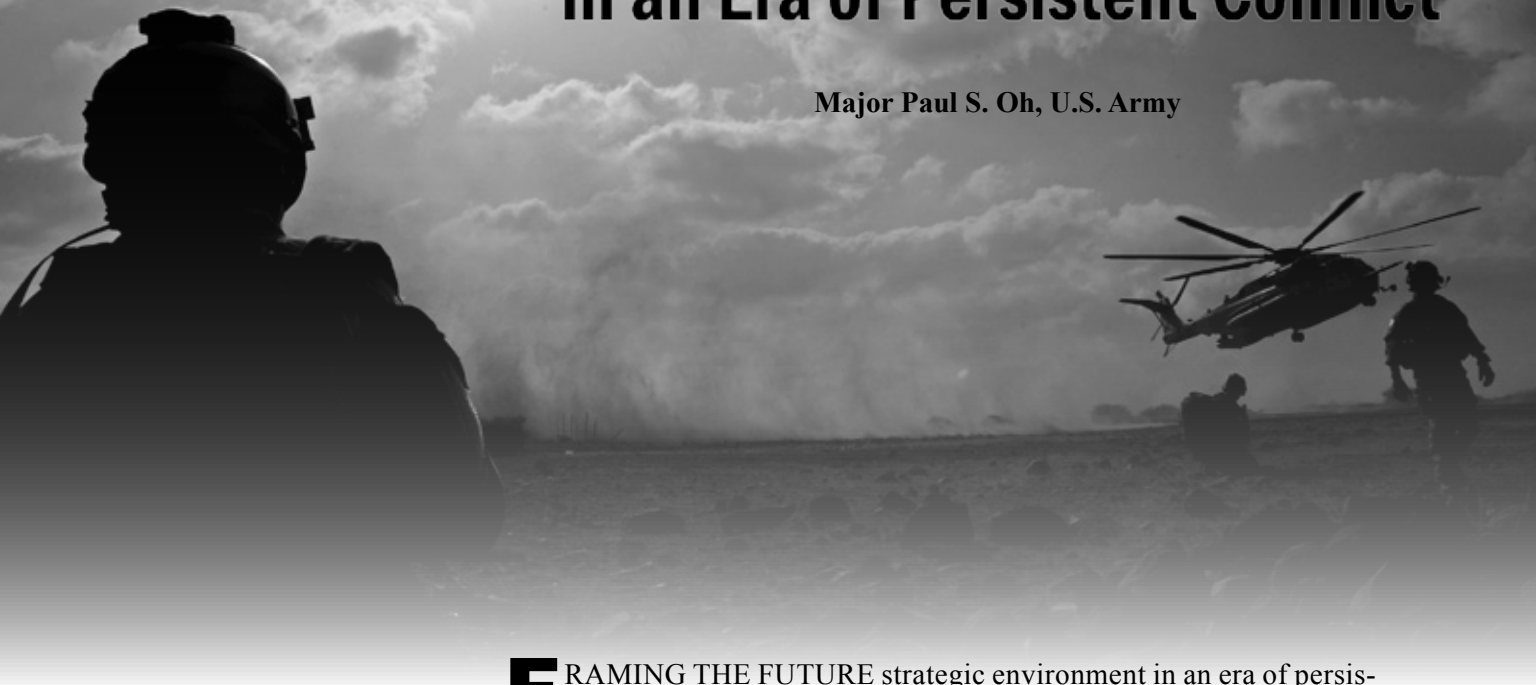


FUTURE STRATEGIC ENVIRONMENT in an Era of Persistent Conflict

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FRAMING THE FUTURE strategic environment in an era of persistent conflict is an immense challenge.¹ Unlike during the Cold War era, the United States no longer has an overarching paradigm through which it can view the world. Nonstate actors and irregular warfare dominate America's attention as it continues to fight insurgencies while coping with terrorist threats like Al-Qaeda. Traditional threats persist in places like the Korean peninsula, while the rise of China presents the prospect of a future strategic competitor. Increasingly global forces in economics, the environment, and health have greater impact on citizens worldwide. The U.S. is not sure how to structure, fund, and oversee its national security apparatus to meet these future challenges. No overarching paradigm suffices, and the United States faces the prospect of racing from one crisis to the next.

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Several institutions have conducted studies to help policymakers plan for national challenges beyond the next 20 years. Among the most recent are *Mapping the Global Future* by the National Intelligence Council; *Joint Operating Environment* by United States Joint Forces Command; *Forging a World of Liberty under Law* by the Princeton Project on National Security; *The New Global Puzzle* by the European Union Institute for Security Studies; and *Global Strategic Trends Programme* by the British Ministry of Defense Development, Concepts, and Doctrine Centre.

These studies suggest the trends that will characterize and shape the future strategic environment: globalization, demographics, the rise of emerging powers, the environment and competition for resources, nonstate actors and challenge to governance, and advances in technology. These trends will present complex, multidimensional challenges that may require careful use of the military along with other instruments of national power.

PHOTO: U.S. Air Force pararescuemen from 82d Expeditionary Rescue Squadron wait for a Marine Corps CH-53E helicopter to land during a training exercise near Camp Lemonnier, Djibouti, 2 May 2009. (U.S. Air Force, SSGT Joseph L. Swafford Jr.)

To respond to this future strategic environment, the United States will most likely be involved in three types of missions: expeditionary warfare to manage violence and peace, defense of the command of the commons, and homeland defense. The land forces will spearhead expeditionary missions to “contested zones” to protect American interests abroad.² Sea, air, and space forces will counter threats to the American command of the commons—air, sea, space, and cyberspace—where the American military currently has dominance. The military will also support the interagency effort in homeland defense as technological advances weaken traditional natural barriers to attack on U.S. soil.

Future Trends of the Next 20 Years

Globalization will force future trends that present both optimistic and pessimistic likelihoods.

The good. In *Mapping the Global Future*, the National Intelligence Council calls globalization the overarching “mega-trend” that will shape all other trends of the future.³ Globalization is an amorphous concept, but here it is meant in its broadest definition—the increasingly rapid exchange of capital, goods, and services, as well as information, technology, ideas, people, and culture.⁴ Markets for goods, finance, services, and labor will continue to become more internationalized and interdependent, bringing immense benefits to the world as a whole.⁵ Globalization will continue to be the engine for greater economic growth. The world will be richer with many lifted out of poverty. It is unclear, however, whether a richer world where America has less relative economic power will be better for the United States in terms of its global influence.⁶

Studies before the recent economic shock had expected the global economy to be 80 percent larger in 2020 than in 2000, with average per capita income 50 percent higher.⁷ According to the European Union Institute for Security Studies, the world economy will grow at a sustained annual rate of 3.5 percent between 2006 and 2020.⁸ The United States, European Union, and Japan will likely continue to lead in many high-value markets, with the United States continuing to be the main driving force as the world’s leading economic power. Emerging economies will continue to do well, with the Chinese and Indian gross domestic product tripling by 2025.⁹

The percentage of the world’s population living in extreme poverty will likely continue to decline.¹⁰

The bad. The benefits of globalization will not be global. The harsh realities of competitive capitalism will produce definite winners and losers, and result in increased social and economic stratification both internationally and within countries.¹¹ Internationally, these losers will concentrate in certain areas of the “arc of instability,” a “swath of territory running from the Caribbean Basin through most of Africa, the Middle East, and Central and Southeast Asia.”¹² Here, the gap between countries who are benefiting economically, technologically, and socially and the countries that are left behind will continue to widen.¹³ And although absolute poverty will decline worldwide, this will not be the case for these regions. In sub-Saharan Africa, for example, the number of people living in absolute poverty—on less than one dollar a day—has increased from 160 million in 1981 to 303 million today.¹⁴ Poverty and aggravated income inequality will remain a monumental challenge in the next 20 years.

The Defense Development, Concepts, and Doctrine Centre notes, “Absolute poverty and the comparative disadvantage will fuel perceptions of injustice.”¹⁵ The disparities will be evident to all because of globalized telecommunications. Populations of “have-not” countries that perceive themselves to be losing ground may continue to be breeding grounds for extremist and criminal ideologies that lead to violence within and outside those countries.

Greater economic interdependence will lead to greater political interdependence. Although such a scenario diminishes the prospects of major industrialized war between two nations, it also means that what happens in one part of the globe will affect other parts of the globalized world. Economic shocks will reverberate throughout the globe. A drastic downturn in the U.S. economy, for example, has caused a global economic recession, perhaps requiring global or regional political solutions.¹⁶

And the ugly. The new era of globalization also means that the United States cannot depend on geography to shield it from the many problems of the developing world. This was clear on 9/11 when the hate espoused by the extremist ideology of radical Islam manifested itself in attacks on U.S. soil. The dangers of interdependence are manifest in other



AP Photo: Elizabeth Dalziel

A Chinese security guard wearing a protective mask cordons the entrance of a hotel designated as a quarantine facility for those who have been in contact with swine flu cases, Beijing, China, 11 May 2009.

areas as well. Effects of climate change, disease, and pandemics originating from remote parts of the world will affect the United States.

Infectious disease is already the number one killer of human beings.¹⁷ AIDS is a scourge in most of the world and poses an extreme societal threat in portions of sub-Saharan Africa. Even more frightening is the threat of a global avian influenza pandemic.¹⁸ The ever increasing connectivity of nations resulting from globalization means that a virus originating in a remote part of an undeveloped country can spread throughout the world at a frightening pace, as evidenced by the recent “swine flu” panic. A pandemic would also cause economic hardship, even if the disease were physically kept out of the United States.

Demographic Trends

Experts expect the world’s population to increase by 23.4 percent from 2005 to 2025.¹⁹ The population growth in the developed world, however, will remain relatively stable. The United States will have 364 million citizens by 2030, while the population of the European Union will grow from 458 million to 470 million in 2025 before declining.²⁰ Japan and Russia will experience a decrease in population, with Japan’s population falling from 128 million to 124.8 million and Russia’s population falling from 143.2 million to 129.2 million within the next 20 years.²¹

Developed countries will also experience significant population aging. In the European Union, the ratio of employment age citizens (15-65) to the retired (over 65) will shift from about 4 to 1 in 2000 to 2 to 1 by 2050.²² Japan will approach 2 to 1 by 2025, and the median age in Japan will increase from 42.9 to 50 years.²³ This trend will fortunately not have as severe an impact on the United States due to higher fertility rates and greater immigration.²⁴ Europe and Japan could face societal upheaval as they try to assimilate large numbers of migrant workers from the developing world. These factors will soon challenge the social welfare structure of these countries, their productivity, and discretionary spending for defense and foreign assistance.

Developing countries. Ninety percent of global population growth by 2030 will occur in developing and poorer countries.²⁵ Population growth in these areas will be 43 to 48.4 percent in sub-Saharan Africa, 38 percent in the Middle East/North Africa region, 24 percent in Latin America, and 21 percent in Asia. Nine out of ten people will be living in the developing world in the next 20 years.²⁶

In contrast to the developed world, a significant portion of the population growth will be the “youth” of the region with a “youth bulge” occurring in Latin American, Middle East, and Sub-Saharan Africa.²⁷ About 59 percent of the population of sub-Saharan Africa will be under 24 years by 2025.²⁸ In the Middle East, the working-age population will expand by 50 percent and in North Africa area by 40 percent, challenging governments to provide employment for a young and undereducated populace with little employment opportunities and setting up the potential for violent conflict. As a recent *Economist* article notes, these young men without “either jobs or prospects” will trade “urban for rural poverty, head for the slums, bringing their anger, and machetes, with them.”²⁹ In the last two decades, 80 percent of all civil conflicts took place

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in countries where 60 percent or more of the population was under 30 years of age.³⁰

Migration. Significant portions of the global population will be on the move, mostly to the cities. By 2030, 61 percent of the global population will live in cities as compared to 47 percent in 2000.³¹ And while the urbanization ratio will be greater in developed countries compared to developing countries (81.7 percent versus 57 percent), the developing countries will struggle to control the transition to urban societies.³² Shantytowns will likely proliferate in “mega-cities” struggling with crime and disease. Migration to wealthier countries will also continue as workers search for better economic opportunities. The Defense Development, Concepts, and Doctrine Centre reports that the number of people living outside their country of origin will increase from 175 million in 2020 to 230 million by 2050.³³ Environmental degradation, natural disasters, or armed conflicts will also forcibly uproot populations. How both the developing and developed countries absorb the influx of migrants may determine the level of conflict associated with these movements.

Identity. How segments of the global population identify themselves may drastically change in the next 20 years. Individual loyalty to the state and state institutions will become increasingly conditional.³⁴ Identity will increasingly be based on religious convictions and ethnic affiliations.³⁵ Religious identity may become a greater factor in how people identify themselves. Although Europe will remain mostly secular, religion will have greater influence in areas as diverse as China, Africa, Latin American, and the United States. In some areas of the developing world, Islam will continue to increase as the overarching identity for large numbers of people. In other regions, ethnicity and tribal loyalties will continue to be the dominant form of identification.

Emerging Powers

The rise of powerful global players will reshape how we mentally map the globe in an increasingly multipolar world. *Mapping the Global Future* likens the emergence of China and India to the rise

of a united Germany in the 19th century and the rise of the United States in the 20th.³⁶ The global center of gravity will shift steadily toward the Pacific.

China. China will become a powerful actor in the global system. The rise of China has been called “one of the seminal events of the early 21st century.”³⁷ China’s economic and diplomatic influence will continue to expand globally. Its gross national product is expected to surpass all economic powers except the United States within 20 years.³⁸ China’s demand for energy to fuel this growth will make it a global presence as it ventures out to secure sources of energy. In East Asia, China is likely to wield its growing influence to shape the region’s “political-institutional contours” to build a regional community that excludes the United States.³⁹ All this will likely be accompanied by a continued Chinese build-up of its military to reinforce its growing world power status.

Whether China continues to pursue a peaceful rise will have a profound impact on the course of international affairs in the next 30 years. The rise and fall of great powers has been one of the most important dynamics in the international system, a dynamic that is often accompanied by instability and conflict.⁴⁰ Defense Development, Concepts, and Doctrine Centre believes China will approach international affairs with a fair amount of pragmatism, but face daunting challenges as it develops. It



DOD, Cherie Thurby

Secretary of Defense Robert M. Gates and Chinese Defense Minister Gen. Cao Gangchuan conduct an inspection of troops during an official military welcoming ceremony honoring Gates’ arrival in Beijing, China, 5 November 2007.

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may exert its growing hard and soft power to either protect its growth or ensure internal stability. When China does establish itself as a global power, it may be less restrained in its conduct of foreign affairs.⁴²

Other powers. Other nations may also play a greater role in the international arena. Among those mentioned in the studies are India, Russia, Indonesia, South Africa, and Brazil.⁴³ Depending on its ability to achieve greater political cohesion, a more united European Union could also play a greater role, especially as a model of global and regional governance.⁴⁴ Another possibility would be the rise of a rival alliance.⁴⁵

The rise of these powers may mean a decline of the relative power of the United States. Though the United States would continue to play the major role in international affairs, its overwhelming dominance may decline. In the next 20 years, a more multipolar world may develop with political, economic, and military power diffused throughout the globe and America's ability to influence dialogue in key global issues relatively diminished.

Environment and Competition for Resources

Scientific consensus increasingly points to human activity as a main contributing factor in global warming. Although climate science is complex and the estimates of probable damages differ, the possibilities of catastrophic effects caused by global warming are real. Major consequences are likely because of "melting ice-caps, thermal expansion of the oceans, and changes to ocean currents and flows."⁴⁶ Possible consequences on land include increased desertification, reduced land for habitation and agriculture, spread of diseases, and an increase of extreme weather events.

The worst-hit regions will likely face political, economic, and social instability.⁴⁷ These regions will be an arc of instability affecting the non-integrated areas of the globe and particularly

worsening the already marginal living standards in many Asian, African, and Middle Eastern nations.⁴⁸ The likelihood of more failed states collapsing will increase as weak governments are unable to cope with decreases in food and water and increases in disease and violent uprisings.

Competition for resources. Exacerbating the environmental concerns is the ever-increasing competition for resources. As countries grow richer and modernize, the demand for resources will greatly increase in the next 20 years. According to the International Energy Agency, demand for energy will likely grow by more than 50 percent by 2035, with fossil fuels projected to meet 80 percent of this increase.⁴⁹ The world economy will remain heavily dependent on oil through 2025 at a minimum.⁵⁰ Similarly, global consumption of natural gas will increase by 87 percent.⁵¹ The United States has so far shown little inclination to seriously address its addiction to oil. Growing Asian powers' consumption of oil will also skyrocket; China will have to increase consumption by 150 percent and India by 100 percent by 2020 to maintain current growth.⁵² Such explosive consumption will exacerbate global warming in the absence of a global framework to tackle the problem.

Because of global growth, competition for these resources will intensify as the United States and other major economies vie to secure access to energy supplies. The competition will bid up energy prices, making it even more difficult for developing nations to afford minimal energy for their populations. As Isaiah Wilson notes, resource security has persistently been the primary objective of advanced-nation security and military strategies. Quests for this security will continue to draw nations into military and economic engagement in the "arc of instability."⁵³ The United States will continue its involvement in the Middle East for years to come. China will continue to build bilateral agreements with various nations in Africa to secure its oil supply.

The degradation of the environment and increased economic growth of nations will cause competition not only for traditional energy sources, but also for necessities like food and water. Major portions of the population will live in areas of "water stress," and the amount of arable land may diminish.⁵⁴ The consumption of *blue water* (river,

lake, and renewable groundwater) will continue to increase, depriving even more people of access to clean drinking water.⁵⁵ Concurrently, environmental degradation, intensification of agriculture, and a quickened pace of urbanization will all contribute to the reduced fertility of and access to arable land.⁵⁶ Increased reliance on biofuels for growing energy needs will reduce food supply crop yields. Competition for other food sources, including fish, will increase.⁵⁷ Even now, African fishermen bemoan the disappearance of their livelihoods while Europeans bemoan the increasing prices for fish in restaurants.⁵⁸

Nonstate Actors and Challenges to Governance

Scholars view the rise of nonstate actors as a fundamental challenge to the Treaty of Westphalia-based international system.⁵⁹ The United States, as the leader and architect of the Westphalian system, has been and will continue to be the primary focus of this challenge. Nonstate actors that do not see themselves bound by national borders are likely to continue to grow in strength and lethality. Small, empowered groups will be increasingly able to do greater things while states' near monopoly on information and destructive power continues to diminish.⁶⁰ Various factors have aided their cause. The National Intelligence Council sees a "perfect storm" in certain regions of the underdeveloped world as weak governments, lagging economies, religious extremism, and the unemployed youth fuel extremist movements.⁶¹

Al-Qaeda remains a formidable near-term threat. Recent testimony by American intelligence officials reported that Al-Qaeda is continuing to gain strength from its sanctuary in Pakistan and is "improving its ability to recruit, train, and position operatives capable of carrying out attacks inside the United States."⁶² Even if the West neutralized Al-Qaeda, the National Intelligence Council

believes that the factors that gave rise to Al-Qaeda will not abate in the next 15 years and predicts that by 2020, "similarly inspired but more diffuse extremist groups" will supersede it.⁶³

Challenges to governance. Nonstate actors such as Al-Qaeda will play a major role in spreading extreme and violent ideologies. Fueled by the perceived injustices in a globalized world and by frustration with the oppressiveness of regional authoritarian regimes, major segments of the population in the arc of instability may rally to radical Islam and attack the institutions of traditional government through violent means. These forces may also cross national boundaries to form a transnational governing body dedicated to terrorism and jihad. The National Intelligence Council, for example, sees a possible scenario in which political Islam provides a context to form a Sunni Caliphate and draws on Islamic popular support to challenge traditional regimes.⁶⁴ The Princeton Project on National Security presents another scenario where a radical arc of Shi'ite governments rules areas from Iran to Palestine, sponsors terrorism in the West, and tries to destabilize the Middle East.⁶⁵

Governments in the arc of instability will face daunting challenges to stability. They will have to deal with the adverse effects of globalization, climate change, unemployment, and a new form of identity politics. To succeed, they will need to fight internal corruption and reform their inefficient, authoritative governments. They will need to do this as a radical ideology fiercely attacks their legitimacy and any connections to the Western world.

International crime will also challenge governance.⁶⁶ Criminal activities will continue to increase in sophistication and lethality as enhanced communication technologies and weapons continue to proliferate.⁶⁷ Such activities will be increasingly intertwined with civil conflict and terrorism as criminal groups leverage the benefits of increased globalization and their alliances with states and nonstate actors, to include terrorists.

Nonstate actors may also provide opportunities for increased cooperation to meet these future challenges. International, regional, and nongovernmental organizations will continue to grow in capacity. Although governance over international trade and crime has increased due to expanded transnational government networks, new collaborative institutions

...nonstate actors [are] a fundamental challenge to the Treaty of Westphalia-based international system.

and mechanisms will be required to cope with increasingly complex global and regional problems.⁶⁸ These networks must continue to grow in strength to solve global problems.

Technology

Advances in technology elicit great hope as well as great fear, because major technological breakthroughs have an impact on every aspect of our lives. We can expect further progress in information technology and nanotechnology, innovations in biotechnology, and increased investments in research and development.⁶⁹ Faster computers combined with elements of nanotechnology and biotechnology may improve our ability to deal with daunting challenges such as human health, environmental issues, and malnutrition.

On the other hand, technology's availability and ease of transfer allow broader access to previously unavailable weapons. The ease of use of commercial technology has also exacerbated the problem of proliferation.⁷⁰ This is most dangerous in terms of weapons of mass destruction. The Princeton Project on National Security asserts that the "world is on the cusp of a new era of nuclear danger."⁷¹ North Korea does possess nuclear weapons. Despite the findings of the recent United States National Intelligence Estimate, it seems likely that Iran is still determined to acquire the ability to build nuclear weapons. If the international community cannot rein in these countries, other countries in the Middle East and East Asia will likely also attempt to join the nuclear club.⁷²

Countries will also continue to pursue chemical and biological weapons, as well as delivery capabilities for these weapons. Chemical and biological weapons can be integrated into legitimate commercial infrastructures to conceal a country's capabilities.⁷³ At the same time, more countries will be able to acquire ballistic and cruise missiles, as well as unmanned aerial vehicles. By 2020, the National Intelligence Council believes that both

North Korea and Iran will have intercontinental ballistic missile (ICBM) capabilities, and several countries will develop space-launch vehicles.⁷⁴ A preview of such capabilities came on 5 February 2008 when Iran launched a Kavoshgar-1 rocket into space using technology similar to that needed for long-range ballistic missiles.⁷⁵

Concurrently, many in the United States fear the waning of American domination in research and development of new, emerging technology. The number of American Ph.D. engineering students is decreasing while the number of foreign students returning to their countries from U.S. universities is on the rise.⁷⁶ At the same time, the *Economist* notes that the domestic trends in American politics and immigration policy are keeping the world's best and brightest talents from "darkening America's doors."⁷⁷

Technology and terrorists. The potential nexus of terrorist groups and nuclear weapons is perhaps the most frightening scenario for national security experts. The increasing ease with which terrorists can acquire weapons to deliver a nuclear attack on the United States presents a nightmare scenario. Graham Allison notes that there are more than 200 addresses around the world from which terrorists can acquire nuclear weapons or fissile material.⁷⁸ Russia, Pakistan, and North Korea are among the likely sources. If terrorists cannot acquire a nuclear bomb, the technology and tools are now available for them to build their own.⁷⁹ The difficult part is acquiring the fissile material needed for a homemade bomb. There is evidence that Al-Qaeda attempted to acquire a nuclear weapon for an attack on the United States.⁸⁰ The prospect of Iran gaining nuclear capabilities is also of great concern because of the capabilities of its proxy force, Hezbollah.⁸¹

Operating Environment and Threat Evaluation

The second part of this paper explores the ramifications of these trends for each type of mission set by explaining the operating environments and the nature of the threat. There are obvious limitations to such framing. First, missions will likely be joint and interagency ventures with success not achieved purely through the application of military force. Second, labeling these challenges as "threats" inherently implies an adversarial relationship, which may not always be the case. The emergence

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of great powers, for example, may not necessarily lead to adverse conditions in international affairs. Third, some challenges do not fit neatly into these categories, so we may not always identify an emerging threat. The emerging radical Islamic community in Europe might be an example.

However, categorization does highlight the vastly different types of missions our military forces may perform during the next 20 years. With tighter budgets for discretionary spending, the U.S. must prioritize missions and use military forces efficiently and effectively. Examining and analyzing mission sets allows each service to plan accordingly and adapt to myriad possibilities the future strategic environment may hold.

So, what do these trends mean for our military forces? American expeditionary forces may need to enter what Posen labels “contested zones.” These zones correspond to areas the Pentagon has called the global “arc of insecurity.” Any mission in these zones will be both dangerous and difficult because political, physical, and technological realities negate many American military advantages. Although this will have to be a joint venture, land forces will likely spearhead such missions. The air, sea, and space forces, on the other hand, will lead the effort in countering threats to the “command of the commons.” With the rise of emerging powers and advances in technology, countries will venture into the commons where the U.S. military has traditionally maintained dominance. Finally, all forces will continue to support the Department of Homeland Security and other federal agencies in defending the homeland against nontraditional actors. For each mission type, the U.S. military will face increasingly capable threats seeking to take advantage of any vulnerabilities.

Expeditionary Warfare to Contested Zones

Although both the Navy and Air Force have begun structuring their forces for expeditionary warfare, the land force will likely spearhead the



U.S. Air Force SSGT Corey Farr, a pararescueman from 82d Expeditionary Rescue Squadron, prepares to board a Marine Corps helicopter during a training exercise near Camp Lemonier, Djibouti, 2 May 2009.

U.S. Air Force, SSGT Joseph L. Swafford Jr.

missions into the “contested zones” in the arc of insecurity. These areas, running from the Caribbean Basin through most of Africa, the Middle East, and Central and Southeast Asia, will disproportionately involve the losers from globalization.⁸² In fact, these zones are where the many trends of the next 20 years will converge. Increased poverty or at least relative poverty, large numbers of unemployed youth, environmental degradation, competition for resources, emergence of deadly nonstate actors, failed states, and proliferation of devastating technology will be the most evident and severe here.

The American expeditionary force may be drawn into these areas for a variety of reasons. First, these areas will continue to be breeding grounds and safe-havens for extremist ideologies and criminal elements. Second, increased global demand and competition for energy sources could require military intervention in these contested zones. Third, tribal wars or genocides may oblige the United States to join multilateral forces in stabilizing failed states or regions. Fourth, humanitarian interventions may increase if natural or man-made disasters cause mass suffering or death. In these zones, the American forces will be involved in both the management of violence and management of peace, forcing it to “fight” wars in a different fashion.

Political, physical, and technological facts will make the missions in these areas particularly difficult. Local actors have stronger interests in a war’s

outcome than the United States, and our adversaries will have a plentiful supply of males of fighting age. They will also have the “home-court advantage.” They have studied the way the U.S. military fights, and the weapons required for close combat are inexpensive and plentiful.⁸³ In addition, conflicts that involve more than battles between traditional armies will also require nontraditional expertise in areas like cultural awareness, working with and training allied nations, interagency operations, and diplomacy.⁸⁴ Major General Robert Scales goes as far as to say that the next World War will be the social scientists’ war, describing the wars to follow as “psycho-cultural wars” requiring officers with knowledge based on the discipline of social sciences.⁸⁵ These factors negate the traditional advantages of the American way of war built on technology and organization.

What will the operating environment look like for U.S. expeditionary forces in the contested zones? A survey of the literature suggests that U.S. forces will have to operate in an environment characterized by the following factors:

- **Highly urban environment/megacities.** Approximately 60 percent of the world’s population will live in cities by 2030.⁸⁶ Some of these cities will grow into megacities containing huge shantytowns. They may have high crime rates, ineffective or corrupt police forces, and high levels of instability. Some megacities may collapse into chaos.⁸⁷

- **Extreme environments.** These regions may become increasingly inhospitable due to human activities and climate change. There may be less access to basic resources needed for survival, like food and water. These conditions could often obligate U.S. forces to provide such resources to populations in countries in which they operate.

- **Communicable disease.** Countries may also have high levels of communicable disease, such as HIV/AIDS, malaria, hepatitis, and tuberculosis.⁸⁸

- **Endemic hostility.** There may be underlying hostility among the populace caused by transnational or intercommunal conflicts or virulent anti-American ideologies, such as militant Islam.⁸⁹

- **Collapse of functioning state.** U.S. forces may have to operate in regions where the government has failed and local warlords use extreme violence to control populations.⁹⁰

- **Nonmilitary partners.** U.S. forces will have to understand how to work with other government

agencies and elements of society to combat adversaries.⁹¹ The management of peace will undoubtedly be an interagency affair as the integrated instruments of national power become increasingly crucial for success. The presence of media and internet coverage will also complicate missions. The military will need heightened awareness of legal implications and the rules of engagement.⁹²

- **Cheaper and deadlier weapons.** Adversaries will continue to benefit from wide availability of weapons, and they will continue to modify what is cheaply available to cause maximum damage on U.S. forces.

- **Weapons of mass destruction.** Advances in and the proliferation of technology may make the use of nuclear, chemical, and biological weapons on U.S. forces a real possibility.

- **Greater collaboration with developing country militaries.** Demographic declines and fiscal pressures will result in reduced military capabilities among developed-country allies. Future coalitions will increasingly rely on less well-trained and poorly equipped developing country forces that may not share the U.S. professional military ethic.⁹³

- **Media on the battlefield.** The media will likely cover the actions of the expeditionary force on the ground and communicate them in real time to a global audience.⁹⁴

- **Humanitarian disasters.** Increasingly devastating natural disasters caused by climate change could require more military humanitarian assistance.

Threats will come from multiple sources:

- **Terrorists.** Terrorists will continue to target U.S. interests abroad, seeking soft targets to send messages and inspire similar groups to action.

- **Paramilitary forces.** These forces will be intermingled with the local population and ally themselves with terrorist groups. The United States will face rebel groups, gangs, insurgents, and private military companies.

- **Tribal forces.** Armed tribal forces may be a big challenge because they have the potential to switch from being adversaries to allies depending on American strategy and tactics and on shifting local political calculations.

- **Criminal elements.** Weak governance will allow both transnational and local criminal elements to thrive. Drug cartels will continue to be an international presence and the most notorious criminal networks.⁹⁵

- Traditional militaries. Although hostilities with another state may be rare, increased competition for resources may cause state-to-state conflicts.

Maintaining the Command of the Commons

Posen describes the “commons” as those areas that no state owns but that provide access to much of the globe. It is analogous to the command of the seas, although Posen also includes command of the air and space.⁹⁶ The Joint operating environment includes the command of cyberspace as well. According to Posen, “command of the commons” means that the United States gets vastly more military use out of the commons than other states, that the United States can generally deny its use to others, and that others would lose access to the commons if they attempt to deny its use to the United States. The command of the commons has been “the key military enabler” of America’s global position and has allowed the United States to better exploit other sources of power.⁹⁷

The United States sea, air, and space forces will lead in responding to these challenges to the command of commons. Though the command of the commons will most likely remain uncontested in the near- and medium-term, the rise of emerging powers could lead to competition over time. Posen notes that the sources of U.S. command include American economic resources and military exploitation of information technology.⁹⁸ As American economic power begins to decline relatively, and as advanced technology becomes more diffused, other nations may exploit these factors to become viable contenders. Already, nations have launched missiles into space, started investing in blue water navies, and increased their cyber warfare capabilities.

The following are critical considerations for the operating environment:

- Increased interest in space. Emerging powers will continue to expand their space programs. Advances in technologies will enable more nations to launch rockets and satellites.⁹⁹ The United States will be increasingly concerned about capability of nations to convert this technology into intercontinental ballistic missiles as well as weapons threatening to U.S. space capabilities.

- Nuclear proliferation. As more countries acquire nuclear weapons, American ability or pro-

clivity to intervene in various areas of the commons (or contested areas) may decline due to the threat of nuclear retaliation.

- Missile technology proliferation. Missile technology proliferation may deny certain areas of the commons to the United States. Examples include sea-lanes in the Straits of Hormuz, the Suez Canal, and the Strait of Malacca.¹⁰⁰

- Connectivity vulnerabilities. Increased automation and reliance on information technology leave the United States more vulnerable to cyber-attacks as adversaries use techniques such as worms, viruses, Trojan horses, botnets, or electromagnetic pulse.¹⁰¹

The rise of great powers will feature nations with increased conventional military capabilities like that of the United States. They will possess “information-enabled network” forces as well as naval forces with air and undersea capabilities.¹⁰² Nations may be able to challenge command of their regional sea-lanes, as well as U.S. dominance in space and cyberspace. Also, nonstate actors may be able to exploit technology to conduct cyber-warfare.

Military Support to Homeland Defense

With globalization and advances in technology shrinking the world, the homeland of the United States will be more vulnerable. 9/11 was a watershed moment in America as national policymakers began reexamining existing defenses and the balance between security and liberty. Many fear that terrorist and other criminal elements will continue to exploit the openness of American civil society to attack our financial, energy, or governmental infrastructure. The increasing availability of nuclear weapons may result in an attack that dwarfs the physical and psychological damages of 2001.

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Many doubt the effectiveness of our changes and criticize the behemoth Department of Homeland Security and the restructuring that occurred with the creation of this agency. The Federal Emergency Management Agency's performance during Hurricane Katrina heightened these concerns. Some scholars also doubt the wisdom of the creation of the Office of National Intelligence and the preservation of the Federal Bureau of Investigations as the lead law enforcement agency on domestic intelligence.¹⁰³ Still others call for reform of Congressional committee jurisdictions and oversight capabilities. How the U.S. military will best support this interagency effort is still unclear. The military has been viewed simultaneously as the last and greatest safety net for devastating events as well as a possible threat to civil liberties when operating within the U.S. borders.

The demand for higher levels of security in the homeland leads to tension with many of the political and cultural traditions of America. Increased domestic surveillance conflicts with cherished civil liberties. Similarly, increased border protection affects immigration and even openness to foreign business travelers, both of which can have negative economic and cultural impacts. The vigorous, often partisan, debates in Washington on wiretapping, torture, and immigration will likely continue well into the future. Following are the areas of major concern:

- Weapons of mass destruction. Proliferation of nuclear, biological, and chemical technology and material will leave the United States increasingly vulnerable to attacks with weapons of mass destruction.
- Natural disasters. Hurricane Katrina may have been a sign of things to come, with the nation looking more to the military as the most effective institution for dealing with devastating natural disasters.
- Economic shocks. Terrorist elements may target key financial nodes in the United States such as the New York Stock Exchange to attack the global financial system.¹⁰³

- Energy crisis. Shortages of supplies relative to increasing demand may leave the United States susceptible to energy shocks.

- Refugee flows. Economic and environmental factors may increase both legal and illegal migration from Latin America and elsewhere.

- Cyber-attacks. Increased automation of our financial systems, physical infrastructure, and government operations renders the homeland more vulnerable to attacks on our information systems by both state and nonstate actors.

There are multiple probable sources of threat. Al-Qaeda and other terrorist groups remain the biggest threat to U.S. homeland. Other Islamic terrorist groups may emerge not directly linked to Al-Qaeda, but inspired by similar extremist ideology. Elements of our society may become disposed to extremist Islamic ideology and independently plan attacks. Transnational criminals, including drug cartels, will continue to have a presence in the U.S. Although state attacks on U.S. homeland will be rare, hostile states may use proxy forces to attack vulnerable sites using difficult-to-trace methods, such as cyber-attack. States could also potentially use economic measures, such as energy embargos or financial measures as holders of U.S. debt, to damage the U.S. economy.

Facing the Challenges

The challenges of the next 20 years are immense and diverse. Some are immediate and others are long term or systemic. In this context, the U.S. military must be sufficiently flexible and multi-talented to play the various roles the nation may ask of it. Operations in the contested zones will be extremely complex and multidimensional, and perhaps more frequent; the military will have to redefine the concept of war and the nature and utility of military forces. Great-power politics will continue and may manifest itself in a challenge to American command of the commons. America may have to reexamine

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its hegemonic status and the role of U.S. forces in maintaining the international system. Threats to the U.S. homeland will continue and increase. The military will need to function effectively in the interagency process to aid in the defense of our

homeland. Yet, our military must do this in an era of likely declining military funding. Forward-thinking analysis of likely trends on these various military missions will prove essential to preparing for the challenges ahead. **MR**

NOTES

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