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“THE END OF THE BEGINNING”:
ON THE APPLICATION OF AEROSPACE POWER IN AN
AGE OF FRACTURED SOVEREIGNTY

by

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Preface

This paper has its genesis in my experience as a junior officer stationed in Europe from 1990 to 1996. The training I had received as an imagery intelligence officer in the waning days of the Cold War had not well prepared me for understanding failing states, civil war and partition, ethnic conflict, or the response of the United Nations, NATO, and the various NGOs to the chaotic scenes. While stationed in Europe, and later as a student at the Defense Intelligence Agency and Air Command and Staff College, I studied the process of state failure and the international response to better understand what was happening in the world. This paper is the result.

I'd like to thank my Faculty Research Advisor, Major John Glock, USAF, for agreeing to take on this unusual endeavor. His support was essential for keeping me from ranging too far afield and is deeply appreciated.

I'd also like my wife, Annie, for her help and support. This paper turned out to be a much larger undertaking than I had anticipated, and I could not have completed it on time if not for her patience and good cheer while I was involved in the research and writing.

Abstract

This paper considers the future use of aerospace power in the changing international system. First, the nature and scope of the changing international system are analyzed via an examination of significant trends in technology, demography, military, and social affairs to build an analytical picture of the coming strategic environment and the probable challenges facing aerospace forces. This analysis describes the stresses and sources of tension that are likely to be present in the international system over the next twenty years. Demographic change makes it difficult for weak states to control their borders against refugees and migrants. Technological change requires states loosen control of their finances and communications if they wish to become competitive in the global marketplace. The decrease in major power war calls into question the relevance of traditional warfare to strong states and the historic rise in low-intensity conflict and civil wars casts doubt on the ability of weak states to defend themselves from internal enemies. Increasingly less able to control their borders, finances, and the tools of organized violence, states are forced to cope with changed circumstances. The research indicates that as aerospace forces are tasked to confront these challenges, they are likely to encounter mass population movements, uncertain and disputed boundaries, and will have to plan operations with an eye toward maintaining international legitimacy at all costs.

Chapter 1

Aerospace Power and the Nation-State

In our own day many authors have argued that “international anarchy” as it exists among states is the root cause of war. What they forget is that war made its historical debut long before the state: and, to all appearances, is destined to outlast it as well.

—Martin Van Creveld

The last decade of the twentieth century was very good for aerospace power. The 1990's began with a convincing demonstration of modern air campaigning in the Gulf War and ended with a victory over Serbia that removed their military forces from Kosovo and paved the way for the entry of peacekeepers. That the victory was won in the absence of a ground campaign surprised some traditional airpower skeptics. Noted military historian John Keegan remarked, “Now there is a new turning point to fix on the calendar: June 3, 1999, when the capitulation of President Milosevic proved that a war can be won by air power alone.”¹

Iraq and Serbia were by no means the only challenges to confront the United States Air Force during this time. USAF forces responded to crises around the world: in Bosnia, Haiti, Somalia, East Timor, Rwanda, Mozambique, among others all the while enforcing no-fly zones over and occasionally striking Iraq. Pundits protested this new world disorder and questioned the United States' role.

More knowledgeable observers agreed that this new-world disorder was an artifact of the end of the Cold War and reflected an international system in transition.² Samuel Huntington

blamed the disorder on a “Clash of Civilizations.” Robert Kaplan warned of “The Coming Anarchy” where overpopulation, disease and environmental problems in the developing world would be a primary cause of state failure.³ Cold War historian John Lewis Gaddis expressed the concern that “State sovereignty in a world of fragmenting politics, is diminishing sovereignty.”⁴ All of these fears were seen in the context where the comfortable U.S. – Soviet bi-polarity had yielded to a brief American uni-polar moment as part of a transition to a more multi-polar international system.

The specter of state failure was perplexing. States were not supposed to fail; the power of the nation-state had been ascendant for the past three centuries. Indeed modern European history is essentially the story of the nation-state’s victory over its competitors. Historian Martin Van Creveld described the development of the nation-state:

Following four and a half centuries of development that had started around 1300, the state found itself perhaps the most powerful political construct ever. Relying on its regular armed forces – first the military, the police and the prison apparatus as well – it imposed order on society to the point that the only kind of organization still capable of challenging it were others of the same kind. Those armed forces themselves rested on unprecedented economic muscle; steadily improving statistical – the word itself comes from “state” – information about every kind of resource available within the state’s borders; and a bureaucratic machine capable of extracting those resources, husbanding them, and wielding them without any need for intermediary bodies. No longer identical with the person of the ruler, and liberated from the religious, legal, and quasi-legal constraints that had hampered most previous forms of government, the state stood poised at the beginning of a spectacular career.⁵

However, if observers like Huntington, Kaplan, and others that described the international system in transition are correct, that “spectacular career” may be approaching its zenith. Their concern is that there are stresses within the international system, long camouflaged by the Cold War and only now coming to light, that failed states are no longer capable of dealing with.

Moreover, these failures are not simply isolated problems; the mere fact of their existence threatens the stability of the entire international system.

States, after all, sanction military force, and the role of the nation-state in this evolving international system should be of particular interest to the aerospace strategist since nation-states created air forces. Martin Van Creveld acknowledges, “The most fundamental single fact about air power - so fundamental that it is seldom even noted, let alone questioned or investigated - is that it is owned and operated by the state.”⁶ Armies and navies have survived changes to the international status quo. Armies and navies have the chronicle of their use throughout recorded history to help them chart their course into the future. Air forces have no such advantage. They were the products of the heavily industrialized nation-states in the age of total war. If, per Gaddis, state sovereignty is truly diminishing, then what of the military forces that buttress those sovereign states and especially the air forces they created? Air Forces were fielded to participate in the formally declared wars fought by the mechanized forces of nation-states.

However, warfare had a long history prior to the nation-state. Professor Kalevi Holsti reminds us that:

War defined as a contest between sovereign states derives from the post-1648 European experience, as well as from the Cold War. It is historically and culturally based. In other historical and geographic contexts, wars have been better characterized as contests of honor (duels), marauding, piracy, searches for glory, and pillaging forays. Armies, navies, gangs, and hordes battled, sometimes in quick but massive battles, at other times in decades-long campaigns. They represented clans, tribes, feudal barons, city-states, empires, and religious orders such as the Templars and Hospitallers. For many, such as Genghis Khan’s hordes, war was at once a style of life, an economic system, and an instrument of the Khan’s temper to punish those who offended him. It was largely devoid of political purpose because it did not result in the rearrangement of political units, the creation of empires, or the alteration of a state’s territories.⁷

The type of war that Air Forces were designed to fight is a historically recent development, and it is not ordained that it will remain preeminent in the future. Indeed, the research will show

that the conflict that Air Forces have been optimized for, major power interstate war, is on the decline. It is reasonable, then to examine the challenge of employing of aerospace power in the new geopolitical circumstances.

This paper will consider the future use of aerospace power in the changing international system. To that end, the discussion will next turn to an analysis of significant trends in technology, demography, military, and social affairs to build an analytical picture of the coming strategic environment and the probable challenges facing aerospace forces. These challenges will in turn suggest operational approaches that will likely prove useful in the complex and unfamiliar security environment of the twenty-first century.

Notes

¹ John Keegan, "Please, Mr Blair, Never Take Such A Risk Again," *London Daily Telegraph*, 6 June 1999, on-line, Internet, 6 Feb 01, available from <http://www.telegraph.co.uk/>.

² See Barry Hughes, *Continuity and Change in World Politics* (New Jersey: Prentice-Hall, Inc., 1997), 129 also Samuel P. Huntington, *The Clash of Civilizations and the Remaking of World Order* (New York: Simon and Schuster, 1996) and "The Lonely Superpower" *Foreign Affairs* (Vol. 78 No. 2 March/April 1999).

³ Robert D. Kaplan, *The Coming Anarchy*, (New York: Random House, Inc., 2000).

⁴ John Lewis Gaddis takes this a step farther in his "Living in Candlestick Park" *The Atlantic Monthly* (April 1999).

⁵ Martin Van Creveld, *The Rise and Decline of the State* (Cambridge UK: Cambridge University Press, 1999), 183-4.

⁶ Martin Van Creveld, "Air Power 2025," address to New Era Security The RAAF in the Next 25 Years, on-line, Internet, 4 Feb 01, available from <http://www.defence.gov.au/apc96/program.htm>.

⁷ Kalevi J. Holsti, *The State, War, and the State of War*, (Cambridge, U.K.: Cambridge University Press, 1996) 1.

Chapter 2

Trends 2020

Trend analysis, an estimation of future events based on a linear extrapolation of their past trajectory, is a standard analytical technique and is widely used in the intelligence and corporate communities. The key to arriving at reasonable, relevant, and analytically sound conclusions via trend analysis is to examine the trajectory of multiple components within or about a phenomenon. Individual trends may serve either to reinforce or nullify one another or the analysis may reveal they are not likely to interact in any way. The strength of trend analysis is that it can develop a deeper and richer understanding of an issue by considering several different sources for cause and effects and their interactions. To examine the changing nature of the international system, it is useful to consider what aspects of the system are currently changing. In that light, four candidates emerge.

First, it will be necessary to take population into account. The world experienced an unprecedented increase in population during the second half of the twentieth century, and population increase stressed the social fabric and governing capacities of many nations during this time. It will be useful to examine future population trends to determine whether they will continue to be a source of strain within the international system.

Technological change, especially developments in information processing and communications, represents another major development and source of stress within the

international system. It is widely accepted that the coming changes in human society due to information technology alone have the potential to be as far-reaching as those that propelled humanity into the industrial age. Clearly any examination of any aspect of the future would be incomplete if it did not take into account technological development. To that end, a consideration of likely developments in information processing and communications will be a necessary part of any analysis of the future.

Since the use of aerospace power in the future will likely continue to be constrained by and seen in the context of what is considered to be a legitimate exercise of military power, it will also be useful to examine developments in military affairs. The last century began with war as activity that was waged mostly between states and ended with warfare being conducted primarily within states. This decline in great power warfare was a key aspect in the transformation of war in the twentieth century, and the impact of that transformation on the evolving international system will have to be considered.

Lastly, how the demographic, technological, and military developments combine to act on the international system cannot be considered without first describing recent development within and the current trajectory of that system. In other words, ‘where it is’ must be established before ‘where it is going’ can be described. Broadly considered, these developments will be described as “social” changes, and the analysis will require a two-step process. The evolution of the current system, briefly described in the first chapter, will be established and then that evolution will be assessed in light of the above developments.

The result of this analysis will be to establish in broad terms the stresses and sources of tension that are likely to be present in the international system over the next twenty years. The analysis will be based on scholarly opinions to ensure its predictions rest on a very firm analytic

foundation. With this in place, the analysis will then proceed to examine what aspects of conflict within the future system will be best addressed by aerospace forces to arrive at implications for their future employment.

Demography: More people, bigger cities

Demography, as the conventional wisdom goes, is destiny. That is to say that a population's demographics, its fertility and mortality rate, its distribution of ages and sexes, describe and predict that same population years in the future. The balance between fertility and mortality describes population growth or decline, and sex and age distribution has real and documented impact on social stability. Demographic analysis is a very useful tool for understanding any community, especially the world community.

The world's current destiny, according to the National Intelligence Council (NIC), will take world population from the current 6.1 billion to 7.2 billion people by 2015.¹ Moreover, 95 percent of this increase will take place in the developing countries and within the urban areas of those countries. The demographic news is not all dismal, however. According to the NIC's *Global Trends 2015* study, the rate of world population growth is falling from 1.7 percent annually in 1985, to 1.3 percent today, to approximately 1 percent in 2015.² However even though the rate of population increase is slowing, "The ratio of urban to rural dwellers is steadily increasing. By 2015 more than half of the world's population will be urban. The number of people living in mega-cities—those containing more than 10 million inhabitants—will double to more than 400 million."³

Another aspect of population increase is migration. There are approximately 130 million international migrants currently, and the number grows by three to four million annually.⁴ *The Global Trends 2015* study predicts, "Legal and illegal migrants now account for more than 15

percent of the population in more than 50 countries. These numbers will grow substantially and will increase social and political tension and perhaps alter national identities even as they contribute to demographic and economic dynamism.⁵”

Meanwhile, in the high-income developed countries, aging populations coupled with low fertility rates will stress pension and medical systems. As part of this process, there will be increasing demand for working-age labor that in turn will draw economic migrants. The overall trend will be increased migration from the developing world to the developed world.

In short, the population trend consists of two stories. The first will be in the developed world, where population growth will be small, and the major issues will revolve around the aging of the general population and the impact of migration from the developing world. The ‘big’ story will be in the developing world, which will comprise 95 percent of the growth. There the trend will consist of urban crowding creating more mega-cities with young populations that generally increase the potential for violence and disorder and certainly constrain their chances for enlightened governance.

Technology: More computers, faster communications

Technological progress tends to define human progress. Both the agricultural and industrial revolutions were technological revolutions, and they are defined by the technological progress they engendered. The agricultural revolution describes the impact on humanity of the invention of agriculture, the industrial revolution, the invention of industry. Along the same line, the term ‘information revolution’ describes how the vast improvements in computers and communications are affecting society. The impact of the information revolution is just beginning to be felt and will likely accelerate as computers and communications continue to improve over the next

twenty years. In short, computers and communications are cheap and getting cheaper, and analysts expect that trend to continue.

These trends, faster, better, and cheaper computers and communications are safe bets because they rely on empirical data. Moore's law is named after Gordon Moore, the Intel Engineer who first noted the constant progress in computing power. Moore's law states that computer chips are doubling in power every 18 months while halving in price.⁶ Techno-theorist George Gilder followed with Gilder's law which predicts that the total bandwidth of communication systems will triple every 12 months for the foreseeable future.⁷ Taken together, over the next generation, the expected advances in information technology will trend toward ensuring very wide, if not universal, access to advanced processing and communications. As the National Intelligence Council's *Global Trends 2015* states:

Over the next 15 years, a wide range of developments will lead to many new IT-enabled devices and services. Rapid diffusion is likely because equipment costs will decrease at the same time that demand is increasing. Local-to-global Internet access holds the prospect of *universal* wireless connectivity via hand-held devices and large numbers of low-cost, low-altitude satellites. Satellite systems and services will develop in ways that increase performance and reduce costs.⁸ *Italics added*

The prospect of cheap, universal, and via encryption, anonymous communication will tend to empower individuals and small organizations. As long as computers were expensive and communications relied on fixed infrastructure, only national governments and other large organizations such as multi-national corporations could afford the networks and processing to communicate reliably and securely. With inexpensive, universal, and secure communication, organizations will no longer have to be big to be effective. This process is central to what

analysts refer to as the ‘decentralizing tendency’ of information technology. Moreover, universal secure communications also hold the potential to allow small organizations the ability to shield their activities from the rest of the world. By removing a long-standing advantage of large-scale organizations, cheap, secure communications will allow smaller organizations to compete more effectively.

At the same time, the information revolution has also constrained national governments’ ability to control their finances. Walter Wriston, former head of Citibank, points out:

The new international financial system was built not by politicians, economists, central bankers, or finance ministers but by technology. Today information about the diplomatic, fiscal, and monetary policies of all nations is instantly transmitted to electronic screens in hundreds of trading rooms in dozens of countries. As the screens light up with the latest statement of the president or the chairman of the Federal Reserve, traders make a judgement about the effect of the new policies on currency values and buy or sell accordingly. The entire globe is now tied together in a single electronic market moving at the speed of light. There is no place to hide. . . No matter what political leaders do or say, the screens will continue to light up, traders will trade, and currency values will continue to be set not by sovereign governments but by global plebiscite.⁹

James Dale Davidson and William Rees-Mogg see nothing to stop the inherently decentralizing forces of information technology. They contend that as cheap encryption becomes more widely available and thousands if not millions of individuals encrypt their financial information, national governments will be unable to track down all of the offenders. Ultimately, Davidson and Rees-Mogg predict that governments will not be able to charge any more for their services (i.e. taxes) than their customers (i.e. citizens) are willing to pay. They believe that “information technology will destroy the capacity of the state to charge more for its services than they are worth to the people who pay for them,” leading to an outright commercialization of sovereignty where states are forced to compete, like other businesses, for customers. They predict this will be a key development in the widespread adoption of commercially available encryption technologies that will allow individuals, “... to determine

where to domicile their economic activities and how much income tax they prefer to pay. Many transactions in the information age will not need to be domiciled in any territorial sovereignty at all. Those that do will increasingly find their way to places like Bermuda, the Cayman Islands, Uruguay, or similar jurisdictions that do not impose income taxes or other costly transaction burdens on commerce.”¹⁰

Now it is unlikely that the truly “Sovereign Individual” of Davidson and Rees-Mogg will come to pass within the next twenty years, but they make a good point to highlight key implications of the information revolution. In addition to empowering individuals and complicating state finances, information technology does hold the potential, via secure encryption, to place high-value assets outside the reach of governments for the first time in the history of the nation-state. The competition between state governments and those who wish to secure their finances outside the control of national governments, whether they are corporations, criminals, or other organizations, will certainly be part of the emerging strategic environment of the next century.

Military: Security Forces, Mercenary Armies

To a very great extent, the concept of sovereignty is defined by the ‘legitimate monopoly of force’ that a nation-state has over its territory and citizens. That monopoly is more than theoretical. Indeed, nothing distinguishes failed states more than the images of half-uniformed and heavily-armed paramilitaries bounding through broken cities, clear evidence that the government is no longer in control of the country. A legitimate monopoly of force is essential to a nation-state’s control over its territory, and if circumstances alter that relationship, either the legitimacy or the monopoly, the utility and ultimately the true authority of the government is called into question. Considered in this light, two trends in military and security affairs, the

decline of major power war and the rise of privately operated or ‘mercenary’ armed forces will define the impact military affairs on society in the twenty-first century.¹¹

Compared to its historical prevalence, since the end of WWII, interstate war between major powers has been on the decline. Professor of Political Science Kalevi Holsti’s research on trends in war has shown that there has been an average of 0.005 interstate wars (per state per year) since 1945. This is far fewer than the 0.014 interstate wars in the nineteenth century and 0.036 from 1919-39 (Table 1). The University of Michigan’s Correlates of War Project echoes Holsti’s trends.¹²

While war between states has been decreasing since 1945, there has been over the same time a dramatic rise in the number of wars within states. Many analysts, while they may not agree on the absolute increase, have commented upon this general rise in intrastate conflict. Colonel Rod Paschall, former commander of the U.S. Army’s Delta Force, has pointed out that “In the late 19th Century, 65 percent of all wars could be described as low-intensity conflicts. In the 1970s, low-intensity conflict represented 80 percent of all wars. A decade later, in the 1980s, low-intensity conflicts represented 90 percent of all wars. There is nothing readily apparent that is going to arrest this trend.”¹³ Moreover, according to the Conflict Data Project at the University of Uppsala, Sweden, out of 108 armed conflicts during 1989–98, 92 took place within the boundaries of a single country. Nine conflicts involved intrastate conflict with foreign intervention, and a mere seven during that decade were interstate wars. Professor Holsti has also noted “there have been an average of 0.85 internal wars per state since 1945, compared to only 0.30 interstate wars per state, or a ratio of 2.9 domestic wars for every interstate war and armed intervention.” (Table 2)¹⁴ The University of Michigan’s Correlates of War Project also shows an increase in civil wars.¹⁵

Table 1: The Decline of Interstate War

Period	Average Number. of States	Number of Interstate Wars	<i>Interstate Wars/State per year</i>
1715-1814	19	36	0.019
1815-1914	21	29	0.014
1918-1941	30	25	0.036
1945-1995	140	38	0.005

Source: Kalevi J. Holsti, *The State, War, and the State of War*, (Cambridge, U.K.: Cambridge University Press, 1996), 24.

Table 2: Armed Conflicts by type 1945-1995

TOTAL	State vs.State/ Intervention	Secession/ Resistance	Ideological/ Factional	Of which Internal	<i>Percent internal</i>	In which external armed intervention	Percent external intervention
164	38	64	62	126	77%	38	30%

Source: Kalevi J. Holsti, *The State, War, and the State of War*, (Cambridge, U.K.: Cambridge University Press, 1996), 22.

The increase in low-intensity conflict and civil war is important because, where they are present, they tend to undermine the state's monopoly of force and its authority. Historian Martin Van Creveld believes that the record of modern armed forces in dealing with low intensity conflict or insurgencies is one of complete failure:

From Afghanistan (where the Soviet army was broken after eight years of fighting) through Cambodia (where the Vietnamese were forced to retreat) and Sri Lanka (which the Indian army failed to bring to order) to Namibia (granted its independence by South Africa after a long and bitter struggle) to Eritrea (which won its independence against everything that the Ethiopians, supported by the USSR, could do) and to Somalia (evacuated by most United Nations forces after their failure to deal with the local warlords), the story was always the same. Each time modern (more or less), heavily armed, regular, state-owned forces took on insurgencies, they were defeated.¹⁶

Van Creveld believes that this inability of state-based forces to deal with insurgency is part of a "transformation of war" that is one aspect of the declining of power of the nation-state and symptomatic of an ongoing evolution of power relationships within the international system.¹⁷

Another trend noted by Van Creveld and others is the increasing presence of hired or mercenary soldiers in conflicts around the world. This is significant because it illustrates that, in territories where they are employed, the state is either unable or unwilling to provide protection for its citizens and businesses. In some cases, mercenaries represent an outright challenge to the nation-states traditional and defining monopoly of force. This increasing use of mercenaries was obvious to the United Nations in 1992 when the General Assembly passed a resolution that directed against the use of mercenaries.¹⁸ In a recent Center for Defense Information monograph on the prevalence of mercenary forces, analyst David Isenberg describes:

Approximately 90 private security forces of varying types exist in Africa today. There are 80 in Angola alone because the Angolan government requires commercial firms such as oil and mining companies to provide their own security. . . The end of the Cold War marked the decline in superpower involvement in regional conflicts, thus creating a demand for military forces in many developing countries. Basic economics explains that the intersection of a supply and demand curve in the case at hand creates a market in which a high demand dictates a high price. Hence, private security firms continue to emerge around the globe.¹⁹

Even when these entrepreneurial efforts are advertised as security forces rather than hired soldiers, the implication is the same. They provide a service that the local government does not. Governments that cannot provide for their citizens' safety are not likely to engender much enthusiasm and are not likely to be stable over the long term.

Not all observers agree. In a review essay in *Foreign Affairs*, historian John Keegan critiques Van Creveld specifically and the thesis of the decline of the nation-state in general. Keegan points out that the number of "effective military powers" is actually declining, and no other organization has shown an interest in challenging the military power of the state. Moreover, wars by weak states that try to challenge state power, either by interrupting the flow of vital resources or by acquiring weapons of mass destruction, "seemed doomed to

failure.”²⁰ Keegan concludes that war, “at least war as it has been known since Napoleon,” does not have a future.²¹

However, Keegan is not disagreeing as much as he thinks he is. The decline of war between major powers, ‘as it has been known since Napoleon,’ is demonstrably on the decline. That fact is not at issue. What scholars like Van Creveld and Holsti point out, is that a different form of warfare, low-intensity conflict (LIC), has taken its place and is a source of great instability in the developing world. The issue is how much of a threat this form of warfare represents to the rest of the world. Van Creveld believes, based on the record of superpower failure in combating LIC, that it does represent a new and destabilizing form of conflict. Keegan chooses not to address the failure, and continues to discuss ‘war since Napoleon.’ This debate is not so much disagreement as it is talking past one another. At a minimum, Keegan and other traditionalists need to respond to the increase in LIC and civil wars in their critique rather than dismiss the trend by defining it out of the argument.

In the meantime, predictions on the future of conflict must account for both the decline of major war as well as the increase in LIC/civil war. In that light, the military trends are clear and unambiguous. There is less major war, more minor war, and a great many more private warriors.

Social: Toward Fractured Sovereignities

The steady concentration of power in the hands of states that began in 1648 with the Peace of Westphalia is over, at least for a while.

—Jessica T. Mathews

The waves of demographic, technological, and military change described above will wash upon on an increasingly complex international system that was none too steady in the wake of the Cold War.

One source of that complexity is the increasing numbers of international actors. The number of sovereign states has tripled since 1945.²² while the current number of non-governmental (NGO) and intergovernmental (IGO) actors has been described as “impossible to measure.”²³ At the same time, these many actors have to deal with an international legal environment that requires different ways of dealing with ‘legal’ and ‘illegal’ activity. For example, legal migration, the lawful implementation of computer networks, and the lawful right of self-defense are all prerogatives of national governments. On the other hand, illegal migration, information warfare and money laundering via private encryption, collective defense (even in an offensive role, i.e. NATO’s bombardment of Serbia) and the regulation of mercenary forces become ‘transnational issues’ that require states to work with a plethora of non-state or supra-state organizations to properly address.

In the developed world, state governments cede authority to regional and supra-national bodies to combat transnational disease and crime. State currencies are no longer worth what the states say, but what the global currency markets judge. In the developing world, where the reach of the state was in many cases never too strong to begin with, the state fails, the clans and tribes resume their historic role, and the international community responds to the human suffering.

Taken together, the trends are problematic and presage difficult times ahead. Demographic change makes it difficult for weak states to control their borders against refugees and migrants. Technological change requires states loosen control of their finances and communications if they wish to become competitive in the global marketplace. The trajectory of development in military science, the current economics of violence, point to decreasing returns to the central control of monopoly violence that allow much smaller ‘military organizations’ to raise the cost of containing them and thereby marginalize expensive state-based forces. Increasingly less able to

control its border, finances, and the tools of organized violence, states are forced to cope with changed circumstances. The problem of state failure among developing states combined with the process of globalization in the developed states point to a need, possibly even a market niche for organizational forms that work where a territorial-based nation-state is no longer the optimal solution.

There is a surprising degree of similarity in the various analysts and commentators view of the future shape of the international system that is pulled in opposite directions by the processes of globalization and state failure. Martin Van Creveld believes

Still, the prospect is that the use of armed violence—which since at least Thomas Hobbes has been recognized as the most important function of the state—will again be shared out among other entities, as it was during the Middle Ages. Some entities will be territorial but not sovereign—that is, communities larger than states; others, perhaps more numerous, will be neither sovereign nor territorial. Some will operate in the name of political, ideological, religious, or ethnic objectives, others with an eye purely to private gain.²⁴

Council on Foreign Relations Fellow Jessica Mathews points out that, “If current trends continue, the international system 50 years hence will be profoundly different. During the transition, the Westphalian system and an evolving one will exist side by side. States will set the rules by which all other actors operate, but outside forces will increasingly make decisions for them.”²⁵ Similarly, Davidson and Rees-Mogg describe:

Before the nation-state, it was difficult to enumerate precisely the number of sovereignties that existed in the world because they overlapped in complex ways and many varied forms of organization exercised power. They will do so again. The dividing lines between territories tended to become clearly demarcated and fixed as borders in the nation-state system. They will become hazy again in the Information Age. In the new millennium, sovereignty will be fragmented once more. New entities will emerge exercising some but not all of the characteristics we have come to associate with governments.²⁶

The evolution of the international system seems to be driven by a process that inclines states to stop performing certain tasks that can be ceded to supranational bodies, outsourced to NGOs,

or ignored altogether. As these other players pick up the slack, they begin to acquire power and certain aspects of sovereignty on their own. These are the fragmented or fractured sovereignties that will be shaping the international landscape over the next generation.

This is not to say that the nation-state or the concept of sovereignty will wither away. The term ‘fractured’ is more a description of the process where non-state entities acquire differing aspect of sovereignty. To be sure, for the foreseeable future, most territorial nation-states will maintain their land and their sovereignty, but other entities are likely to emerge that are neither territorial nor sovereign, but still command some legitimacy within the international system.

As humanity copes with a changing world today, there are aspects of sovereignty that get in the way of getting the job done, whether tracking global epidemics, establishing environmental standards, or restoring order in failed states. The fractured sovereignties currently developing in response to these conditions will change the international security environment in a profound way, and the implications for the application of aerospace power in new world will be the subject of the next chapter.

Notes

¹ National Intelligence Council (NIC), “*Global Trends 2015: A Dialogue About the Future With Nongovernment Experts*,” on-line, Internet, 7 Feb 01, available from <http://www.cia.gov/cia/publications/globaltrends2015/index.html#link>.

².Ibid.

³.Ibid.

⁴ Philip Martin and Jonas Widren, “International Migration: A Global Challenge,” *Population Bulletin*, April 1996, p.2.

⁵ NIC, “*Global Trends 2015: A Dialogue About the Future With Nongovernment Experts*”.

⁶ Gordon E. Moore, “Cramming More Components onto Integrated Circuits.” *Electronics*. (Volume 38, no. 8, April 19, 1965) on-line, Internet, 3 Mar 01, available from <http://www.intel.com/research/silicon/moorespaper.pdf>.

⁷ George Gilder, “The Bandwidth Tidal Wave.” On-line, Internet, 5 Mar 01, available from http://www.gildertech.com/public/telecosm_series/tidalwave.html.

⁸ NIC, “*Global Trends 2015: A Dialogue About the Future With Nongovernment Experts*,” on-line, Internet, 7 Feb 01, available from <http://www.cia.gov/cia/publications/globaltrends2015/index.html#link9a>.

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⁹Walter B. Wriston, *The Twilight of Sovereignty: How the Information Revolution is Transforming Our World*, (New York: Charles Scribner's Sons, 1992) p. 9.

¹⁰James Dale Davidson and Lord William Rees-Mogg, *The Sovereign Individual: How to Survive and Thrive During the Collapse of the Welfare State*, (New York: Simon and Schuster, 1997) pp. 194-5.

¹¹Margareta Sollenberg, ed., *States in Armed Conflict 1998, Report 54* (Uppsala, Sweden: Uppsala Univ., Department of Peace and Conflict Research, 1999).from Michael Renner, "Alternative Futures In War And Conflict," Naval War College Reveiw, (Autumn 2000), on-line, Internet, 10 Feb 01, available from

<http://www.nwc.navy.mil/press/Review/2000/autumn/art3-a00.htm>.

¹²Barry B. Hughes, *Continuity and Change in World Politics*, (New Jersey: Prentice-Hall, Inc., 1997), 114.

¹³Rod Paschall, *LIC 2010: Special Operations and Unconventional Warfare in the Next Century*, (McLean, VA: Brassey's Inc., 1990), 7.

¹⁴Kalevi J. Holsti, *The State, War, and the State of War*, (Cambridge, U.K.: Cambridge University Press, 1996), 24.

¹⁵Barry B. Hughes, *Continuity and Change in World Politics*, 114.

¹⁶Martin Van Creveld, "Through A Glass, Darkly: Some Reflections on the Future of War," *Naval War College Reveiw*, (Autumn 2000) on-line, Internet, 8 Feb 01, available from <http://www.nwc.navy.mil/press/Review/2000/autumn/art2-a00.htm>.

¹⁷See Martin Van Creveld, *On Future War and The Rise and Decline of the State*.

¹⁸United Nations General Assembly Resolution 47/84, 47 U.N. Supp. (No. 49) at 165, U.N. Doc. A/47/49 (1992).

¹⁹David Isenberg, "Soldiers of Fortune Ltd.: A Profile of Today's Private Sector Corporate Mercenary Firms" (Washington: Center for Defense Information, November 1997). An online version of this monograph is posted on the CDI web site at www.cdi.org/issues/mercenaries

²⁰John Keegan, "War Ca Change," *Foreign Affairs* vol. 76 no. 3 (May/June 1997), 116.

²¹*Ibid*.

²²Martin Van Creveld, *The Rise and Decline of the State*, p. 332.

²³Jessica T. Mathews, "Power Shift," *Foreign Affairs Volume 76 No.1*, (January/February 1997) 52.

²⁴Martin Van Creveld, "Through A Glass, Darkly: Some Reflections on the Future of War".

²⁵Jessica T. Mathews, 66.

²⁶James Dale Davidson and Lord William Rees-Mogg, *The Sovereign Individual: How to Survive and Thrive During the Collapse of the Welfare State*, (New York: Simon and Schuster, 1997) 24-5.

Chapter 3

Implications for Aerospace Forces

As the international system evolves in response to the various demographic, technological, military and social pressures, aerospace forces will be presented with a challenge. For the first time since their inception, aerospace forces will be routinely required to operate in a political environment where territorial nation-states are only one of the major players. That environment will also include the United Nations, regional security collectives, non-governmental relief organizations, human-rights monitoring organizations, and private security forces.

Aspects of this kind of environment were present in the early days of the Bosnia crisis. NATO aircrews patrolled no-fly zones to support United Nations Protection Forces delivery of aid to ethnic enclaves that were surrounded by military and paramilitary forces of the Bosnian Serb Army. Any NATO close air support for the UNPROFOR had to be authorized by both local NATO Air commanders and U.N. representatives under the problematic ‘dual key’ arrangement.¹ In short, no single organization was completely sovereign. The responsibilities and power were divided among several different organizations. Similar competing authorities and multiple actors were also present in operations against Serbia, and relief operation in Mozambique and Sierra Leone.²

In these environments which are likely to prevail in the coming years, the key task for aerospace forces will be to stabilize unstable situations. By controlling the aerospace medium

above and beyond the patchwork of competing quasi-sovereign organizations on the ground, aerospace forces will need to create the conditions that will allow relief aid to flow in the case of humanitarian crises or bombs to fall in the case of actors who have raised international ire.

Considering the evolving international system as described by the research, three future aerospace challenges are apparent. The increase in migrants suggests that Aerospace forces will likely be tasked to respond to crises involving population movements. At the same time, the process of fracturing sovereignty is likely to lead to operations in areas where boundaries are in question. Finally, the increasing number of players in the international system coupled with the decline of major war as a way of settling disputes suggests that maintaining the legitimacy of the operation among the diverse group of interested parties will be familiar fixture of future operations.

Implications -- People: Population Movement as Operational Art

In a world with millions of potential migrants, some willing, others less so, and an increasing number of private ‘military’ organizations, the potential for forced migration to become useful weapon for inflicting instability on neighboring territories is growing. Furthermore, these future practitioners have the lessons of the 1990s in Rwanda and Kosovo to guide them. It is frightening to contemplate, but to some minds, the mass movements of humanity can address what they perceive as immediate social problems. In 1994, Brigadier General Hayden, then the Director of Intelligence of U.S. European Command described the Hutu exodus from Rwanda as:

...a political act, well organized by the same national and village power structures that have just organized the slaughter of the Tutsis. Like the Tutsis before them, in an earlier round of a struggle that stretches back for decades, the Hutus are now going into exile and taking with them all the attributes of statehood save one—land. They are to be an army, a government and a population in exile; for us to

work to move the population back into Rwanda would put us at odds with the Hutu government and army and put us right in the middle of an African civil war.³

Mass migration across borders can be tremendously destabilizing. Recall the domestic strife that Fidel Castro inflicted on the southern states when he instigated the Muriel boatlift in 1980. More recently, the economic crisis in Albania induced mass migration across the Adriatic to Italy, and the collapse of the Indonesian economy sent thousands of Indonesians to Malaysia. In both cases the receiving countries deployed their militaries to cope with the influx of humanity.⁴ In the world of 2020 with sixty to eighty million refugees and migrants available and with the successes of the Hutus and Operation Horseshoe in Serbia in mind, it is easy to envision new types of operations, (one hesitates to label them ‘military’) where the object becomes destabilizing the targeted territory by flooding it with waves of refugees. This development would be the logical result of ethnic cleansing, deliberate starvation, and other terror tactics that deliberately target civilians as the focus of effort.

The forced migrations in Africa and the Balkans were accomplished by a comparatively small number of professional thugs and paramilitaries. Similarly, Kosovo and Chechnya the truly brutal house-to-house work was outsourced to contractors. The objectives for the traditional forces was merely to seal off the escape routes leaving the targeted populations no choice but to flee in one direction.⁵

Deliberate population movements will be useful because they will be able to remove troublesome groups from desirable territory while disguising the aggression as a humanitarian problem. There will be a real question as to whether these actions constitute an act of war. Similarly, the combatant status of mercenary forces will likely be open to question. If they do not belong to the national forces of the state in question, then what will their status be?

By creating confusion about the means and ultimate goals of the “operation,” future competitors will be able to create facts on the ground that Aerospace forces were never intended to deal with. The goal of the forced migration will be disruption of the civil order. The challenge for Aerospace forces will likely involve tracking and monitoring the movements through Intelligence, Surveillance, and Reconnaissance (ISR) and providing relief supplies through airlift. Aerospace forces will also be challenged to identify and target the dispersed ‘forces’ that are causing the migration. If there are no ‘national’ forces responsible, the task will be compounded, but the task will remain. Aerospace forces will be required to stabilize the environment, keep the conflict from spreading, and identify the factions responsible.

Implications – Operations with Blurred Boundaries

The international community has shown great reluctance to change or move borders as a result of military conflict. Aside from the instances of state break-up, no borders of any nation have changed since the end of World War II. Meanwhile, the demographic, technological, and social trends that confront the international system confront its member states no less. Within states, ethnic enclaves are set up and then must be defended.

Whether it is the safe areas in Bosnia, the towns in Kosovo, or refugee camps in Zaire, there is a repeating pattern where populations are assigned to a small piece of land in a larger territory. Their persecution by the majority soon raises international concern, and governments begin to contemplate a military response. Dealing with enclaves surrounded by a hostile population is very problematic in an international system composed of territorial nation-states, but in an age of fracturing sovereignties, it is not too difficult to imagine a patchwork of semi-sovereign organizations in close proximity with security ensured by private security forces within the towns. Meanwhile, aerospace forces could secure the airspace, roads, ports, airfields and other

strategic communications. In such a scenario, the well-worn operational concept where a single ground commander coordinates air support from the JFACC may no longer be relevant in an environment where no one entity controls the ground. Aerospace forces will likely need to learn to coordinate support from the variety of semi-sovereign players that will be co-existing on the disputed territory.

At the same time, shifting and uncertain borders will complicate the targeting process. Coercion via Aerospace forces relies on identifying targets, either infrastructure or forces, to hold at risk to compel an opponent to do our bidding. Targeting forces is likely to become increasingly problematic as weak states pare down their already sparse force levels. At the same time, contract or irregular forces will be difficult to identify in a timely fashion. As factions compete over territory and influence in failing states, it will become less clear which group is associated with what infrastructure. Targeting databases will have to associate targets to more than just nations if coercive strategies are to continue to be employed.

Implications -- Legitimacy: Permission for Destruction

In *The Limits to Airpower*, Mark Clodfelter describes how the effective use of diplomacy isolated the North Vietnamese and set the stage for the successful LINEBACKER campaigns.⁶ Leaders during DESERT STORM and DELIBERATE FORCE and ALLIED FORCE took a page from this success story and realized that in order for a modern air campaign to be effective, it must be seen as legitimate in the eyes of the international community. Diplomatically isolating the North Vietnamese, Saddam Hussein, the Bosnian Serbs, the Slobodan Milosevic had that effect. Consequently, there was international consensus to proceed with air attacks to punish organizations that were seen as essentially criminal by a majority of the world.

Considering that all future aerospace campaigns will be revealed to the public through the eyes of the media commentators who are watching the strikes in real-time, in the future, it will be essential that the world community see aerospace campaigns as legitimate. That community will increasingly consist of actors who will demand a role in the decision-making process. In a networked world, processes must be seen as transparent if they are to gain the trust of the international community. It is a safe bet that aerospace campaign plans, including target development and battle damage assessment will have to be shared with non-military and possibly even non-governmental players in order for the operation to maintain its legitimacy.

Maintaining operational security and creating decisive aerospace effects while convincing these new players that all pains are being taken to reduce collateral damage is likely to become an even greater challenge in this environment.

Conclusion

The international system is in flux. Observers may disagree about the specific causes, but there is surprising unanimity in the perception of change. It is no surprise that the political scientists like Barry Hughes tend to see political causes (end of the cold war, shifting polarity) behind the change, nor that businessmen like Davidson And Rees-Mogg describe it in economic terms, nor that military historian van Creveld blames it on a transformation of war. They are all describing change in the international system, and there is much to take from all of their analysis. However, while the analysts are analyzing the causes and their interactions for years to come, others will have to deal with the repercussions. This is not to say there will be no wars or that the wars will be less violent than before. Recall that some models of multi-polar systems predict an increase in war, and the recent increase in low-intensity conflict and civil wars may be a real-world reflection of that prediction. The inhabitants of today's troubled states are not living in a

less violent world, and global communications and transportation ensure that their problems soon become others’.

In this uncertain environment, the United States and its allies will be status quo powers, interested in stability above all, and aerospace power will provide a key asymmetric advantage in dealing with instability. Their task will be to contain the chaos rather than confront the fielded forces of a functioning nation-state. It will be important to understand the distinction. Carl von Clausewitz was especially firm on this point “The first, the supreme, the most far-reaching act of judgement that the statesman and the commander have to make is to establish by that test the kind of war on which they are embarking; neither mistaking it for, nor trying to turn it into something that is alien to its nature.”⁷ Future wars, in the international system described by the research, are likely to be more concerned with stabilization of the political situation rather than destruction of enemy forces.

With this advice and the impact of the trends discussed above in mind, the results of the research indicate that the threat and the wars in the future will not be against a state or groups of states, but more concerned with the failed states and how that failure should be handled. While the international community struggles with that question, the task of stabilizing and containing the instability will likely fall to the military. In time, it is likely that the “humanitarian” missions will be better understood as true security problems that call for military participation.

The challenge will be for aerospace forces to adapt to changed circumstances: non-traditional enemies and a new mission of establishing stability in a dramatically changed security environment. The research indicates that aerospace forces are likely to confront mass population movements, uncertain and disputed boundaries, and will have to plan operations with an eye toward maintaining legitimacy at all costs. This will be a definite change in emphasis for the

forces and way of war that were originated as a way of leaping over the carnage of World War I. No longer can aerospace forces continue to plan for employment solely against other states, they must begin the difficult task of planning for operations in an age of fractured sovereignties.

This is not the end for aerospace as an instrument of military force, but instead a beginning for aerospace power as an instrument of successful state power in an increasingly unsettled international system.

In a very different context, referring to the Allies' early victories in North Africa, Winston Churchill remarked, "This is not the end. It is not even the beginning of the end. It is however, the end of the beginning." That is the right formulation for aerospace power on the threshold of the twenty-first century. Planning for the employment of aerospace forces in a stabilizing role to combat the chaos of failed states and fractured sovereignties is not the end of aerospace power, merely the end of the beginning.

Notes

¹ Michael V. Hayden, "Warfighters and Intelligence: One Team –One Fight," *Defense Intelligence Journal*; Vol. 4 No. 2, 1995, 29.

² Christian Lowe, "General Offers Glimpse Into Humanitarian Missions," *Defense Week*, February 12, 2001, p. 16 see also Jonathan Broder, "Mercenaries: The Future of U.N. Peacekeeping?" on-line, Internet, 6 Feb 01, available from http://www.foxnews.com/world/062300/un_broder.sml.

³ Hayden, 23.

⁴ Paul J. Smith, "Transnational Security Threats and State Survival: A Role for the Military?," *Parameters*, Autumn 2000, 77-91.

⁵ For Kosovo see Johanna McGeary, "The Road to Hell," CNN.com, on-line, Internet, 10 Feb 01, available from <http://www.cnn.com/ALLPOLITICS/time/1999/04/06/road.hell.html>, On Chechnya, see Margaret Paxson, "The Ghosts Of War; Russia's Sons Come Home From Chechnya" *Washington Post Magazine*, Sunday, December 17, 2000 ; W09.

⁶ Mark Clodfelter, *The Limits of Air Power: The American Bombing of North Vietnam*, (New York. The Free Press, 1989) 172-3.

⁷ Carl von Clausewitz, *On War*, (Michael Howard and Peter Paret eds, Princeton: Princeton University Press, 1976) 88.

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