

# Maturing Aerospace Power

**Charles D. Link**  
**Major General, USAF, (Ret)**

*Premise: Two growing trends converge to create increasing demand for military capabilities of certain characteristics. These characteristics might be described in terms of responsiveness, reach, lethality, and precision, all or combinations thereof, delivered through methods that reduce risk to the attacking force to almost inconsequential levels.*

## **Political Trends**

Modern societies, manifesting political democracy and market economy, tend to desire a sufficiency of stability in world affairs. A sufficiency of stability encourages and enables orderly and predictable development in the social, political, and economic spheres. Such an environment permits market economies to plan, execute and deliver in ways that create national and personal prosperity amid a sense of a secure and desirable future.

In seeking this sufficiency of stability, these modern societies tend to adopt similar defense strategies. Firstly, they tend to espouse "defense," as opposed to other strategies that might be perceived as expansive or imperial. Democracies do not generally attack other nations in order to expand territory, capture resources, or enslave populations. Their primary interests lie in preserving the integrity of their territory and their way of life through an effective defense, thereby discouraging the aggression of others. Their secondary interests often lie in regional stability to preserve market relationships. Many of these nations are globally engaged in ways that marshal their interests in even the most distant of potential crises.

While these modern democracies will wish to counter and/or deter aggression, they can be expected to carefully weigh their "interest" against the potential "cost" of action. Leaders elected by democracies can be expected to be very careful in committing the nation's young people in military operations. There are no "distant" theaters in the modern world where the horrors of war are hidden from public view. As a result, modern democracies manifest little appetite for traditional "conquest," friendly force, or even adversary civilian casualties.

The combined effects of these factors, increasingly in evidence in all modern societies, leads to the desire to be able to influence an adversary's behavior as opposed to capturing and occupying his territory, appropriating his resources, or ruling his people. One wishes to be able to control an adversary's behavior in order to reduce or eliminate those activities deemed inimical to one's interest. Modern societies desire capabilities that will influence outcomes with the greatest assurance at the least cost in blood.

## **Military Trends**

Since the earliest time, mankind's nature has led to argument and strife. At the same time, his intelligence has encouraged him to make tools for many purposes – making war has always been one of those purposes. An examination of the long term trend, from club to spear, to bow and arrow, to catapult, musket, rifle and so on indicate a specific motivation. One wishes to be able to affect an adversary from a sufficient distance so as to avoid being similarly affected. In other words, there is a specific and rational desire to be able to project distant influence without projecting vulnerability in the same ratio.

Since the dawn of flight, certain of those concerned with military matters have understood the extraordinary potential in dominating the third dimension. For most of the time since, their farsighted vision has exceeded their technological grasp. But then, that is what vision is all about – explaining the possible in ways that make it sufficiently attractive to focus investment and energy.

The long-term military trend toward projecting distant influence without projecting vulnerability in the same ratio has favored the development of aerospace capabilities resting firmly in the ever-evolving foundation of modern technology. Advances in speed, range, agility, precision, and lethality have been complemented by improvements in stealth, standoff, and information in ways that support the fullest exploitation of the third dimension in military matters. These capabilities manifest themselves in Aerospace Power.

### **Mapping Progress**

For the purpose of drawing the conclusions this paper intends to support, it is useful to consider the progress of aerospace capabilities, as their characteristics, and intended use and unintended consequences have matured over time. One calls to mind the many forms and uses of aerospace capabilities manifested over the course of the two world wars. From observation to reconnaissance, from air defense to close support, from interdiction to strategic bombardment, through a full range of applications, aerospace capabilities demonstrated an inherent versatility. Still, problems in accuracy, night and weather limitations, munitions and airframe inadequacies combined to constrain the full development of inherent potential.

For the most part, improvements in the effectiveness of airpower remained relatively evolutionary through the Vietnam War period. Near the close of that conflict, however, precision guided munitions and improved air-to-air capabilities were beginning to hint at future possibilities no less than revolutionary. United States defense planning, particular the various war plans of regional US Commanders-in-Chiefs (CINCS) reflected the limiting view of airpower capabilities. These various war plans were designed to support variations of a "one and one half" to "two major regional conflicts" force-sizing construct adopted by succeeding administrations over the past 20 years or so. As such, many of these plans adopted strikingly similar assumptions and sequences of events.

Regional war plans of US and various regional Allies generally assumed that the conflict would begin by an attack on an Allied or otherwise friendly nation by a regional adversary. This is an entirely logical assumption, considering the democratic natures of nations that attract US support, friendship or alliance. The follow on assumption, that the US and its Ally would cede

territory to the aggressor while building up regional land force strength does not rest on such solid logic. Instead, it rests on a long term US war fighting bias that envisions "joint" operations as organizing air and naval capabilities to support land force operations. In these plans, aerospace power capabilities were generally harnessed to the vision of land force commanders, assigned inefficient "local air superiority" missions to protect the land force build-up, then expected to support ground maneuver with "fires."

In exercises all over the globe, US forces trained American and Allies alike to consider Air Force combat capabilities as support capabilities for land maneuver forces. Typical exercise events were the daily "apportionment" meetings in which the Joint Force Commander and other component commanders reviewed the Air Component Commander's plan for support of other component operations, then reviewed the extent to which the previous day's plan was carried out in terms of such support. No such meetings were required to police the activities of the other components.

In the vast majority of cases, these plans assumed a policy goal of total victory, or "conquest" of the adversary. On the other hand, in the vast majority of these cases, the political authorities anticipated to be involved did not envision "conquest". As a result, there developed an expanding gulf between the capabilities the US military planned and exercised and those better suited to the range of flexible uses more suited to likely policy goals of the political authorities.

The "legacy conflict construct" manifested itself in the way in which the US initially planned for the defense of the Arabian Peninsula. Shortly after taking command at USCENTCOM, General Norman Schwarzkopf completed exercise "Internal Look" to determine the adequacy of US planning against an attack from Iraq. While such an attack was not considered highly probable at the time, it was the most likely of available regional scenarios, and sufficiently demanding as to provide a good test of CENTCOM plans. As is now widely known, the results were discouraging, sufficiently alarming to Schwarzkopf as to motivate a call to the Air Force for a help in developing a more effective plan as the prospect of hostilities began to appear less remote in the early summer of 1990.

## **The Gulf War**

By the time of the Gulf War, modern military technology had begun to create potential asymmetries across air, land, and naval forces. Still, the notion that armies were required to combat armies, navies to combat navies, and air forces to combat air forces was continuing in vogue. As a result of Schwarzkopf's adoption of the Air Force proposed air campaign, that paradigm was forever broken. Modern aerospace capabilities outstripped the adversary's aerospace capabilities, creating undefeatable asymmetries that severely limited the effectiveness of the adversary's land forces. Unfortunately, US military planners failed to anticipate the capacity of modern aerospace capabilities to constrain the options of surface based forces. The doctrine, training, exercises, and concepts based on such a notion had not materialized – the new paradigm was simply delivered into a vacuum, born without context for best exploitation. Still, the effectiveness of these capabilities against adversary land forces, including the most sophisticated integrated air defense systems of the time, was powerfully and convincingly demonstrated.

Opponents of greater reliance on aerospace capabilities began almost immediately to characterize the Gulf War as "anomalous." It was described as perfectly suited to aerospace power, and not likely to be repeated in any other time or place. They warned against taking any truly useful lessons from the experience. Regardless of one's position on these questions, the Gulf War provided some clear milestones in the maturation of modern aerospace capabilities.

### **Notable Gulf War firsts:**

- First modern manifestation of unified command of airpower functions at theater level - a Joint Force Air Component Commander (JFACC)
- First large scale, strategic use of conventional airpower in a major conflict since the end of WWII – Rolling Thunder, the campaign waged to persuade North Vietnam to release American POWs, was applied against secondary objectives; the American raid against Libya was not large scale
- First major conflict to feature an air campaign as its centerpiece - its defining characteristic
- First large scale use of stealth, precision bombardment, effects based targeting, and parallel warfare
- First operational realization of the synergy of air and space power at theater and global level
- First campaign level application of modern aerospace capabilities directly against policy objectives

Perhaps most importantly, the Gulf War experience laid the foundation for airmen to begin thinking in terms of counter surface operations to 1) create an environment suitable for subsequent surface operations [as opposed to the simultaneous operations envisioned in "air land battle"], and 2) contribute directly to the achievement of a policy goal.

### **Post-Gulf War Experience**

In two conflict situations since the Gulf War, the US and allies have relied almost exclusively on aerospace capabilities to achieve specific policy goals. The policy goal of Operation Deliberate Force in 1995 was to bring the otherwise recalcitrant Bosnian Serbs to peace talks, which were held in Dayton, Ohio. The policy goal of Operation Allied Force in 1999 was a bit more murky, but could be summed up as clearing the Kosovar Republic of Serbian forces. In each case, the policy goals were achieved, although perhaps not as rapidly nor as cleanly as the US and her Allies might have wished.

### **Bosnia – Operation Deliberate Force**

If the Gulf War was the first campaign level application of modern aerospace capabilities directly against policy goals, then Operation Deliberate Force was the second. As in the Gulf War, the air campaign was designed to create an environment suitable for subsequent not simultaneous surface operations. The results, Bosnian Serb attendance and acceptance of the Dayton Accords, was hailed by political authorities as an extraordinary success. Critics of the

growing utility of modern aerospace power were stringent in their praise, assigning much of the credit to Croat ground forces.

### **Kosovo – Operation Allied Force**

The air campaign that resulted in Serb acceptance of NATO conditions for withdrawal of their forces from Kosovo was the third campaign level application of aerospace capabilities directly against policy goals. Unlike the Gulf War and, to some extent, Operation Deliberate Force, Allied Force clearly manifested the lack of practice and policy precedent for the exclusive use of aerospace capabilities.

The policy context for the conflict was not harmonized with the military capabilities that the political authorities intended to use. One does not easily eject forces from Kosovo by bombing in Serbia. On the other hand, had the political authorities announced their intention was to prevent the adversary from ever being capable of such transgressions in the future, the preferred military capabilities would have been perfectly harmonized.

Further, a number of policy pronouncements, deemed useful or necessary from a political perspective, complicated the already difficult military effort. Authorities announced their firm intention to avoid the use of ground forces, providing the adversary two key insights: 1) he could focus his defensive efforts on aerospace capabilities alone, and 2) he could assume a certain limit to the level of commitment on the part of the allies.

In spite of these complications, the policy goal was eventually achieved. Political authorities hailed the results as extraordinary. Critics of aerospace capabilities tended to assign credit to the Kosovo Liberation Army ground forces.

### **Lessons airmen should be learning...**

- An air campaign designed to create conditions suitable for subsequent surface force operations is a likely component of all future armed conflict involving the militaries of modern democracies
- Regardless of political constraints, the optimal air campaign is more likely to result from placing an airman in command, in direct dialogue with political authorities as military options are conceived and formulated.
- While the involvement of friendly ground forces may make aerospace power more effective, less effective aerospace power may be sufficient to the task, even preferred. (Interest / risk ratio when the introduction of ground forces leads inevitably to friendly force casualties)
- Aerospace capabilities increasingly constitute the "force of choice" in a wide range of response situations
- Expect to be employed as a "lead force" or an "alternative" force as well as the more traditional employment as a "support force." Still, airmen will continue to be called upon for enabling support to land and naval forces.

- Airmen must learn how to connect their increasingly wondrous capabilities to policy goals – even to influence the articulation of policy goals in ways that better exploit the advantages inherent in aerospace capabilities.

### **What might all this mean for the international community of airmen?**

First and foremost, we must understand the limitations on aerospace capabilities inherent in totalitarian / authoritarian regimes.

- No dictator who holds his position by virtue of force alone can afford to concentrate effective power in his air forces.
- Therefore, every democracy enjoys a certain potential advantage in aerospace power, inherent in the political system.

Second, the ease of forming coalitions of air forces must be understood as value added in the political dimension. Those who would complain about the inequities of some air forces when compared with the United States Air Force should better understand the advantages of military power vested in air forces.

- In a majority of circumstances, any viable airpower capability can be put to good use...
  - Assuming a "professional" level of competence and readiness
  - Assuming a willingness to do what is needed – as opposed to what one prefers to do
- One need spend only a little time in research and discovery to illuminate the vastly more difficult problems inherent in "theater command" of several nations' ground forces.

Third, airmen must take an active role in educating political leadership on the appropriate uses of aerospace capabilities...

- It may be easier / simpler to "authorize airstrikes" than to "declare war," but both decisions demand equal gravity in deliberations.
- The decision to unleash our military capabilities should reflect the most careful weighing of potential gains, costs and risks – to include the moral costs of relatively one-sided combat against a determined and ruthless adversary.

Fourth, as long as a policy goal can be achieved, or even reasonably pursued, without putting large numbers of the nation's young people in harms way, leaders of democracies will choose to do so.

- Airmen should anticipate an ever increasing role in their nations' military undertakings

Finally, whether an airman's nation is imminently threatened by a hostile neighbor, or considering distant employment in support of regional stability, aerospace power will be important. Modern aerospace power is fungible. Aerospace power can compensate for shortfalls or inadequacies in land or naval forces to a much greater extent than either land or naval forces can compensate for shortfalls in aerospace power.

---

### **Disclaimer**

The conclusions and opinions expressed in this document are those of the author cultivated in the freedom of expression, academic environment of Air University. They do not reflect the official position of the U.S. Government, Department of Defense, the United States Air Force or the Air University.

This article has undergone security and policy content review and has been approved for public release IAW AFI 35-101.

---