A growing body of mythology gets in the way of rational decision-making on important defense matters. Gen. Robert C. Mathis, USAF’s Vice Chief of Staff until May 31, presents facts to dispel some of the more pernicious myths floating around Washington.

BY GEN. ROBERT C. MATHIS, USAF (Ret.)

I'm not much on mythology, but there certainly are a lot of myths floating around Washington these days concerning defense issues. Myths have a purpose, but they don't help much when you're making serious decisions that will determine the future of the country.

The growth in Soviet military power and a vital concern over the state of our military forces have precipitated ongoing debate over our national defense today and the course the United States should follow in the future. This debate is important, and I believe that all of us in the military truly welcome the variety of opinions and creative thought that is being brought out. One of the fundamental strengths of this nation is that we freely express our opinions on any and all issues.

While I firmly believe that everyone has a right to his opinion, I don't subscribe to the idea that everyone has a right to his own facts. In the course of the ongoing debate, a set of opinions has been established and repeated to the point where these opinions have almost become accepted as fact. I would like to address some of those “myth-facts,” which, through repetition, have become accepted as enlightened wisdom and truth.

Myth: We Overestimate the Threat

The requirement for national defense is established because of a threat to the nation. One “myth-fact” alleges that we can get by in today's world with a greatly reduced commitment to national defense.

It would be nice to believe that we could lay down our arms and meet our enemies at the bargaining table and make all well in the world. However, history, common sense, and a realistic appraisal of the world today don't support that contention.

The threat we face today from the Soviet Union is very real. The persistent Soviet military buildup, particularly over the last decade, and their adventuresome activities in recent years reflect the Kremlin's drive for advantage over the West. Like it or not, we, along with our allies, are engaged in a tough, long-term competition with a capable, determined adversary.

The Soviets have outspent the United States in defense by more than $400 billion over the last decade. The American defense establishment spends almost half of its allocated budget on manpower, while the Soviets, with their source of cheap labor, spend less than a quarter of their defense budget on manpower. As a result, the Soviets are able to devote more than twice what the United States does to the procurement of military equipment.

The results of the Soviets' persistent acquisition of military power are disturbingly visible. They have modernized their tactical aviation since the early '70s from a fair-weather, short-range air force oriented to defensive operations, to a sophisticated force that operates at long range and in increasingly demanding weather conditions.

At the same time that they modernized, they maintained a fighter production rate that exceeds ours by a factor of three. In other elements of conventional combat power the trend has been the same: tanks, four to one; surface ships, three to one; and submarines, three to one. The challenge is unambiguous. While we hope for a peaceful world, we cannot slacken the pace as long as the Soviets continue on their current course.
When B-17s bombed on the second Schweinfurt mission in October 1943, 3,000 people flew the mission and 600 were lost. In a hypothetical calculation, the same ordnance on target could be delivered today with eight F-16s.

**Myth: Technology Is Trouble**

A second “myth-fact” hypothesizes that modern technology causes us trouble in both cost and maintainability. The “myth-makers” equate technology with complexity and high cost and draw the erroneous conclusion that we would be better off by returning to the combat-proven weapons of the past. They assert that men in simple machines did more—and did it better—than the current generation of men and machines can do today.

This thesis is simply fallacious. For example, the generation of fighter aircraft that we are fielding today—the F-15s, F-16s, and A-10s—represents the most significant increase in operational capability since the introduction of the jet aircraft itself. These aircraft are not only effective, but they are more maintainable, reliable, and easier to operate and employ than the aircraft they replaced.

Somewhere lost in the discussions of those who advocate simple solutions for complicated problems is a comparison of how much capability has changed over time. For instance, the F-16 requires less than two-thirds of the maintenance time of an F-4, while the F-15 requires only about three-fourths of the F-4 maintenance time. So while we have vastly improved the capability, we have at the same time reversed the trend toward increased maintenance.

Even the radios that we use in our aircraft have been made much more reliable and easier to maintain. The ARC-164 ultra-high-frequency radio, common throughout our Air Force today, is roughly forty times more reliable than the radio it replaced.

Mr. Keith Jackson recently illustrated the progress we have made over the years in an article published in the SAE Technical Paper Series—"Quality-Quantity and Technology—A Perspective on Fighter Development." He used the second Schweinfurt raid as a basis for comparison between the B-17, the backbone of the Eighth Air Force in World War II, and the F-16, the smallest combat-coded fighter in the USAF inventory today.

Two hundred ninety-one B-17s, plus their fighter escort, participated in the second Schweinfurt mission on October 14, 1943. Sixty B-17s were lost on that mission—each with a crew of ten. Of the 228 B-17s that made it to the target, only a small percentage was able to get their bombs within the target complex because of the smoke and haze. Actually, only thirteen percent of the bombs that were dropped impacted within that complex. Thus, in order to get that small number of bombs on the target, the Eighth Air Force had to put more than 3,000 people into the air and lost more than 600 of them.

To show you what technology has really done for us, consider how that mission could have been carried out using the tiny F-16. The F-16 can carry about twice the bomb load of the Flying Fortress, could complete the mission in one-third the time, and could serve as its own escort. Using conservative weaponeering estimates, at least seventy-five percent of the bombs dropped by the F-16s would hit the target. Mr. Jackson runs the calculations out and shows that the entire Schweinfurt raid could have been well performed with about eight F-16s and only eight people at risk.

Today, as part of our peacetime training, we routinely deploy fighter squadrons across the ocean and operate them at wartime beddown locations at very high sortie rates for extended periods. With conformal fuel tanks, the F-15 can even cross the Atlantic to Europe without tanker support, if necessary.

As a vivid example of our force projection capability, B-52 bombers recently flew nonstop from North Dakota to Egypt in Exercise Bright Star ’82 and dropped their bomb loads on target within one second of their preplanned time. In that same joint exercise, we also flew paratroopers from Fort Bragg, N. C., to Egypt and dropped them in their designated landing zone within twenty seconds of their planned time. These were the longest distance bombing and paradrop missions in history. These are feats that were simply unachievable without our modern capabilities.

**Myth: We Can’t Sustain Combat**

Another “myth-fact” asserts that, while performance has increased, we have lost the capability to fly our
aircraft at high sortie rates in combat. We keep hearing that we can’t fly these airplanes like that fine P-51 in Europe in World War II or that super F-80 in Korea. In fact, I seem to remember flying a number of sorties every day in that F-80 in Korea, but what does the historical record show us?

The overall average sortie rate of Ninth Air Force during World War II was 0.26—one flight every four days. In January 1944, the Ninth Air Force fighter sortie rate was only 0.13, a total of four sorties for the month. In December 1944, the month of the Battle of the Bulge, Ninth Air Force was only able to average a sortie per aircraft every other day. Rates varied with the intensity of combat, but rarely exceeded one sortie per day.

Even during the Battle of Britain, the most intense air campaign in history, the highest daily sortie rate achieved by the RAF was only 1.5 on August 30, 1940. A giant technological leap was taken between World War II and Korea, with the incorporation of the jet aircraft; however, the impact on average combat sortie rates was only a slight increase to 0.32 sorties per day. Again, only rarely did monthly sortie rates even approach one sortie per day in the Korean War.

The history of that war shows that I was dead wrong in my memory of how often we flew the F-80. The Air Force was never able to achieve a flight per day for a full month during the entire Korean War in any of its airplanes.

The Vietnamese conflict produced the first large jump in sustained combat sortie generation rates. The overall rate in Southeast Asia was 0.82, and for the first time we exceeded the 1.0 sortie rate for an entire year—in 1972 with the F-4. The historic record shows that the sortie rates in the “good old days” were quite low and didn’t show any improvement until the relatively recent past.

Today, the F-15s, F-16s, and A-10s are all simpler to operate and maintain than the aircraft they replaced in the inventory. They have consistently higher mission capable rates. To test our wartime surge potential, sortie surge exercises have become a way of life for the operational Air Force. Although the stress of combat introduces uncertainties, we are confident our newest generation of pilots can meet the demands of required wartime plans, and operate far more effectively, more often, than anything we have seen in the past.

The Air Force safety record is a strong indicator of the operability of the effective new fighters in the force. Last year, the tactical air force had the lowest accident rate in USAF history. The F-15 is the safest fighter in our history with a destroyed rate that is one-twentieth that of the P-51 Mustang and one-sixth that of the F-86. For a three-year period (1954–56), we lost nearly one F-86 each training day to peacetime flying accidents. Now with a far less experienced crew force we are setting safety records—a credit to the professionalism of our pilots and maintenance people, together with the operability of the machines.

I wouldn’t trade our Air Force for any other. We are capable and effective, not “gold-plated” and unnecessarily complex. We operate well with equipment and people who can meet our threat. In the future, we need to capitalize on our technology to increase our effectiveness, not turn our back on our primary advantage.

**Myth: We Can’t Afford Defense**

Another popular “myth-fact” is that an adequate defense is unaffordable. Again we must compare defense spending today with the past. From 1953 to 1962, defense spending was nine to eleven percent of the gross national product (GNP) while inflation was about one to two percent. Today, even with the proposed increases in defense spending, it will only reach about six percent of the GNP.

As another point of comparison, in constant year dollars, in 1962 each individual in this nation invested $930 in defense and $430 in government cash payments and services to the individual. Today, in the FY ’82 budget, the per capita defense investment has decreased slightly to $870, while our individual share of government cash and services to the individual has more than tripled to $1,540.

America spends more on alcoholic consumption each year than on the Air Force and more on entertainment than on defense altogether. Is an adequate defense affordable? I believe so. It is a matter of priorities. I am confident that a well-informed American public will support an essential disciplined defense budget.

Debates over defense will go on—as they should. I hope that people, well-informed on the real problems that face us, will lend their strong support to actions we are embarked on.

The Air Force of today is strong and made up of outstanding dedicated professionals. The challenges that the Air Force and the nation face in the years ahead are staggering. It is a time when we must dedicate ourselves to the tough task at hand. I am confident we can do it.

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Gen. Robert C. Mathis is the nineteenth general officer to serve as the Air Force’s Vice Chief of Staff. A 1948 graduate of the US Military Academy, he served as a fighter pilot and forward air controller during the Korean War and as a senior military advisor in Vietnam, where he flew more than 200 combat missions. Stateside, General Mathis has seen duty in a number of key aircraft development programs and as Vice Commander of AFSC and TAC. He became Vice Chief in March 1980 and retired on June 1, 1982.

The F-15, with greater combat effectiveness, requires only three-fourths the maintenance time of the F-4, as seen here at Cold Lake, Canada, during an exercise.