

"Preparing for the Right Future"
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Gen. Richard E. Hawley had been head of Air Combat Command for only a few months when he spoke to an AFA audience some 20 years ago in Los Angeles. His principal subject was a good one--the revolution being wrought by precision weapons. Barely one week earlier, three B-2 bombers using GPS-guided bombs had staged a stunning demonstration of accuracy on the ranges at Nellis AFB, Nev. Though Hawley's speech was short--only about 1,800 words--it had considerable punch, tracing the evolution of precision weaponry over the decades and concluding with the words, "The revolution in air and space power is upon us."

As always, it is a pleasure to be invited to share an AFA rostrum, and especially to talk about two of my favorite subjects--air superiority and precision attack.

First, let's talk about air superiority for a few minutes: why we airmen feel so strongly about this subject--why all Americans should care deeply about this vital mission--and why our Air Force plan is the right one for this nation. This nation, and its Air Force, learned some basic lessons about airpower during World War II. We learned about centralized control and decentralized execution; we learned that airpower can have strategic effects independent of any other form of military power; we learned the value of interdiction to isolate the battlefield and control the pace of combat; we learned the importance of being able to apply force with precision, and how the costs of combat mount when precision is not possible; and we learned a lesson that transcends all others: air superiority is a prerequisite for the success of all other military operations--on land, at sea, and in the air. Or, as Secretary of Defense Perry has put it: "Everything else we do depends on this air dominance."

Now as some of you may know, my education was concentrated in the dismal science of economics, not the far more satisfying study of man's history through the ages; but, I need to retrace some history here. So what I'd like to do is borrow a thought from our more historically-minded Chief of Staff, General Ron Fogleman. We began the strategic bombing campaigns of World War II without a shred of air superiority--we thought massed formations of bombers could overcome any defense. But that theory foundered when per-mission losses passed 9 percent in October of 1943.

And so we invented the P-51, a fighter that could stay with the bombers all the way to the target, and provide a measure of protection from the German air defenders. Not air dominance, not even air superiority, but enough to let us get the job done.

By June of 1944, we had learned that basic lesson of modern warfare: air superiority must come first. In the skies over Normandy the German Air Forces had been rendered virtually ineffective, and Operation Overlord succeeded--a success that rested squarely on a foundation called air superiority.

A few years later, in the cold gray skies of Korea, we found ourselves engaged in a contest for which we were woefully unprepared. But our fledgling Air Force, still struggling to take root as an independent service, had not forgotten the lessons about air superiority that had been learned in World War II. It had persevered with development of a jet fighter called the F-86, and had trained its airmen to be masters of air-to-air combat. There were 40 aces in that war--38 Air Force, one Navy, and one Marine--who was on exchange duty with an Air Force F-86 outfit.

The Naval Services had great aviators, but it was the Air Force that had learned, remembered, and applied the lesson of air superiority from World War II.

But institutions can have short memories too. And in the '50s, our Air Force became so focused on its mission of deterring nuclear war that we failed in our responsibility to guarantee the nation superiority in the skies over any future battle. We built great nuclear strike aircraft, like the venerable F-105, but we neglected Job Number One: to control the air--to provide air superiority.

And so we fought another Asian war, this time in Vietnam, without a capable air-to-air fighter. We fought without pilots schooled in the fine art of air-to-air combat. And we fought without weapons with which to neutralize the newly emerged threat of surface-to-air missiles--and we paid a terrible price against a third-rate power.

In the six months from 23 August 1967 to 5 February 1968, Vietnamese MiG-21 pilots racked up a 16 to 1 kill advantage.

Five years later we had turned the tables to achieve a meager 2.55 to one advantage. There were five aces in Vietnam--three Air Force and two Navy.

How easily we forget.

Now run the clock forward nearly 20 years, and circle half way round the world to yet another military contest, against another aspiring military power called Iraq. In the years after Vietnam, the Air Force had vowed not to be caught short again in the contest for air superiority. We fielded the F-15 at great cost to the nation, and over howls of protest

that it was too costly and that we were buying technology for technology's sake. For 15 years the debate simmered on. The pundits doubted that these high tech systems would ever work under combat conditions--and then came the Gulf War. Forty-one Iraqi aircraft were destroyed in the air--35 by Air Force aviators, three by Navy pilots, two by a single Saudi pilot flying an F-15, and one by a Marine--on exchange duty with the Air Force flying an F-15.

No wonder the Chief enjoys studying history so much--it sure beats economics.

Now we stand staring into a future lit dimly. We can no more guess what kind of challenge our nation will face in the year 2020, than those who fought to field the F-15 in 1975 could predict an operation called Desert Storm in 1991--just about at the mid-point of the F-15's expected 30-year life. Our Air Force is fighting doggedly to field the fighter that will guarantee this nation superiority in the skies over that unknown battlefield, in that unknowable future that is lit so dimly. The pundits decry our efforts. They say there is no threat. They say we are buying technology for technology's sake. They say we simply can't afford it--not if we are to have all those other things--things that in their near perfect vision of the future will be so much more appreciated than air superiority.

Well, the pundits are wrong. We can afford this machine that will guarantee air superiority for our nation through the third decade of the next century, as well as most of the other things that seem so appealing as we contemplate the future from our current, but perhaps temporary, vantage point as the world's only super power.

And this "air superiority" machine will do so much more for those future peacemakers and warriors. It will suppress enemy surface-to-air missile defenses to open the way for other, less capable aircraft. And it will deliver bombs from eight miles high, with accuracy that would make our early air power pioneers drool with envy.

And that gets me to the second subject for today--precision attack. Now, we could trace a lot of history--from our early efforts at daylight precision bombing in World War II, to those incredible videos of bombs going down elevator shafts that we all witnessed during the Gulf War. We could recall that day in the spring of 1944 when more than 700 bombers and 800 fighter escorts--8,000 airmen--set out to attack Berlin with over 1,600 tons of bombs. Seven hundred airmen were killed or captured on that mission. Seventy-five bombers were lost and another 350 damaged. Tooey Spaatz's report on the mission to General Arnold said: "Generally poor results obtained. Hit none of the primary targets."

It was during the Vietnam conflict that technology began to catch up with the promise of airpower. The march to today's very impressive capabilities began with frustrations over our inability to take out targets like the Thanh Hoa Bridge--targets that had consumed hundreds of sorties with "Generally poor results obtained." Then came the first laser

guided bombs, and the Thanh Hoa Bridge that had defied hundreds of attacks, yielded to a single flight of four.

But LGBs, and the equipment needed to employ them, are expensive. And by the Gulf War, nearly two decades after Vietnam, only a small fraction of the force could use them. On 19 January of 1991, we attacked a key industrial complex near Baghdad with 72 F-16s, supported by 18 F-15s, F-4Gs, and EF-111s. We lost two F-16s that day.

Captain Mike Roberts and Major Jeff Tice were captured. Tooey Spaatz might have written the mission report--"minimal target effects."

Four years later, during Operation Deliberate Force in Bosnia, the campaign that brought the warring factions to the peace table in Dayton, more than 60 percent of the weapons we used were PGMs. Now, there are still pundits who belie the significance of this revolution in air and space power. They compile data in ways that make it seem we have gained little from our investments in these capabilities. They argue that the old ways are much less expensive, and just as effective--and they build spread sheets to prove the point. Too bad they can't roll in off base into a hail of triple A fire--it can be very enlightening. Maybe they should talk to Mike Roberts and Jeff Tice.

And the next stage in this revolution is now upon us, as we integrate air and space power to produce even more magical results. A new generation of very accurate munitions is taking to the field-bombs that exploit the power of satellite navigation to find their way to within feet of any target. The first of these are now in the hands of our B-2 operators at Whiteman AFB in Missouri, and on 8 October they attacked an array of 16 targets on the Nellis ranges. The B-2 crew, call sign "Spirit 09," delivered eight, 2,000-pound GPS-Aided Munitions, or GAMs, from 40,000 feet high and six miles from the targets--targets that were spread over an area of more than two square kilometers.

Tooey Spaatz would have been proud to submit this mission report: eight targets destroyed. "Spirit 14" followed with seven more bombs from 43,000 feet--four targets destroyed, two severely damaged, and one moderately damaged. One target had eluded attack because it could not be identified on radar with sufficient certainty to meet the stringent rules of engagement that were applied to this simulated combat mission--avoiding collateral damage was a high priority. That's where "Spirit 33" came in, the clean-up hitter. That third B-2 achieved the needed radar clarity, delivered a single bomb from 40,000 feet and shacked the target. Overall results--13 targets destroyed, 2 severely damaged and one moderately damaged. The widest miss was thirty feet.

No collateral damage.

This revolution in air and space power is upon us now. Our investments in air superiority and precision attack will yield enormous benefits in the twenty-first century--if we can just see them through to the finish.