Come the Revolution

"Sticking to the Basics: 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."

[Future USAF aircraft] will deliver bombs from eight miles high, with accuracy that would make our early airpower pioneers drool with envy. ...

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. [Gen. Carl A.] "Tooey" Spaatz's report on the mission to Gen. [Henry H. "Hap"] Arnold said: "Generally poor results obtained. Hit none of the primary targets."

A B-2 Spirit drops JDAMs over the Utah Test and Training Range.

USAF photo

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. Capt. Mike Roberts and Maj. Jeff Tice were captured. Tooey Spaatz might have written the mission report—"minimal target effects."

Four years later, during Operation Deliberate Force in Bosnia, ... more than 60 percent of the weapons we used were PGMs [preci-sion guided munitions].

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. ...

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. ...

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 [bomber] operators at Whiteman Air Force Base in Missouri, and on 8 October [1996] 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. ...

That's where Spirit 33 came in, the cleanup 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, two severely damaged, and one moderately damaged.

The widest miss was 30 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 21st century—if we can just see them through to the finish. ✪