HABU HEIGHTS

"On a smaller scale, suppose two drones fight each other in the air. One drone cannot open fire without first receiving the go-ahead from a human operator in some distant bunker. The other is fully autonomous. Which drone do you think will prevail?"

Yuval Hariri

Last week, I read an interesting article on the possibility that the latest U.S. reconnaissance aircraft is now on the drawing boards—the SR-72 hypersonic aircraft. As the article points out, the promoters of such a project—each aircraft is expected to cost over one billion dollars—generally cite three arguments: "speed is the new stealth," improved network sensors are diminishing the survivability of today's stealth aircraft, and hypersonic weapons' systems (those capable of flying over five times the speed of sound) are the new darlings of military planners. Indeed, scientists and technicians in the military-industrial-intelligence complexes in China, Russia and the U.S. (perhaps Israel as well) are frantically working to beat the others to be first in the race to make such systems operational.

I have written before that there is typically a lag time of five years or more between the time such sensitive advanced systems become operational and are announced to the public. This is particularly true of tightly-held "black" systems, hidden in the defense budget to avoid prying eyes. In this particular case, the design and production of a future surveillance aircraft undoubtedly will involve DARPA "black funding" as well as Lockheed Martin's legendary "Skunk Works"—or its progeny—and Aerojet Rocketdyne, not to mention a constellation of tech subcontractors. I am guessing that such systems are now being tested (perhaps that would explain the rash of triangular shaped UFOs being sighted lately).

But perhaps not.

In a world of orchestrated disinformation and misinformation—including at the clandestine level—it is becoming increasingly difficult to sort out the real from the manipulated, the truth from the counterfeit. For example, in the case of the so-called Aurora reconnaissance aircraft—a Mach 5 hypersonic aircraft purported to replace the aging SR-71—rumors began swirling as early as the mid-1980s about its existence. There were supposed sightings of such an aircraft off the California coast and over the UK, reportedly missing "black project" funds in the DoD budget, a still unexplained crash site at RAF Boscombe Down in Wiltshire (UK) in late September 1994, and a BBC special report on the Aurora project in 2005. US

¹ Sebastian Roblin, "Why the Hypersonic SR-72 Spy Plane Has Hit Some Hurdles," *The National Interest*, Apr. 24, 2021.

and UK officials, however, have vehemently and consistently denied that such a plane exists.²

One thing is for sure: the next-generation reconnaissance aircraft (when and if it makes it past the concept phase) will almost certainly be an unmanned aerial vehicle (UAV)—those receiving a "Q" designation—heavily reliant on the latest algorithm-driven sensors. Perhaps it will even be armed with laser "death rays."³

We are certainly entering a new world of drones, AI and lasers.⁴ Indeed, one of the hottest debates in military circles these days is whether such hi-tech weaponry will continue to rely on man-in-the-loop control (susceptible to delay and disruption) or operate according to their internal, autonomous algorithms.

So, let me take you back to a simpler, less complex time. Perhaps.

The time of Habu Heights.

For me the year is 1972. Our country was in the midst of the Cold War. I'm stationed on the tiny island of Okinawa, which was then (and still is) crammed full of U.S. military installations. During my Air Force tour-of-duty, the island reverted to Japanese control (if you think today's trip to the DMV is a frustrating experience, try to imagine the bureaucratic "goat rope" of registering my light-green Nissan and obtaining Japanese license plates—as a foreigner!).

At the time, even a lowly Air Force enlisted type like me, recognized the sprawling Kadena Air Force Base as the crown jewel of the island's military bases. I was a Chinese Mandarin linguist in those years (along with Gary, Richard, Paul and Kirbo) and typically flew eight sorties per month down to the Tonkin Gulf, with our normal combat orbit tracing the Vietnamese coastline. We flew in the back end of the RC-135 "hog-nose" aircraft studded with listening devices, mysterious "black boxes," and ECM equipment (at the time the existence of the aircraft and what we did was highly classified).

Toward the end of 1972, we participated in "Operation Linebacker II" an around-the-clock aerial campaign targeting the North Vietnamese mainland—including Hanoi and Haiphong—authorized by then President Nixon to force the North Vietnamese leaders back to the negotiating table and, eventually, release our POWs.⁵ We had started our drawdown of ground forces earlier that year as a good faith effort to prod ceasefire negotiations. I remember flying Christmas Day. We

² For those interested, Wikipedia's article on the topic (Aurora aircraft) is very informative.

³ Think this is science fiction? Read Kyle Mizokami, "The Air Force is Putting Death Rays on Fighter Jets. Yes, Death Rays," *Popular Mechanics*, May/June 2021.

⁴ This week, for example, there was a troubling report over Iran's progress in making drones, see David Hambling, "U.S. and Israel Concerned Over Growing Drone Threat From Iran," *Forbes*, Apr. 28, 2021.

⁵ For those interested, see "B-52s Over Hanoi, 1972—Operation Linebacker and the Christmas Bombing," *Soldier of Fortune*, Dec. 24, 2020.

only had four small windows in the back of the aircraft (some of my fellow crew members referred to it as a "flying coffin"), but I still remember looking in the direction of Hanoi and Haiphong at night and gawking at the ultimate fireworks show as SAM missiles exploded and puffy contrails arced skyward in the darkness.

Ah the memories.

Okay Jeemes, but what does that have to do with future intelligence platforms like the SR-72?

One of the true high points during my time in Okinawa was participating in a celebrated event, of sorts. On occasion, I would join dozens of others stationed at the base in a gathering of cars on Habu Heights, overlooking Kadena's longest runway. We would assemble to watch the take-off of the world's fastest, most secretive aircraft, the SR-71. (Because of its futuristic design, artists' conceptions of the possible SR-72, the aircraft may look remarkably similar to the SR-71).

How did we know when to gather? From our end of the island (and certainly on base) you could hear the roar of the SR-71's powerful engines. (For you geeks—the SR-71 was powered by two Pratt & Whitney J58 axial-flow turbojets with afterburners, each producing 32,500 lb of thrust). Bottom line: when they rev'd those babies up for a final check of the instruments, the noise was our cue to gather on the heights.

Watching the take-off was a spectacle in and of itself. If you somehow received a tip on the time of take-off and got there early, you could see a van drive up to the aircraft and the two pilots—wearing astronaut suits—would climb into the aircraft. Prior to take-off, a blue military pick-up truck would slowly drive the length of the runway to make sure there was no debris which could be sucked into the two rocket-style engines.

Few of us noticed at the time (we had generally left the heights by then) a hazmat clean-up crew that would come after take-off. The SR-71 actually leaked fuel while sitting on the runway. Lots of it. It refueled shortly after take-off. Its fuselage was made of titanium and other composites, and the plates actually fused together at altitude. Indeed, the use of titanium caused a number of problems including, in part, that new titanium tools had to be invented to work on the plane's parts—regular steel tools shattered the titanium on contact—and, at the time, the principle source for titanium was the USSR, our bitter Cold War foe.⁷

Actually, that is why the aircraft was eventually retired by the USAF: the SR-71 was simply too expensive to maintain in an age when sophisticated overhead surveillance systems could replace it. It has yet to be surpassed in terms

⁶ For technical details on the SR-71, see (among many others), "NASA Armstrong Fact Sheet: SR-71 Factsheet," *NASA TV*, Feb. 28, 2014. (During final years of program, the Air Force loaned two SR-71 frames to NASA).

⁷ Jacopo Prisco, "SR-71 Blackbird: The Cold War spy plane that's still the world's fastest airplane," *CNN*, Jul. 20, 2020. (Indeed the manufacturers had to destroy the tools after the production run ended).

of speed and altitude: to this day it still holds the records for the highest altitude in horizontal flight (85,069 feet) and the fastest speed (2,193 mph) for a non-rocket powered aircraft.⁸

And that is the non-classified data.

Not bad huh? Especially for an aircraft designed in secrecy over seven decades ago! The SR-71 is able to fly at the edge of space and outfly every missile then in the Soviet-bloc inventory.

Without really appreciating it, all of us watching from Habu Heights were seeing an aircraft ahead of its time. As aviation historian and author Peter Merlin recently said: "It still looks like something from the future, even though it was designed back in the 1950s."

Why did we call it Habu Heights? We nicknamed the SR-71 the "habu" after the deadly, venomous pit viper (*protobothrops flavoviridis*) native to Okinawa and whose bite could cause sickness, extreme pain and, in rare circumstances, death itself. The reptilian name seemed an apt description of the aircraft.

Others, however, nicknamed the SR-71 "Blackbird" because of its dark green—almost black—exterior, designed to help protect it from enemy radar and absorb high temperatures at altitude.

Move my time-clock forward almost twenty years to 1990. After over a decade of teaching college students and administrative duties at Alice Lloyd College, the academic dean at the Salmon P. Chase College of Law in northern Kentucky asked me why I hadn't considered law school myself. (A group of college students had approached me and asked me to sponsor the first campus law club; I agreed—even though I knew nothing about law—and during the semester we would take field trips to visit the Chase College of Law, one of the three law schools in Kentucky.) Why indeed? I resigned my position at the college, packed up Imogene and Kimberly and headed to northern Kentucky to study law Fortunately, after we had already moved, I passed the LSAT without preparations of any sort, one of the many miracles that God would perform for us over the next three years.

But that is another missive!

Great Jeemes, but what does that have to do with the SR-71?

During my second year in law school, I applied for a clerking position at the Air Force Contract Law Center at Wright-Patterson AFB in Dayton, Ohio. It was about a 45-minute drive or so from our apartment in northern Kentucky. Our offices—located in a squat, three-story, yellowish brick, cookie-cutter building that was probably a barracks during the wartime years—was adjacent to what is now

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⁸ Ibid.

⁹ *Ibid.* Merlin is author of the book *Design and Development of the Blackbird*.

The National Museum of the United States Air Force. (This museum, which everyone should visit if they're in the area, is billed as the oldest and largest military aviation museum in the world, with more than 360 aircraft and missiles on display).¹⁰

One of those 360 aircraft is the SR-71. It flew into the base and the runway near the museum. I was watching the aircraft from the rooftop of our office building, along with dozens of others who had never seen the aircraft before. All of a sudden, I was no longer among a bunch of lawyers but was swept back to my service days on Habu Heights, when I saw her (the SR-71) in her operational glory. I'm quite sure that only three or four other individuals gawking from our rooftop at the aircraft knew anything about those chaotic days of the Vietnam War.

Sigh.

The museum-bound SR-71, probably to burn off excess fuel to get as light as possible for a landing on the shorter than usual runway, made several low passes over our building. I joined the others in cheering each time the plane passed overhead.

What a sight to see!

I'm sure you will think this is a selfish thought, but as the futuristic aircraft made its final pass—and as the crowd dissipated—somehow, I knew it had all been arranged just for me.

I lifted my fist and yelled—to the astonishment of those remaining on the roof with me—"Habu baby!"

Move my personal time-clock forward almost another two decades. It is late 2013, my last day at CIA headquarters. After the office retirement parties are over, I take a solitary walk to the beautiful A-12 aircraft display on the compound. The aircraft was the predecessor of the SR-71 and is very similar in design and appearance.

Thirteen A-12 aircraft were built, exclusively for the CIA, and began service in April 1962. The Lockheed A-12 was a high-altitude, Mach 3 (plus) reconnaissance aircraft built for the Agency by the "Skunk Works" alnd the brainchild of legendary aeronautical designer Clarence "Kelly" Johnson. The aircraft operated from 1963 to 1968, under Project Oxcart. The aircraft was originally designed in response to the U-2 Incident, where CIA pilot Francis Gary Powers (1929-1977), ¹¹ on a reconnaissance mission, was shot down over Soviet

¹⁰ "History of the National Museum of the United States Air Force," *National Museum of the United States Air Force official site*. Jun. 2007.

¹¹ Powers was captured by the Soviets and judged in a show trial to maximize Soviet propaganda narratives. His U-2 flight, originating in Pakistan, was to be the first to transverse the Soviet Union. He was shot down by one of a barrage of S-75 Dvina (SA-2 Guideline SAMs. He was unable to activate the plane's self-destruct mechanism and declined to use his suicide device (a poison-laced injection pin) and was captured immediately and taken to

airspace in early May 1960. The event prompted an international incident and heightened tensions between the then-USSR and the U.S.

After the U-2 incident, CIA officials—who had already been considering plans to replace the U-2—and ordered 12 A-12s, ostensibly for strategic reconnaissance activities over the Soviet Union and Cuba. Instead, because of the dangers inherent in operating over the Soviet Union (and a political promise made by JFK), A-12s operated almost exclusively in Asia—flying primarily out of Kadena AFB—in support of military activities in Vietnam (Operation Black Shield), with a few flights over North Korea. The final mission over North Vietnam and the DMZ was early March 1968. The A-12s at Kadena AFB were replaced by SR-71s in that same month, March 1968.

The static display A-12 that I was looking at in 2013 had a bit of controversy associated with it. The aircraft was formerly on exhibit in Minneapolis, Minnesota, and its move to CIA headquarters was protested by legislators as well as those who maintained the exhibit. Despite these protests, the A-12 was placed at the CIA in late January 2007.

As I gazed upon the aircraft, possibly for the last time, my thoughts went back to the first time I watched the SR-71 from Habu Heights. It ambled down the runway, on stork-like landing gear, gained speed and then shot into the sky like a bullet. The grace and sheer power of that scene left a permanent impression on me.

The Blackbird series of aircraft overlaps, in a curious way, my years of service to this country that I love so deeply: from my Chinese linguist days and flight crew experience during Vietnam, to my legal duties with the Air Force at Wright-Patterson, to my years and travels with the Agency.

So much has changed in the world—and in our country—since those Habu Heights days. To say I'm not concerned about the political trajectory in this country would be a bold-faced lie. I worry about the country we have left to our grandchildren. I'm also concerned about the future of intelligence: we need a vibrant, dedicated and technologically-savvy group of individuals to address the myriad challenges that lie beyond the horizon. In a word, politicization has taken a heavy toll on the organization I loved working for all those years. Langley is not the same as it was when I first started working there: and not all the changes, in my view, have been good.

Like the A-12 on display at headquarters, I may have reached the limit of my usefulness to this great land of ours.

Lubyanka Prison in Moscow where he was interrogated by the KGB. He was put on trial for espionage, confessed and apologized for his spying activities. In 1962, he was exchanged after less than two years in captivity, for well-publicized Soviet spy "Rudolf Abel" in a famous scene at Glienicke Bridge in Berlin. Powers died in a helicopter crash in Los Angeles in 1977 and is buried in Arlington National Cemetery. Interestingly enough, Powers was the son of a coal miner and raised in Jenkins, Kentucky, very close to where Imogene spent her childhood.

I hear the sounds of wolves and naysayers growing louder.

Thank God my mission has changed.

New assignments await.

I'm not ready to be put on display yet.

Perhaps if the timeworn titanium hulls of the SR-71s and A-12s (and, in a few years, the short shelf life of a SR-72)—could talk—I'm sure they would join me in this final thought: I wouldn't replace the memories of this marvelous life's journey with anyone else on earth.

"Habu baby!"