

## Taking the measure of the two cultures

The two cultures may share topics, problems, and occasionally the same cranium, but they rarely mix. When it comes to practice, my usual index is simple. The sciences deal with figures, and the humanities, with figures of speech. Numbers act on the marketplace of ideas as monetizing does on the economy overall. Most scientists scorn the sloppy, metaphoric expressions of text-based scholarships. In thought, as with computing, the digital has triumphed. What isn't numbers isn't serious. The money goes to those who count.

So when, as part of presenting a seminar at NASA Goddard, I was given a tour of the facilities, I was prepared for the usual humiliations. What Goddard had, in particular, was an extraordinary capacity to test payloads, including a space environment simulator and the largest clean room in the country. Here technicians shook, blasted, vacuumed, zapped, and otherwise readied satellites before launch. The facility claimed the center of the campus. It was enormous, a hollowed-out high-rise. Just ogling at bolts the size of steers and wind tunnels as big as Arizona rivers was humbling. And it was real: the test facility was tangible in ways that the humanities could never hope to match. I saw the future, and it required some serious wrenches as well as computer crunching power.

At the seminar I spoke, as a historian, about the Voyager mission. Most of the audience were engineers, and a majority were hunched over laptops, pecking away, no doubt doing the numbers while I held forth about the narrative arc of the Voyagers' trek across the solar system. They knew quantities were the true language of space exploration. So, even as I spoke and paced across the auditorium stage, I thought how different it all was from the humanities. We had nothing comparable.

Yet once free of the campus, I realized I was wrong. History did have its simulator facilities and its clean rooms, and in fact, earlier that week I had spent several days in a stellar exemplar at College Park, Maryland, down the road from Greenbelt, where the National Archives and Records Agency had its flagship facility, National Archives II. NARA, like NASA, has campuses around the country. NA II, which opened in 1994, was intended to unburden the old National Archives facility on the Mall. It's a state-of-the-art structure for storing, processing, and using the stuff of history - for doing its pre-launch testing, if you will. The reading room may be the largest clean room in the country for historical scholarship.

How does NARA's National Archives II physically compare to NASA Goddard? With trepidation I asked the archivists. Surely, they would know the scope of the holdings but not, I reasoned, those of the holding pen itself. Yet within minutes they found, on the NA II website, the facility's physical specifications. The building occupies 6.8 acres on a 33-acre campus. It's a multi-storied tumulus of glass and steel 1,104 feet long, 448 feet wide, and six stories high. The records storage area embraces 691,572 square feet. Shelving runs for 520 miles. I saw the past, and its future looked like a simulacrum of Biosphere II, ready for transplanting to another world.

It would be simple, I knew, to get the comparable dimensions for Goddard's space simulator and clean room - I'd only have to convert from Si units to English. I was wrong. The Goddard website lists the space environment simulator as a cylinder 40 feet tall and 27 feet wide. What

about its encompassing edifice? The engineer who had hosted me was clearly not only uninformed but uninterested. He suggested I find the campus on Google Earth, and use cars parked around the facility to estimate the size of the structure. So many Buicks wide, so many Jeeps long, so many SUVs high.

I felt as though I had stepped through a looking glass. The hardcore humanities, compelled by the logic of narrative to reason through analogies, could cite inch and mile. A NASA facility famous for quantifying and systems engineering could only allude to analogues, lacking both number and narrative. The humanities might struggle to be counted, but the counters, it seemed were lost in space, simulated or otherwise.

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