Toponymy and Technology

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During the time I was administering Geographic Names Information System (GNIS) contracts in the University of New Mexico Earth Data Analysis Center (EDAC), my mother once took me aside and in a confidential, almost conspiratorial voice, asked, "Bob, what *do* you do?"

That was the question my colleagues at EDAC often asked as well. EDAC was primarily a GIS shop but also did a lot of image processing, as well as other very high-tech geographic projects. All anyone knew about GNIS was that the equipment it required was from the technological Pleistocene. Thus, they viewed GNIS as irrelevant. At staff meetings I used the word "data" as often as possible, but I fooled no one; I wasn't manipulating bytes and pixels; I was working with names. A quaint but sometimes interesting oddity.

But over time that subtly began to change. The GIS people noticed first. They discovered that GNIS wasn't just a bunch of names; as a database it could become a data layer in their GIS's. What's more, it resided not in books and on maps, as name information traditionally had, but on computers and could be transmitted electronically.

Almost overnight, I acquired new respect, because names had made the transition from words to data. And this has led me to ponder this rather momentous shift in the evolution of toponymy.

It was a quarter century ago that I first became involved in toponymy, a word foreign to me at the time. I was editing and managing a little weekly newspaper in the White Mountains of northern New Hampshire, and because the business, which included a tiny printing plant, long ago had published a small booklet about the region's myths and legends that still generated revenue from the tourist trade, I reasoned that another booklet might generate still more revenue. But a new booklet about what? Well, the region was filled with interesting, curiosity-compelling place names—why not a booklet about them?

So my wife and I set about gathering information. We examined books and maps in local libraries and interviewed local historians, taking notes with pencils on index cards. (Some notes I typed on an ancient but beloved Remington manual typewriter dedicated for that purpose; I collected old typewriters, indicating the kind of retro guy I am.) Before the booklet was published, we left New Hampshire and moved to New Mexico, but we continued the project. By this time I'd acquired an electric typewriter, on which I typed the final manuscript. And that was as close to technology as I ever got, for toponymy then was not a technological field; I was proof of that. It attracted people like me, a former English major whose idea of a wild and crazy Sunday afternoon was sitting in an almost empty library, scribbling with a fountain pen. Moreover, in doing so I felt connected to my predecessors and exemplars. Henry Gannett (1846-1914) didn't even have a typewriter. Most of the great toponymic compilations of the past were simply agglomerations of index cards, notebooks, or scraps of paper.

Certainly that was how T. M. "Matt" Pearce, a founder of ANS and one of my role models, had worked. When I was preparing *The Place Names of New Mexico*, the successor to his seminal work on the state's namescape, I spent two weeks sifting through the university library's collection of his papers. There, in several large cardboard boxes, were countless scraps of paper, index cards, letters, and postcards, all handwritten or typed on ancient typewriters (most of whose keys had occluded o's and e's), from the hundreds of people throughout the West with whom he corresponded. He had taken all this information, much of it collected by WPA researchers during the Depression, typed a draft, and submitted it to the University of New Mexico Press to be published in 1965 as *New Mexico Place Names: a Geographical Dictionary*. Earlier versions had simply been mimeographed.

This was in the early 1990s, and the technological revolution had begun to have an impact, even upon people like me. As I sat in the library, I had gone far beyond pencil and paper and even mere typewriters; instead I used one of the first "portable" computers, a 34-pound metal block the size of a suitcase with a screen the size of a matchbox.

Now, all that seems very long ago. Technological change has become the standard by which we measure time, and as I'm writing this,

I'm sitting in the Business Services Center of the Boise Airport, about to return home from the 2001 Council of Geographic Names Authorities (COGNA) meeting. I'm writing on a sleek, lightweight laptop computer. If I knew how, I could connect my laptop to the Internet, where with a few clicks I could link to any number of toponymic sites throughout the world. Foremost among these is the GNIS database, maintained by United States Geological Survey in Reston, VA, but I also could have access to the National Imagery and Mapping Agency's database of foreign geographic names, the Canadian toponymic databases, and many, many more. From my table top in Boise I could even connect with the Place Names Board of Estonia.

Via the Internet I also could be in touch with such toponymic organizations as the American Name Society and the Place Name Survey of the United States. If in the course of my toponymic work here I needed to look at topographic maps, I could insert a CD into my computer's CD-drive and have access to all of USGS's 1:24K and 1:100K topographic maps—about 2,500 in all—covering New Mexico. Or any other state I chose. I also have access to all the records in my personal names databases. When I complete this article, I will send it to Ed Callary via email.

And like most people in our age, I would never presume to predict what technology I might be using even five years from now. For all I know I'll be using a telepathy chip implanted in my cranium. Toponymy no longer is a non-technological discipline.

GNIS has led the way in this, and when it is completed and refined, this trend will become even more manifest. Already, GNIS has become among the most popular websites among the thousands in the federal government, with 20,000 hits a day, and work is underway to allow GNIS users not only to glean locational and administrative information about a specific name but also to be able to view the feature on a map online.

To be sure, one cannot obtain much cultural or historical information from GNIS. Its contractors, while not forbidden from adding this information, have not been encouraged to do so. No field in a name's record lists the name's language, for example. This was by design rather than bias, and for good reasons. GNIS was designed to be a national

gazetteer, not the *Oxford English Dictionary* of toponymy. Yet toponymists should make no mistake: we owe GNIS and its creators, primarily Roger Payne and Robin Worcester of USGS, a huge debt of gratitude for leading us into the unknown territory of technology. Perhaps one day Payne and Worcester will be seen as the Lewis and Clark of toponymy.

I've embraced this technological revolution eagerly. I would no more return to a typewriter or index cards than a modern physicist would return to a slide rule, and I'm an enormous fan of such innovations as GNIS.

For not only does technological innovation make my work more efficient, it also makes it more insightful. For example, when I was researching *The Place Names of New Mexico* I used GNIS the learn that names referring to cottonwood trees are the most common names in the state. GNIS also revealed the distribution of these names in their various forms, Spanish forms being more numerous along the Rio Grande and other areas of early Spanish settlement, English forms more common on the plains, settled mostly by English speakers. If I wished, I could use GNIS to extend this even further, to compare the occurrence of cottonwood names in New Mexico with that in other western states. Jon Campbell, a historian formerly with the USBGN, used GNIS to map stream generics throughout the U.S., and the patterns that emerged reveal much about regional settlement patterns. Until GNIS and computer technology, this kind of mapping would have been difficult and lacking in precision.

GNIS and GIS technology have opened many new avenues of toponymic inquiry, which we have only begun to explore.

But just as we use technology, so technology in subtle ways uses us. It's been my observation that technology tends to shift effort from what *should* be done to what *can* be done. And I've also sensed that technological tinkering tends to replace contemplation and abstract thought. It's been a long time since I've seen someone sitting on a park bench with a pencil and paper.

Technology tells us which questions to ask—and in which directions to look for answers. In toponymy as in other disciplines, the direction of research and inquiry often is determined by the equipment available. More and more, we ask questions whose answers are numerical and

spatial, rather than cultural, linguistic, and historical. For example, as an ice-breaker at COGNA, Jeff Ford asked representatives of the participating states to discuss the influence that birds have had on their states' toponymy. The overwhelming majority of respondents went to GNIS to learn what are their state's most common avian eponymns—a numerical response.

Technology also keeps us where the equipment is—and buffers us from the reality represented on the equipment. I recall the comments of a member of the New Mexico Geographic Names Committee during the Gulf War. This woman is a GIS specialist, but she was deeply troubled by how many of her colleagues, sitting before their computer screens, saw the war as a neat technological challenge—even an opportunity—and how technology had removed them from the brutal reality of the battlefield. People had become pixels, and war had come to resemble a computer game.

So I guess my main concern is that as technology inevitably assumes a larger role in toponymy, its cultural-historical aspects will shrink, and we will lose sight of the fact that the main elements of toponymy remain words and ideas.

And people. I recall an incident that occurred when I was researching *The Place Names of New Mexico*. I was driving across the vast and mostly empty plains of eastern New Mexico when I stopped to chat with an elderly couple working on the community center in the otherwise vanished homesteader community of Ima. Nothing resembling a village remained, but the two cheerfully informed me that contrary to appearances Ima was not dead; rather, the community and the name remained very much alive—in the minds of the farmers and ranchers who lived in the area.

I dutifully recorded this information—with paper and pencil.