

Mountains and Creative Mexican Maps: From Seminar to Survey

by MATTHEW C. LAFEVOR

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IN THE MOUNTAIN COMMUNITY OF SAN Nicolás de los Ranchos, Puebla, citizens use maps in creative ways. Every year, families gather on the town plaza to engage in artistic map-making rituals as part of a local government campaign

to strengthen a sense of community and regional identity. The small town's ministry of culture provides the materials and refreshments while school kids and their parents draw representations of their surroundings. Parents begin by tracing the municipal boundaries and surrounding mountains, filling in empty spaces with roadways. With these outlines in place, children map their schools, athletic fields, and other, more abstract images that perhaps only they understand. Perceptions of space and place are depicted artistically while geographical knowledge is passed between generations. Families, however, seem to consider the event more for enjoyment and less as a serious educational experience. Regional music plays loudly over the plaza speakers as the children proudly display their creations on the walls of municipal buildings for the entire community to view and enjoy.

I came across the map-making project in San Nicolás by accident after traveling through the region while conducting dissertation research this past summer, generously funded by the Mexican Center of LILAS. Before this funding, seminars at UT had left me with a greater appreciation of maps and landscape representations and the historically rooted values and meanings attached to them. Without the ideas from these seminars in mind and the freedom to explore provided by the funding, I likely would have passed by San Nicolás's mapping project without considering the value of such an event in maintaining and strengthening a sense of community.


Dr. Karl Butzer's seminars *Indigenous Maps and Architecture* and *Landscape, Society and Meaning* and Dr. Susan Deans-Smith's seminar

Rethinking the Conquest of Mexico dealt with topics of identity and representation in Mexican maps. While lectures and discussions addressed a wide range of issues, the importance of sociocultural contexts in map interpretation was a central focus. Especially informative and enjoyable were class visits to our Benson Latin American Collection to view several of the *Relaciones Geográficas*—sixteenth-century representations of Mexican towns and landscapes often drawn by indigenous craftspeople. As always, the Benson's Dr. Michael Hironymous generously offered insight, with both general and site-specific knowledge of the *Relaciones*.

Discussions at the Benson addressed several general questions: What cartographic methods do individuals use to express their surroundings in map form? What can we learn from studying these representations, and how far should we push our own interpretations of the iconography? These questions lingered in my mind well into the summer and were important considerations during my own mapping surveys for dissertation research in Tlaxcala, Mexico.

While doing some additional work at the Benson, I accidentally came across another map that piqued my interest. Part of a yellowed, nineteenth-century folio, it described a bizarre mining operation atop the 18,000-foot Mexican volcano Popocatepetl, which included etchings of mining shafts, railways, and roadways—all part of a distribution network that extended from the volcano to the coastal port of Veracruz. I was intrigued not only by the physical difficulties associated with climbing the mountain, which were legendary, but also with how such an unlikely mining operation could have been economically and socially viable. Having lived near the volcano for several years while conducting postgraduate work, I was surprised never to have read any reference to such an operation.

According to additional sources from the Benson Collection, during the nineteenth century an iron winch lowered miners from nearby



TETEOLOTITLA
(LUGAR DONDE SE REUNEN
LOS DIOS.)

YACIMIENTOS DE LA
CANTERA.

SN. Nicolás de los
RANCHOS.

communities into the active crater some 1,200 feet deep. Living at the bottom of the crater for months at a time in caves among the rock outcrops, workers tenuously mined the bright-yellow volcanic sulphur rocks with pick and shovel. Additional workers hoisted the sulphur out of the crater and then slid down mountain glaciers on woven mats, carrying the sulphur in bags on their shoulders to a small refining operation on the mountain slopes just below the tree line. The refining buildings, known as *Tlamacas*, were mapped and etched in foreign travel accounts from the nineteenth century that included personal narratives containing additional details of the refining operation.

Once at *Tlamacas*, workers boiled the sulphur in cauldrons around-the-clock, while random travelers from the adjacent valleys of Puebla and Mexico were allowed to take shelter there from the mountain wind and rain. Among these travelers, all-night drinking and storytelling often ensued while the

and Manuscripts room, I thought, “I must visit these places in the field!”

Curious to learn if material remnants of this mining operation were still in place and if nearby communities had some memory of the events, I traveled to the last community on the road ascending the volcano, San Nicolás. It was here that I accidentally came across the mapping exercises involving parents and their children mentioned earlier. While observing, I had the privilege of meeting San Nicolás’s president, who upon learning of my interests offered the municipal archives as a potential resource for my investigations.

Shoeboxes of mildewed materials in the municipal archives contained records dating to the late nineteenth century and included several references to different sulphur mining operations. However, one example stood out in the historical records and oral histories of the townspeople. As recounted by official and informal documents, in 1919 a fledgling

which despite the tragedy was now referred to affectionately as “Don Gregorio.”

Innovations in commercial sulphur mining in the early twentieth century rendered the sulphur deposits in Popocatepetl less appealing as an industrial source, and, as a result, extracting sulphur from the crater became mostly ceremonial in nature. Mining operations focused on gathering sulphur pebbles, which were ground into powder and added to local wines. These drinks were purported to have medicinal properties and were used by locals to cure stomach ailments and even some infections. It was explained to me that although sulphur from other, more accessible sources would have sufficed, only that of Popocatepetl achieved the optimal curative effects, the power of the volcano being manifest in its sulphur powder. Unfortunately, renewed volcanic activity in 1994 suspended all sulphur mining operations within the crater, and climbs to the top were declared illegal by

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distinctive odor of sulphur filled the air. In the morning, some miners guided recreational climbers to the summit while others transported the refined sulphur down the western slopes to Mexico City via a network of mule lines and canals. In Mexico City, most of the sulphur was used in the Mexican gunpowder industry or mixed into black powder and sold to fireworks manufacturers.

An 1857 publication outlined additional details and included a yellow, crusty map that demonstrated the preferred route to the mountaintop, allowing climbers to navigate around dangerous ice crevices and deep volcanic sands. Other sources detailed the expansion of mining operations during the Porfirio Díaz presidency, which included the construction of additional railroads and depots for transport to Veracruz, where sulphur from Popocatepetl was shipped to markets around the world. Looking up from these historical maps and out of the window of the Benson Rare Books

sulphur mining operation planted dynamite in crevices deep within the crater of Popocatepetl in an attempt to gain access to greater sulphur deposits. The charges were poorly placed, however, and an explosion and cave-in caused the prolonged death of thirteen individuals. Handwritten records included the testimonies of those who had lost loved ones in the accident, accounts that sometimes conflicted with the official governmental investigation into the tragedy as later described in historical newspapers. I conducted interviews with descendants of those killed in the accident in order to better understand what had occurred. These brought back some painful memories as well as feelings of resentment against the mining executives. At the same time, the interviews presented an opportunity for children to hear additional details of their great-grandparents’ lives and deaths and how the families coped with the tragedy. All shared admiration for those miners who braved the active volcano,

the federal government because of the danger. Today, only a few bottles of medicinal sulphur drinks still decorate the shelves of local liquor stores, and a handful of families keep sulphur pebbles from Don Gregorio as souvenirs.

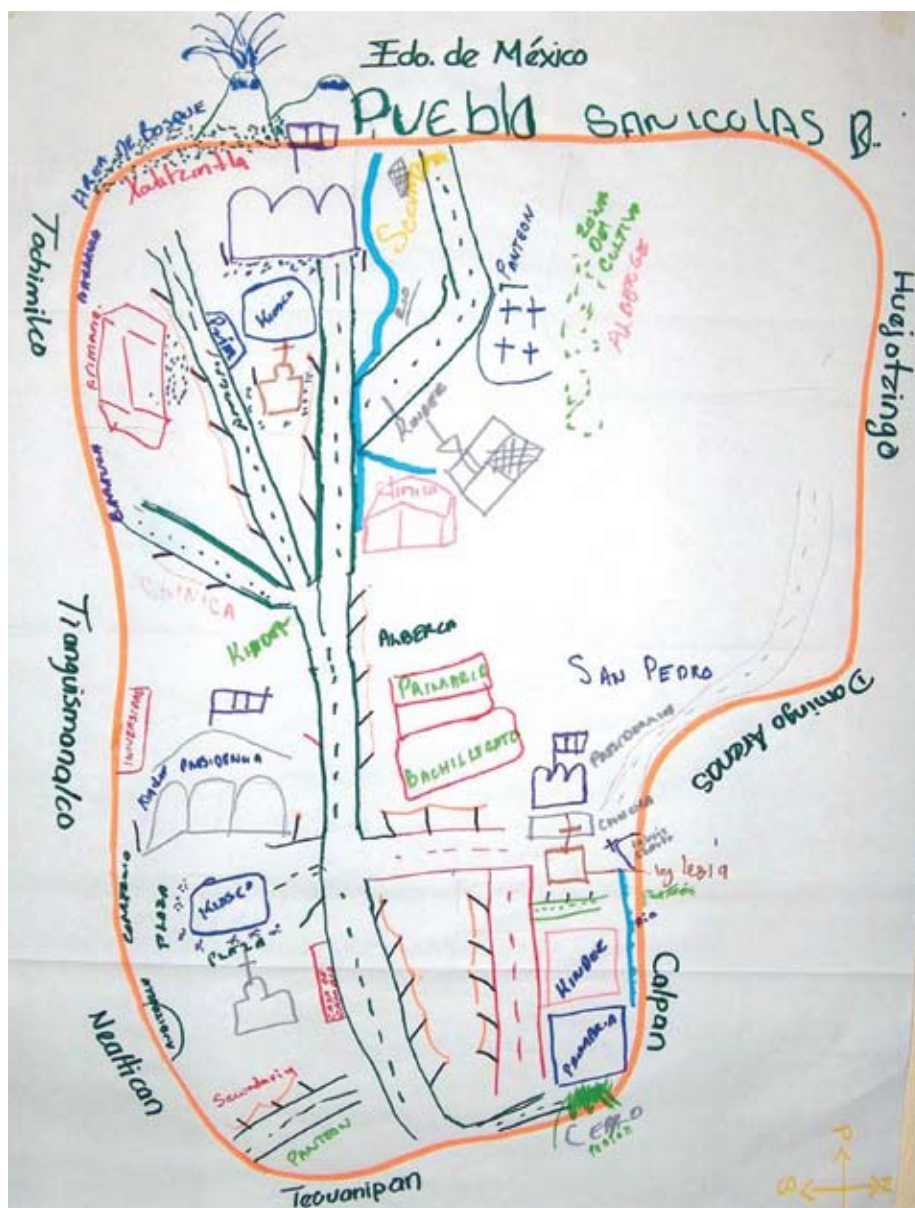
The ethnographic evidence gathered from multiple interviews, archival research, and climbs to *Tlamacas* yielded several other possible avenues of investigation. However, given the recent volcanic activity, verifying the remnants of the nineteenth-century sulphur mining operation near the crater seemed a bridge too far—despite the fact that older climbers recalled that many artifacts were still in place, at least before the eruption of 1994.

The Minister of Culture in charge of the annual mapping project appeared to sense my disappointment, but persuaded me that the upcoming festival, *La Feria de la Nuez*, was worth experiencing. As part of the festival, community members fill an entire square block with representations of important topographical

features from the surrounding valley. Tons of earth from the slopes of individual mountains are brought in and shaped into models of their respective origins. These large mounds of earth are positioned according to cardinal directions and spaced roughly to scale as the mountains are found on maps. Festival participants carefully sculpt the mountains and add miniature vegetation to the models in accordance with the mountain landscapes high above the town.

The Minister of Culture ceremonially fills the earthen crater of Popocatepetl with dry ice so that it emits a constant vapor, which is blown by an electric fan in the appropriate direction. This perfectly mirrors the mountain horizon above. Taxidermies of regional wildlife are planted in the diminutive Popocatepetl's slopes, with the heads of these animals protruding awkwardly from the display. Archaeological finds from the valley below are arranged in display cases among the other mounds. These artifacts include figurines and fetishes, *metates* and *malacates*, which are positioned, spatially, according to where they had been uncovered. When not in use at the festival, the artifacts are kept at a secure, undisclosed location pending funding for a local museum that would ensure they remain in the municipality where they were found, and not exported to Mexico City or nearby Puebla.

The miniature landscape of the surrounding valley is, in effect, an interactive map. To enter, one ascends a dirt path a couple of feet from the street and walks across the elevated Paso de Cortés, in-between the dry-ice vapor of the smoking Popocatepetl and its glacially clad neighbor, Iztaccíhuatl, whose peak is covered with baking soda and granulated sugar. Then, descending further into the map, participants glimpse the eastern peaks of the municipality at the far end of the plaza. Along the circumference of the display for perhaps 200 feet are other earthen mounds constructed and decorated to resemble less important mountains in the region. At the base of some of the mounds are attendants who distribute pamphlets containing explanations of Nahuatl place names and folk histories of the area's mountains, flora, and fauna. Most of the participants' efforts, however, are directed at enjoying the event. The taxidermy especially amuses the children, as does the live snake pit. In one corner, stone masons attempt to construct what is advertised as "The World's Largest Molcajete," a grinding and mixing device with pre-Hispanic origins.



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Regional music plays loudly over the plaza speakers.

Busily organizing the booths and greeting visitors, the Minister of Culture flashes a grin in my direction. The entire affair was his creation. He explains to me that each year the event grows as more people from neighboring communities participate. He adds that, despite the carnival type atmosphere, the goal of the interactive display is simply for participants to better appreciate their surroundings. In San Nicolás, map-making is one mechanism by which community members creatively convey perceptions of space and place. For many, mapping exercises are heuristic devices that help

maintain and strengthen a sense of community identity and attachment to the land. Like the educational map projects on San Nicolás's plaza, classroom instruction at UT and visits to the Benson reinforced, for me, these themes of landscape, society, and meaning as they are represented in map form. Fieldwork during the summer of 2009 provided only part of the picture—a glimpse of the meanings that maps express for the citizens of San Nicolás. There is more work to do in the area.

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