

THE CARTOGRAPHIC HERITAGE OF THE LAKOTA SIOUX

**Julie A. Rice
University of Oklahoma
100 E. Boyd St., SEC 684
Norman, Oklahoma
USA**

For over two centuries now, the American Indian has been the subject of continuous study, empathetic interest, cultural curiosity, and romantic idealism. Like anthropologists, filmmakers, and historians, cartographers have focused their attention on the American Indian. The greatest share of this cartographic focus, however, has analyzed maps that Indians verbalized or sketched at the request of soldiers, fur traders, and interested others. Very little research has addressed upon the collection and use of cartographic information within a tribal band specifically and solely for use by the members of those tribal bands. Because of the nomadic existence of many American Indian tribes, and therefore their obvious reliance on geographic elements, it is curious that such a topic has not been previously explored in any great depth by cartographers.

The Lakota Sioux people roamed the expansive northern Great Plains until the late 19th century. Like other nomadic tribes of that area, geographic information was a vital aspect of their daily lives. The Lakota's world was structured upon their collection, knowledge, and use of spatial information, and the ability to both communicate and understand it ensured nothing less than their survival as a people.

The cartographic heritage of the Lakota is the focus of my masters thesis in geography at Kent State University. The thesis itself analyzes the map-making techniques and tools they developed, the Lakota who were responsible for the acquisition, retention, and transmission of cartographic data, and how the cartographic tools were utilized by the Lakota to spatially navigate their daily, seasonal, and spiritual activities.

For the purposes of this short presentation, however, I will talk mainly on the cartographic tools and techniques developed by the Lakota. The information presented here was obtained primarily through personal interviews of Lakota elders and scholars on the Pine Ridge and Rosebud

Indian Reservations of South Dakota and through research review of Lakota culture, spirituality, and oral traditions.

The Lakota, like virtually every other North American Indian tribe, had no written language, and therefore maintained a highly efficient, highly organized oral tradition. In other words, the primary transmission of the Lakota's cultural traditions, social values, technological techniques, and legends was spoken or sung, and passed down through the generations in such a manner. Survival of the nomadic Lakota relied upon the individual acting strictly as part of the band or tribe. It was an incorporation of the individual parts into the whole, however, that created the corpus of Lakota oral tradition, ensuring what the greater membership of the tribe recalled, practiced, and believed was constant.

In keeping with their oral tradition, the Lakota relayed the greatest share of their cartographic and geographic data verbally and from memory, combining the oral information with observed spatial relationships to create their own collective and individual mental maps. Each individual Lakota's conception of the earth allowed him to create his own mental map, detailing his perceptions of and experiences within his known world. His mental map became much more powerful and useful, however, when combined with the maps of others into the general body of oral cartography. Oral cartographic tools and techniques were relied upon primarily, and understandably so in a "pre-written language" society. While the oral tradition did not entirely preclude the creation of physical cartographic tools, these instruments served more as mnemonic devices than things to be relied upon absolutely for navigation of the physical or spiritual plain.

Lakota storytelling was the vital component of the tribe's oral tradition. It was in the telling and re-telling of stories that Lakota traditions and recollections of past events of interest and importance became part of the band's collective memory. Tales and myths were passed from generation to generation, faithfully recounted word for word by Lakota elders and medicine men. The Lakota had scores of stories in their tribal repertoire, a testament to the incredible memory skills of the storytellers. Traditionally, several natural features in the Black Hills were linked with specific constellations, which in turn were linked to a particular story about Fallen Star, a Lakota figure of legend. The Fallen Star stories explain the creation of many physical sacred sites.

Songs and other musical instruments were also integral parts of Lakota activities, whether ceremonial or celebrative. Not surprisingly, Lakota songs reflected the spiritual and nomadic nature of the tribe, containing many references to the Directions, journeys across the prairie, animals, the Winds, and hunting. More than providing a set of definite physical directions, the songs were spiritual in nature and thereby provided a kind of sacred cartography, mnemonic tools for prompting Lakota thinking.

The Lakota named the physical features of their landscape; those names, however, sometimes differed depending upon the time of year or season. A single place may have up to four different names, tied to either the physical appearance, physical attributes, or social and spiritual usage of the place. Use of a particular name was predicated upon the context in which it was spoken. Take, for example, the Black Hills. In most any private or social setting the name *R_e Sapa* (Black Ridges), or, more commonly, *Paha Sapa* (Black Hills), could be used to identify the formation. If a more proper term of special respect were called for, the hills would be referred to as *O Onakinzin* (Sheltering Place), perhaps in reference to the protection the forested areas provided Lakota winter camps. *Wamaka Og_naka I_cante* (The Heart of Everything That Is) was a very formal and proper name, denoting great spirituality. Finally, *Hocoka yapi* (The Center) was the ultimate sacred name, reflecting the Lakota belief that the Black Hills were the center of the universe. This term was only used in ceremony or religious settings, and perhaps only within the Hills themselves. It was essential that a Lakota be familiar with these ways of naming places; proper navigation of his physical landscape depended on it. Certainly strict Lakota etiquette required proper usage of names, as one of the most humiliating situations for a Lakota was to be found speaking improperly or incorrectly.

Fundamental to Lakota spatial perception and cosmology was their belief that what was on the earth was mirrored in the heavens and vice versa, a relationship basically described by this glyph. The bottom figure, an earth vortice, and the top figure, a star vortice, combine to represent the Lakota belief that every physical phenomena on earth has a corresponding celestial designation in the sky, whether it be a single star or an entire group of stars or constellation. Use of these triangular symbols was not uncommon in Lakota picture writing, and understanding this particular glyph was key to interpreting Lakota perceptions of space and navigation through that space.

The stars played multiple roles in the Lakota cosmology. They were at once supernatural people of the sky, portals and paths to the afterlife, calendars, and written ‘scriptures’ of sacred stories. They were also cartographic guides, representations of the physical landscape mirrored in the heavens and essentially the Lakota’s greatest, most accessible, and, in their perception, most accurate, map.

The Lakota closely watched the ordered movements of both the constellations and the Sun, which allowed them to construct accurate celestial calendars needed to conduct their vital religious rites. It was at those times when the solar and celestial bodies came together that specific ceremonies were performed, and in specific places. As the sun moved clockwise through the Lakota constellations, so did the Lakota people through the sacred Black Hills. This annual pilgrimage was meant to mimic the sun’s path on earth. During the three months between the vernal equinox and the summer solstice, the sun moved through four Lakota constellations that corresponded with four places in the Black Hills. The four ceremonies to be performed—the Pipe Ceremony, Welcoming Back the Thunders, Welcoming Back All Life, and the Sun Dance—were life-renewing rites, and therefore the most important of the calendar. Because the Lakota believed that the ceremonies were performed simultaneously in the heavens by the *Maghpie Oyate*, the Cloud People, it was absolutely essential that the tribe, or representatives of the tribe, be at the Black Hills locations when the Sun entered the proper constellation. Special medicine men within the band, called the *Wica_hpi_yuha_ma_ni*, or “The People Who Walk With the Stars”, were entrusted with understanding and interpreting the information imparted by the heavens.

For educational purposes and as memory prompts, the Lakota constructed physical maps, made out of tanned animal hides. This practice had been all but forgotten until the revelation of a map in the early 1980s, and discovery of it was a big surprise to many people, including Lakotas. Unfortunately, these maps are not available for examination. One particular map that has been described to me, however, was a joint earth and sky map, displaying the mirroring relationship between the star and earth markers as differently colored triangles. Perhaps because of this cultural symbol abstraction, it is said that without proper instruction that hide maps cannot even be recognized as such, especially to Western eyes used to identifying a map by its Cartesian cartographic elements. This raises the possibility that other hide maps exist, perhaps in museum archives or private

collections, and are simply not recognized for what they are. Of major preservation concern is the condition of these hides; even the best cured and tanned hides may only last a decade or so before they deteriorate.

The Lakota, like other Plains tribes, computed distances by a day's journey, a day being either from sunrise to sunset, or sunset to sunrise; in other words, the modern twenty-four hour period constituted two days from the Lakota perspective. I was startled to discover, however, that the Lakota also had a spatial measurement system, and a scale to denote it, which was not a phenomena so far encountered or documented in literature pertaining to American Indian mapping. The Lakota used fixed spatial delineations, the smallest measuring approximately .8 inches and the largest approximately seven miles. This measurement, called a *tansun*, was designated using a scale symbol, indicating both the distances between markers and whether the route described was by water or land. Distance was calculated based on the length(s) of the vertical marks; however, other markings would have to accompany this particular *tansun* scale for the set of glyphs to successfully denote a particular site or intersection.

Though the Lakota had no written language, they did utilize pictographs, petroglyphs, characters, symbols, and stylized figures to convey information, and so developed a recognized "cultural system of symbolism". These designs or markings could be found on animal hides, cliff faces, rocks, bone markers, or scratched into the earth, and were used to identify particular bands, record sacred visions or stories, indicate sacred spaces, denote tribal or individual events, and transmit cartographic data. As an example, locational boundaries were often delineated by rock cairns or by painted markers, such as trees. The entrance to the sacred Pipestone quarry was delineated by trees painted with a red stripe; this communicated that all must wait on the periphery before being invited into the quarry.

As villages moved from place to place during the year, it was sometimes impossible to wait for young men who had gone out on various missions to return. In these cases, a signpost would be erected at the old village site, and pointed in the direction the camp was moving. Fashioned from a stick tied to a buffalo shoulder blade, the bone was marked with symbols that identified the particular

tiyospaye, or family group, that had been there. Usually this symbol was of the headman's name, such as the one shown here.

Rock petroglyphs seem to also have been utilized as cartographic tools. Two rock art sites in the Black Hills, in particular, could be star charts. Each contains a cluster of small triangles, similar to the representations used on the hide maps to indicate astronomical and geographical phenomena. Proper interpretation of these petroglyphs, however, would require a medicine man or other spiritually trained individual to decipher, and it is unclear as to whether the Lakota themselves chipped out these petroglyphs or simply incorporated them into their collective dogma.

Traditionally, the Lakota Sioux were dependent upon successfully navigating their mirrored worlds of the physical and spiritual. As such, they developed cartographic techniques and tools that enabled that navigation, creating mental and physical maps to provide direction, stimulate memory, delineate distances, and define boundaries. Though many facets of traditional Lakota cartography are only beginning to be examined and explained, Peter Nabokov encourages further study of indigenous cartography, noting that the “.....cosmographies and cosmograms that Native Americans produced in order to orient themselves in worlds were just as real to them as those Rand McNally interprets for non-Indians today.”