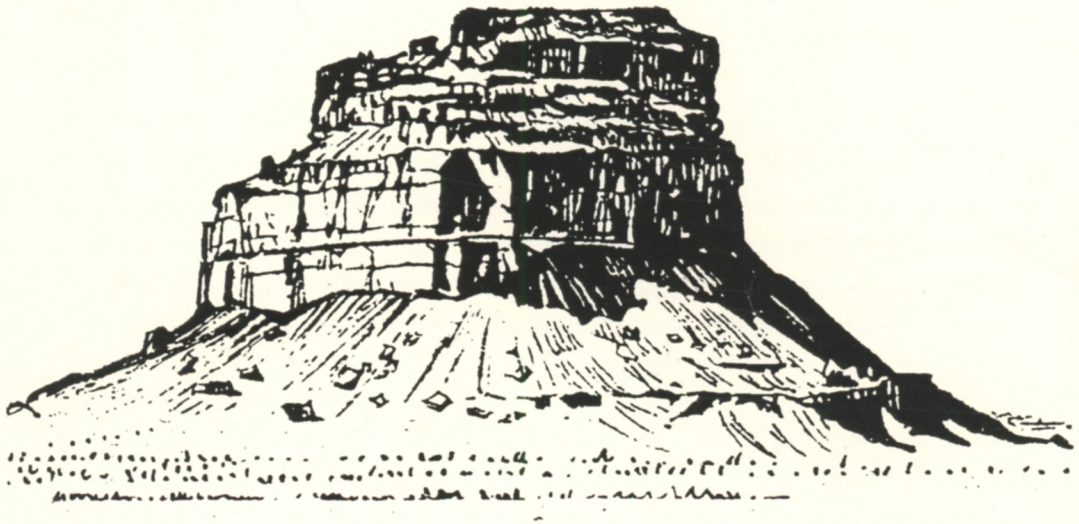
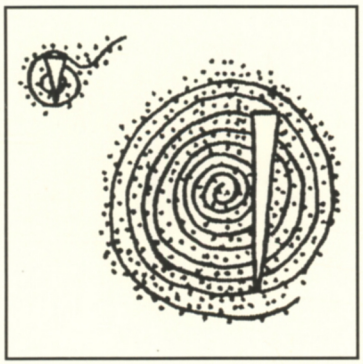
Fajada Butte Solstice Marker

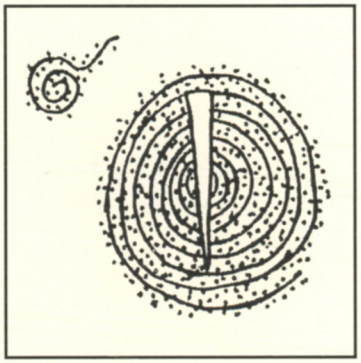


Fajada (banded) Butte is a dominant landmark in Chaco Canyon—an imposing presence rising over three hundred feet from the valley floor.

Chaco Culture National Historical Park



SPRING EQUINOX

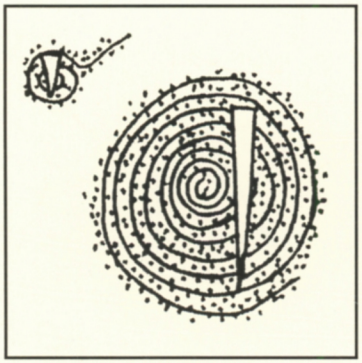


SUMMER SOLSTICE

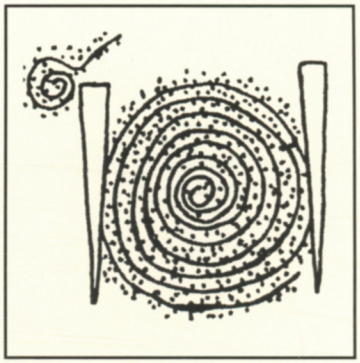
On a cliff face atop Fajada Butte, three large upright rock slabs stand in front of two spiral petroglyphs carved by ancestral Pueblo (Chaco Anasazi) people. As sunlight passes through these slabs on the spring and fall equinoxes and the winter and summer solstices, dagger-shaped beams of light appear at various points on the spirals. This planned interplay of light and shadow appears to have functioned as a calendrical marker for the people of Chaco Canyon.

In modern southwestern pueblo cultures, solstices are crucial to the societies' ceremonial and agricultural needs. They have solar and lunar sky watchers who announce the seasons by monitoring the cycles of the sun and the moon. The sun appears to hesitate for a few days at the solstices before it changes direction. In winter, ceremonies are held to encourage the sun to move back toward the north so that the days will again become longer. This is a very important time of year, for it signifies renewal.

The people of Chaco incorporated a variety of solar orientations into their architecture and art, which included the Fajada Butte solstice marker. These alignments indicate that the people possessed a well-developed knowledge of astronomy and its relationship to the seasons. This knowledge played an important role in their lives, and does so today.



AUTUMNAL EQUINOX



WINTER SOLSTICE

The Sun Dagger site atop Fajada Butte was recognized as a solstice marker in 1977. Once identified and publicized, visitation to the site increased. Unfortunately this visitation threatened the stability of the marker and the other sites on the butte. To ensure preservation and provide protection of these fragile archeological resources, the National Park Service restricted access to Fajada Butte in 1982.

On summer solstice 1989, it was discovered that two of the three rock slabs had shifted. These shifts affected the shafts of light that were projected on the spirals. Off-center and irregular patterns of light are now created on the spirals instead of the centered "daggers" that were recorded when it was first observed. Following this discovery, an evaluation team studied the site to determine the causes of deterioration. It was concluded that even though access had been restricted, human impacts did accelerate the normal erosion process causing the slabs to shift. Boot soles grinding on the soft sandstone, foot traffic disturbing plant cover, and paths worn into the fragile soils had added to the rain and wind erosion. To prevent any further deterioration, access to Fajada Butte and the solstice marker must be restricted to site monitoring.

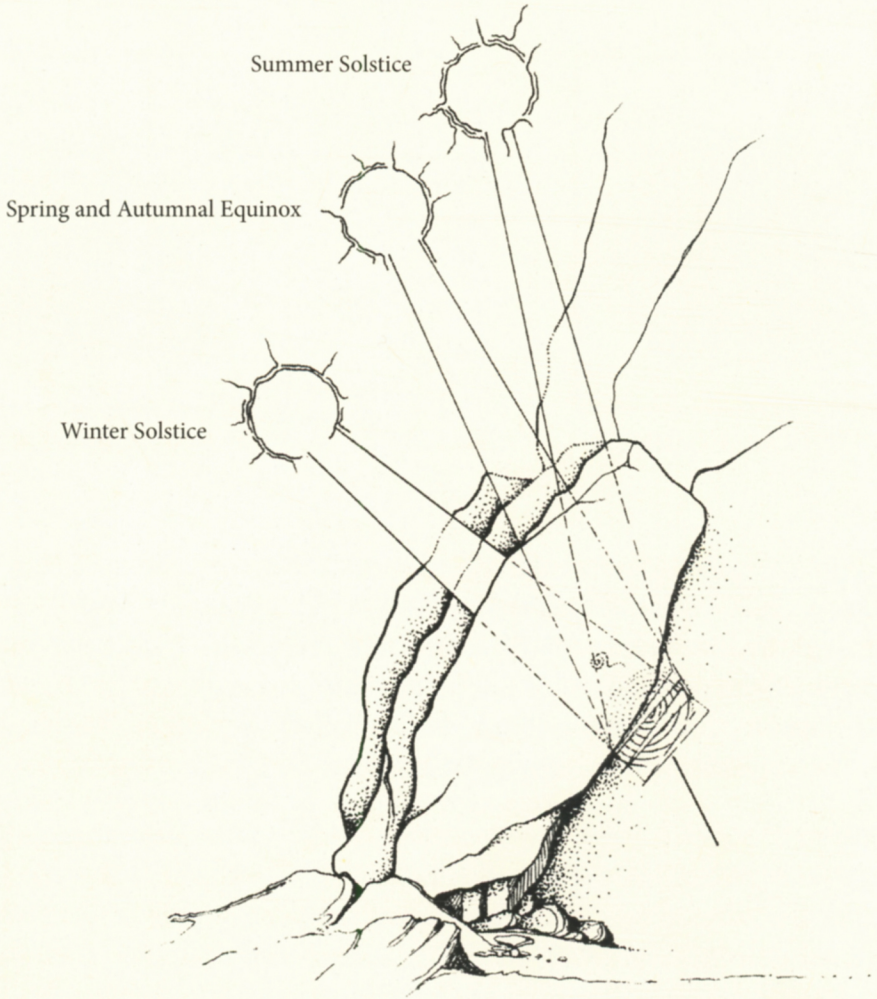


Illustration by Lyle Yazzie

Fajada Butte and other cultural sites in Chaco Canyon are part of the history and traditions of the Hopi, the Pueblo peoples of New Mexico, and the Navajo, who continue to respect and honor them. These places are fragile and irreplaceable and form a significant part of our world heritage. If we all take responsibility for their care, they will be here for the education and enjoyment of future generations.

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