Introduction

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In honor of Su Shi (1037-1101)

Looking from the side it forms a range, from the end it forms a peak;

From everywhere looking at the mountain, it’s never the same.

I do not know Mount Lu’s true face and eyes,

And this is simply because I am in the very midst of the mountain itself.

Translation by James M. Hargett
Another face of a mountain revealed through GIS
Spatial analysis and scientific visualization of sacred sites on Chinese mountains
GIS allows empirical patterns and spatial relationships evident in the data to emerge in ways simple textual analysis can not
Background of project

- Pacific Rim Research Grant
- Professor William Powell, UCSB
- “The Cultural Production of Space in China: A Spatial Analysis of Religious Sites, Routes and Boundaries”
Project objective

- Relationship between Chinese religious geography and the social and political structures of Chinese society
- Understanding of regional and trans-regional constructions of space.
The purpose

Through spatial analysis and scientific visualization

- Identify a spatial correspondence between
  - Chinese religious geography
  - Administrative boundaries
  - Topography & watersheds
The project consists of two integral components:
1. Data collection in several regions of China:

- Mapping location of sacred sites
  - Temples and other cultural features
- Documenting architectural and natural features with digital photography
- Collection and digitization of local gazetteers and scholarship
2. Collaborative use and analysis of field data

- Develop understandings of sacred geography and its relationship to:
  - Social and political institutions
  - Natural landscape

- Generalize about systems of Chinese spatial logic across regional and sectarian boundaries?
Documented sites

- Jiuhua shan  Anhui
- Emei shan    Sichuan
- Qingcheng shan  Sichuan
Some proposed sites

- Wutai shan, Shanxi
- Putuo shan, Zhejiang
- Hua shan, Shaanxi
- Wudang shan, Hubei
- Wuyi shan, Fujian
- Luofu shan, Guangdong
- Tai shan, Shandong
- 24 Dioceses, Sichuan
GIS reconstruction of four networks of site complexes

- 4 Buddhist Mountains
- 5 Marchmounts
- 10 Greater Grotto-heavens
- 36 Lesser Grotto-heavens
Grotto-heavens

- Produced in consultation with Professor Franciscus Verellen

- Localizations listed in Appendix:

- Geocoded using Alexandria Digital Library Gazetteer Server
Small-scale China GIS Data

Vector and DEM data produced under the direction of:

Lawrence W. Crissman
The Australian Centre of the Asian Spatial Information and Analysis Network (ACASIAN)
Griffith University
Sacred sites networks and navigable waterways
The purpose

- Demonstrate spatial relationship of trans-regional religious networks to:
  - Tang administrative boundaries
  - Navigable waterways
    - Sources of water
    - Routes
    - Barriers
    - Boundaries
GIS reconstruction of an example site complex

- Emei shan
  (7th Lesser Grotto-heaven)

峨嵋山
第七小洞天
Large-scale China GIS data

- Russian Military Maps (1:100,000)
- Digitized by East View Cartographic
- Purchased by the Map & Imagery Library, UCSB
Sacred site complex and watersheds
The purpose

- Demonstrate a spatial relationship between individual sites within the example complex to:
  - Pilgrimage routes
  - Watersheds
  - Topography
Sacred Sites Reconstructed

Representative Screenshots from Shanghai Demonstration
Small-scale maps

- Four sacred site networks
4 Buddhist Mountains
Hotlink to pilgrimage maps
5 Imperial Marchmounts
Hotlink to idealized maps
10 Greater Grotto-heavens
Hotlink to historical maps
36 Lesser Grotto-heavens
Buffer Analysis: 30 km buffers with 10 km rings
10 Greater Grotto-heavens: Select By Theme Analysis
30 km within distance of navigable river
36 Greater Grotto-heavens: Select By Theme
30 km within distance of navigable river
Administrative boundaries: Tang (741) dao
Large-scale maps

- Mt. Emei (Emei shan 峨 嶿 山): Seventh Lesser Lesser Grotto-heaven
Close-up with temples
Hotlink to digital photos
A while passed, then I braved the cold and went up over the Bridge of the Celestial Transcendent to Brilliance Cliff, where I lit some incense. The chapel there is covered with a roof of bark. The Vice-Grand Councilor Wang Zhenxu once had his roof tiled, but snow and frost seeped in and within a year the tiles had all cracked. Later it was recorked with bark that at least lasts for two to three years. Someone said to me, 'Buddha's Halo always appears at the hour of yu [11:00 AM, 7:00 PM]. Now it is past seven [3:00 PM]. We had better return to our lodgings and come again tomorrow.' While we were hesitating, suddenly clouds arose below the cliff from a valley to the side, just where Thunder Cave Mountain is located. The clouds paraded by vigorously like an honor guard. When they encountered the cliff, they paused for a short while. From the top of the clouds, a grand halo appeared containing several rings of various colors. I stood exactly opposite it and saw an inky shadow in its center, like a Transcendent or a sage astride an elephant. In the time it would take to drink a cup of tea the halo vanished, while beside it appeared another halo just like the one before. It, too, vanished after a while. From the clouds there then appeared two rays of golden light, which extended along the waist of the cliff. People call it the ‘Lesser Manifestation.’ By sunset the clouds had all dispersed, and the surrounding mountains became quite tranquil. By the second night watch (9:00-11:00 PM), lights appeared all over below the cliff. When viewed from a distance, they seemed to number in the many hundreds, perhaps even a thousand. At night, the cold was intense; I could not stand outside for long.

The next day, ping shen [July 25], I again ascended Brilliance Cliff for the view. Behind the cliff were the many layers of the Mount Min range. Slightly to the north was Tiled House Mountain, located in Ya Prefecture. A bit to the south was Greater Tiled House Mountain, close to the area of Nan Qiao. Its shape looked just like a one-room house with a tiled roof. There was also a halo at Lesser Tiled Rock Mountain, known as the ‘Manifestation of Self-Enlightenment.’ Behind these mountains are: the Snow Mountains of the Western Region. Lefty, rugged, carved, sliced, scores, perhaps a hundred peaks in all. When the rising sun first illuminates them, the snow glitters like shiny silver, shimmering in the light of the dawn. From antiquity to the present, this snow has never melted. These mountains extend a way to the land of India and to tributary kingdoms along the border for a distance of I don’t know how many thousands of li. It looks like it is spread out on a table before one. This spectacular, unique, unsupposable view was truly the crowning one of my entire life.

I returned to the chapel on the cliff to offer up a prayer. Soon, a dense mist arose on all sides, blending everything into a single whiteness. A monk said to me, ‘This is the Silvery World.’ After a while, a heavy rain fell and the mist dispersed. The monk said, ‘This is the Rain That Cleanses the Cliff.’ Buddha’s Halo is about to appear.” Fleshy clouds once again spread out below the cliff, billowing upward until they reached only several tens of feet below the top. The clouds smoothed themselves out like a floor of jade. There was a sudden rain, and droplets flew about. I looked down at the middle of the cliff; there was a large halo lying on top of the smooth clouds. Encircling it were three rings, each containing blue, yellow, red, and green colors. The center of the halo was empty, bright, dense, and clear. Each observer could see his form appear in the empty, bright area without the slightest degree of obscurity, just like a mirror. When one raised one’s hands and moved one’s legs, the reflection indicated this without showing anyone else’s form. The monk said, ‘This is the Halo That Captures the Body.’ When this halo vanished, winds arose from the mountains in front and the clouds quickly drifted away. From the midst of the wind and clouds appeared yet another large halo. It stretched across several mountains and contained many unusual hues; all gathered together in a multicolored light. Peaks, plants, and trees were so fresh, gorgeous, brilliant, and glittering that I couldn’t look at them directly. When the clouds and mist dispersed, this halo remained to shine alone. People call it the ‘Pure
Hotlink to primary Chinese sources: (digitized in Unicode)
Viewshed analysis of a temple on Mt. Emei
Institutional credits

- University of California
  Pacific Rim Research Grant
- ACASIAN and Griffith University
- East View Cartographic, Inc.
  Minneapolis, Minnesota
- Alexandria Digital Library Project
  and the Map & Imagery Library at UCSB
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