

Designing Scenic Tourist Maps through a Framework of ‘Spatio-temporal Imageries Formation’

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Abstract:

As tools for spatial cognition, maps serve not only as carriers of geographical information but also as intersections of cultural expression, artistic creation, and scientific inquiry. Recent advances in cartographic design have expanded map functions from basic information transfer to multidimensional perspectives encompassing narration, emotion, and aesthetics.

According to travel purposes and types, tourist maps were classified into sightseeing tourist maps, quality tourist maps, other types of tourist maps, tourist city maps, and maps made for tourism promotion and advertising (Jancewicz & Borowicz, 2017). Early studies on tourist maps prioritized utilitarian functions such as navigation and POI annotation. Forrest & Castner. (1985) examined the design and perception of point symbols in tourist maps, providing accurate guidance for wayfinding. As tourism diversified, people's requirements for tourist maps were not limited to wayfinding. Instead, they thirst for deep knowledge about target landscapes and various information related to tourist services, activities, and experiences. (Airikka & Masoodian, 2023) Recently, a growing number of scholars have attempted to integrate local cultural themes, such as intangible cultural heritages and historic cities, into tourist map design through forms like hand-drawn maps and thematic maps, to present the historical and cultural context of urban areas. Jiang & Gao (2014) employed stylized vector illustrations in their Ningbo Travel Souvenir Maps, replacing complex route networks with minimalist pictorial symbols to achieve visual simplification. Weng et al. (2021) embedded Xi'an's cultural essence into thematic cartography, visually articulating the city's unique identity as a historic and cultural city through layered spatial narratives. Moreover, scholars have further deconstructed research paradigms in urban tourist map design to establish theoretical frameworks. For instance, Wang et al. (2024) have systematically investigated the narrative potential of tourist maps and demonstrated a narrative cartographic design approach.

However, there are still three aspects that need to be discussed urgently: (1) In terms of the map theme, more attention should be paid to the imagery shaping of the natural landscape beyond the cultural connotation. (2) In visualization design, temporal logic and dynamic feature arrangement are critical to transcending mechanical layouts in cartographic composition. (3) For binding design, designers should consider more personalized and attractive design forms to enhance user experience. To this end, we attempt to construct an alternative logical framework of scenic tourist maps based on four modalities of ‘Real’, ‘Mental’, ‘Artificial’, and ‘Perceptual’, which propose the basic principles for ‘Spatio-temporal Imageries Formation’. The design implementation involves three key steps: Firstly, replace abstract symbols of tourist spots with concrete landscape features. Secondly, transform the mechanical arrangement method of ‘tourist routes + introduction texts’ into a narrative sequence. Finally, single-large-format map with high information density should be transformed into an innovative design that reflects the connotative characteristics of landscapes, integrates users and the scenery, and delivers a more engaging and immersive user experience.

Through designing the *Guilin Notes: Green Peaks, Magical Caves and Charming Water* atlas, this article details how to develop informational and visual designs for urban scenic tourist maps based on the principles of ‘Spatio-temporal Imageries Formation’, thereby achieving creative deconstruction of natural landscapes (Figure 1). This exploration provides a new perspective for the development and application of scenic tourist maps. It offers theoretical foundations and methodological references for design practice. The final binding product is shown in Figure 2.

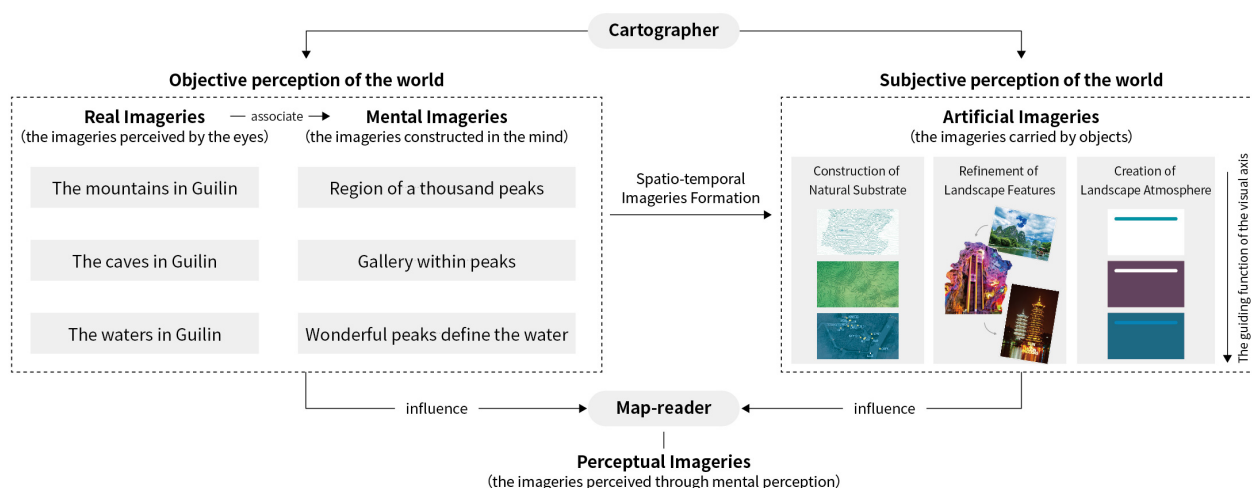


Figure 1. Design framework of Guilin scenic tourist map based on the principles of 'Spatio-temporal Imageries Formation'



Figure 2. Binding design with an accordion fold format

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