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The Use of Spatial and Mixed Methods in Analyzing Cultural Landscapes

Elizabeth Brabec¹, Chingwen Cheng¹ and Kristina Molnarova²

The cultural landscape is a complex phenomenon resulting from both natural-geographical and social-cultural processes. Defining the normative patterns produced by each culture and/or historical period is essential to understanding the patterns and features of the anthropogenic landscape and the inherent meaning. Currently, an understanding of both historical and contemporary patterns is developed from the qualitative analysis of a single or small number of cases. Results obtained from a single or small number of cases are inherently limited in their ability to clearly identify the pattern in a complex system, particularly when a chosen case may present an anomaly rather than the norm.

A more comprehensive and robust research methodology can be found in a population sample design using a mixed method approach including qualitative, quantitative and spatial analysis methods. While classic statistical methods are useful for quantifying objects and analyzing distribution patterns in the landscapes, qualitative methods can illuminate and interpret the cultural meanings in the patterns. Therefore, a mixed methods approach takes advantage of the strengths of applying both quantitative and qualitative methods in a sequential, concurrent, and transformative manner (Creswell 2009). Stated another way, while spatial analysis is useful in finding statistically significant relationships between objects in landscapes, qualitative analysis methods are crucial in making the spatial pattern meaningful. Combining the two into an integrated spatial and mixed method approach can provide a full analysis and understanding of the cultural landscape.

Spatial analysis has long been in use in the fields of archeology and heritage management to identify cultural patterns (Baena et al. 1998; Soltysiak and Jaskulski 1998). Based in part on these existing methodologies, a sequential and iterative, spatial mixed-method approach for analyzing settlement patterns in cultural landscapes is presented and evaluated in this paper. The methodology is applied and evaluated in two contexts: the Gullah community of St. Helena Island, South Carolina, and the pluzina patterns of medieval settlement and field patterns in the Czech Republic. The cultural landscape patterns are analyzed at the regional, community and individual household levels, using iterative applications of spatial, quantitative and qualitative methods to both individual cases and large sample sizes. The paper presents the strengths and weaknesses of single cases versus samples that are reflective of entire populations, the application of quantitative,

qualitative spatial analysis methods and subsequently the benefits of a mixed-methods approach to cultural landscape analysis.

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Soltysiak, Arkadiusz, and Piotr Jaskulski. 1999. Czekanowski's Diagram a Method of Multidimensional Clustering.

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landscape research methods, cultural landscape analysis, spatial mixed-methods

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