

Working with Spatial Data: Implications of the Change of Support Problem

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ABSTRACT

Data are commonly provided pre-aggregated at a particular spatial level. For example, data on poverty is collected at the block-group level, while data on education is easiest to obtain at the school district level. This makes it difficult to combine data, and can lead to major issues when the data does not make sense at the level it was collected. Working with data to change its level of spatial aggregation is called the Change of Support Problem, and has many implications in the real world. In this talk, I will discuss the statistical problem and some specific examples where it impacts us, such as gerrymandering and the Flint water crisis. While there is no one accepted solution to these problems, I will present a few methods that allow data analysts to move from one level of spatial aggregation to another.



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BIOSKETCH

Amelia McNamara is an Assistant Professor in the Computer & Information Sciences department, where she teaches statistics. She has a BA in English and mathematics from Macalester College, and a PhD in statistics from UCLA. Her research focuses include statistical computing, statistics education, data visualization, and spatial statistics.

