

**October 22, 2004 at 12.00 Noon
Zimmer Lounge, Maxcy Hall**

Spatial Structure in the Social Sciences Colloquium Series

What is Special about Spatial Analysis in the Social Sciences?

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Abstract: Nearly all of our knowledge about the world easily can be classified into a time and/or place category. Research in the social sciences follows that classification by dividing its subject matter into specific time periods and specific sites or areas. Those social scientists among us who theorize about some aspect of the world may not state specifically where or when, but we all know that there is relatively little that can be said that generalizes to all of time and space. Time is usually divided into well understood units – seconds, hours, years, and so on --- that form the foundation of our data collecting systems. But what of space? Countries? They change boundaries from time to time and are never homogeneous internally in any variable. Metropolitan areas? They can grow. Zip codes? They were not here a couple of decades back. Of course, a mile is always a mile, a meter is always a meter, but what is the meaning of a mile for the phenomenon under study? In this talk, I will attempt to prove that without a clear understanding of the meaning of our spatial units we tend to misspecify our models, structures, hypotheses and, as a result, disseminate information that is biased or erroneous. I will discuss spatial data, the need for them, the problems in their use, and give some examples of their proper use. For example, to what extent are family income data a function of the size and shape of the geographic units on which they are based? All of this is tantamount to introducing a new discipline for our universities: it could be called spatial information systems or geographic information science.

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