

Migration, Exposure and Health

- *Spatio-Temporal GIS Analysis for Environmental Health*
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with Max Egenhofer, U. Maine*
- National Institute of Environmental Health
Sciences, National Institutes of Health

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Spatio-Temporal GIS Analysis for Environmental Health

- To develop and test a set of tool and procedures for spatio-temporal analysis of environmental health data.
- Will apply tools in a series of epidemiological studies

[Back](#)

Spatio-Temporal GIS Analysis for Environmental Health

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[Back](#)

[On to slides 2-5](#)

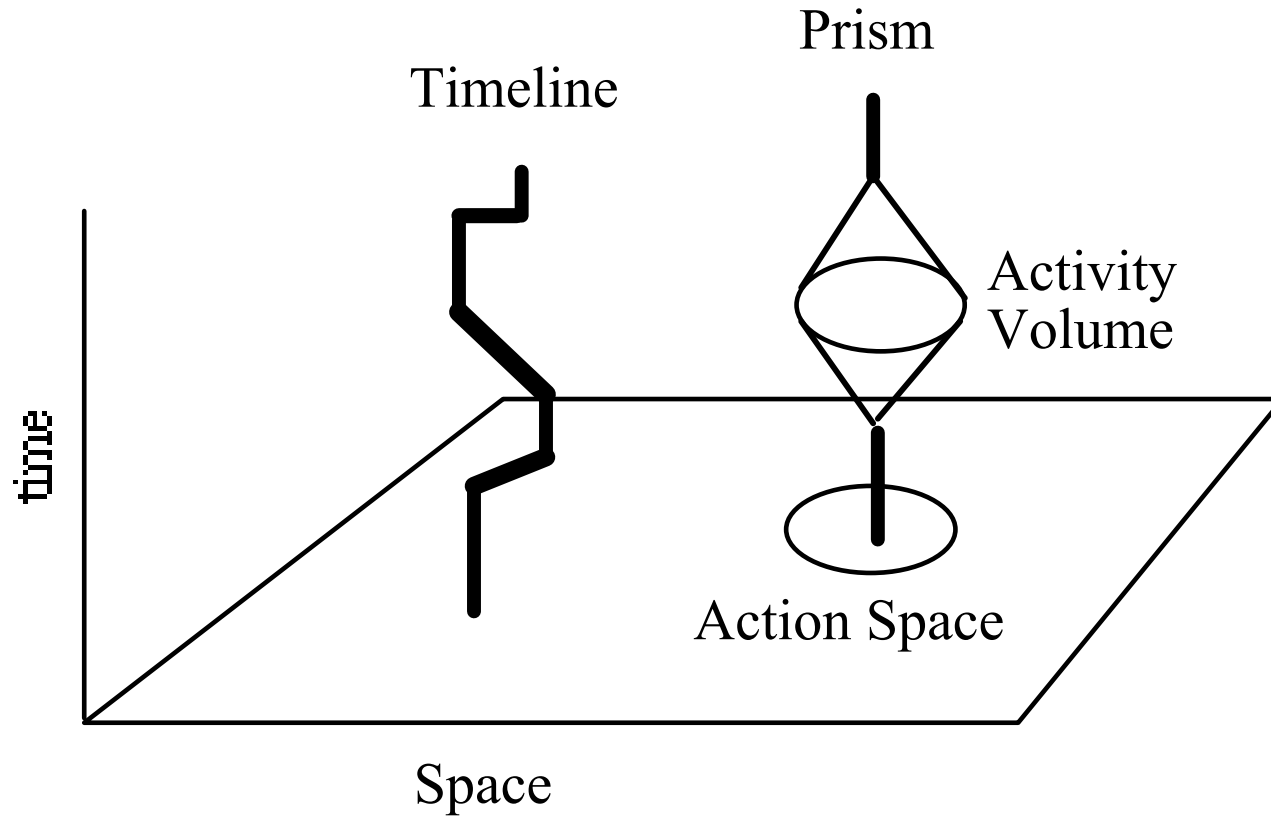
Environmental Health Problems with Long Latency Periods

- Human mobility at slow time scales (months, years) is an important factor in interpreting health statistics, especially in studies of diseases with long latency periods such as many forms of cancer.
- Residential moves may break up spatial clusters or 'hot spots', and weaken associations between health problems and environmental factors.

Human Mobility and the Analysis of Health Statistics

- Project Researchers are developing new methods for
 - Testing statistically for disease clusters
 - Rolling back residential life histories of cancer patients to search for disease clusters in the past
 - Reasoning about similarity of life trajectories and correcting for migration

Reasoning About Geographic Movement



Reasoning about Movements of People Through Space-Time

