

Diffusion of Innovations Over Space and Time

Lecture by

Grant Ian Thrall, Ph.D.

Professor of Geography,
University of Florida
Gainesville FL 32611

Types and Processes of Diffusion

- Two Distinct Types of Diffusion
 - Relocation Type
 - Expansion Type
- The Diffusion Process
 - Contagious Diffusion
 - Hierarchical Diffusion

The Diffusion Spatial Pattern

- Phenomena that diffuse have spatial patterns
 - **Point pattern analysis**
 - Boots, Barry N. and Arthur Getis. 1988 *Point Pattern Analysis*. *Scientific Geography Series* No. 8. Sage Publications, Newbury Park, California
 - **Spatial autocorrelation**
 - Odland, J. 1988. *Spatial Autocorrelation*. *Scientific Geography Series*, vol 9. Sage Publications, Newbury Park, California
- The new location pattern may be a function of the previous or old location pattern

The Process of Diffusion: Innovation

- Innovation
 - Invention
 - Tentation
 - Cultural Borrowing
 - Variation

The Process of Diffusion: Social Acceptance

- Absorbing Barrier
- Reflecting Barrier
- Permeable Barrier
- Examples of Barriers
 - Physical
 - Cultural
 - Linguistic
 - Religious
 - Political
 - Psychological
 - Legal and Economic

The Process of Diffusion: Five Personal Stages

- Innovator
- Early Adopter
- Early Majority Adopter
- Late Majority Adopter
- Laggard

Innovator

- The innovator is *venturesome*
 - Has an obsession with new ideas
 - Cliques are common and not dependent upon proximity
 - Substantial financial resources
 - Highly educated

Early Adopter

- The early adopter is *respected*
 - While innovators are cosmopolites, the early adopter is a localite
 - Great opinion leadership
 - Embodiment of discrete use of new ideas

Early Majority Adopter

- The early majority adopter is *deliberate*
 - Adopt just before the average member of a social system
 - Activity with peers is high, yet leadership positions are rarely held
 - They are an important link in legitimizing innovations

Late Majority Adopter

- The early majority adopter is *skeptical*
 - Adopt just after the average member of a social system
 - Adoption may be both an economic necessity and the answer to social pressure
 - Innovations are approached with a cautious air
 - Weight of public opinion must favor the innovation before the late majority are convinced

Laggards

- The laggard is *tradition*
 - Laggards are the last to adopt
 - No opinion leadership (this is changing)
 - Most localite of all adopters
 - Point of reference is the past
 - Interaction is primarily with others with traditional values
 - When laggards finally adopt an innovation, it may already be superseded by another more recent idea
 - Laggards are frankly suspicious of innovations, innovators, and change agents

Further Readings On Spatial Diffusion

- John Corbett, 2001. "Torsten Hägerstrand: Time Geography." *Center for Spatially Integrated Social Science*. <http://w.csiss.org/classics/content/29>
- Publications by Torsten Hägerstrand 1938 – 2004
<http://www.keg.lu.se/html/torstenhagerstrand.html>
- Morrill, R., Gaile, G., & Thrall, G. 1. (1988). *Spatial diffusion. Scientific Geography Series*, vol 10. Newbury Park, CA: Sage Publications.
- Allaway, Arthur W, Black, William C, Richard, Michael D, Mason, J Barry. Jan 1994. Evolution of a retail market area: An event-history model of spatial diffusion *Economic Geography*
http://www.zoeticzone.com/p/articles/mi_qa3660/is_199401/ai_n8732780?pi=zoe
- Diffusion Through Space And Time
http://media.wiley.com/product_data/excerpt/52/04714305/0471430552-3.pdf