Lecture - 54

Homophily (Continued) & Positive and Negative Relationships

Spatial Segregation: An Introduction

It assumes that individuals have a preference for living among people of their own group or type, and that they will move to a new location if they are not satisfied with the composition of their immediate neighborhood.

In the Schelling model, individuals are represented as agents that are placed on a grid. Each agent has a type or color, and their happiness is determined by the number of similar-colored agents that are in their immediate neighborhood. If an agent is unhappy because there are too few similar-colored agents around them, they will move to a new location.

The model is run through several iterations, with agents moving around until they reach a stable state. The final state of the model represents a snapshot of a segregated city or neighborhood, where agents of the same type tend to cluster together.

The Schelling model is a simple yet powerful tool for understanding the mechanisms behind segregation. It demonstrates how even a small preference for living among one's own type can lead to large-scale patterns of segregation in a city or neighborhood.

Lecture – 55

Homophily (Continued) & Positive and Negative Relationships

Spatial Segregation: Simulation of the Schelling Model

This simulation is based on the Schelling model, which was introduced by Thomas C. Schelling in 1971 to explain how segregation can arise from individual choices. The model assumes a city divided into a grid of cells, with different types of people living in each cell. In this simulation, red and blue represent the two types of people, and white represents a blank space where anyone can move.

The simulation has several parameters that can be adjusted, including the similarity threshold (t), which is the minimum percentage of neighbors that need to be of the same color for a person to be satisfied; the distribution of red and blue cells; and the percentage of blank spaces.

The simulation works by randomly moving dissatisfied people to a blank space until everyone is satisfied. As the similarity threshold increases, the simulation shows that people become more segregated.