

Assignment week 12

- 1) What do global and local indicators of spatial autocorrelation measures? What is the difference?

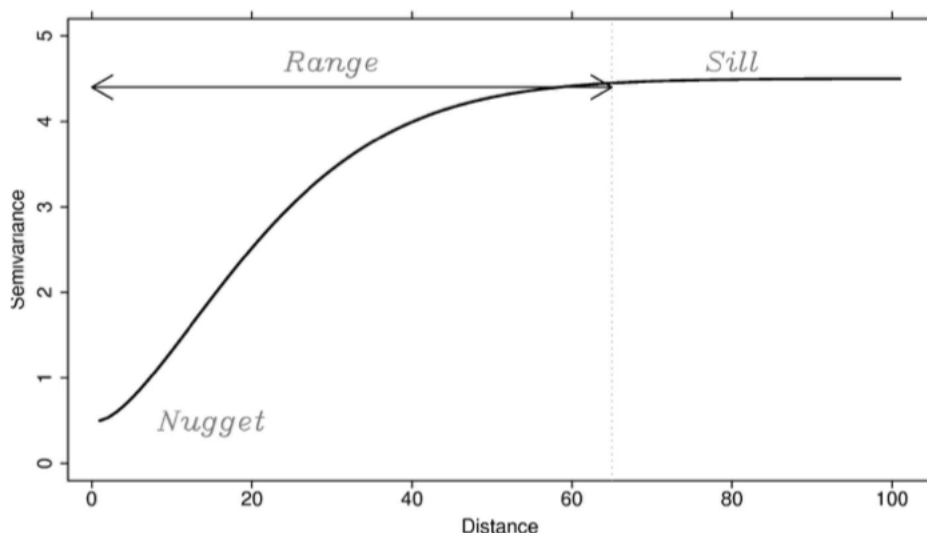
Global indicators of spatial autocorrelation measure with a single value if there is spatial autocorrelation across the entire study area and if it is positive or negative.

Local indicators of spatial autocorrelation measure the magnitude of spatial autocorrelation heterogeneously across space and can identify local hot or cold spots, clusters and outliers across the spatial data set.

- 2) Which role does the spatial lag play and how can we best set it?

Spatial lags help determine spatial autocorrelation in the geographic region and the spatial processes and pattern that characterize. We can best set it, by incorporating a priori knowledge we may have of spatial interaction or spatial heterogeneity, into the contiguities, distances and weights we set.

- 3) What are the key components of a variogram and what to they mean?



The key components of a variogram are the nugget, range, and sill.

The **nugget** is the residual seminaries that remains unexplained by variogram. For example two measurements taken right next, or even overlapping each other might yield different results, due to a range of factors such a measurement error, device calibration, or small scale heterogeneity

The **range** is the spatial distance at which two measurements can be said to still be correlated to each other. The width and slope determine to what degree measurements are correlated.

The **sill** is the distance at which maximum variance is reached and the distance after which measurements can be said to be no longer correlated to each other.