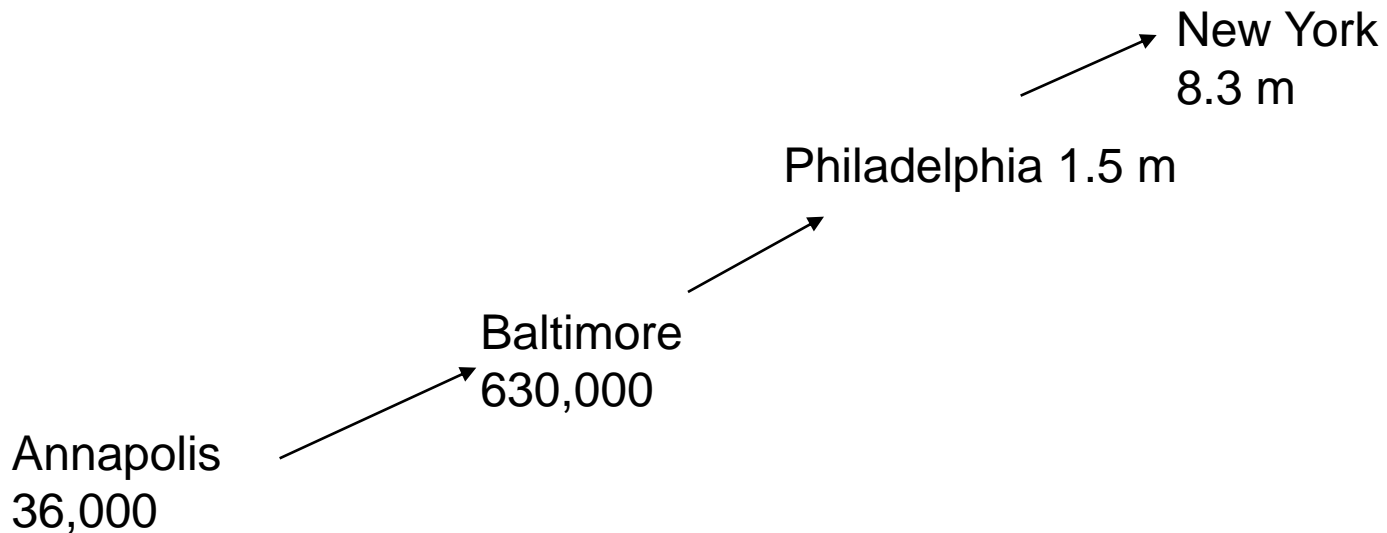


Central Place Theory

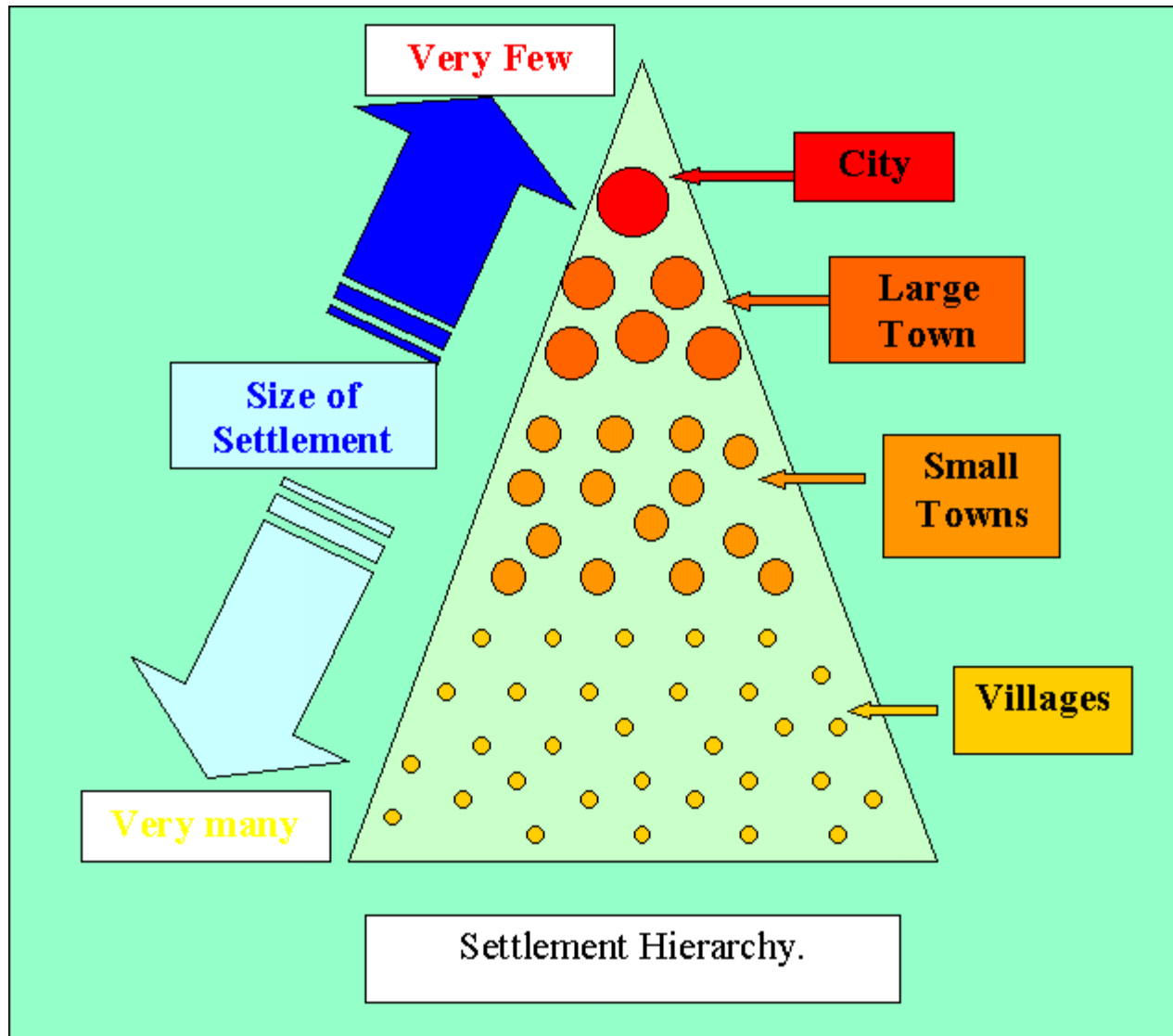
This is theory concerned with the functional importance of places

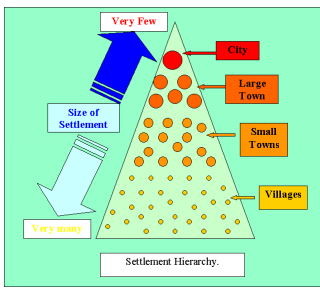
Central Place

- -is a settlement that provides goods & services. It can be small (a village) or large (primate city)
- → all settlements form a link in a hierarchy



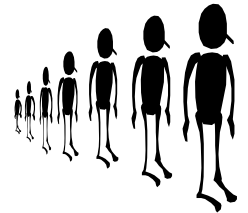
Why are there very few large settlements?





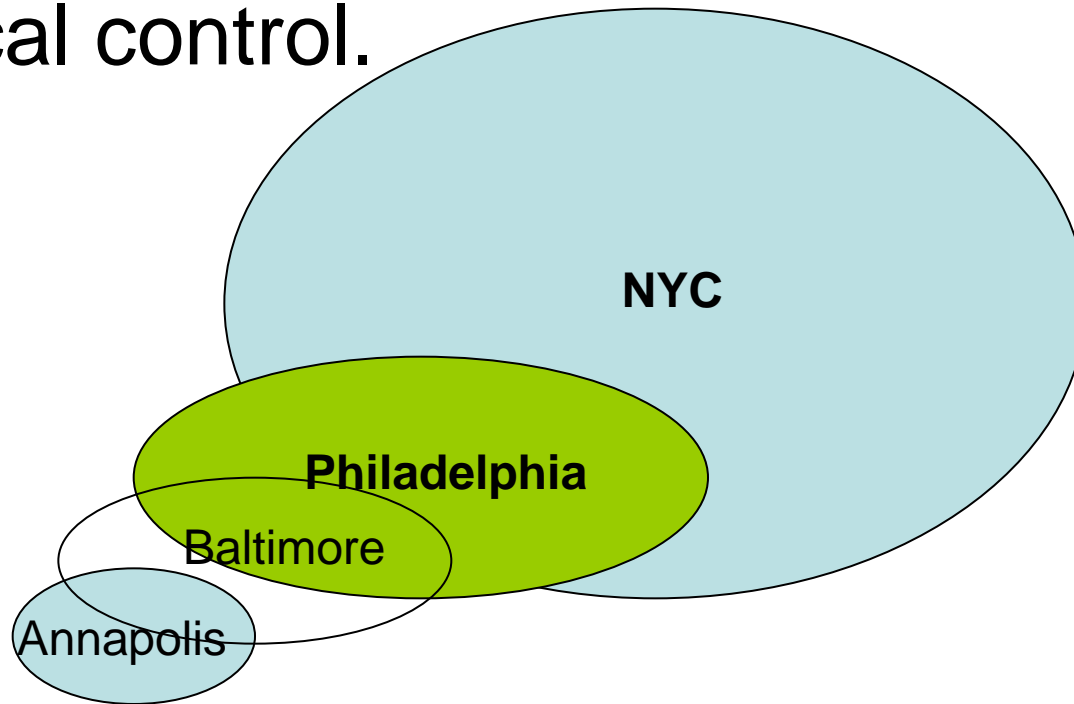
Settlement hierarchy

- Why are there very few large settlements?
- Large settlements need a very large population (threshold) to support all of their functions (services)
- Large settlements provide very high order functions (NYSE, etc). Because these functions are so highly specialised there is not enough demand to support more than a few of them



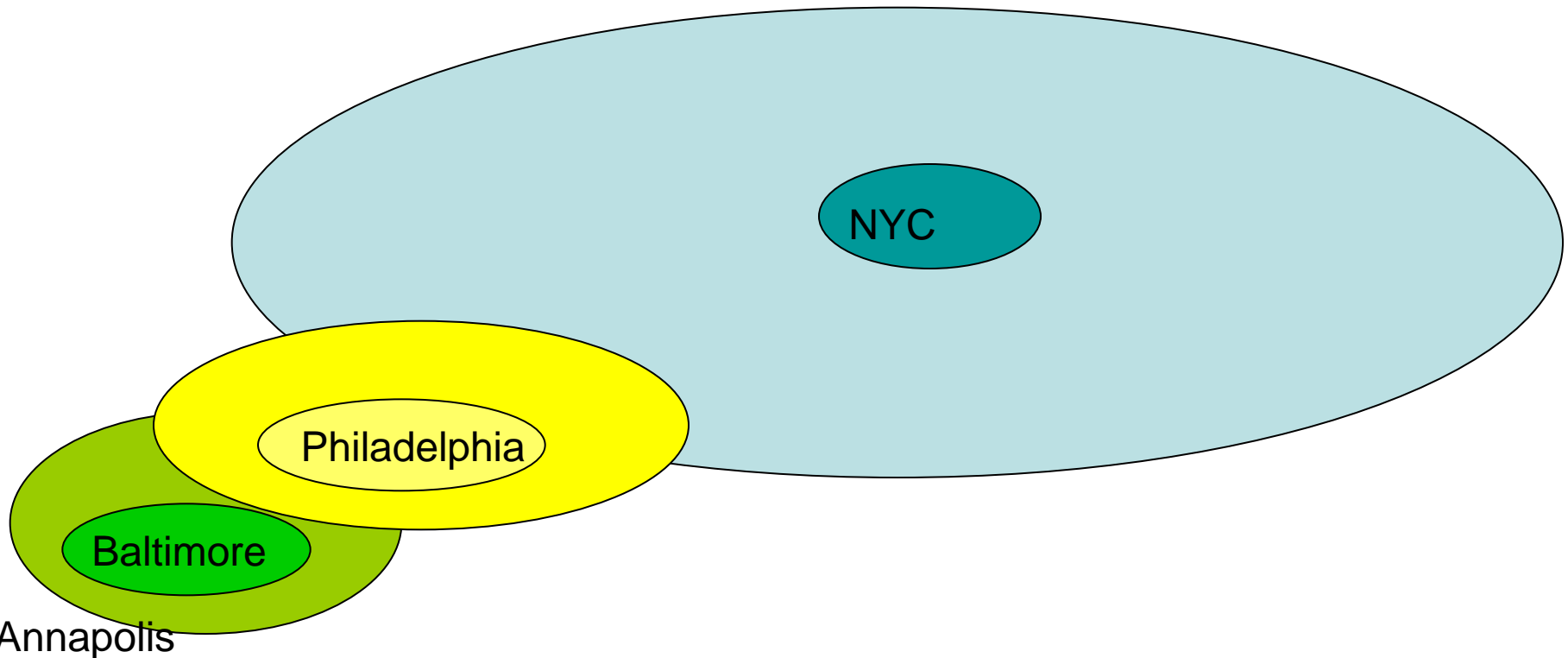
Sphere of influence

- Is the area around each settlement that comes under it's economic, social & political control.



Sphere of influence

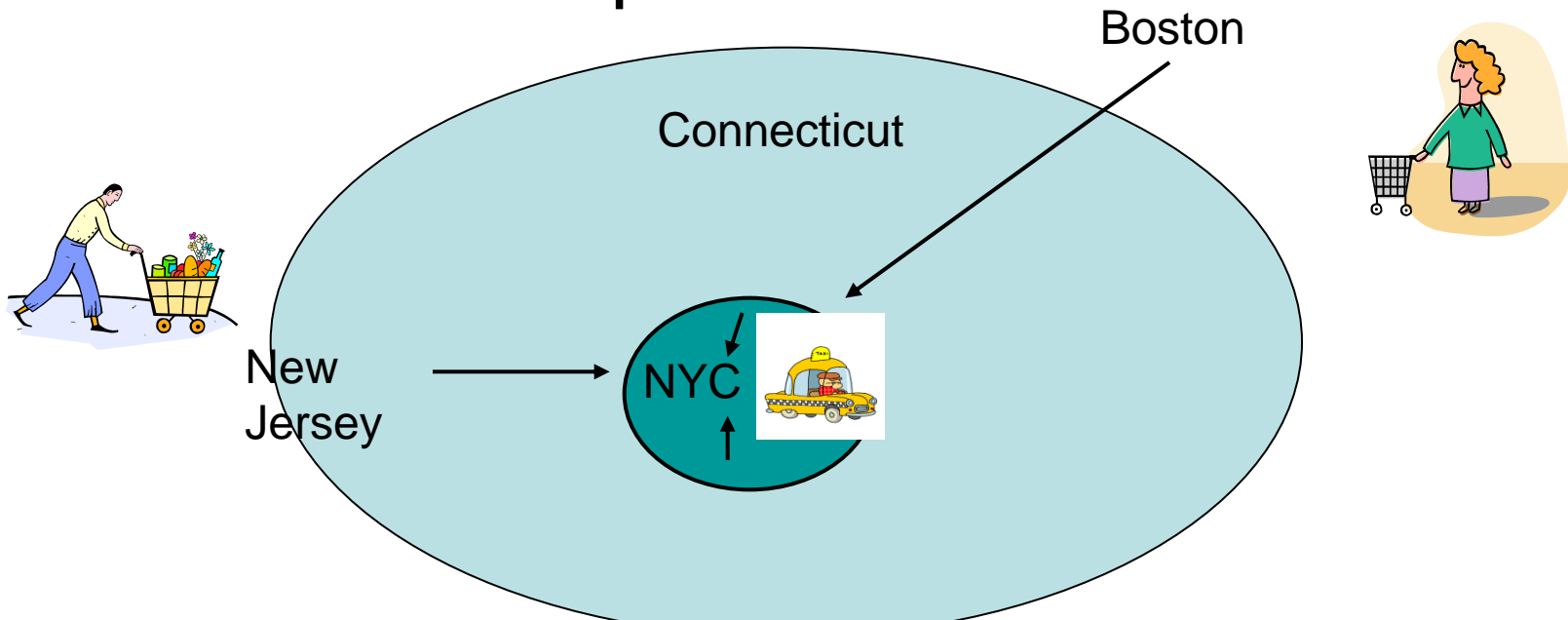
- The extent of the sphere of influence will depend upon the spacing size & functions of the surrounding central places



Central place functions

Function= a service

- These are the goods & services it provides for local customers & for clients drawn from it's wider sphere of influence



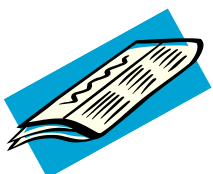
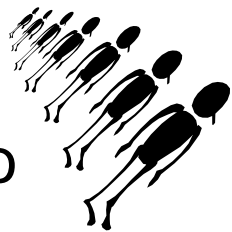
Population size does not necessarily determine the importance of the central place

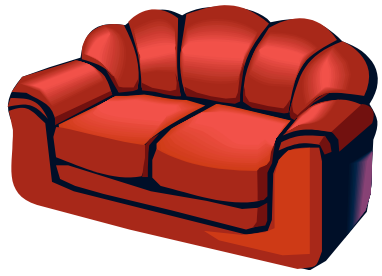
Range (km) →

Range & Threshold

Threshold = ●

- The **range** of a good or services is the maximum distance that people are prepared to travel in order to obtain it. (short distances for a low order item e.g. newspaper)
- The **threshold** of a good or services is the minimum number of people required to support it i.e. 2500- doctors surgery
- 500-elementary school/ 25,000-shoe shop 60,000 for a large grocery store/ 100,000- large department store/ 1million University
- **The more specialised the service the greater the number of people needed to make it profitable.**

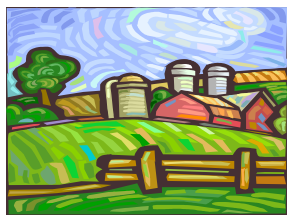




Range & Threshold

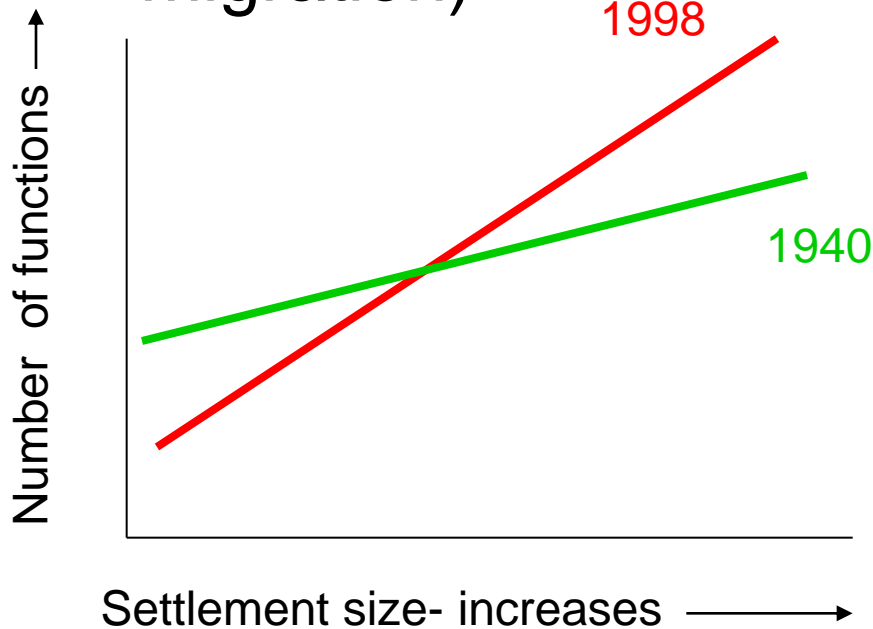


- Low order items (basic items)= newspaper
- High order items (specialised items)= furniture
- Low order functions (basic services)= corner shop/ Primary school
- High order functions (specialised services)= university/ hospital
- Settlements providing low order services = low order settlements (rural)
- Settlements providing high order services= high order settlements (urban)



Changes in population size & number of functions

- Settlement sizes change over time (via births, deaths, migration)



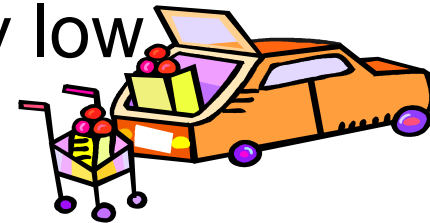
- Settlement functions (services) change over time
- Over the past 50yrs in the US= decrease in the # of services available in small settlements and an increase in the # of services provided by larger settlements





Factors that affect a settlements number of functions

- Settlement depopulation or increased population
- Greater wealth & mobility means some rural populations no longer visit their own local services but go further afield seeking services from higher order settlements
- Domestic changes (deep freezers) means rural household, no longer make use of daily low order services (village shop)



Population size does not necessarily determine the importance of the central place → but there is a strong correlation

The rules of functional hierarchies

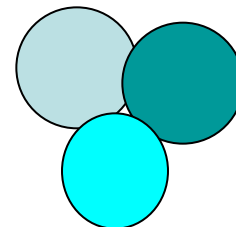
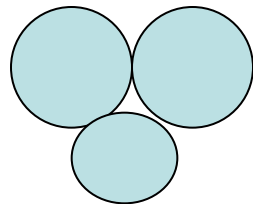
(service)

- 1. The larger the settlements are in size, the fewer in number they will be
- 2. The larger the settlements grow in size the greater the distance between them
- 3. As a settlement increases in size the range and number of it's functions will increase
- 4. As a settlement increases in size, the number of higher-order services will also increase (the services become more specialised)

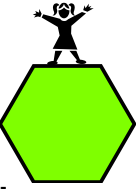


Walter Christaller's model of central places

- The theory states that **threshold** and **range** act as laws that govern the number, size and distribution of settlements
- When these 2 factors act together they create a hierarchical landscape
- Christaller noticed in the flat land of South Germany that towns of a certain size were roughly equidistant (uniformly spread)
- He stated that the ideal shape for each town's sphere of influence should be a hexagon because circles either leave gaps (which are unserved by any central place) or they overlap (meaning one area is served by too many central places)



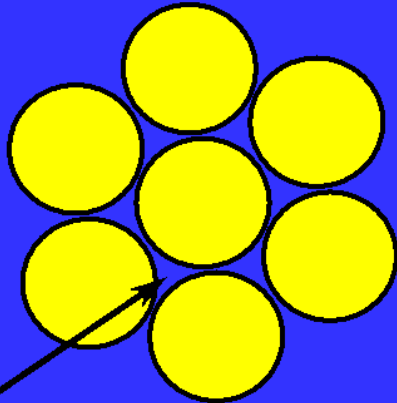
Christaller's central place theory



- Christaller stated that the best shape for a sphere of influence is a **hexagon**. This shape means that consumers still have accessibility to the highest order central place and its trading area from all parts of the hexagon.
- Christaller's key idea was that **customers would go to the nearest higher order central place to buy goods and services**
- High order central places act like a magnet for consumers.
- He called this phenomenon **$K=3$** (or the marketing principle)
- In order to make his theory work Christaller had to make a few assumptions
- **He assumed that each trading area had an isotropic surface (that the whole area was the same all over) i.e.**
 - **→ the whole area was flat**
 - **→ there was only 1 form of transport (and transport costs were proportional to distance)**
 - **→ the population was distributed evenly across the plain**

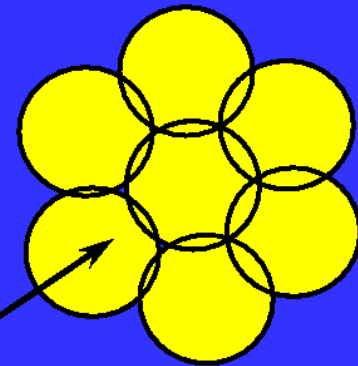


What's wrong with circles?



Leaves some consumers unserved

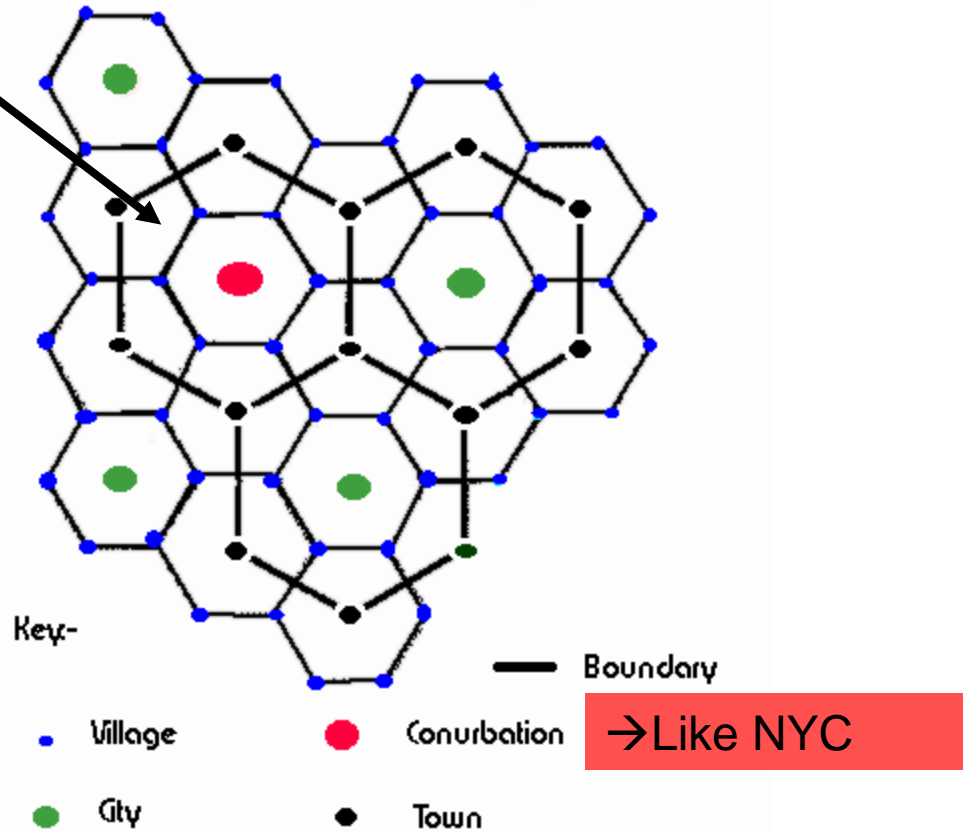
What's wrong with circles



Or overlap

The areas within the black dots shows the sphere of influence (trading area) of the largest settlements

Central Place Theory



- The uses of Christaller's central place model
 - The model is often used by governments to plan the location of new towns (i.e. Milton Keynes) and high order services i.e. hospitals
 - It is used by transport authorities to plan transport routes(so that all areas have equal access)
 - Businesses can use the model to decide where to locate a new shop

Limitations of Christaller's model

- Few real-life regions fit Christaller's model (except the flat lands of the Dutch Polders and East Anglia in the UK)
- **The problem lies in the basic assumptions of the model:**
- People do not always go to the nearest central place (they may chose a new edge of city superstore further away) So the K3 theory wouldn't work.
- Large areas of flat land rarely exist. Mountains & hills etc distort transport routes
- People and wealth are not evenly distributed (if poorer people live in a certain area & their nearest high order settlement is expensive then they won't visit it)
- in the US, multi-million dollar businesses have insufficient thresholds because the range for their products are too small; hence, professional athletic teams and popular entertainers with their high income demands travel throughout the country collecting "ranges."
- Already in the 19th century, catalog companies, like Sears, were already "annihilating" space, as does the internet now.
- Governments often control where new towns are located, not market forces (i.e. not necessarily where the demand for goods and services is highest)

