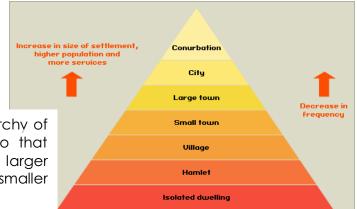
## Theoretical Rationale

I will now explain the theory behind my hypothesis.

A key focus during my investigation is spheres of influence. Settlement hierarchy, suggests that the larger the settlement, the larger the sphere of influence.

This is the same with settlement because larger settlements provide a greater variety of services and shops, affecting the distance from which people are prepared to travel to the settlement. For example, the sphere of influence of a capital city would stretch to the borders of a country, but the sphere of influence of a small town, may only be very local, due to fewer services and shops, hence less reason to travel there. As it would be impractical to carry out such a large scale investigation of sphere of influences of settlements, I will adapt the theory to retail outlets, to investigate differences between spheres of influence of two retail outlets.

## <u>★ Diagram showing the Hierarchy</u> of **Settlements**



This image shows a hierarchy of settlements; it shows also that there are fewer larger settlements and lots of smaller ones.

http://www.bbc.co.uk/schools/gcsebitesize/geography/images/g\_ure\_stu\_4.gif

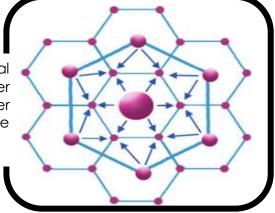
In 1933 a man named Walter Christaller developed the central place theory, adding to the **settlement** hierarchy. In assuming, flat ground and similar accessibility to simplify the theory, he claimed that there was always a central place, for example a large capital city. Around this would be six other smaller surrounding **settlements** and again six more around these. This consequently

Investigating spheres of influence of two retail outlets Bharath Varadharajan

forms a hexagonal network of **settlements**, all equidistant from each other. It suggested that merchandise is always obtained from the nearest centre. However, he added, some centres offered only low order goods and small market areas and some centres offered high order goods and low order goods due to larger market areas. This would be a key factor in how far people would be willing to travel and which centres they would travel to. If applied to my investigation, I would be interested in how the type of goods affects the range and threshold of two **retail** outlets.

## ▲ Diagram demonstrating Christaller's Central Place theory

This is a model of the central place theory. The much larger dot (representing larger settlements) can be seen in the centre of smaller towns.

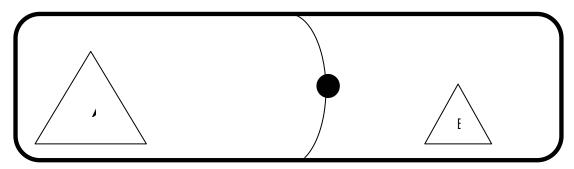


http://upload.wikimedia.org/wikipedia/commons/6/63/Christaller\_model\_1.jpg

Conversely, in 1931, William Reilly suggested that there are no fixed areas of trade and that they could vary in size, shape and may overlap. A statistical method was still used however, to determine a point. Consumers living on one side of this point, or breaking point, would patron settlement A and those on the other side would patron settlement B. So the point furthest from a settlement where someone would choose to travel to that settlement would be the breaking point. The breaking point between two settlements would generally be further from the larger settlements, hence closer to the smaller ones. Which leads not be calculated without 2 settlements.

There is a breaking point shown (black dot) on the line between the settlements A and B. Notice it is further from the larger settlement (A). This indicates that larger settlements will have greater spheres of influence. (All consumers on the left side will travel to A and all those on the right will travel to B)

▲ Diagram demonstrating Reilly's Law of **Retail**Gravitation (Drawn with Microsoft Office Word 2007)



Christaller and Reilly's theories are both deterministic, however, in 1963, Huff brought a new concept into the study and his theory was more probabilistic. He too used a statistical method; however the result was expressed as a probability. Therefore it is hard to determine whether **consumers** will definitely travel to a place on a particular side of a line, because there was always a chance they might not. The point at which **consumers** will patron either location is then the point of indifference. Huff's model is advantageous over others as it allows for customer choice and imperfect knowledge.

These theories allow me to form my own expectations and theories about this investigation. Christaller's central place theory allows me to consider how the **sphere of influence** is affected by the type of good (high or low order), hence get an idea of the range of the goods and also how it affects the threshold population. The **settlement** hierarchy can be adapted investigate whether there is also a correlation between **sphere of influence** of a shop and its size. Reilly's model also shows the effect population (and indirectly size) has an effect on **sphere of influence**, as shown in the diagram. Huffs probability model, reiterates that **consumers** have imperfect knowledge and choice to patron different locations, showing that a line cannot be drawn to fully determine whether **consumers** on one side will patron a certain location.

## **Hypothesis**

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To investigate the **spheres of influence** I will be comparing two **retail** outlets. These will be a Sainsbury's and an Aldi, both in the area of Selly Oak; the Sainsbury's being much larger. On the next page I am going to locate these outlets with the use of aerial maps and photos (from www.multimap.com). How close the **retail** outlets are to each other can be noticed.