

Geo-clustering the Human Market

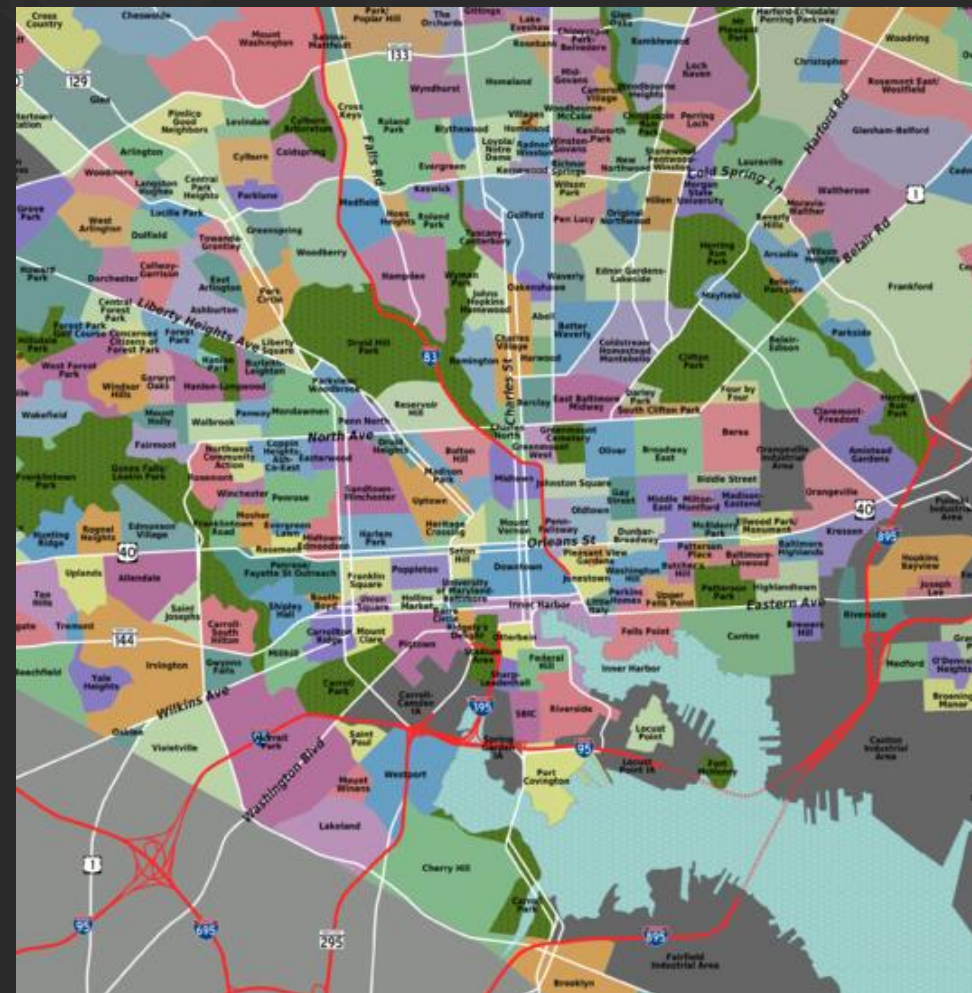
Through trade, humans communicate which things they value.

Measuring and analyzing human needs has always been an endeavor of the humanities and social sciences.

Users input their generalized "needs" (laptop, water, food, etc.) and how much money they are willing to pay. The system is not a store in that there is no way to connect buyers and sellers. This is done on purpose to encourage local business.

As we identify areas of shortage, it becomes easier to connect those areas to people willing to provide goods and services.

This tool relies on the scholarly primitives of Sampling and Representing. We can use the existing Google Maps JavaScript API to overlay regions of markets.



Location

Select Category, Subcategory

Desired Price

Enter Your Willingness to Pay

Most maps are made up of arbitrary boundaries and regions. ABTAME relies on *k-means* clustering to divide regions of the world as more users input data. Data older than 90 days is considered stale by the algorithms. Stale data is archived as a snapshot to show how people's needs and values change over time.

Of course everyone needs food, but the users that think food is significant will be more likely to submit food as their need. (see Maslow's hierarchy of needs)

ABTAME also supports intangible needs (eg. educational, occupational needs). Users need only to submit their desired work / skillsets. It could also easily support non-monetary value systems like time as a substitute for money.

Geo-clustering the Human Market (continued)

ABTAME (Asymmetric Bounded Topographical Accessible Market Explorer)

All of this data can be used to create aggregate demand curves which help small businesses know if they can earn more profit by adjusting their price, but this can also serve as a public index of well-being or poverty.

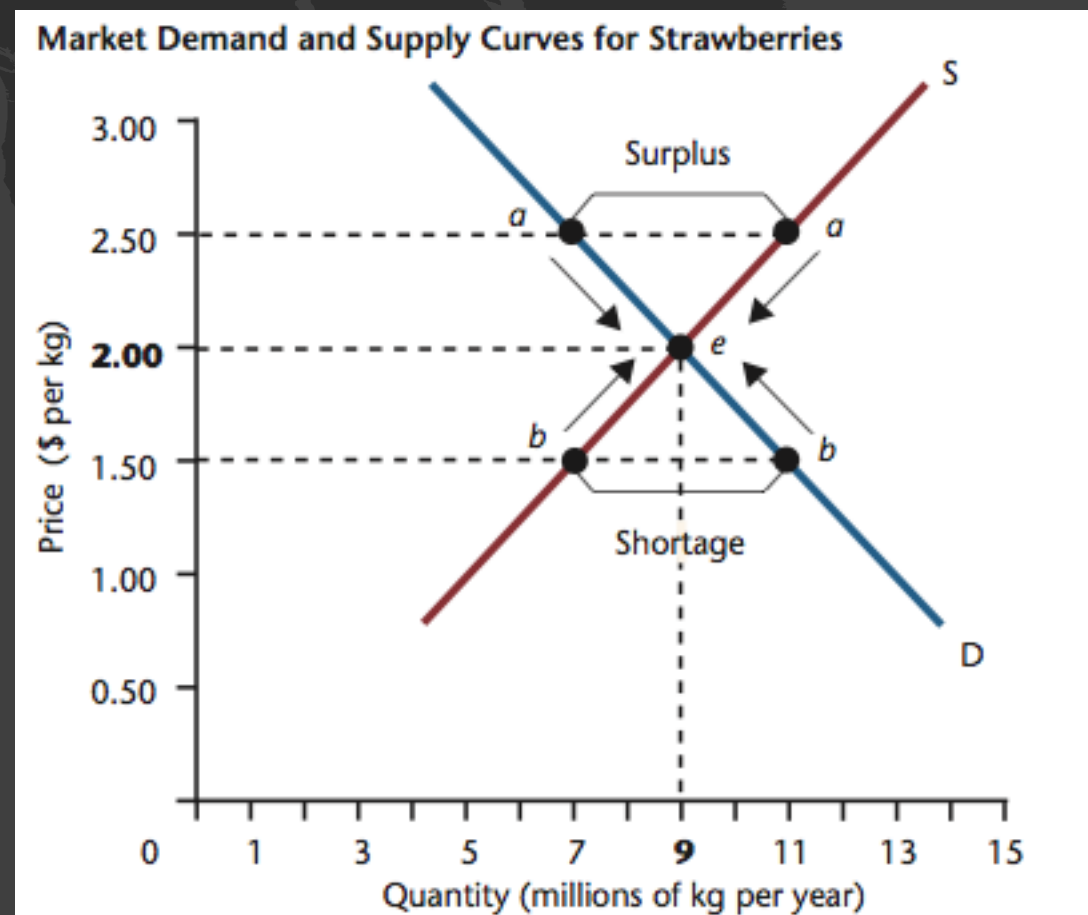
Thus marketing becomes consumer-driven.

Impact 1:

Current geographic market segmentation enables businesses to identify consumers that are willing to pay for their product or service. Market segmentation is often resource-intensive, complicated, and expensive which is why small and niche businesses generally do not know how to identify areas of potential growth.

Impact 2:

Many regions of the world lack basic necessities and there are often significant delays between the time a region can afford a service and the time a reputable business opens within the region.



Because ABTAME is data-driven and extremely time-sensitive, no user logins are needed. While this makes it easy to ensure privacy, it is still likely that this system would be targeted by hackers (especially if ABTAME was taken seriously by businesses/governments). To prevent misuse we would have to use data capture filtering in order to ensure data accuracy (like how YouTube calculates view count).



Regions become less arbitrary as data becomes important in the formation of each region. A voronoi diagram illustrates this principle. Each region has the closest proximity to the point within the region.