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### Spatial Perceptions: Maps

[W]hen people thought the Earth was flat, they were wrong. When people thought the Earth was spherical they were wrong. But if you think that thinking the Earth is spherical is just as wrong as thinking the Earth is flat, then your view is wronger than both of them put together. –*Isaac Asimov*

Asimov is correct when he said that believing one way to represent a geographical region is always superior over another format always is wrong. Maps are very relative, and just like everything else they inherit the trait of having the creator's perception. Although natural to have a specific perception, sometimes they are intentionally manipulated to one's own purpose. For how much faith we put in maps, such as with time and clocks, they certainly are uniquely biased towards the one perspective thus not giving the entire truth of the situation being presented. A map's sole purpose to inform the user is not only its greatest feature, but also its worst based on how representative of perspective and truth that map is. All the data represented on the map may be as accurate as possible, but the intentional exclusion of possibly vital data to have a map act as a representative of one's own opinion can be potentially dangerous.

Maps have been given many purposes over time, all used to reflect the interests of those who had power to create them. Just as all knowledge is power, maps have an especially interesting hold on power in that it divides land. Land was, and still is, the source of wealth and health, so by having the land visually and "formally" (by having it written) laid out provides a structure of power through land ownership. And yet, that same feature that divides power so determinately with arguably negative affects can also bring orderly structure and resolution to a conflict. An example from the television sitcom "Married With Children" is when Al Bundy has "territory" wars with his neighbor, building fences and tearing them down, cutting down tree limbs, etc. Wars over boundaries still exist, but once a map is presented from an authoritative source such as the government, people have a strong tendency to believe it. And while it may resolve the conflict to some degree, a blind trust in a map may lead to false thinking.

The trait of perception is inherent in all created works, whether based off of actual data or not. It is because maps built through geographical information systems are typically designed through hard data that makes it so easy to accept the information being transmitted as being the truth. What we have learned, however, is that the data can be represented very differently to provide very different perceptions. Positively, maps can show data to create a positive action from it. For instance, in Paul Spicker's paper titled "Poor areas and the 'ecological fallacy'," he argues that whether or not a map is representative of every individual within the unit being used, it still displays important information about that area. An individual of that unit should not be stereotyped by the characteristics of the unit, however. By representing the unit as a whole is positive by giving administration the perception of the poorness in that community. This may lead to a positive outcome such as increased funding to support community involvement or to

introduce learning centers. Thus, the perception of this unit as being poor gives that unit an advantage.

This same perception of that unit may also cause bad results. The creator of this map may be displaying this information in such a manner as to increase funding for one region and decrease funding for another region. Although this is a more intentional example, it can happen unintentionally as well. If not all the data is being displayed at a relevant point at which any greater detail cannot change the action involved, the map cannot be as accurate to the truth as one can hope for. It is when actions and perceptions are influenced by this biased map that perception becomes a negative force. This can usually be seen when two opposing forces are vying for “constituency” on their opinion. A current example of this is with the elections. Change the unit of scale slightly, or as pointed out in class, shift the boundaries so clusters are better represented, and the same data will produce completely different results. When the perception of an area is skewed intentionally to produce a desired result with accurate data behind it, one could phrase this as “perceptive fallacy.” The truth behind any represented data is that it may all be true, yet fallacious in the fact that it is being represented and not given directly. This debate of perception has occurred often in media. Media, because it is produced mainly by large conglomerate organizations with their own intentions in mind, is often highly biased to exclude anything negative in relation to their dealings. This skewed perspective often distorts the truth, making the transmission of such information seemingly commercial. Maps are also used to such a degree, but not always the case.

Another type of fallacy is the “intentional fallacy.” A definition for this concept is provided at Wikipedia ([http://en.wikipedia.org/wiki/Intentional\\_fallacy](http://en.wikipedia.org/wiki/Intentional_fallacy)). This is a lot more relative because it states that although the author may have a specific intention in mind in their creation, the user may perceive it different based on their experiences. Bringing in not only the perception placed on a created item by its maker but also those of the users of that item complicates this act of transmission data through representation more difficult to understand. An example of this we can see applied with maps is with the use of graduated colors. In class we viewed a map that projected the elevation of the United States based on a graduate color scheme of green and tan. If the map is not well labeled so the user immediately notices the headings, they may interpret that map as showing desert versus grasslands that also more commonly uses green and tan to represent the different regions. Other elements of a map such as symbols to represent different types of buildings are locations may be detrimental in another user’s ability to interpret that map correctly. Even if the map is “correct” in displaying the location of a building or area, the user may not perceive the symbols properly according to what the author intended, thus the intentional fallacy occurs.

So, not only do we have the ecological fallacy and the several other fallacies listed by Johnston in his entry for “ecological fallacy” in *The dictionary of human geography*, 3rd ed., but at a more internal level of fallacies that can be displayed through maps as well. This only proves that maps are simply a means to express a perception of the world, and those perceptions, whether caused internally or through manipulation, can cause both positive and negative results. To believe one perception of a map better than another would be ill-conceived. It is probable that the maps were created in such a fashion as to represent different perspectives, and are correct in their own accord. It is also bad to believe a map is representative of the real situation behind the data, for as digital music has taught us, no matter how precise one can match a binary code to a real sound it can

never give the fullness of experiencing the real sound. Maps have a great influence over us, in this modern era, and it is important to respect the inherent fallacies by understanding that a map is simply one perspective of a larger picture. Some maps may be extremely simple and show street names or building locations, and to some degree these maps are not as dependent on the author's perception, but they do in the sense that the author believes the streets to exist and be known by a certain name, and in the way the author decides to represent the streets or buildings. Scale may also impede a person's perception of an area, so even these maps have some of this attribute built into them. As it is, that is a map's strongest and weakest trait, both giving liberties to those who need help, and liberties to those who do not. "Men are disturbed not by things, but by the view which they take of them." -Epictetus