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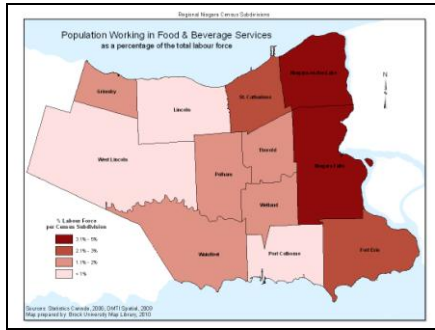
GEOG 3P93

Mapping Stats

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This presentation focuses on the value of mapping statistics as information sources; and to prepare for a subsequent census mapping tutorial that is required for GEOG 3P93

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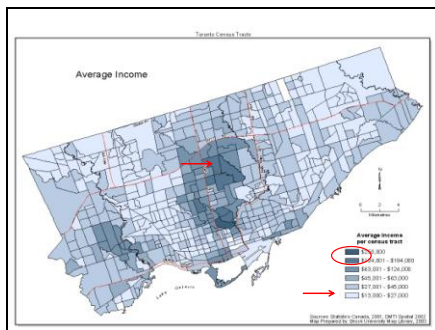
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Household income values for Toronto

Census tracts	Income
01	10000
02	10000
03	10000
04	10000
05	10000
06	10000
07	10000
08	10000
09	10000
10	10000
11	10000
12	10000
13	10000
14	10000
15	10000
16	10000
17	10000
18	10000
19	10000
20	10000
21	10000
22	10000
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87	10000
88	10000
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94	10000
95	10000
96	10000
97	10000
98	10000
99	10000
100	10000

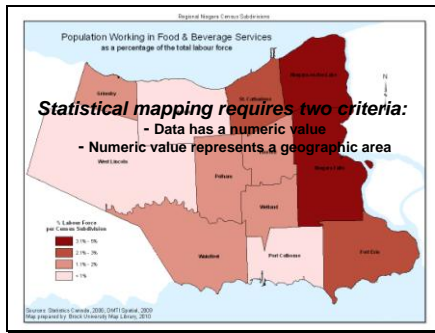
This table represents two fields of data: Toronto census tracts by numeric code; income values for each census tract. Determining the census tract with higher values is difficult to determine from this table.

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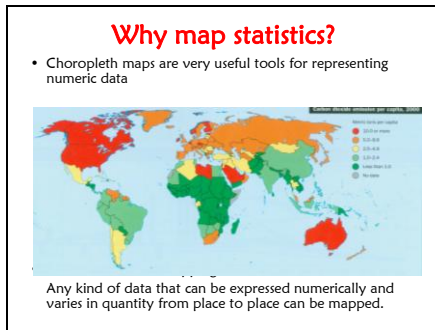


Mapped data makes it easier to “see” where these higher values are, and provides immediate visual results. The darker colour represents census tracts with higher income values.

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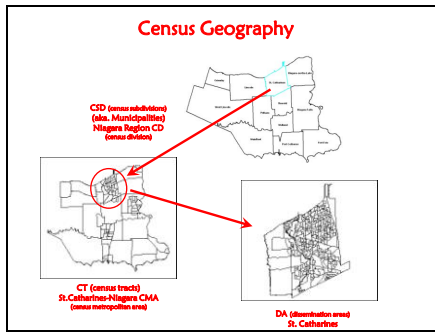


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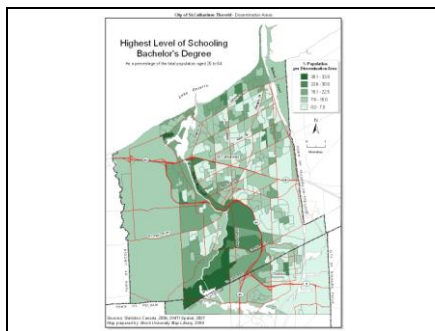
The geography used here is the world broken down by country. The numerical data is metric tons of carbon dioxide emissions per country. Choropleth maps use colour gradation to represent a range of values for each variable being mapped.

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Geography file is a digital map that outlines the boundaries of a census geography level and is the foundation of statistical mapping. These are available for all of Canada, not just the local area. These are examples of the more common ones used for census mapping. The census subdivision is the level used in the mapping tutorial for this course.

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Map of St. Catharines showing higher education. Immediately we can see where the smart people live!

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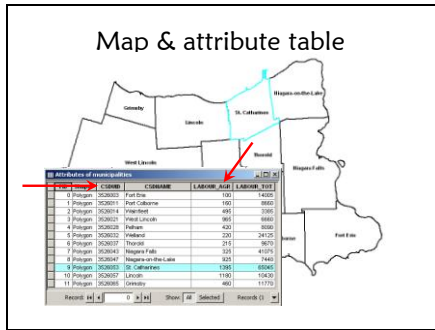
Using GIS to map stats

- GIS (Geographic Information System) is a software that stores, displays, manipulates and analyzes geographic data.
- ArcGIS is software of choice for 3P93 assignment.
- Provides operations for calculating statistics and “joining” data to geography.

GIS is a tool for mapping and working with spatial data. It is much more sophisticated than other common mapping software, such as Paint or Illustrator.

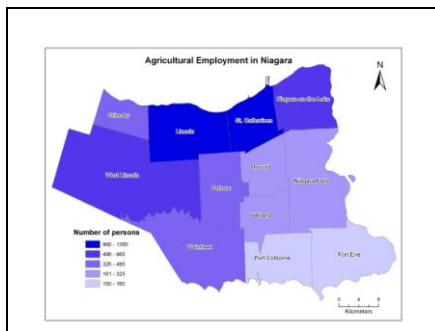
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Map & attribute table



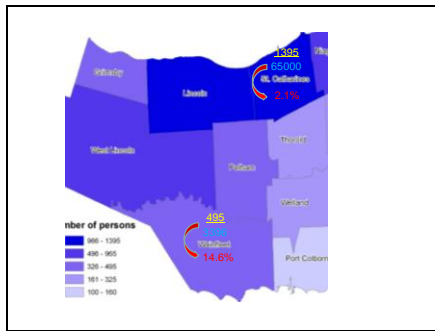
Example of a map of Niagara census subdivisions. The attribute table lists the geography code and data fields for each polygon, or geography. These two files are connected. Using a few GIS steps, statistical maps can be created very easily. This method is the basis for the GIS mapping tutorial for the course.

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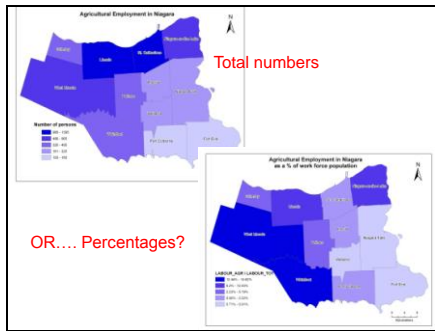
Mapping the total number of persons will reflect the total population within a geography. This poses the question: is this what we want to show? For example, St. Catharines shows a high number because it has a higher labour force population. Mapping real numbers is not appropriate for statistical mapping.

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Calculating the numbers as a percentage of the labour force population is a better representation of the data.

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Representing the data as a percentage provides a different and more accurate pattern. Wainfleet, West Lincoln and NOTL exhibit higher concentrations of those employed in agricultural activity, which makes more sense.

Demographics are more accurately represented as a % of the population. When mapping labour force demographics, the number of persons should be represented as a % of the total labour force population for each geography (in this case, census subdivision). Labour force is population 15 years of age.

The data represents household surveys. Therefore, this pattern also indicates that many of the agricultural workers in Wainfleet and West Lincoln live and work in the same geography.

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Other map sources

- Topographic maps
- Thematic maps
 - Land use
 - Agriculture activity
- Other [census maps](#)

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Additional help!

1. GEOG 3P93 Subject guide
2. Literature on reserve
3. Map Library staff

Here you will find:

- GEOG 3P93 subject guide; Excel statistics file; a copy of the mapping Tutorial and GIS data necessary for creating maps; other mapping sites.
- Census of Canada mapping: “ready made” statistical maps of the region for many census variables that should be explored for this assignment; a document that describes census mapping in more detail.
- Other census mapping sites: Atlas of Canada; Statistics Canada; E-STAT (all yours to explore). Links are provided on the 3P93 subject guide.