Map Visualizations
CMSC 436/636
Data Visualization

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Contours
Contours

1
2
3
4
5
6

Contours

A
B
C
D
E
F
Contours

Choropleth Map
Area units
Colored by value
Choropleth Maps

Figure 1. Poverty maps for Ecuador at various levels of spatial resolution

Choropleth Map

[Detailed map with legend showing head count index (%)]

[Another map with different regions and municipalities, color-coded for a specific metric]
Choropleth Map

• Data intervals
  ◦ Equal
  ◦ Quantile

Choropleth Map

Catholics in the United States
Percentage of population that is Catholic, by county

Source: Germany Research Center
Note: Data is for 2000

Equal Interval Classification
1.5%
2.73%
8.0%
Percent

Quantile Classification
1-0
8.01-10
15.01-25
25.01+
Percent

Percent living on active farms
Choropleth Map

- Equal Interval

WHAT IS EQUAL INTERVAL CLASSIFICATION?

Count of total population: Source Census

493.8 K  7.2 M  13.8 M  20.5 M  27.2 M  33.9 M

EQUAL_INTERVAL CLASS INTERVALS

Choropleth Map

- Quantile

WHAT IS QUANTILE CLASSIFICATION?

Count of total population: Source Census

493.8 K  1.3 M  2.9 M  5.1 M  8.2 M  33.9 M

QUANTILE CLASS INTERVALS
Map Projections

- Cylindrical

Map Projections

- Mercator
Map Projections

- Mercator

- Equal Area
Application: Poverty vs Conflict

Cartogram

- Keim, North, Panse, Schneidewind, Infovis 02
Continuous Cartogram

Science Research

"Scientific research is as much the product of the society that enables it, as of the individuals who author it."

David Darling, 2006
Killed by Disasters

This is a map of people who are known or presumed to have been killed by disasters which are beyond local capacity. The map covers the period 1975 to 2004, so includes the 1979 earthquake in China, the 1984 drought in Sudan and Ethiopia, and the 1991 cyclone in Bangladesh.

Death counts from disasters are affected by human factors. The 1984 Ethiopian famine was caused by a lack of rain but aggravated by civil war, and an initial reluctance to give international assistance. Deaths from disasters can be minimised by warning systems (early communications are needed); durable shelters; political will; and practical support.

*Forty per cent of all deaths caused by disasters, 50 per cent of all deaths, and 90 per cent of all deaths caused by disasters are not normally listed.*

"We are preparing ourselves for up to 1,000 dead bodies from this flood alone..." Insp Daniel Gezahenge, 2006

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