

## 4 Studying Geography: Introduction to Mapping

Prof. Anthony Grande  
Hunter College Geography

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## Geographers' Tools

### TOPICS in "INTRODUCTION TO MAPPING"

- Cartography
- Location Systems
- Maps and their Parts
- Geographic Information Technology
  - Remotely Sensed Information
  - Automated Cartography (mapping by software)
  - Geographic Information Systems (GIS)

**EXAM 1 follows this section**

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## Geographers' Needs

When studying the earth we need to be able to do three things:

1. **Collect** data (using specialized tools)
2. **Locate** data that has been collected (using a grid spread over the Earth's surface)
3. **Portray** data spatially (using cartographic techniques to create maps)

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## The Map

The map is our special tool because it:

1. Gives a wealth of **information** at a glance.
2. Shows **relationships** between locations.
3. Can be used to **influence** people by the visual components included in the map.

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## Cartographic Terms

### ❖ Map:

A view of the earth or a portion of its skin drawn to scale (proportion) on a flat surface.

### ❖ Cartography:

The art and science of map making.

### ❖ Atlas:

A collection of maps.

### ❖ Globe:

Spherical-shaped map or model of the earth.

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## Cartographic Terms

### ❖ Thematic map:

A cartographic representation of a particular subject; it is a special-purpose map.

### ❖ Cartogram:

A map that uses data other than land surface to portray the size of an area.

### ❖ Mental map:

A map drawn from memory representing a person's perception of an area (size, content and proximity of component parts).

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## Cartographic Terms

### ❖ Cartographer:

Mapmaker; portrayer of information.

**Selects** the information to be shown and **Decides** how it will be portrayed on the map.

### ❖ Reader:

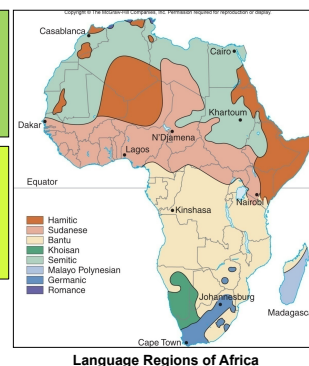
**YOU**, the interpreter of the information.

➤ Therefore, you must be *aware of the options* a mapmaker has when creating a map.

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## Thematic or Special-Purpose Map

A thematic map focuses on one subject or topic. Contains data or information that is **relevant** to the theme and **omits** other geographic material.



## Cartogram

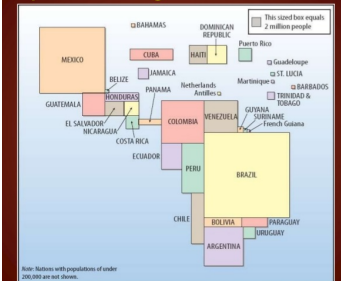
A cartogram is a map that uses **data other than land surface** to portray an area's size.

It **does not** represent true size or true shape.



Compare Ecuador with Peru and Nicaragua with Puerto Rico on both maps.

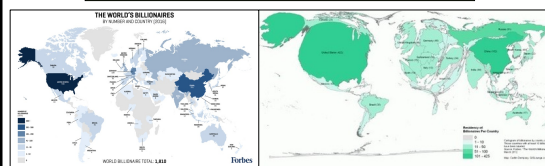
### Population Cartogram of Latin America



Countries are drawn to size according to their population (above), NOT land area (left).

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## Mapping Billionaires



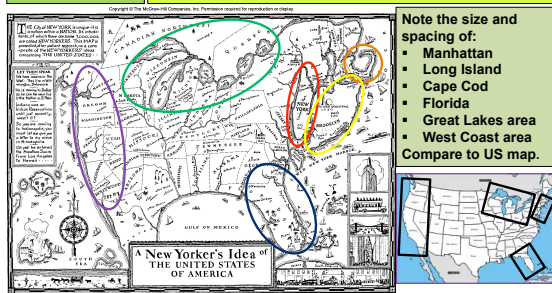
**Standard Thematic Map:** Uses color intensity to show headcount within a country's land area and shape.

**Cartogram:** The size of countries are drawn according to the number of billionaires, not land area.

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## Mental Map

❖ A **mental map** is an illustration of a person's **perception** of an area. It is **drawn from memory**.  
➤ Distance, size and proximity are influenced by a person's **preferences** and **familiarity** with the area portrayed.



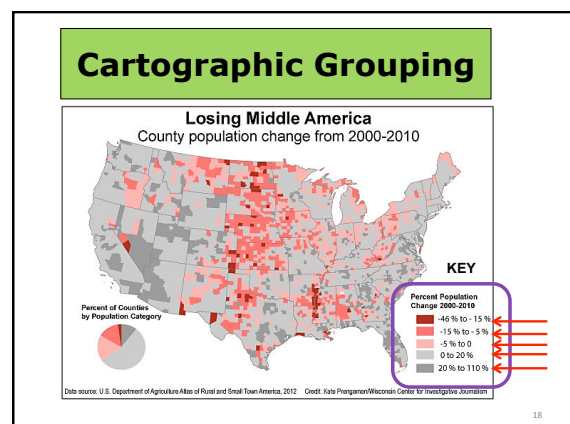
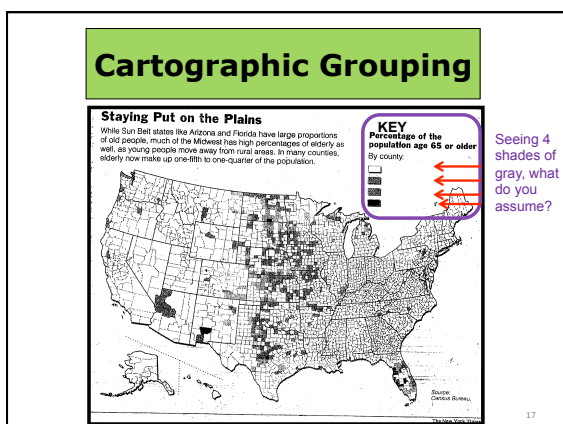
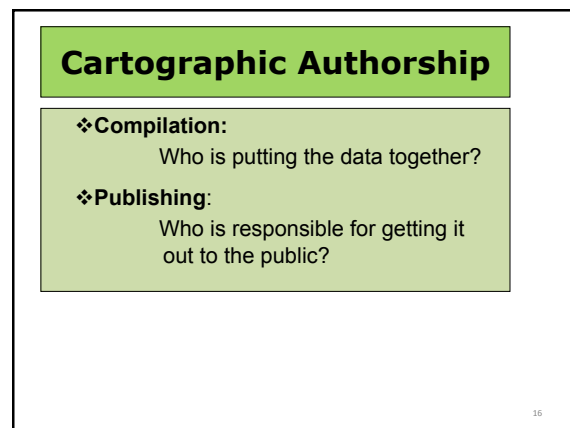
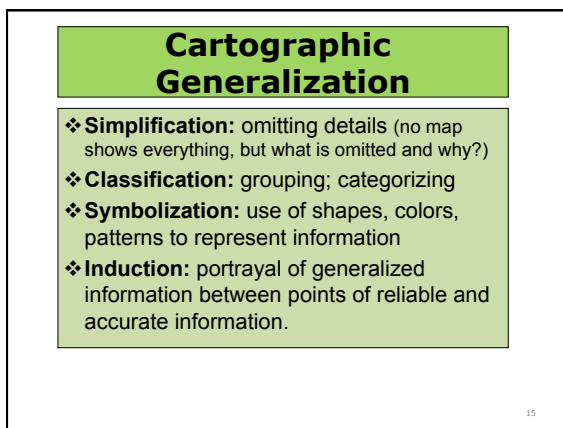
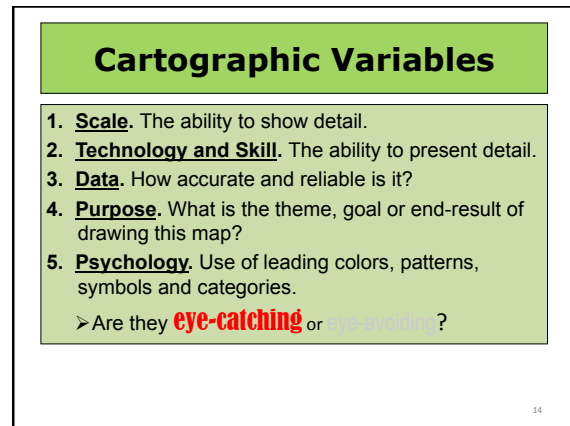
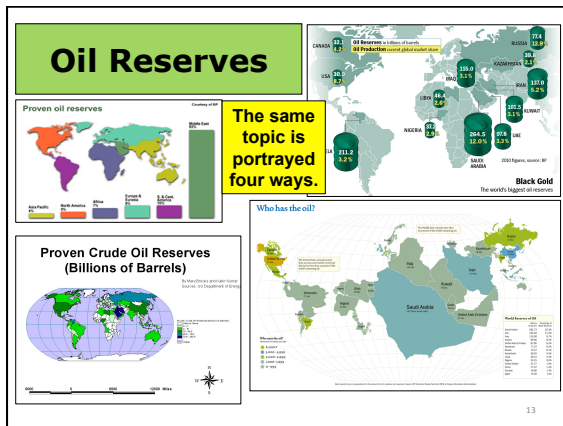
## Map Design

❖ The map reader must be aware of the map-maker!  
**WHY?**

➤ Because map-makers use **cartographic generalization** to create the end product.

✓ The **mapmaker selects** the information and subjects to be shown.  
▪ So what was omitted?  
▪ How is the information being portrayed?  
✓ The map be influenced or limited by a number of **stylistic** factors **chosen** by the mapmaker.

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### Using Maps to Compare Service: Classic 2009 Verizon vs AT&T Dualing Ads

Actual US population map

Verizon Wireless AT&T

5X More 3G Coverage  
Comparison based on square miles. Coverage not available everywhere.

In 2009 AT&T and Verizon attacked each other in warring ads and in court. AT&T said map ads were misleading because it had nationwide voice and "somewhat slower" wireless service.

<https://cdn.phonearena.com/images/articles/26661/PhoneArena.com/verizon-vs-at-t-mobile-vs-sprint-coverage-maps.pdf>

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### AUTHORSHIP Point-of-View Map (propaganda)

Find at least six  
subliminal symbols  
on this map >>>>

SAUDI ARABIA

How can anyone say that selling F-15s to Saudi Arabia isn't a threat to Israel?

Advertisement placed in the NY Times by the Bin al Bith on 5/6/78 in an attempt to influence a US Congressional vote on selling fighter planes to Saudi Arabia.

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### Outline Map of the Middle East

Israel Jordan Saudi Arabia

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W E S

Eshel Learning.com

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### NEXT

## Location Systems

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