2 PERCEPTION and MAPS

The Nature of New York

Prof. Anthony Grande
Geography Dept.
Hunter College-CUNY

Spring 2018

Lecture design, content and presentation ©AFG 0118. Individual images and illustrations may be subject to prior copyright.

1

ADOPT-A-COUNTY

- Each student is randomly assigned three counties from distinct areas of NYS.
- These counties will be **used throughout the semester** to complete the required and extra credit exercises.
- They will also be used in any analysis of comparison with statewide data.

Required Exercise 1 is a comparative geography to introduce you to your counties. **Optional Exercise 5** focuses on a statewide physical/political geography.

Extra Credit Exercises 2, 3 and 4 contain the instructions for a museum visit, field work at a specific site and the route of the Orange/Rockland County field trip.

http://www.geo.hunter.cuny.edu/courses/geog306.04_grande/s2018/2018-NONY-Ex05.Poli-Phys.pdf
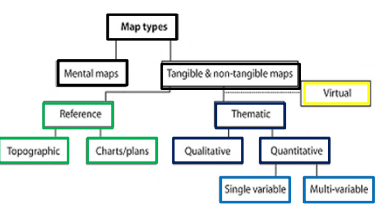
2

Focus on Maps

❖ **Maps are geographers' special tools.**

They show spatial distribution at a glance.

They allow for comparison over time.

- **GEOG 101/150 introduced us to maps and geographic research.**

   Information must be: Collected, organized, processed, analyzed and portrayed in order to be analyzed spatially.

   The map does it all.

3

Types of Maps

Map types
- Mental maps
  - Reference
    - Topographic
    - Charts/plans
- Tangible & non-tangible maps
  - Thematic
    - Qualitative
    - Quantitative
      - Single variable
      - Multi-variable
  - Virtual

Methods of Portraying Data on Maps

1. **Point:** dot distribution (location on earth)
2. **Point:** graduated size symbols (proportional values)
3. **Flow Line** (movement)
4. **Isoline** (connects points of equal value)
5. **Choropleth:** qualitative (shows the extent of characteristics)
6. **Choropleth:** quantitative (shows data as a unit area)
7. **Cartogram** (uses data other than land area to show size)

4

Maps and Reality

In intro classes we learned that:

➢ **Maps can be used to influence peoples' perceptions** by the use of scale, colors, graphics and type size. What people "see" can be influenced by the intent of the map maker.

➢ **Maps portray reality by showing the location of things.**

➢ **Maps can also influence reality by creating a perception of a place that is different from reality.**

   A **false impression** of an area may be conveyed by the **size** of dots on a crime map or the **coloring** of large areas when the item being mapped covers only a small portion of that area.

❖ **If this is true, maps can then influence peoples' opinions and behaviors.**

5

Spatial Arrangement and the Pattern of Man-made Phenomena

➢ **People's behaviors influence the arrangement of cultural phenomena** (rather than just the theory of location variables).

➢ **Perceive -- React -- Impact**

– **The Individual** – perceives/recognizes/interacts with other people and/or the environment.

– **Geographic space** – is reality (places can be located on the earth's surface)

– **New variables and spatial structures emerge** – mental images, time-distance relationships, regional science *(when an area takes on a "life" of its own),* and spatial interaction.

– **Includes changing attitudes about our relationship with nature.**

6

Spatial Arrangement and the Pattern of Man-made Phenomena

Do maps duplicate reality?
- Need to differentiate between quantitative and qualitative mapping.
- Perceived relationships *(mental images)* are created by using lat/long coordinates that creates real places.

- People then observe the relationship between phenomena and real locations *(and accepting the validity because of the "real" location).*
- The earth locations of abstract ideas and perceptions (that may have been linked to real data) create a new reality. *(Because data sets are anchored to the earth's grid and presented in map format, they are assumed to be true.)*

7

Spatial Arrangement and the Pattern of Man-made Phenomena

What is the real nature of New York?
- Do statistics actually reflect what is out there? *(We use lat./long. to locate statistical data.)*
- Does the use of maps help or hinder the perception of reality? *(GIS automatically creates maps from lat./long.-tagged data.)*
- What's the role of field observation and fact checking?
- ➢ **We need to be careful when viewing and interpreting maps**.
- Know where the data comes from.
- Find out how it was collected.
- Be cognizant of the tools of the map-maker.

8

Map of New France
showing area of NYS (early 1600s)

9

Maps from the 1600s

Dutch 1673

British 1671

The David Rumsey Collection (https://www.davidrumsey.com/) has a very extension collection of scanned images.

British 1674

British Maps of North America including the area of NYS

1676

1680

11

Map of the British Middle Colonies

Notice the increase of topographic detail on this 1776 map. The Adirondack region is still unexplored.

Optional Exercise 6 focuses on NYS in Maps.
http://www.geo.hunter.cuny.edu/courses/geog306.04_grande/s2018/2018-NONY-Ex06.NYS%20in%20Maps.pdf

12

Perceptions

What is your perception of the nature of NYS?

- **What is the area like?**
- **Can you name and locate its physical features?**
- **Where are its people?**
- **Where are the largest cities?**
- **Where are its productive areas?**
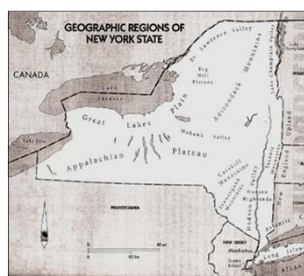- **Where are its areas in need?**

What is your **perception** when you hear the words "**New York**"?

- Urban area
- Tall buildings
- Congestion
- Many people
- Little open space
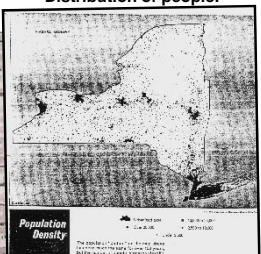- Business and finance
- People with money
- New York City

14

NYS in Maps

Distribution of natural areas.

Distribution of people.

15

What is the **nature** of New York? What do we **find** in NYS?

- **84% of the state is rural (62% forested; 22% agriculture).**
- **NYS has the most ski areas of any state.**
- **Lake Placid is one of only 3 US Winter Olympic sites.**
- **NY is an agricultural state.**
- **NY is a mining state.**
- **Adirondack Park is the largest state park outside of Alaska**
- **There are high poverty levels in upstate areas.**
- **Economic base has changed; many original sites/ location factors are no longer important.**
- **Depopulation of rural areas upstate.**
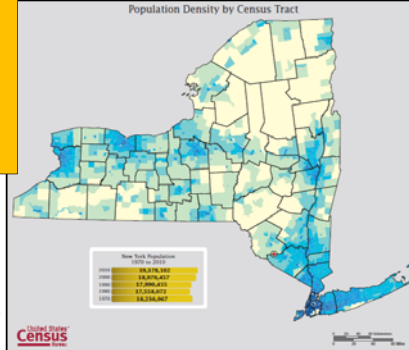- **Concentration of wealth/political influence downstate** 16

Vital Statistics

- **Area:** 54,471 sq. mi. (27th in size)
- **Population:** 19.9 mil (2017 est.; 4th in size) US = 325.7 mil
- **Pop. Density:** 420 people per sq mi (7th most densely populated state)
- **Pop. Distribution:**
  65% (12.5+ mil) live in the NYS area focused on NYC.
  42% (8.5+ mil) live in NYC.
  13% (2.6+ mil) live in Brooklyn.
  https://www.census.gov/quickfacts/fact/table/ NY,US#viewtop

- **NYS has 62 counties**
  In area (largest/smallest):
  - St. Lawrence (2768 sq. mi.)
  - New York County "Manhattan" (23 sq. mi.)

  In population (largest/ smallest):
  - Kings "Brooklyn" (pop: 2.6+ mil)
  - Hamilton (pop: 4,712)

  In density (most/least):
  - New York County (69,500/sq mi)
  - Hamilton (3/sq mi)

  The New York Metro Stat Area which is anchored by NYC has over 20.1 million people in NY, NJ and PA counties.

NYS Population Density by Census Tract - 2010

2010 Census tally = 19,378,102 people

2017 Census est. = 19,8549,399 people (+2.4% from 2010)

18

New York City

❖ **NYC is the largest city of the US (8.55 mil., 2017 est.).**
- **It is the only city that is not part of a county.**
- **It is the only city made up of <u>more than one</u> county.**
- **There are 5 counties within its political boundary:** Bronx, New York, Queens, Kings and Richmond. The 5 counties are conterminous with the 5 boroughs.
  - ➢ New York County is the Borough of Manhattan.
  - ➢ Kings County is the Borough of Brooklyn.
  - ➢ Richmond County is the Borough of Staten Island.
  - ➢ Queens County is the Borough of Queens.
  - ➢ Bronx County is the Borough of The Bronx.

19

Urban Concentrations

Largest Cities
1. New York City
2. Buffalo
3. Rochester
4. Yonkers
5. Syracuse
6. Albany
7. New Rochelle
8. Mt. Vernon
9. Schenectady
10. Utica

20

TRUE or FALSE: NYS is part of the Mississippi River Basin?

TRUE

from USGS watersheds web page

21

Thematic Maps

State Forests and Preserves

Cancer Mortality by County

■ State Forests
— Forest Preserves

Recurring Patterns

23

Influence of Geography on NYS

1. The geologic structure of the state is responsible for its highlands and lowlands.
2. Rugged terrain and water bodies limited contacts with neighboring areas.
3. NY harbor and the Hudson River valley become the **gateway** to the interior of North America.
4. NY is situated on major trade routes: the trans-Atlantic, coastal and interior.

24

4

Influence of Geography on NYS

5. NYC became the focus of commerce and trade in the 1800s because of its location.
6. Climate – a result of many factors – is favorable.
7. Climate with landforms create soil.
8. Surface water systems and groundwater are a result of glaciation.
9. The glaciers, which retreated 8000-15,000 years ago, created the present landscape.

25

Influence of Geography on NYS

10. The settlement pattern reflects the **path of easiest movement** through the state.
11. People selected the **best** aspects of the physical environment for their needs: gather, hunt, fish, mine, lumber.
12. The valleys were settled first: ease of farming, transportation, and access to fresh water supplies.
13. The physical landscape has been transformed by people and their works *(attitude)* over time – first by native Americans then by Europeans.

26

Viewing the Physical Characteristics of New York

- We set the "stage" that is NYS by looking at the characteristics of its physical geography. These in turn have shaped its human/cultural geography.

- We will look at the **LANDFORMS, CLIMATE** and **WATER RESOURCES**.

- **These three are part of nature** -- the **BIOSPHERE** -- which supports all life.

27

Viewing the Physical Characteristics of New York

❖ When people are put into the mix, there is the creation of the **cultural landscape**.
- People have made decisions over time on how to best use the physical landscape for their needs *(the nature of the natural setting for best use)*:
  – Settlement
  – Transportation networks
  – Economic development

28

Google Maps

Using **Google Maps** you can get a bird's eye view of NYS. http://maps.google.com

Start off with the "SATELLITE" view and then zoom in on various areas of the state.

Switch to "MAP" view. On the pull-down list, click on "TERRAIN" to see 3-D representation with contour lines. Zoom in for details.

29

N E X T

Physical Geography of New York State

30