

Geog183: Cartographic Design and Geovisualization Spring Quarter 2020

Lecture 8: Toponymy, typography and map text

Dealing with text

- What text and language?
- What component: map, legend, reference frame, metadata
- What design elements: font, variation, color, spacing
- What text: selection
- Where: placement and design
- Where: rules of precedence and overlap
- Text as symbol

toponymy

- The study and practice of placing of place names on maps especially those derived from topographical features
- **Gazetteer**: A dictionary, listing, or index of geographic names
- **Board on Geographic Names**: a Federal body created in 1890 and established in its present form by Public Law in 1947 to maintain uniform geographic name usage throughout the Federal Government
- **GNIS**: USGS BGN data base containing all US domestic place names
- **GEOnet Names Server** (GNS) provides access to the National Geospatial-Intelligence Agency's (NGA) and the U.S. Board on Geographic Names' (BGN) database of foreign geographic feature names.

Place names matter

Home » Cartography, Geopolitics, Place Names, Southwest Asia and North Africa

What's In A (Place) Name? The Gulf Controversy

Submitted by Martin W. Lewis on January 20, 2010 – 7:06 pm

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In mid-January 2010, the Islamic Solidarity Games—scheduled to take place in Tehran in April—were cancelled over a toponymic dispute. The Iranian organizers of the athletic competition insisted on labeling the body of water located between Iran and the Arabian Peninsula the “Persian Gulf” in their promotional materials. The event’s organizing committee, based in Saudi Arabia, refused to tolerate such effrontery, and called off the competition. Officials in Saudi Arabia, like those in many other

Arabic-speaking countries, regard the term “Persian Gulf” as a form of Iranian cartographic imperialism. They prefer Arabian Gulf, and if that name cannot be used, they insist on a neutral term such as The “Arabo-Persian Gulf” or simply “The Gulf.”

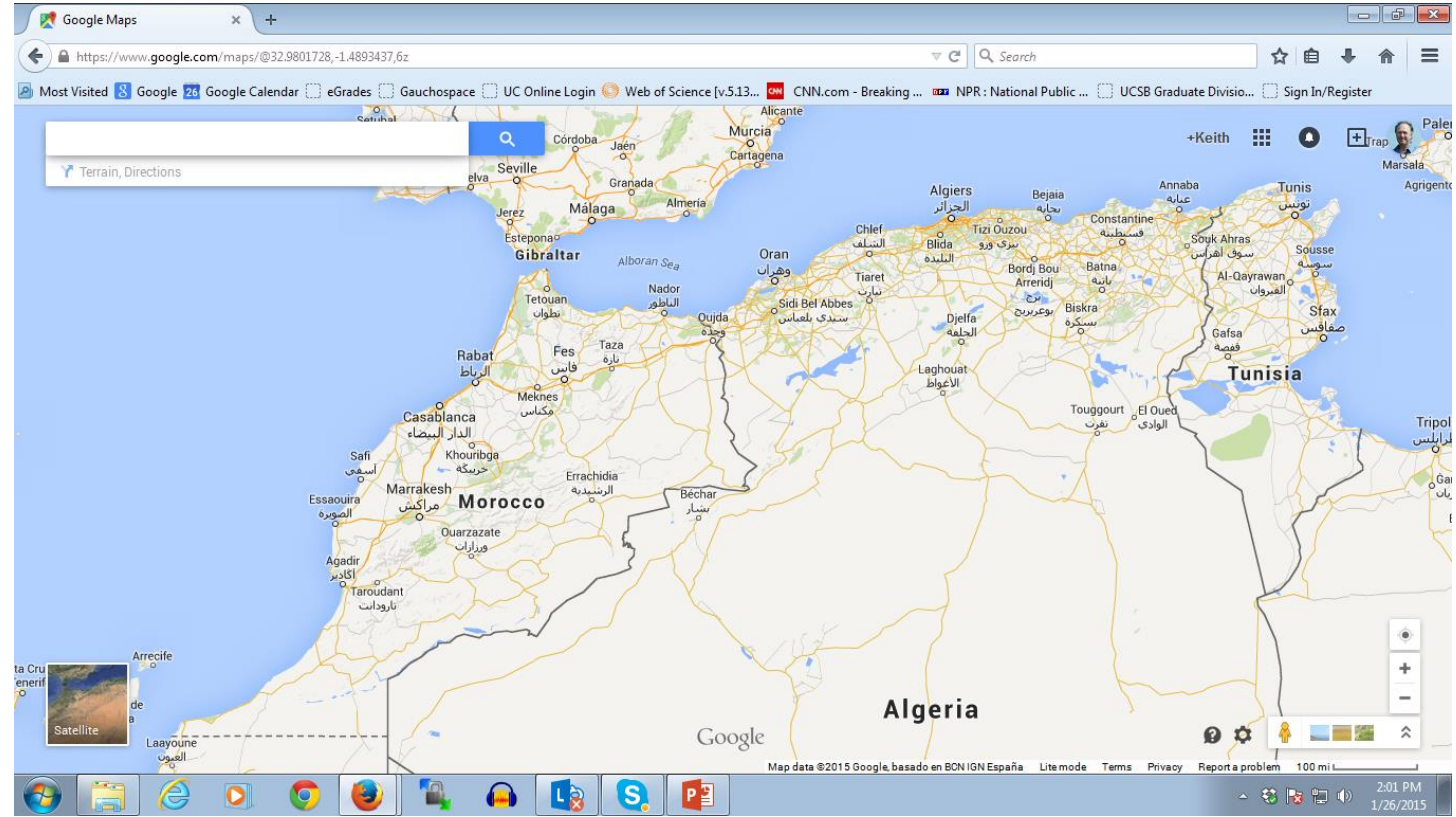
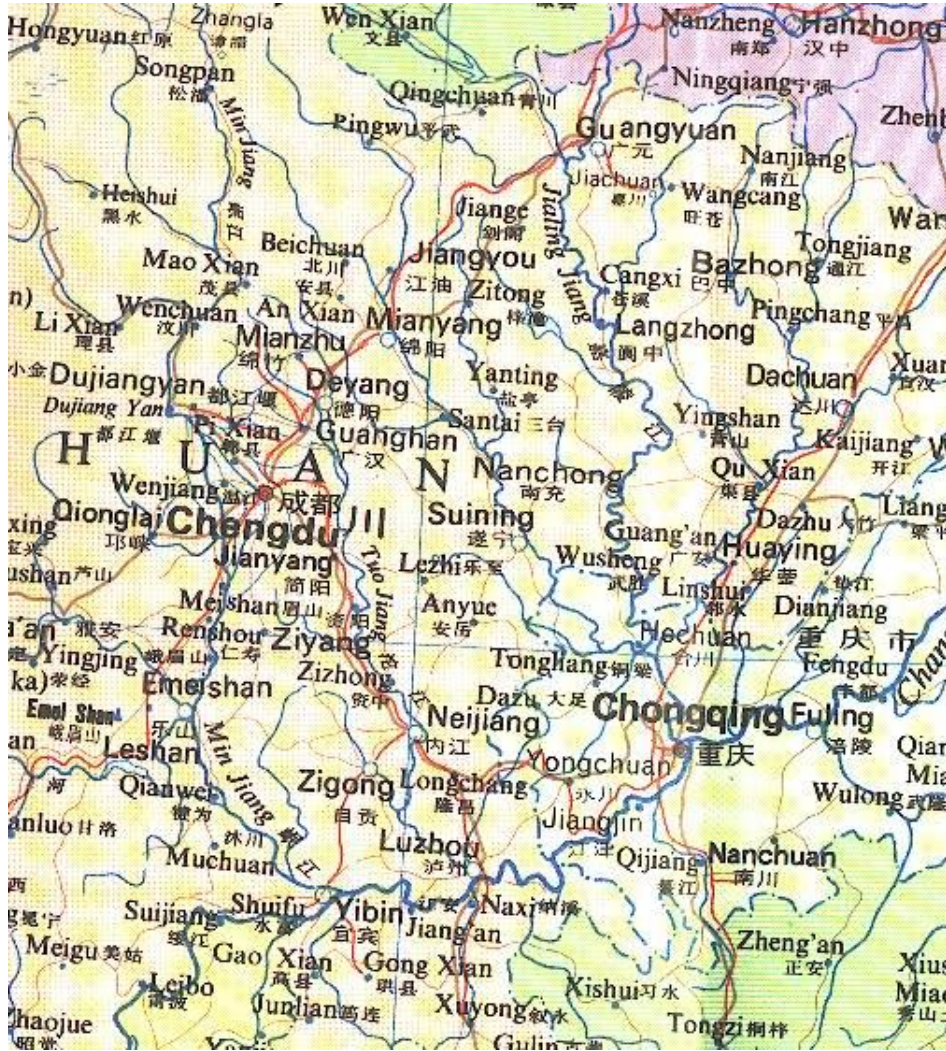
This controversy reveals the deep cultural cleavage between Iran and the Arabic speaking realm. Most other bodies of water named for particular places do not inspire much animosity. The United States lodges no protests over the Gulf of Mexico; India does not object to the Arabian Sea; Malaysia has no problem with the South China Sea; Taiwan and Japan do not worry about the



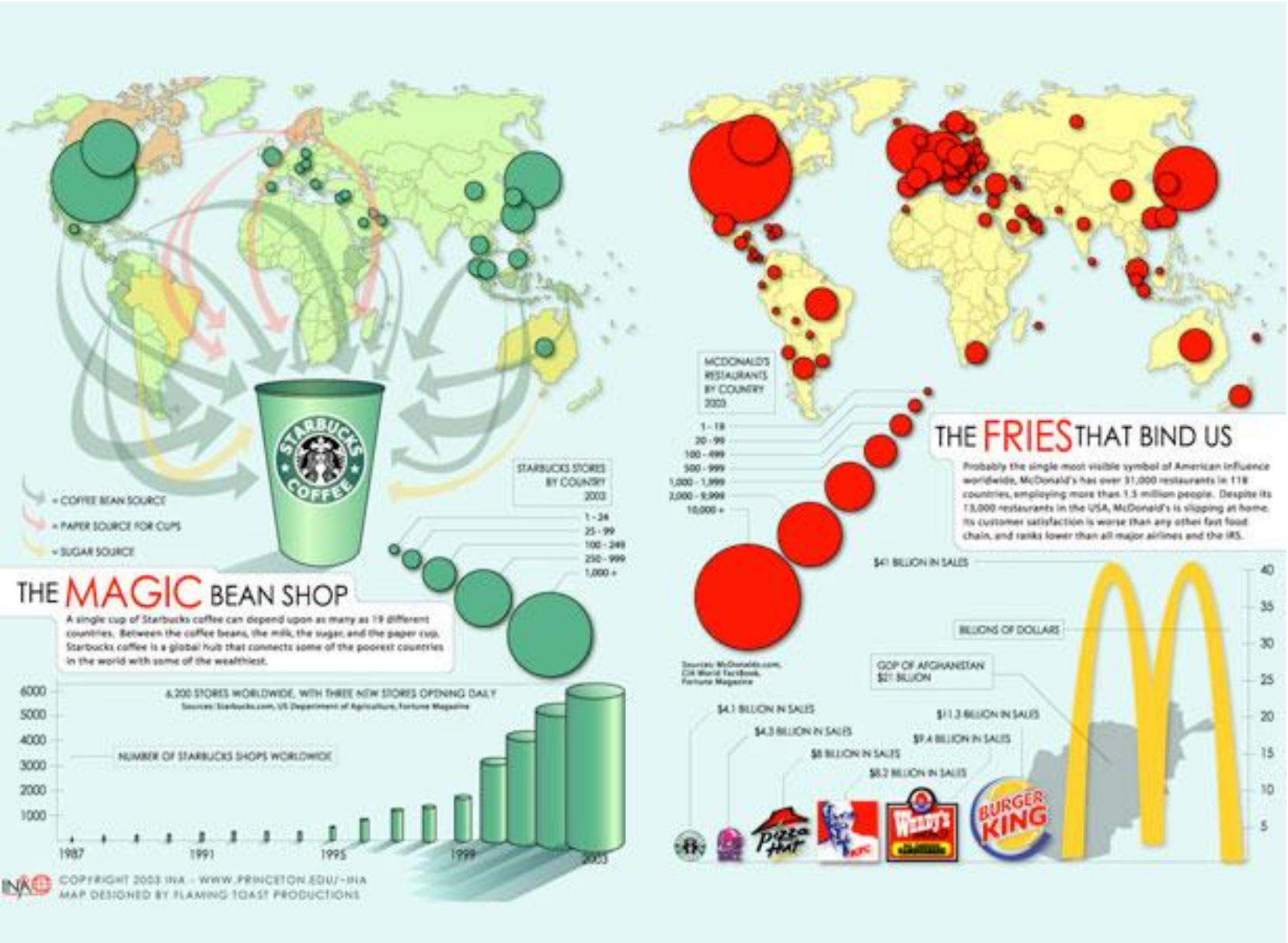
GEOnet Names Server: NGA

- The GNS is the official repository of standard spellings of all foreign geographic names, sanctioned by the United States Board on Geographic Names (US BGN).
- The database also contains variant spellings (cross-references), which are useful for finding purposes, as well as non-Roman script spellings of many of these names.
- All the geographic features in the database contain information about location, administrative division, and quality.
- The database can be used for a variety of purposes, including establishing official spellings of foreign place names, cartography, GIS, GEOINT, and finding places.

Language



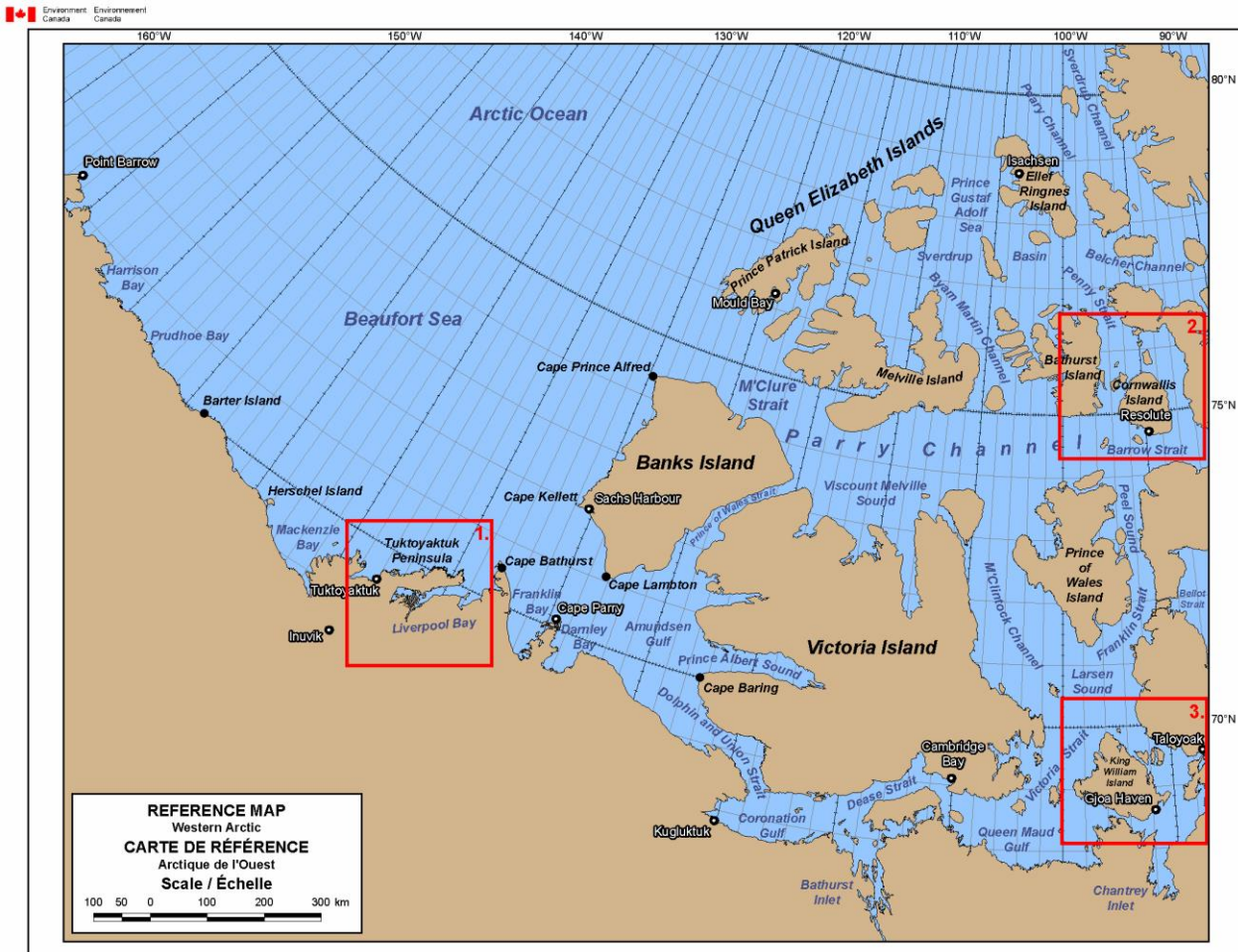
Map components: Text *and* toponyms



Text design



Selection



Placement and design



Precedence

Point Rules

Placement

Clear Last

Clear All

1

2

Select positions in order of priority.
Unselected positions will not be tried.

Centered on point

Allow stacking Up to 3 lines

New York City

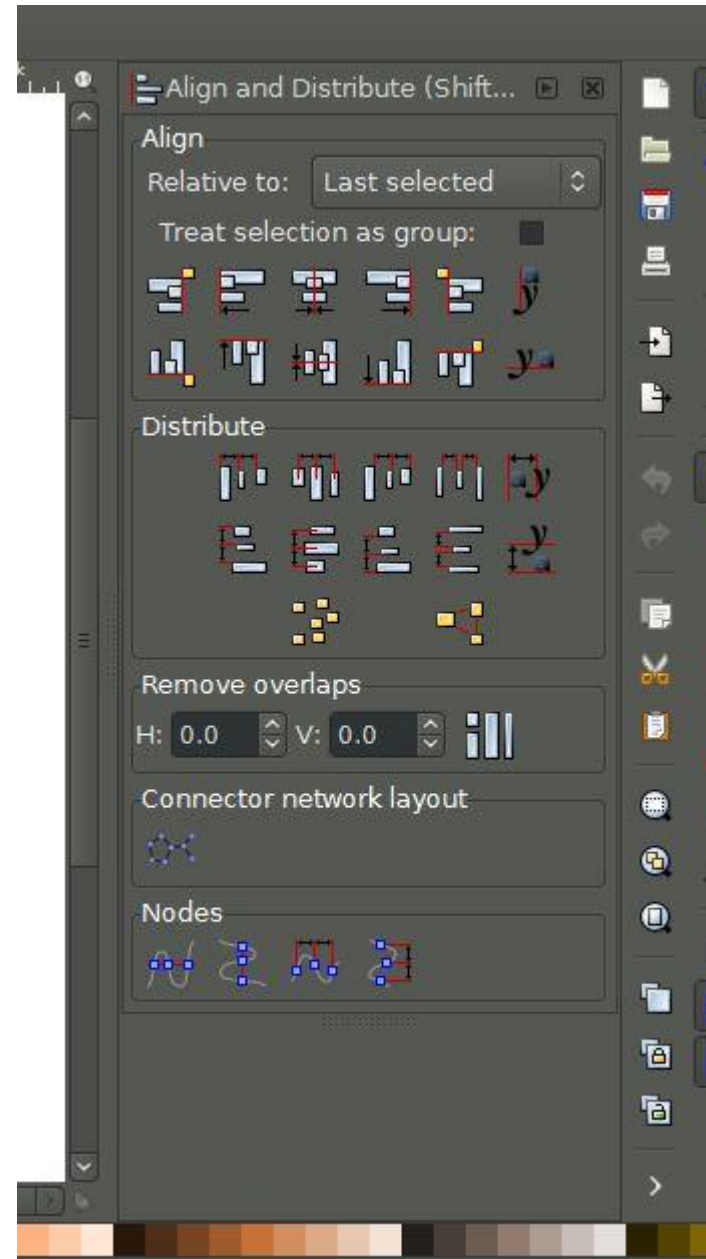
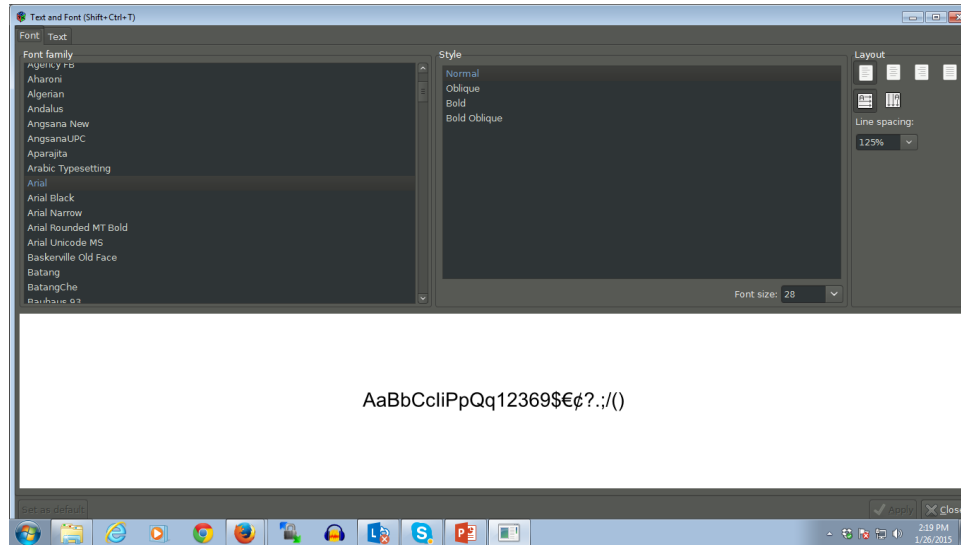
Allow labels to cross lines

New York City

Allow font reduction



Placement tools



A Horizontal Alignment and Centering of Vertically Distributed Features

Black Mountain

Horizontally aligned to right

Black Mountain

Horizontally centered

Black Mountain

Horizontally aligned to left

B Vertical Alignment and Centering of Horizontally Distributed Features

Black Mountain

Vertically aligned to bottom

Black Mountain

Vertically centered

Black Mountain

Vertically aligned to top

C

Adobe Illustrator

Horizontal controls | Vertical controls

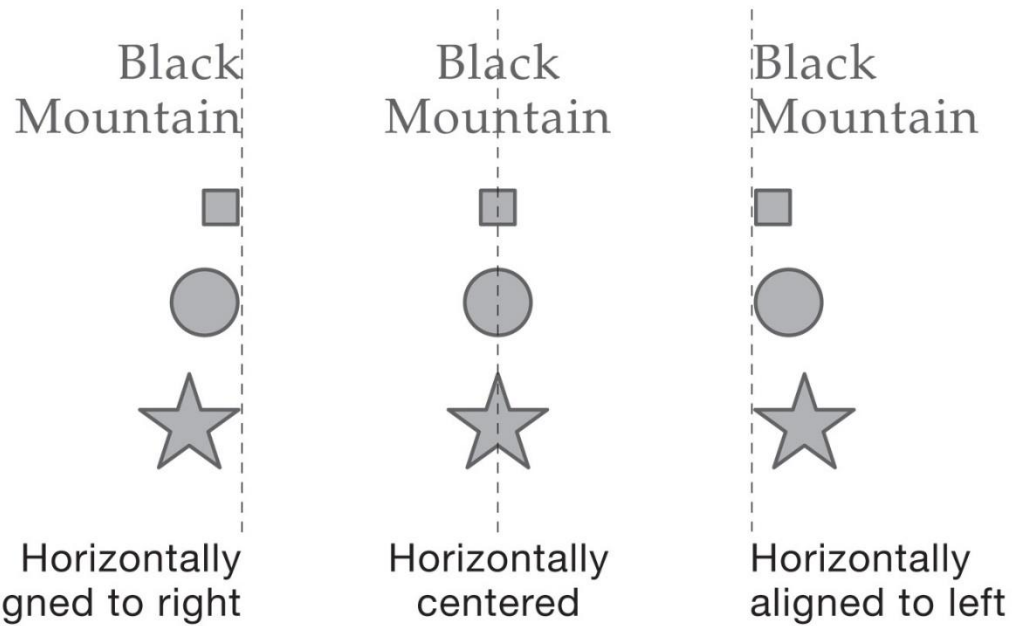
ESRI ArcMap

Horizontal controls	Align Left
	Align Center
	Align Right
Vertical controls	Align Top
	Align Vertical Center
	Align Bottom

Alignment and centering

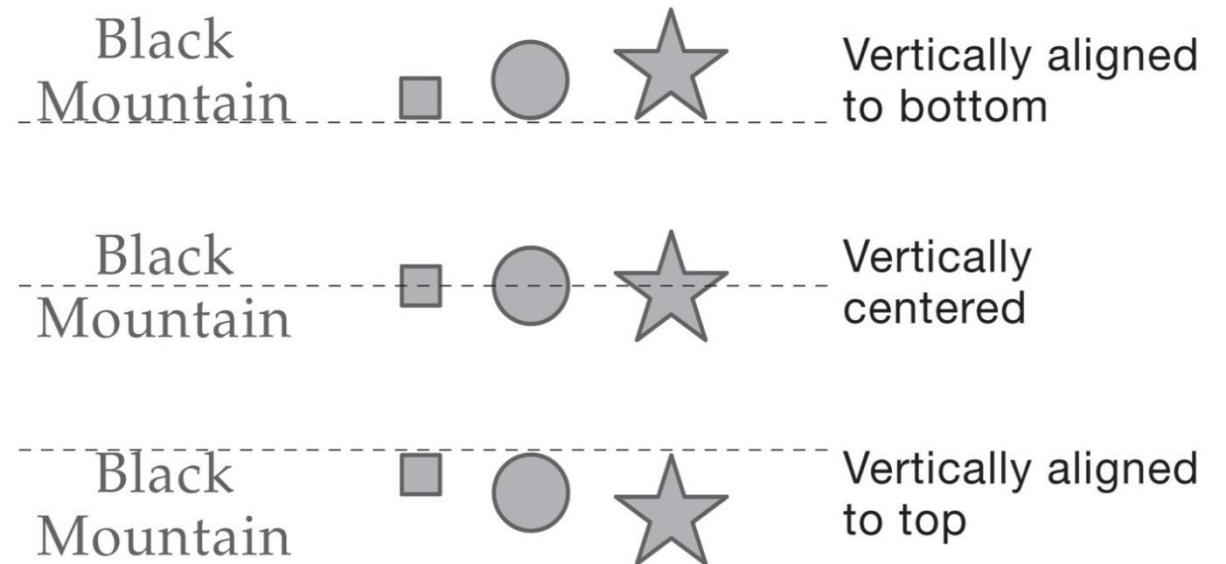
A

Horizontal Alignment and Centering
of Vertically Distributed Features

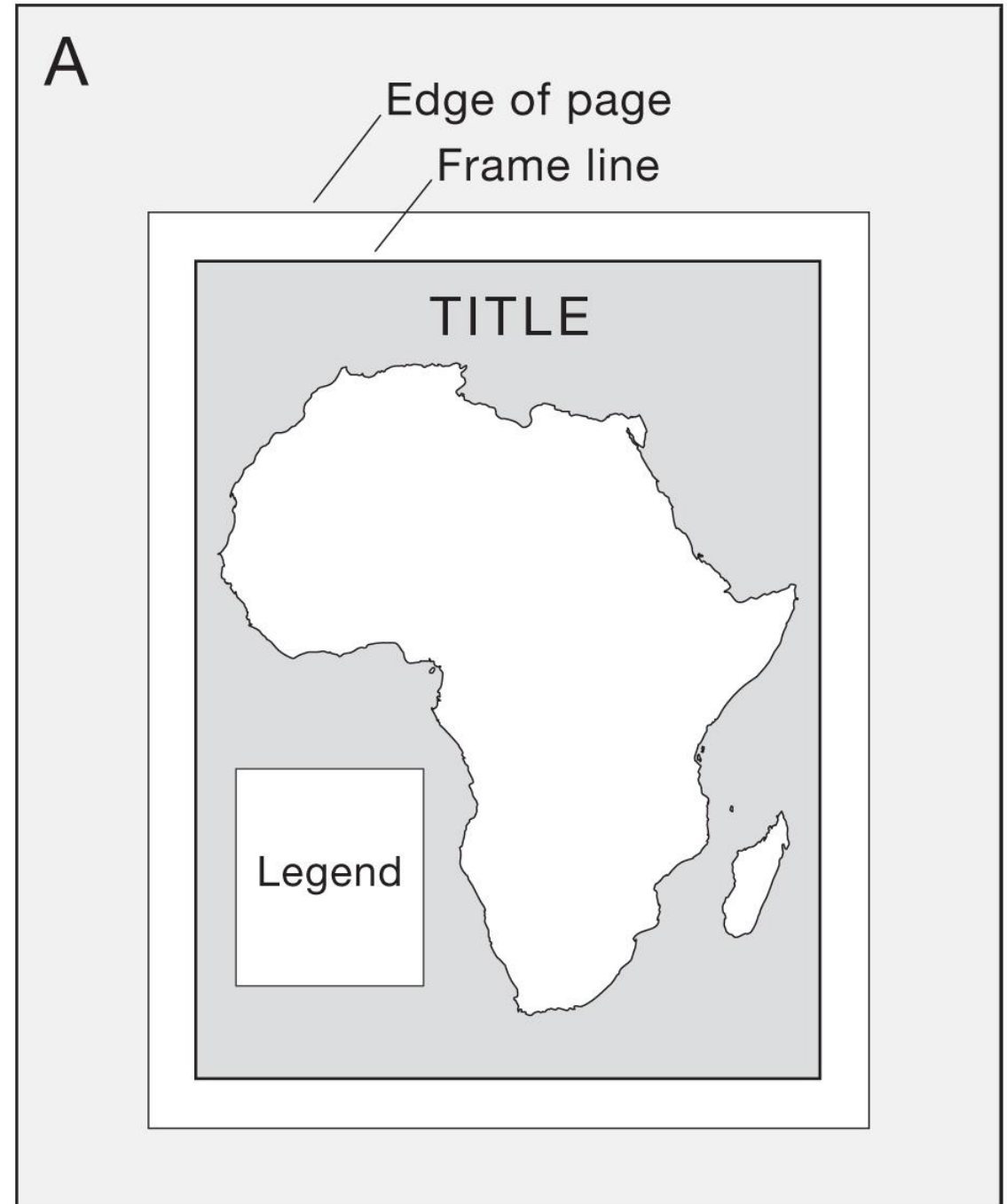
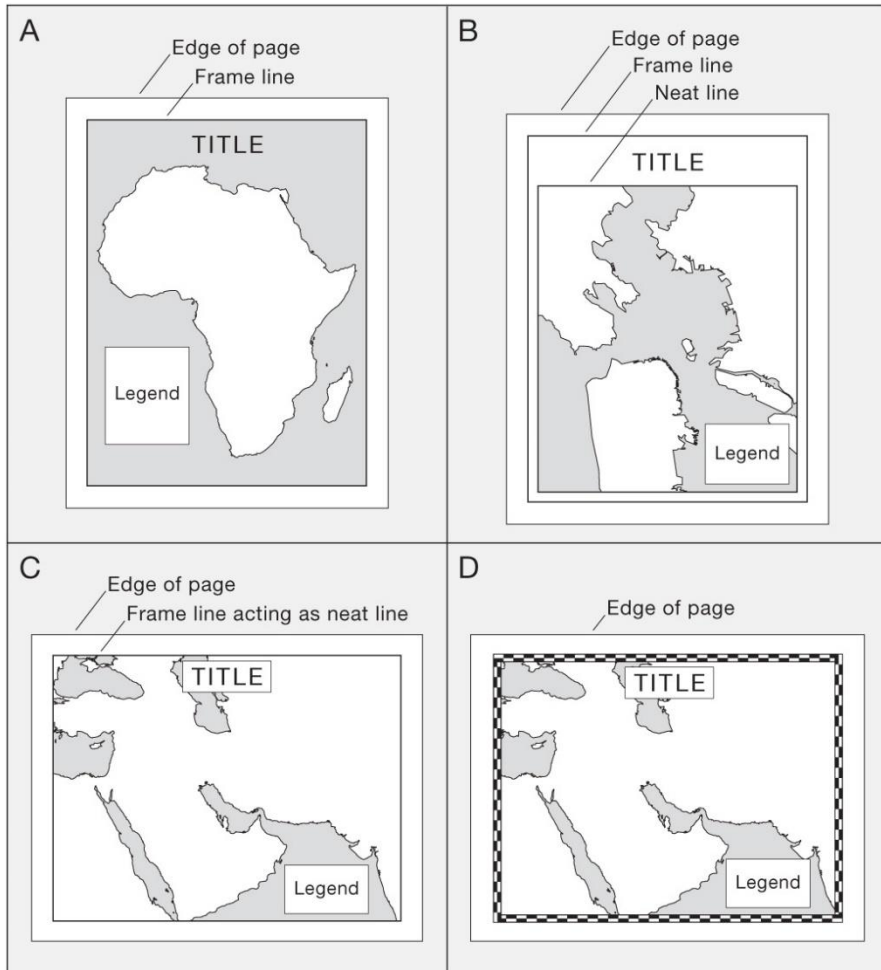


B

Vertical Alignment and Centering
of Horizontally Distributed Features



Text and Map Layout



B

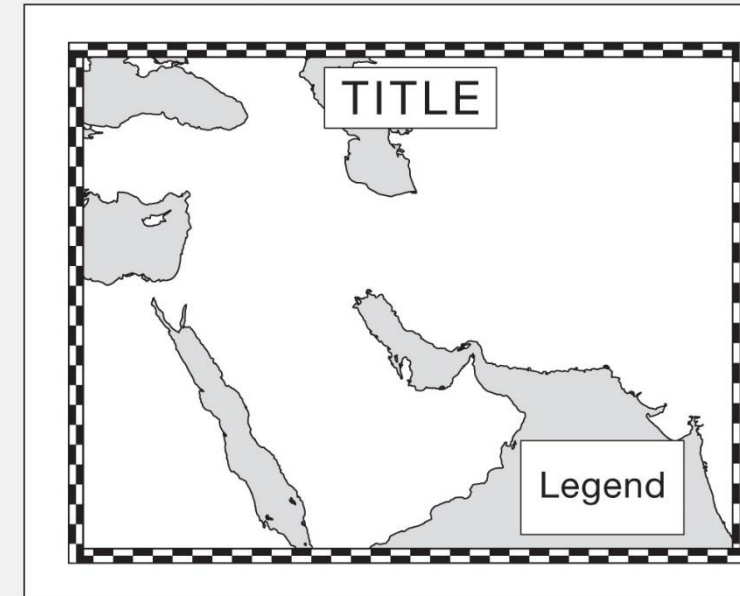
Edge of page
 Frame line
 Neat line

**C**

Edge of page
 Frame line acting as neat line

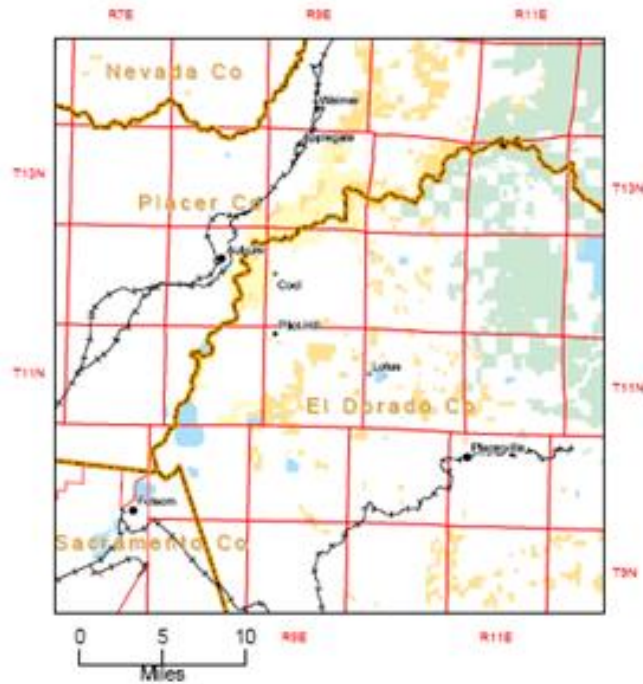
**D**

Edge of page

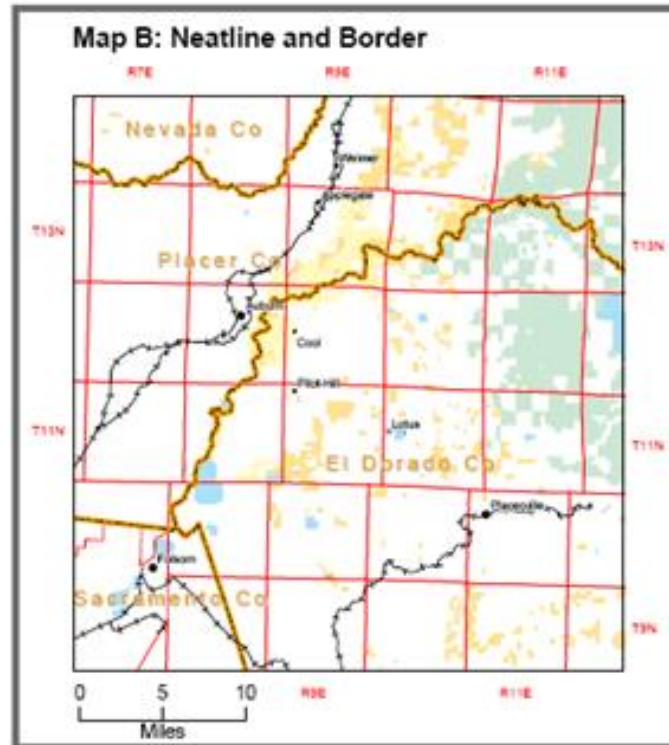


Borders and neat lines

Map A: Neatline No Border

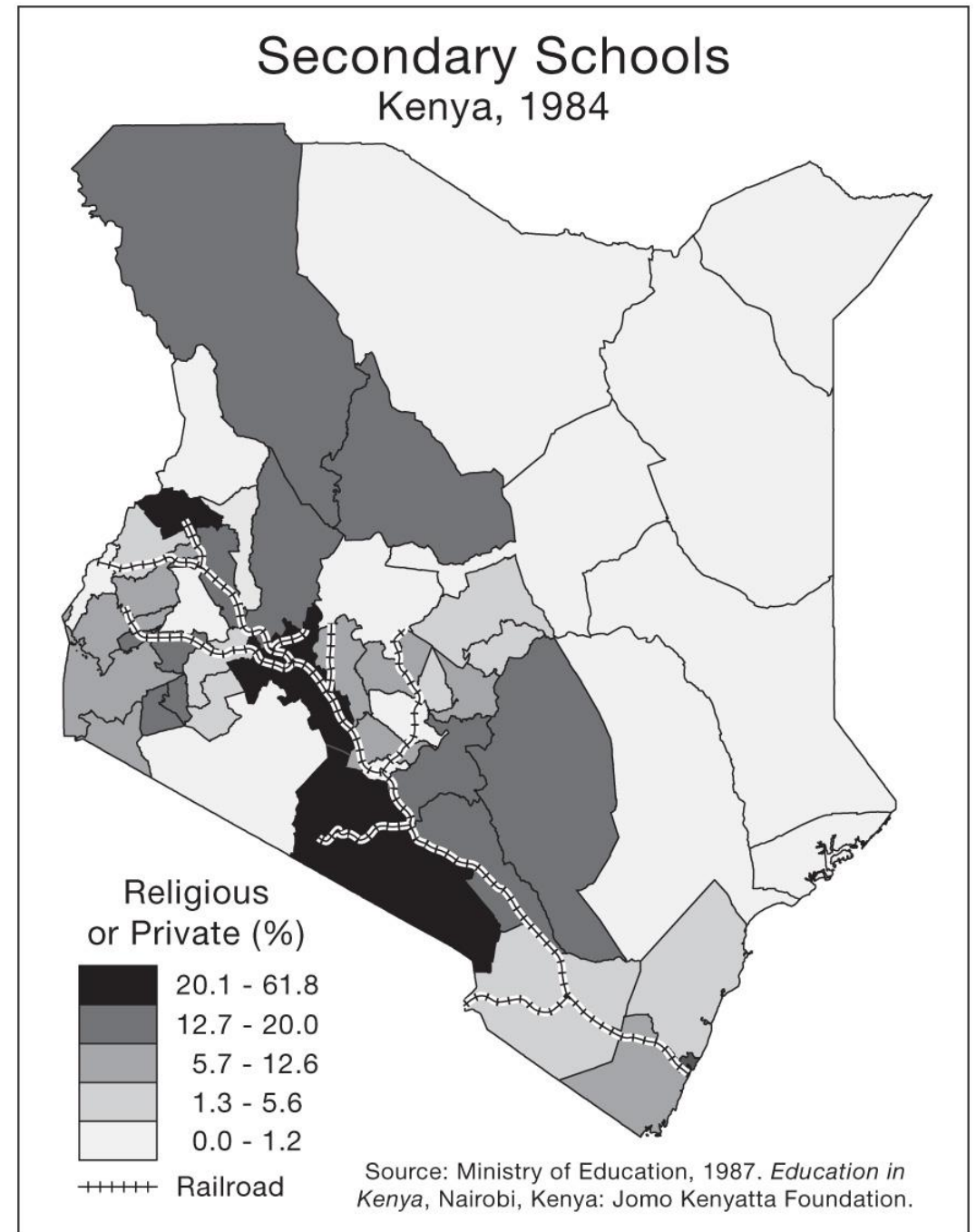


Map B: Neatline and Border

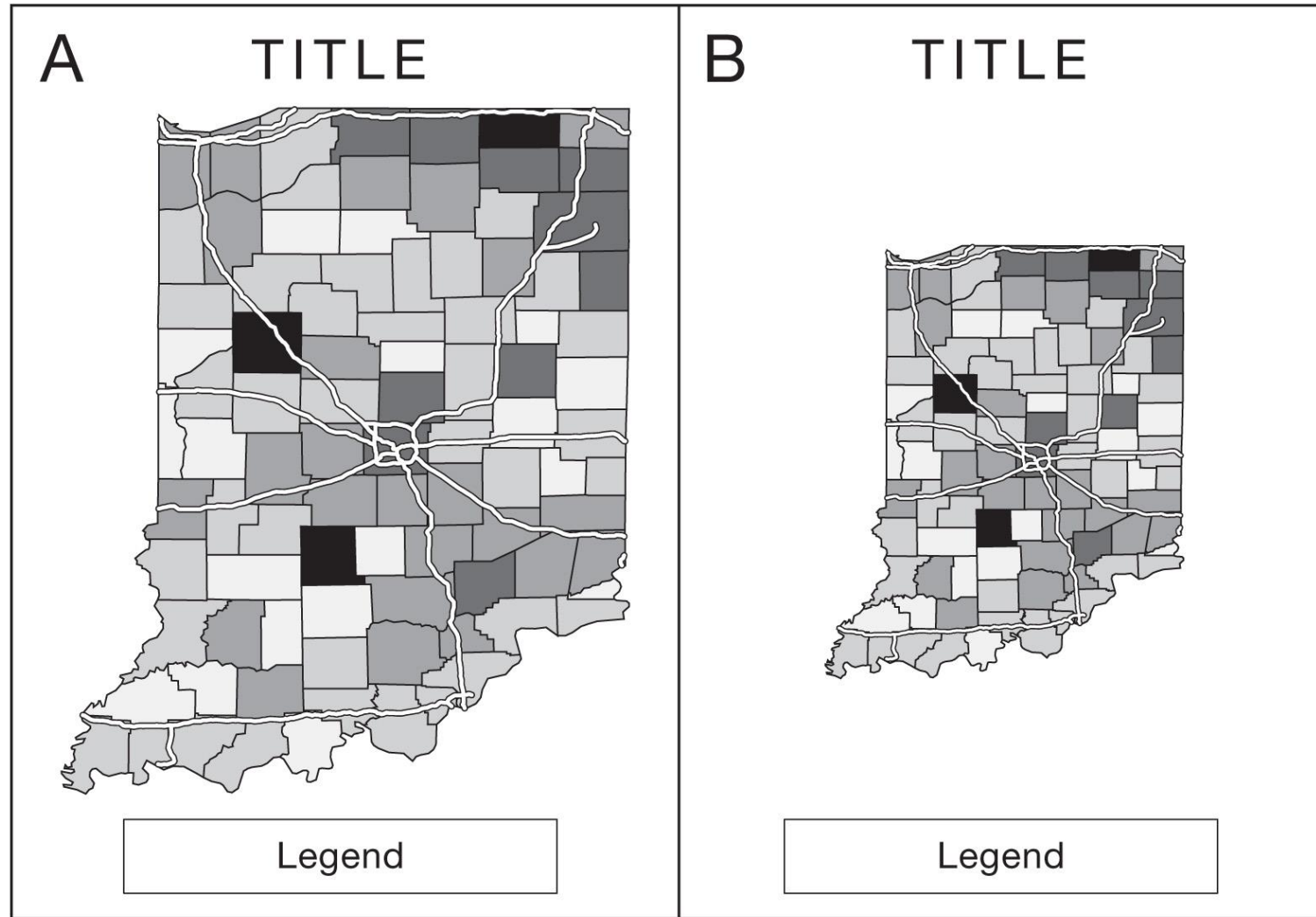


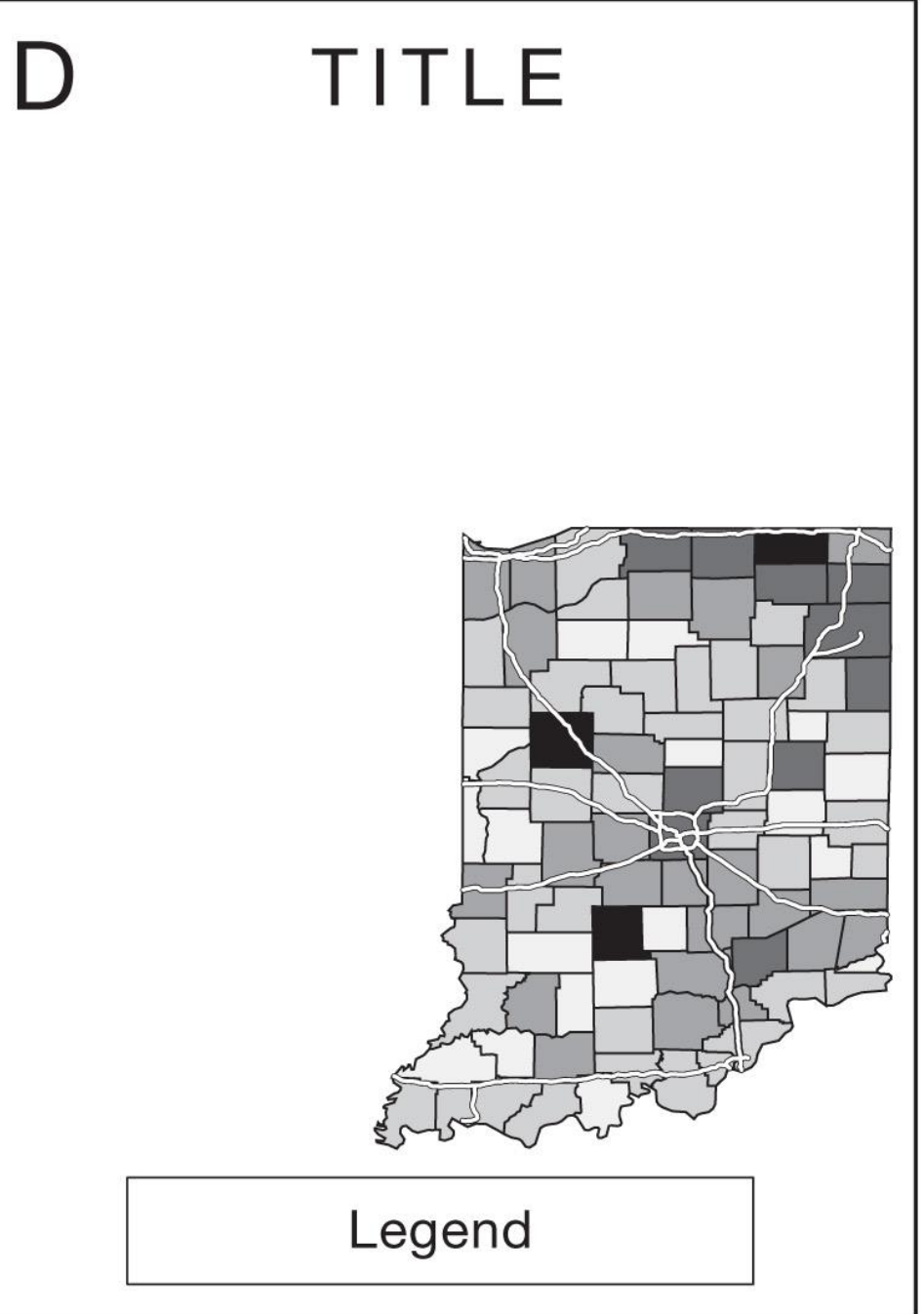
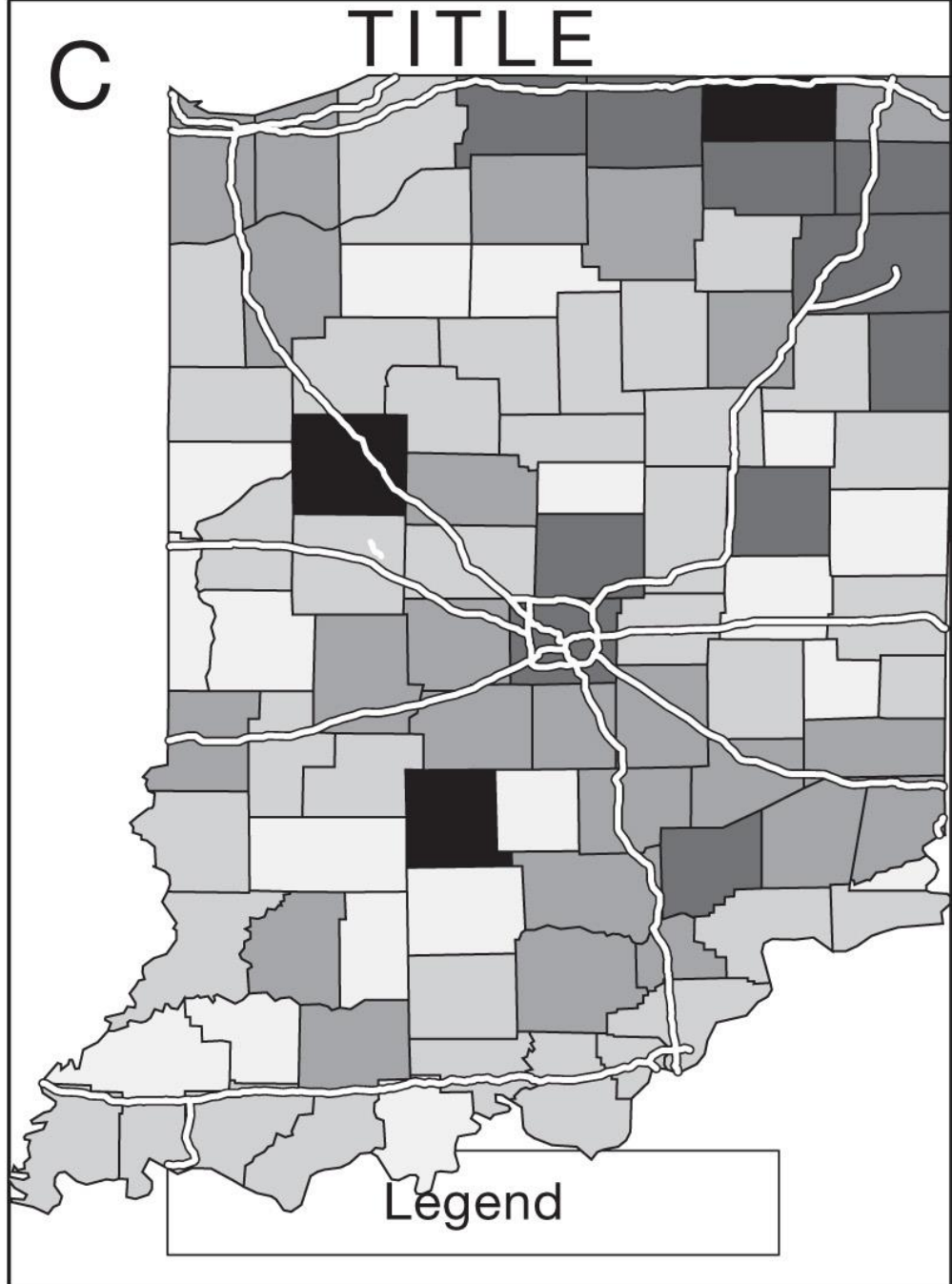
Neatlines and Borders:
A neatline delineates the extent of the data.
A border frames the map graphic.

Source, title, legend

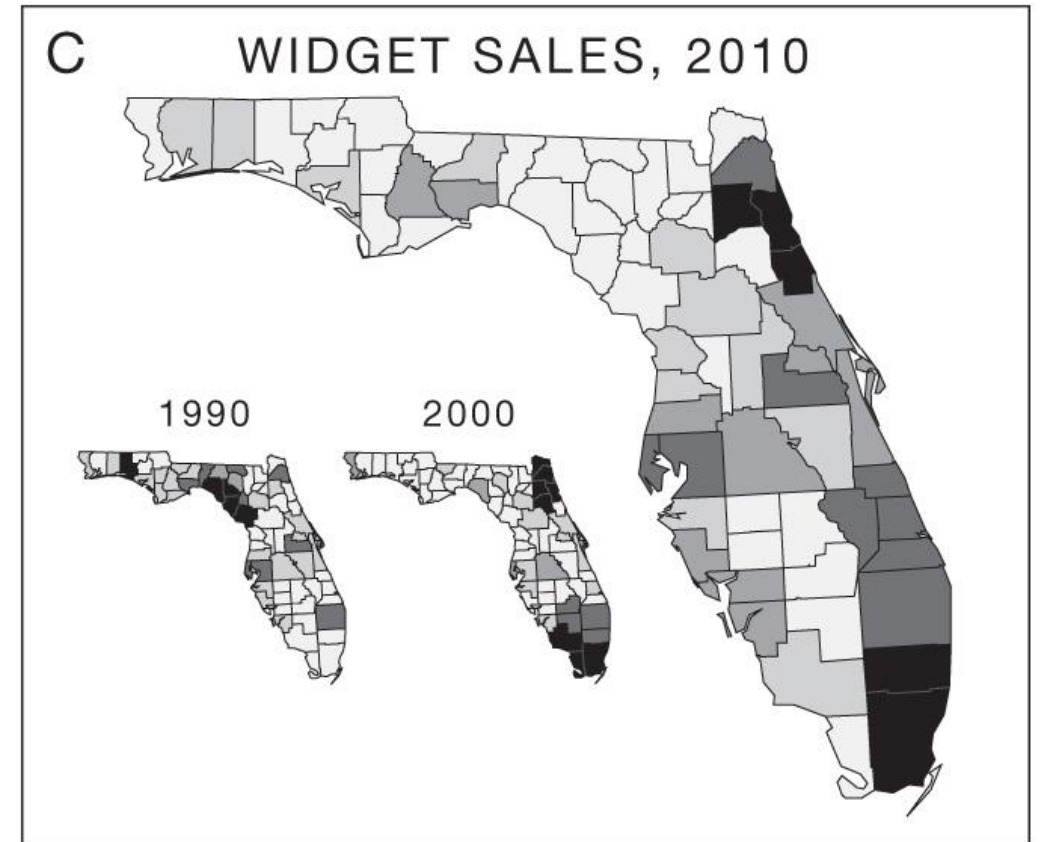
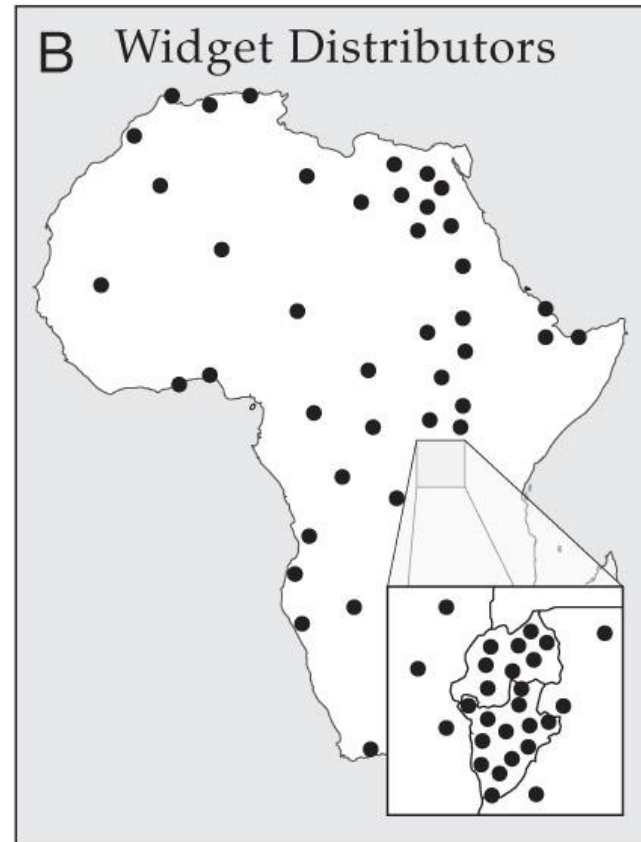
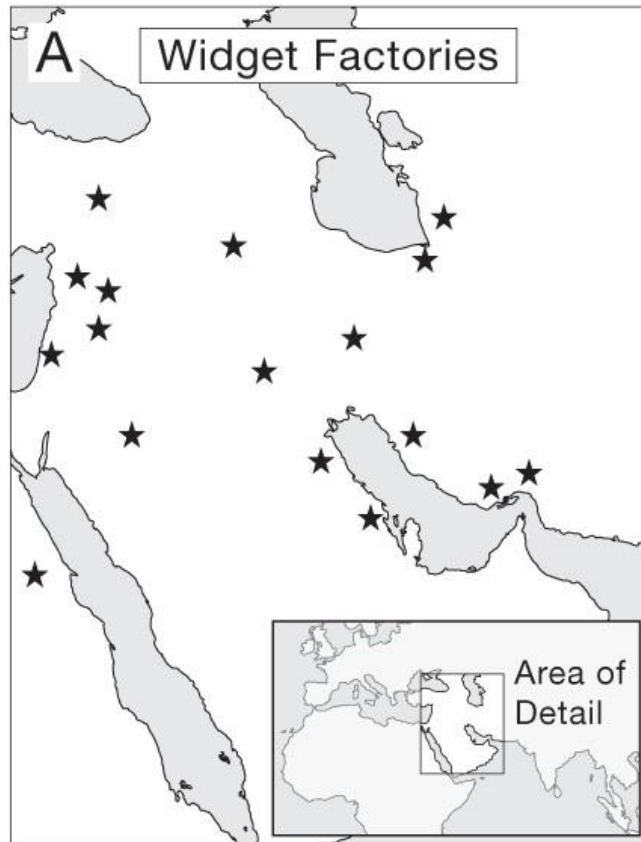


Framing and placement

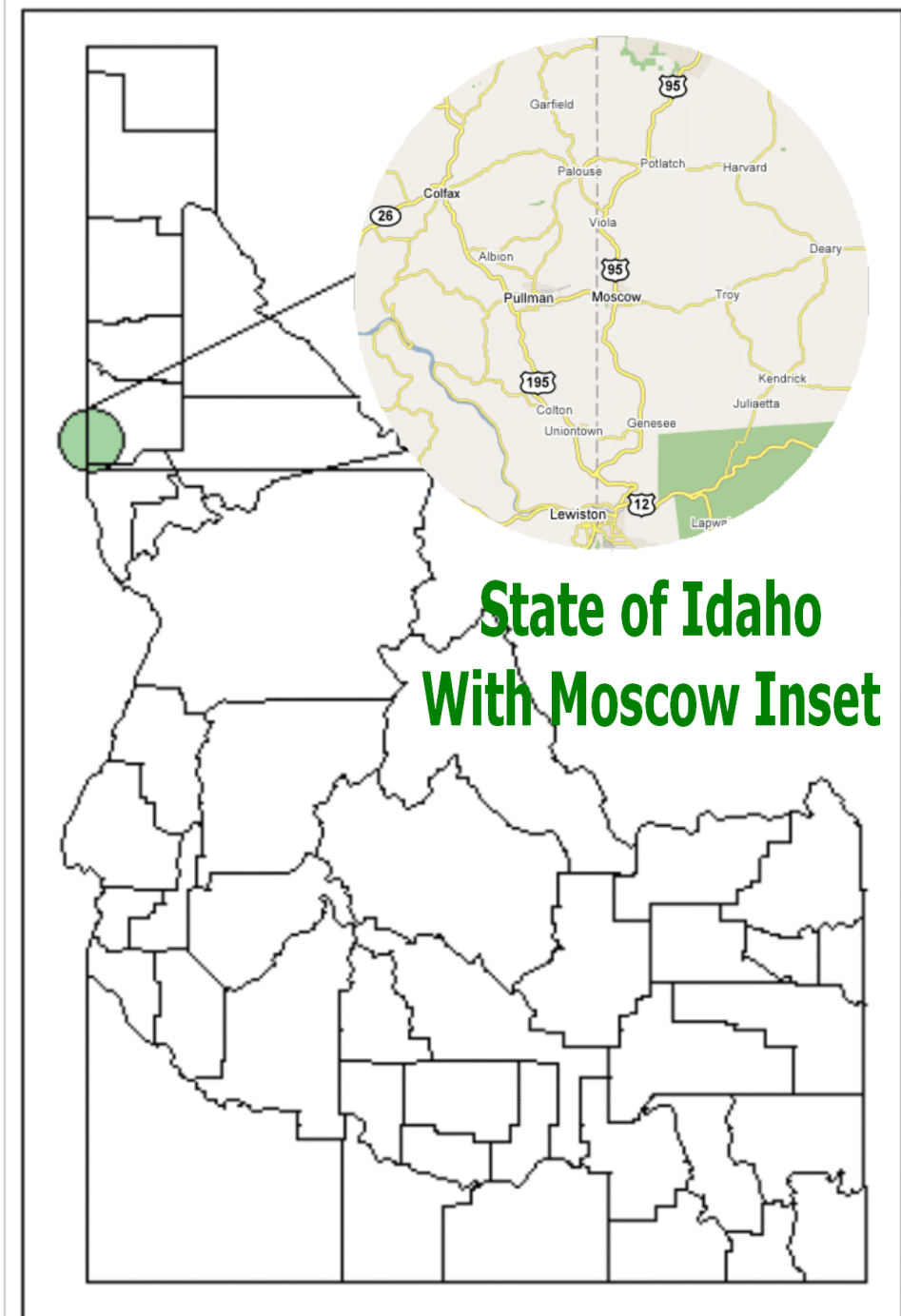




Insets: 2 types, plus location map



Location maps



Wording: Subheaders

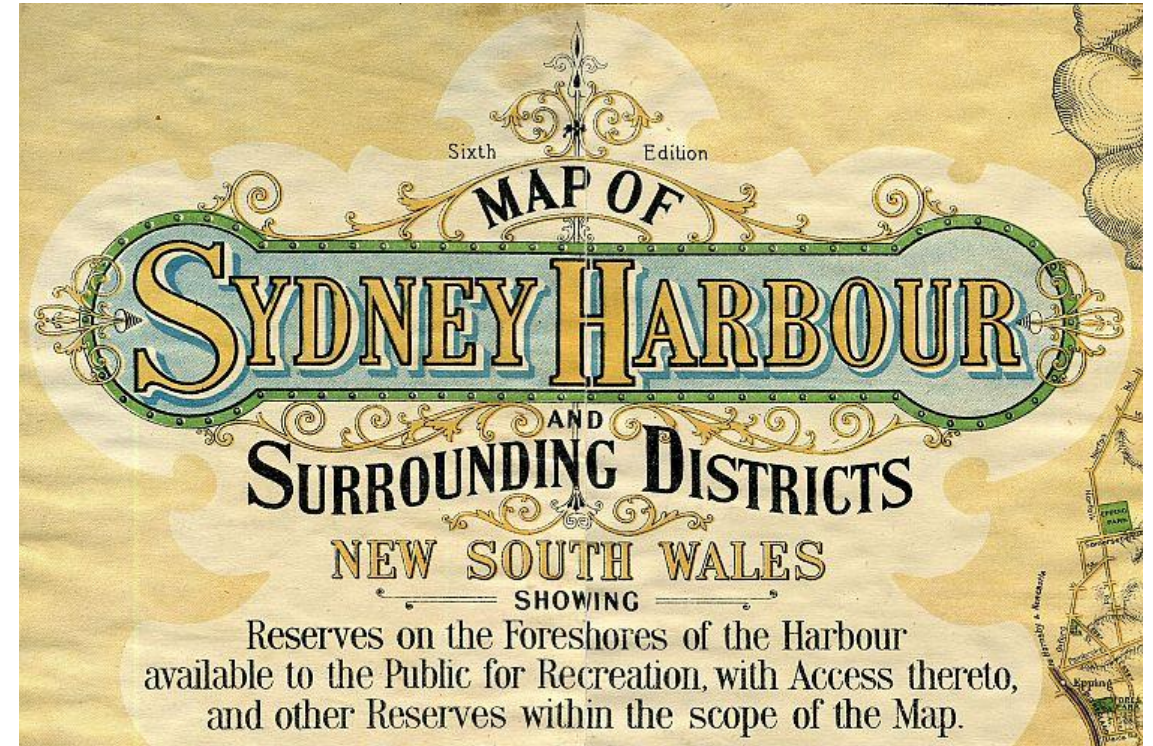
A

Long Term Debt
AVERAGE AGE, 2001
Museums of Modern Art

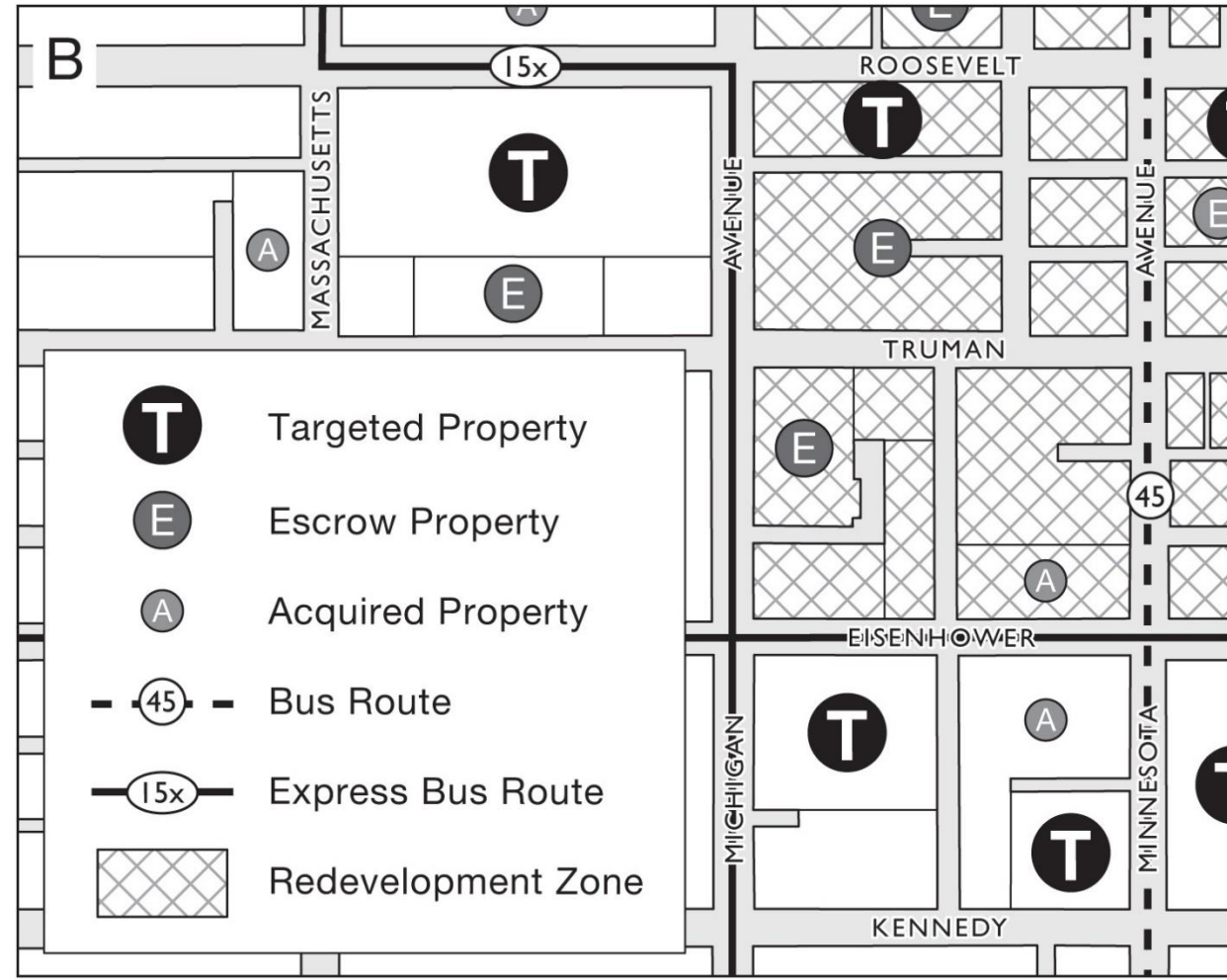
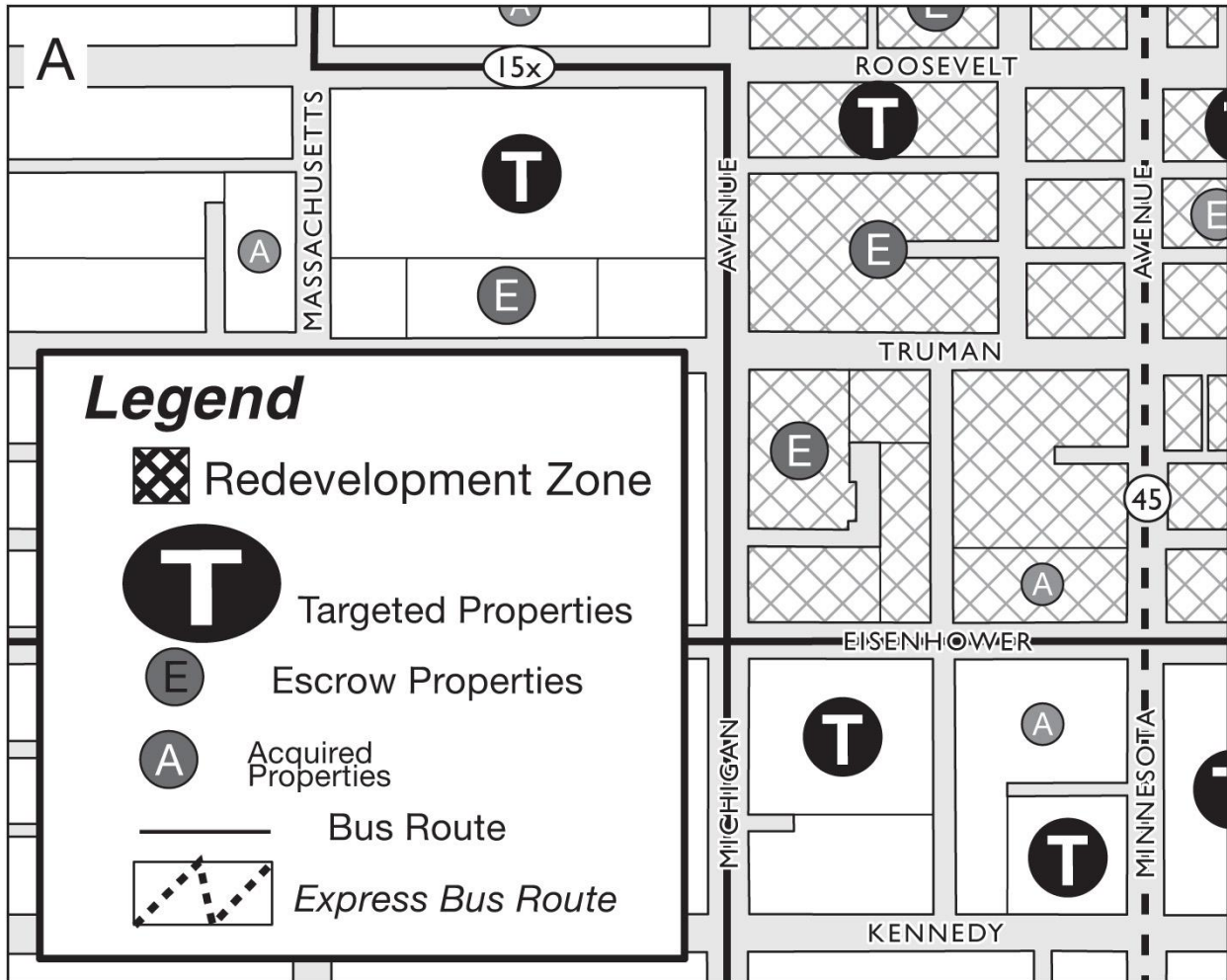
B

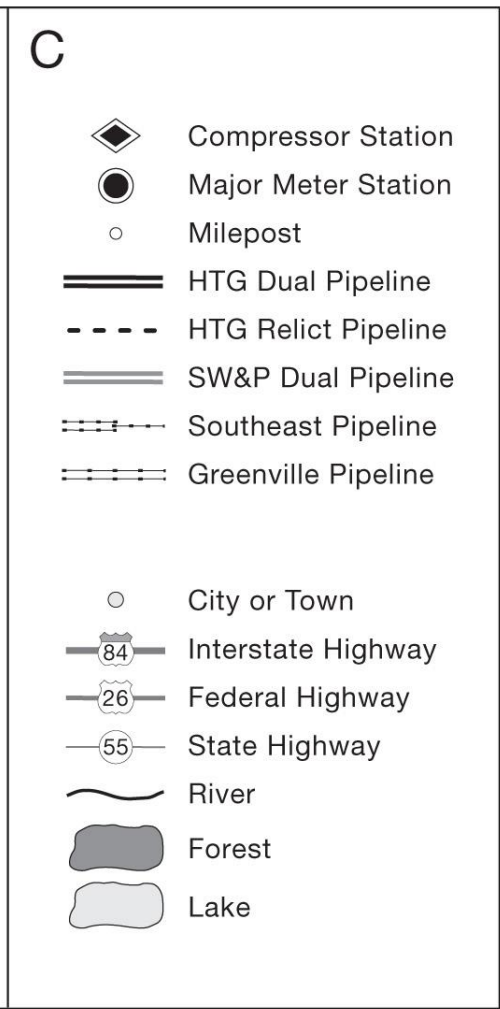
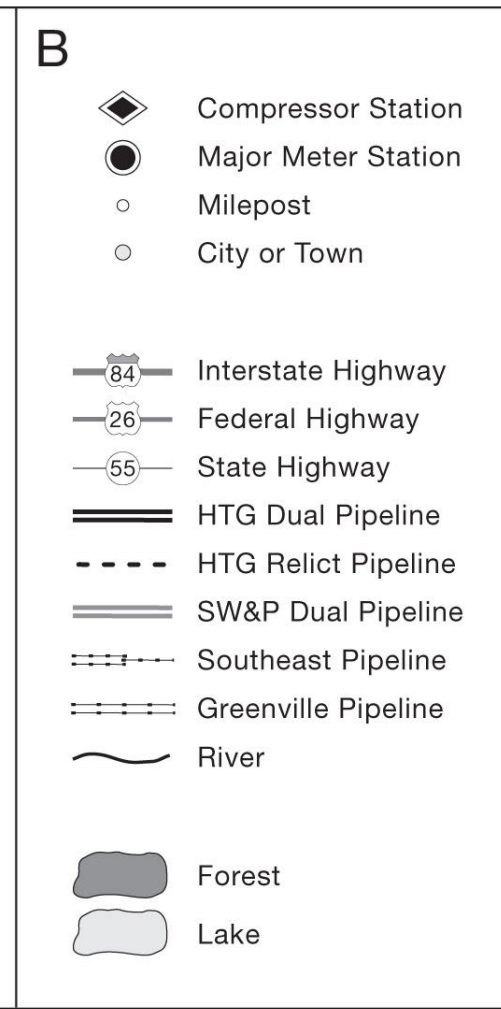
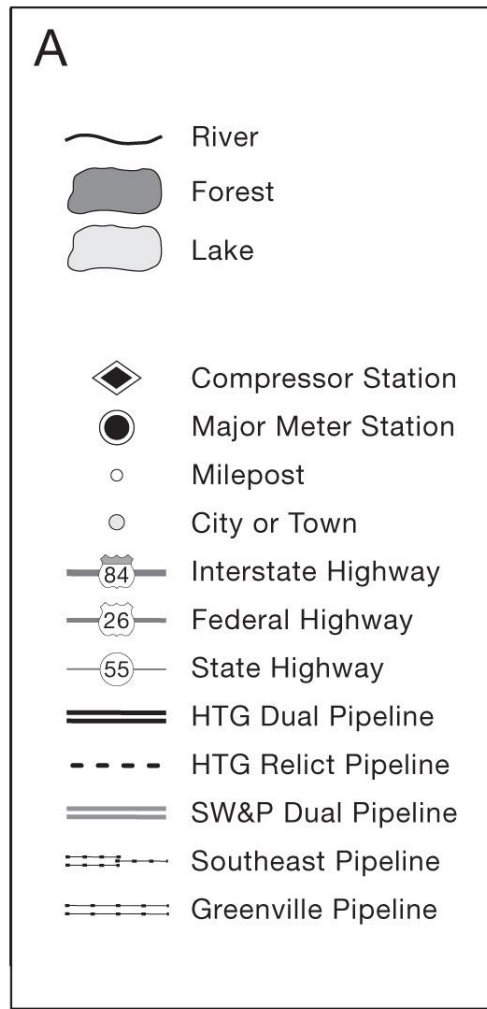
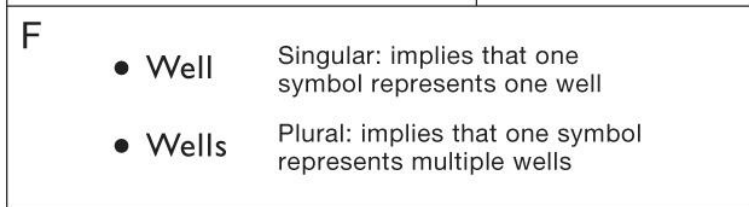
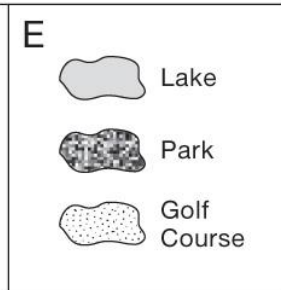
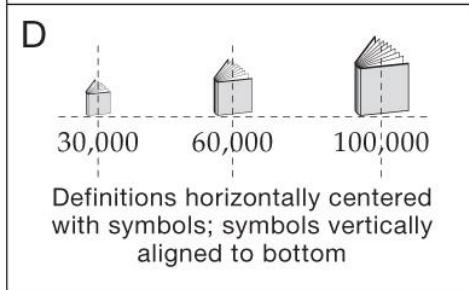
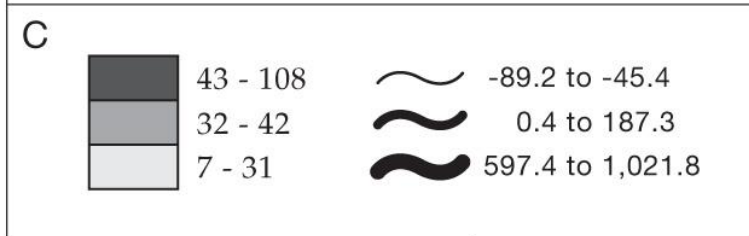
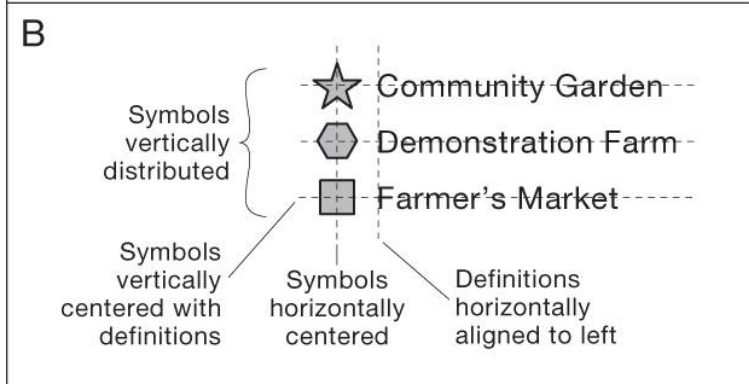
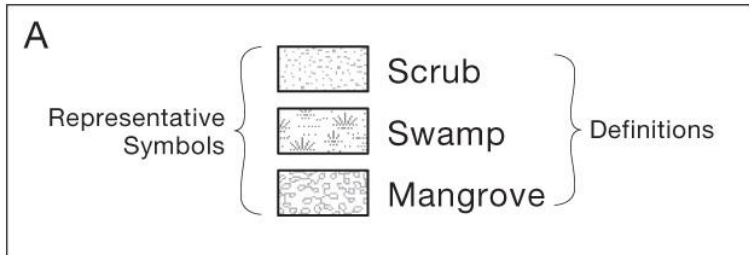
Population Density
New Hampshire, 2010
Number of Chickens
Harper County
BIRTH RATE INCREASE
1950 - 2000

Subtitle horizontally centered below title



Legend complexities





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Splits

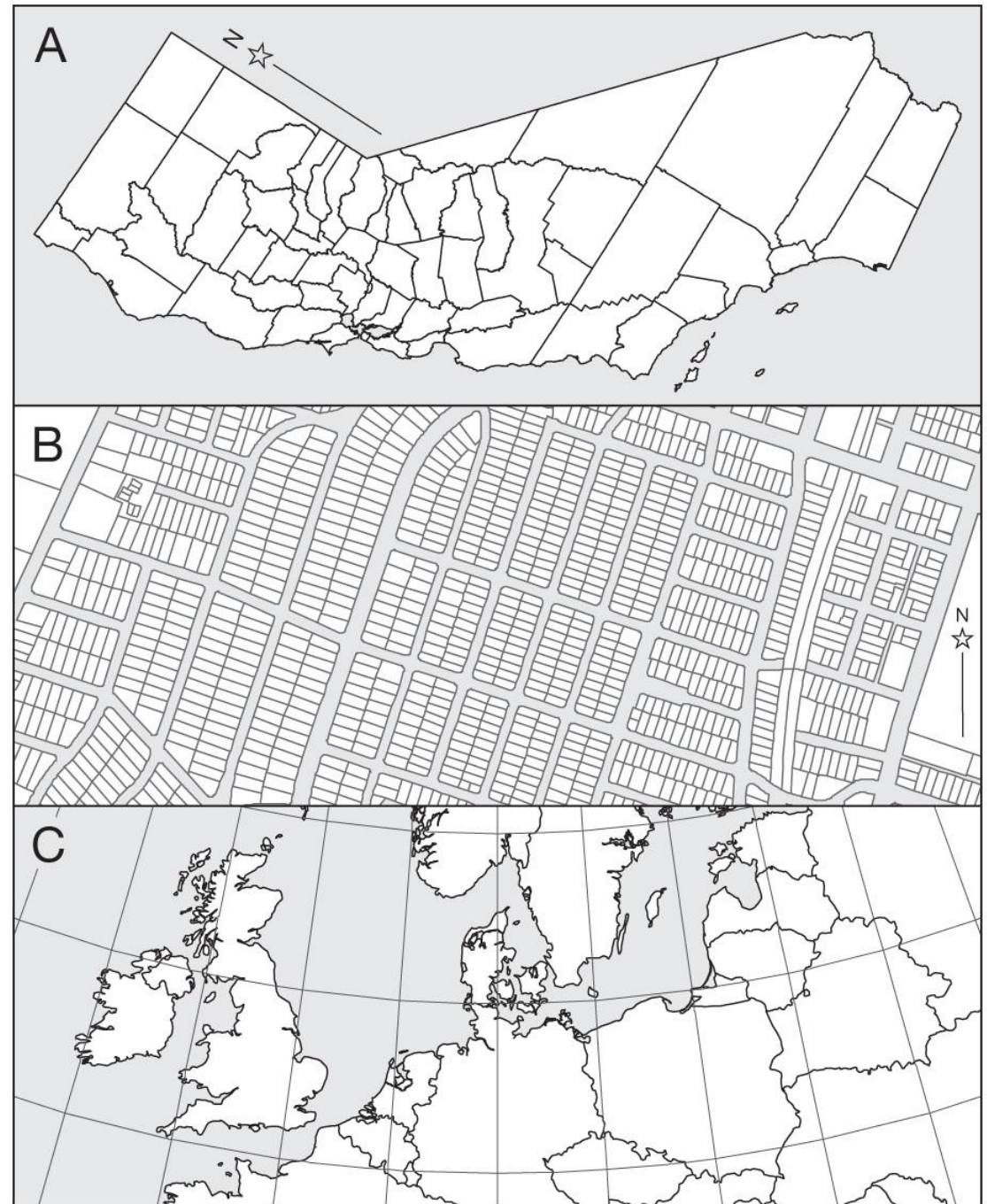
Poverty as Shown by Per Capita Income
South America 2015

Poverty
as Shown by Per Capita Income
South America
2015

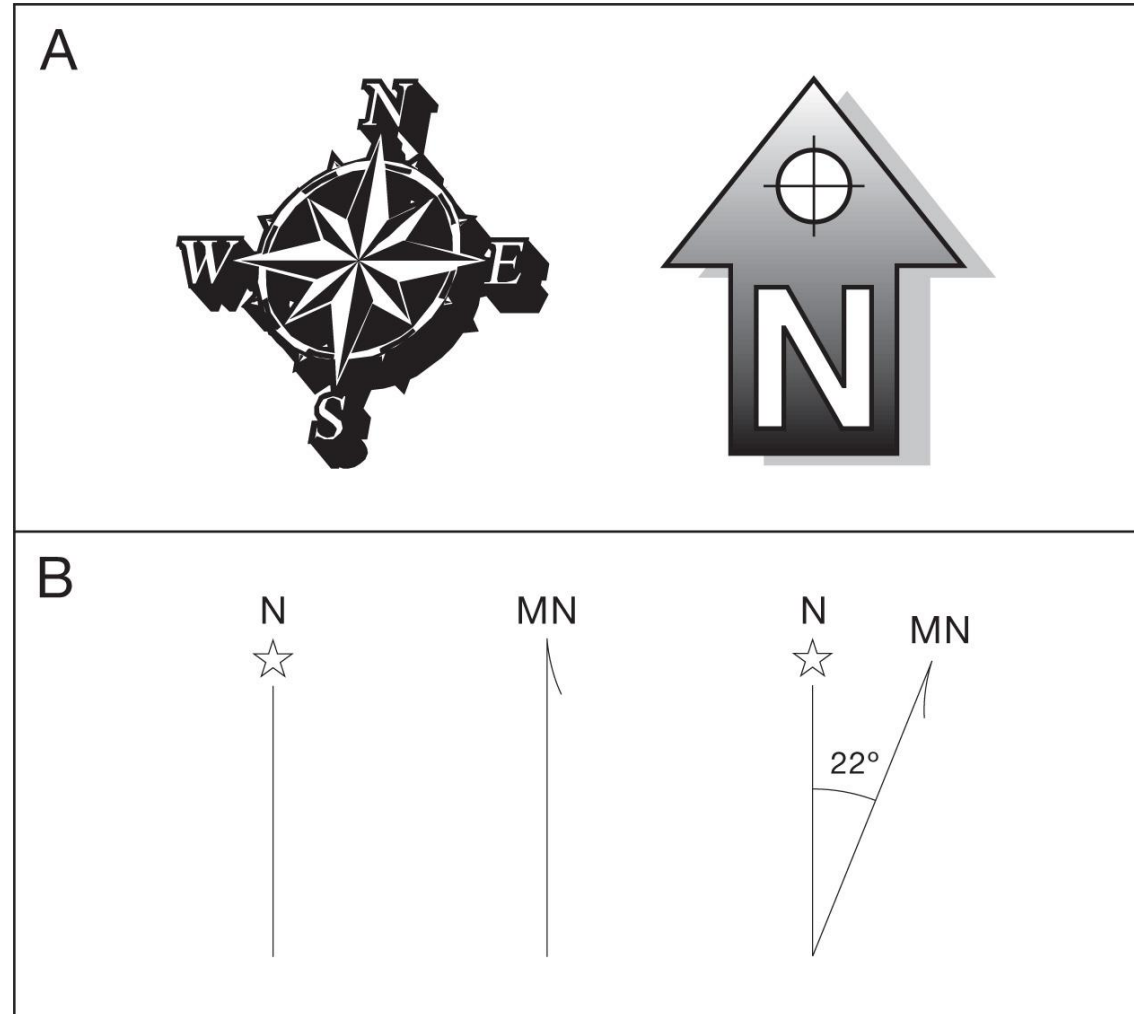


Space and layout

Creating label space



North Arrow or cartojunk?



Credits/Sources

Source: Census 2010, *Summary File 3*, U.S. Census Bureau.

Data Source: *ESRI Data & Maps*, 2007.

Source: United States Central Intelligence Agency.
Map File #505103 (547149) 2-82.

Data Source: National Atlas of the United States,
<http://www-atlas.usgs.gov/mld/hurall.html>

Source: The International Bank for Reconstruction and
Development/The World Bank.
World Development Report, 2000: Poverty.

Source: Field Survey by Nigel Tufnel and
David St. Hubbins, December, 2008.

Multiple lines are horizontally centered

Fonts

<p>A</p> <p>Type Family</p> <p>Palatino Helvetica Bookman Gill Sans</p>	<p>B</p> <p>Type Style (Based on Palatino)</p> <p>Roman Bold <i>Italic</i></p>
<p>C</p> <p>Typeface</p> <p>Palatino Roman Helvetica Bold <i>Bookman Italic</i> Gill Sans Condensed</p>	<p>D</p> <p>Type Size (Based on Palatino Roman)</p> <p>Six point Ten point Fourteen point</p>

Look and feel

LOOK AND FEEL

Cheltenham provides an old-fashioned look.

Courier looks like a typewriter.

Times New Roman looks like a modern textbook.

Bookman looks like a primary school book as it is larger.

FORMAL: Times New Roman

INFORMAL: Kristen ITC

LIGHT: Bigmouth

DRAMATIC: **SHOWCARD GOTHIC**

MODERN: Tahoma

TRADITIONAL: Goudy Old Style

WARM: *Script MT Bold*

COOL: CASTELLAR

Serifs


A

UPPERCASE
lowercase
Title Case
Sentence case

First letter of every word is uppercase
Except for words like *in, on, or, of, per, by, for, with, the, and, over, etc.*

First letter of sentence is uppercase

B



Serifs are circled

Palatino is serified
Helvetica is sans serif
Bookman is serified
Gill Sans is sans serif

Kerning

→ A
→ T
AT

OATS none
OATS optical
OATS metrics
OATS manual

Text path

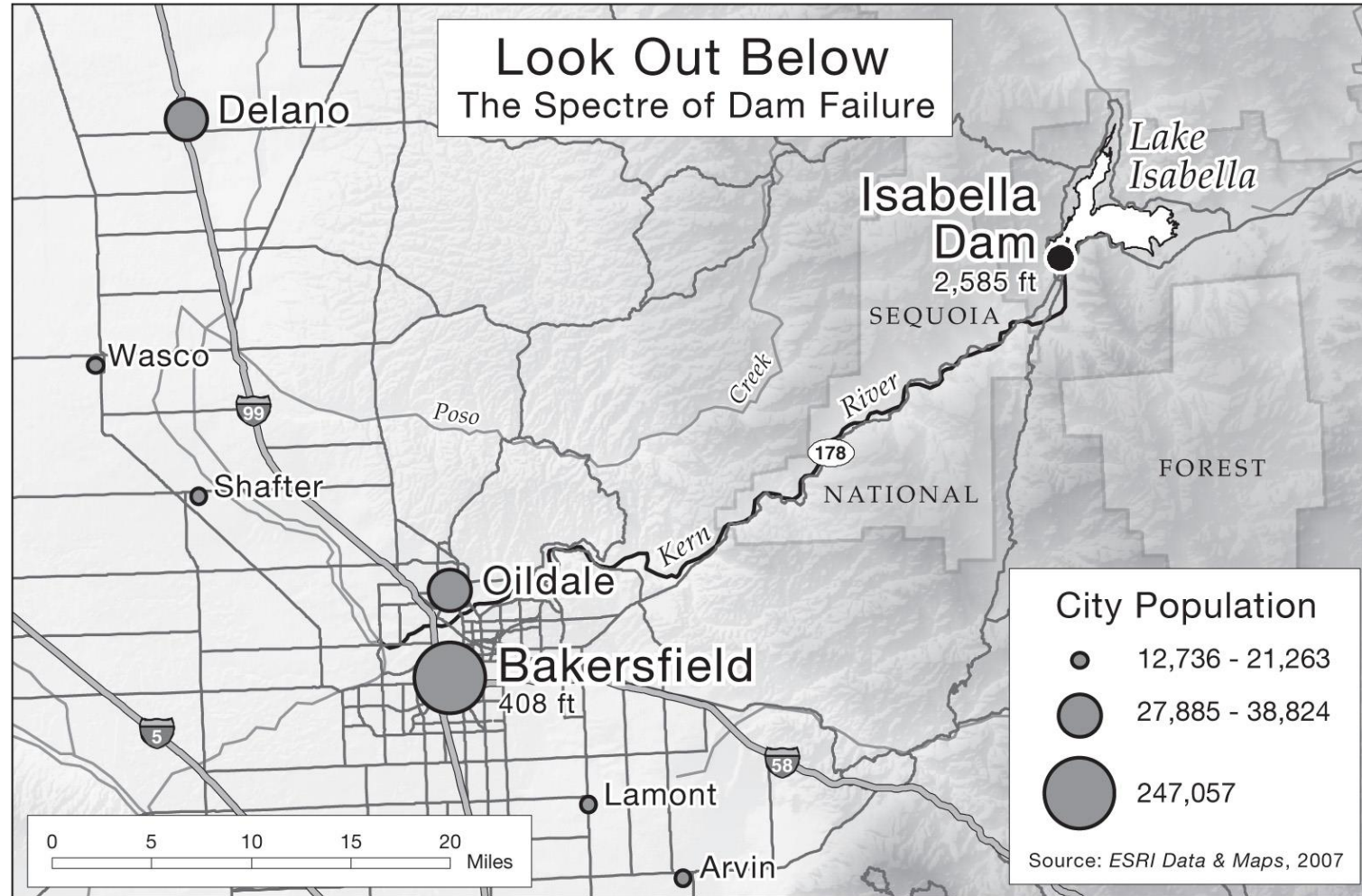
- Right

D
o
w
n

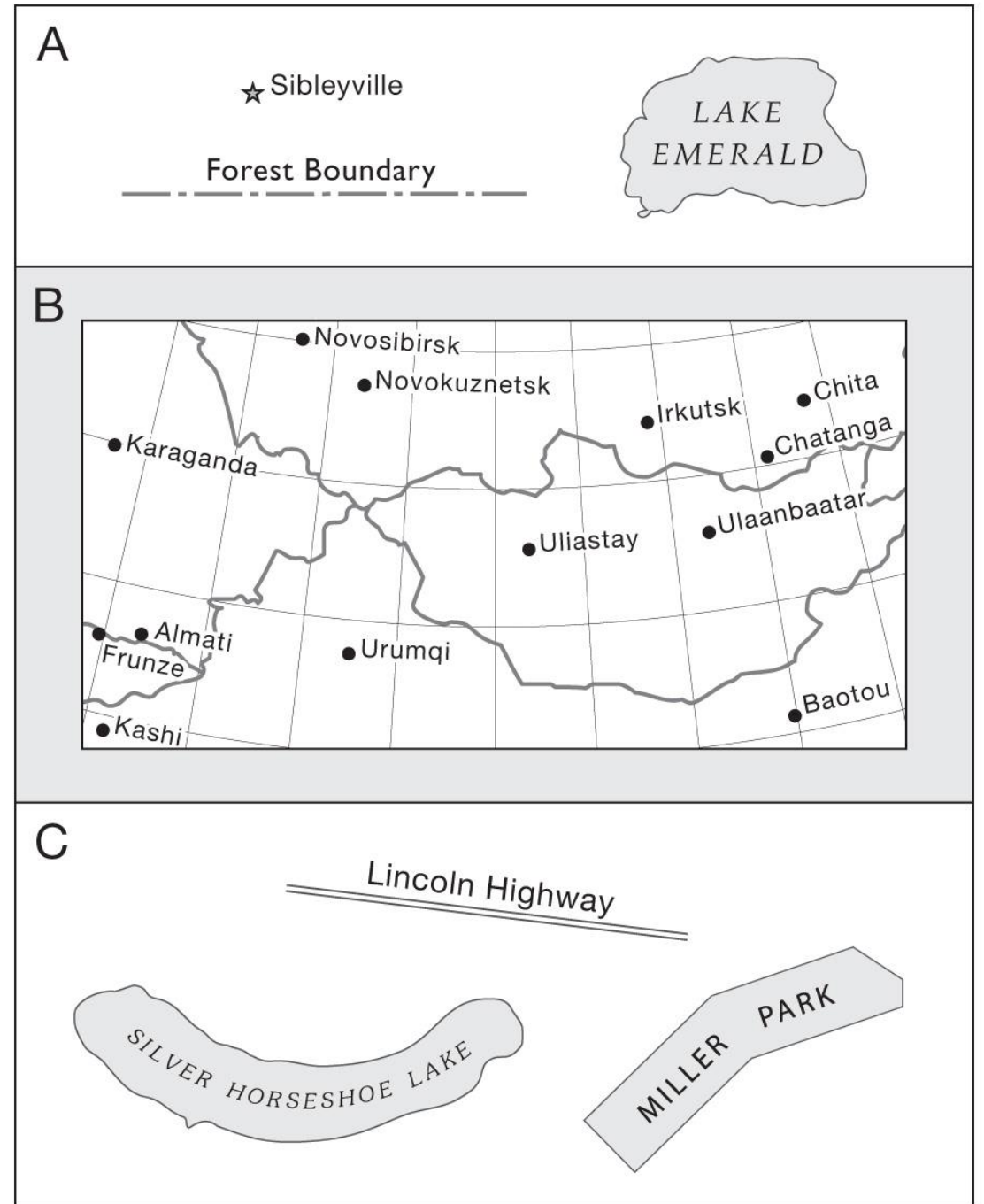
Down, rotated

Some text warped to a curve.

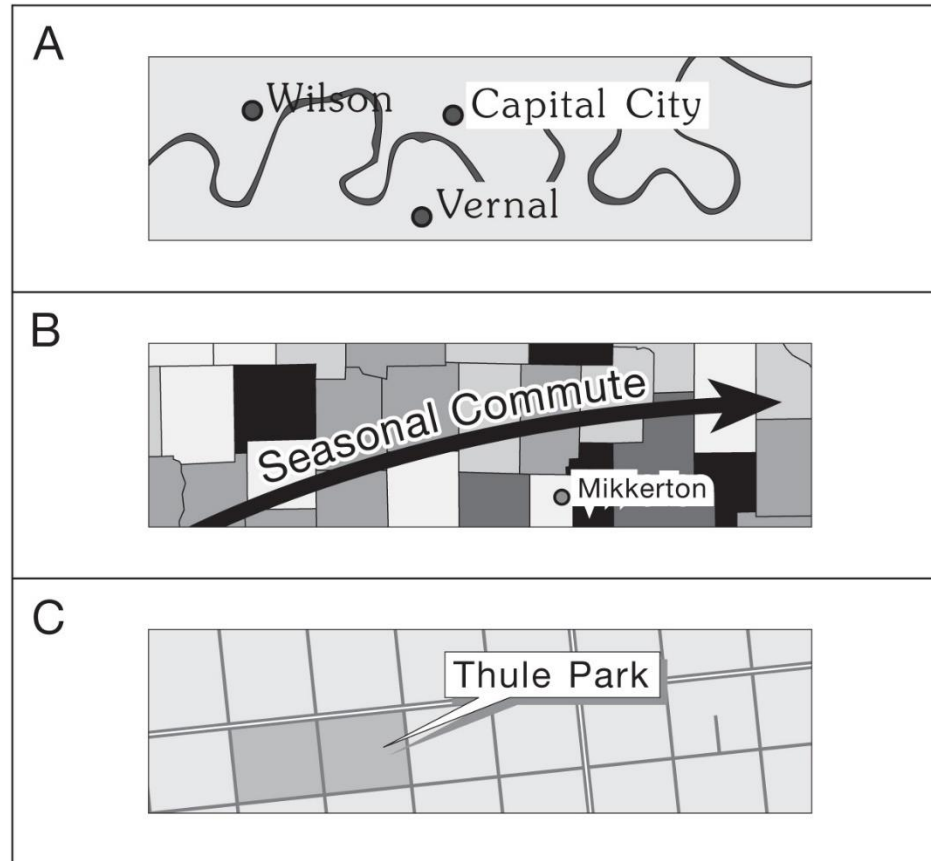
Placename size

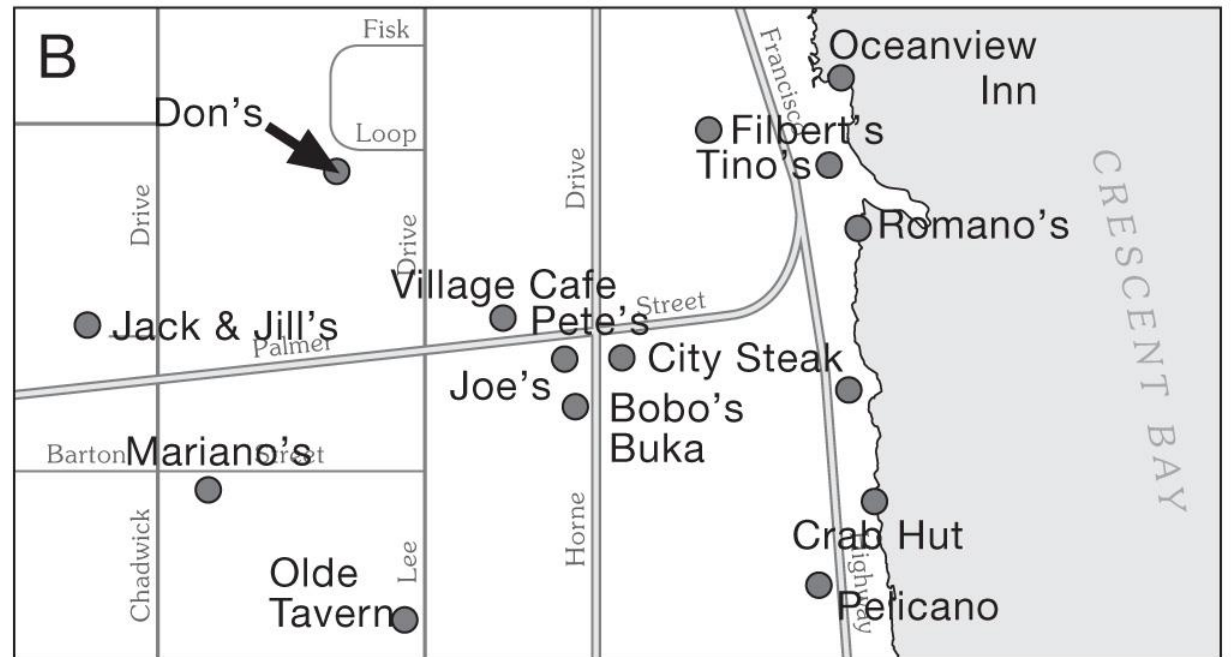
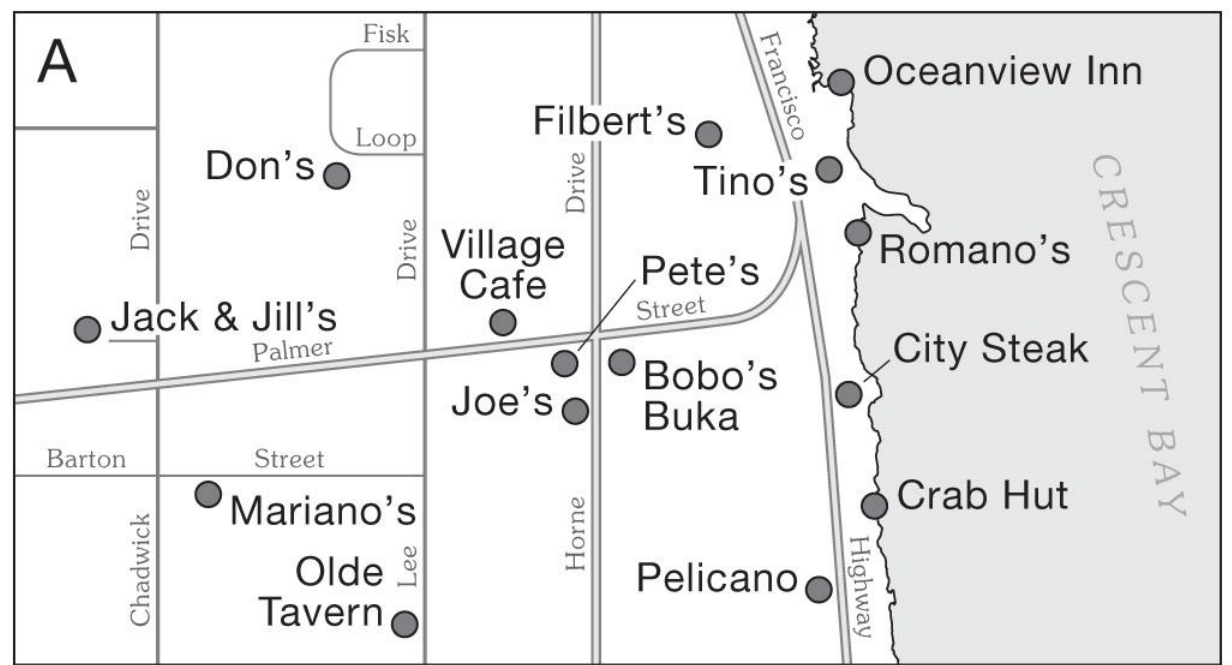
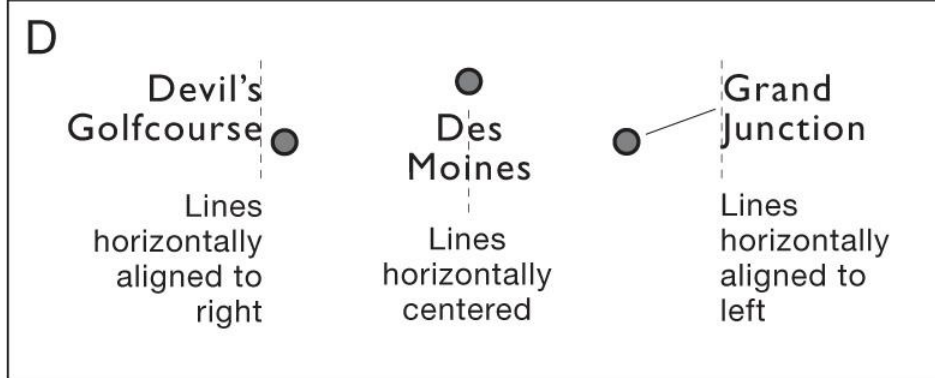
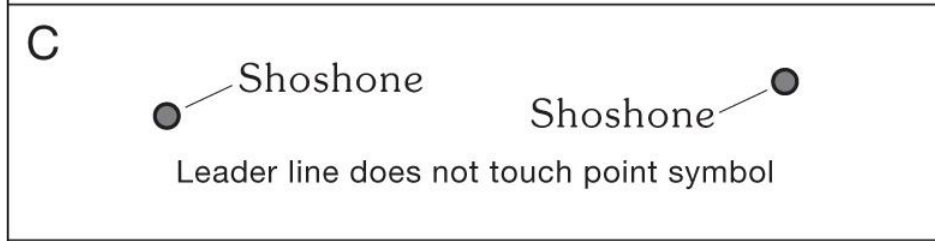
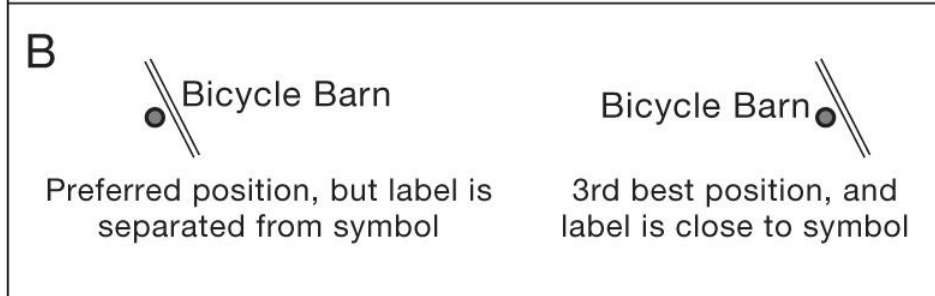


Points, lines, areas



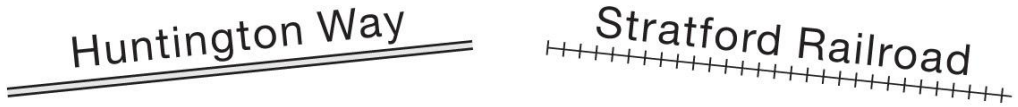

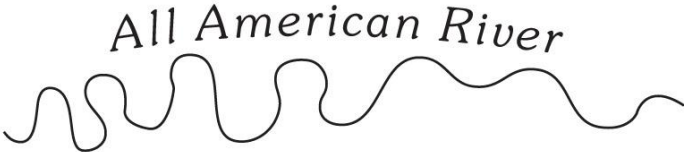

Label highlights



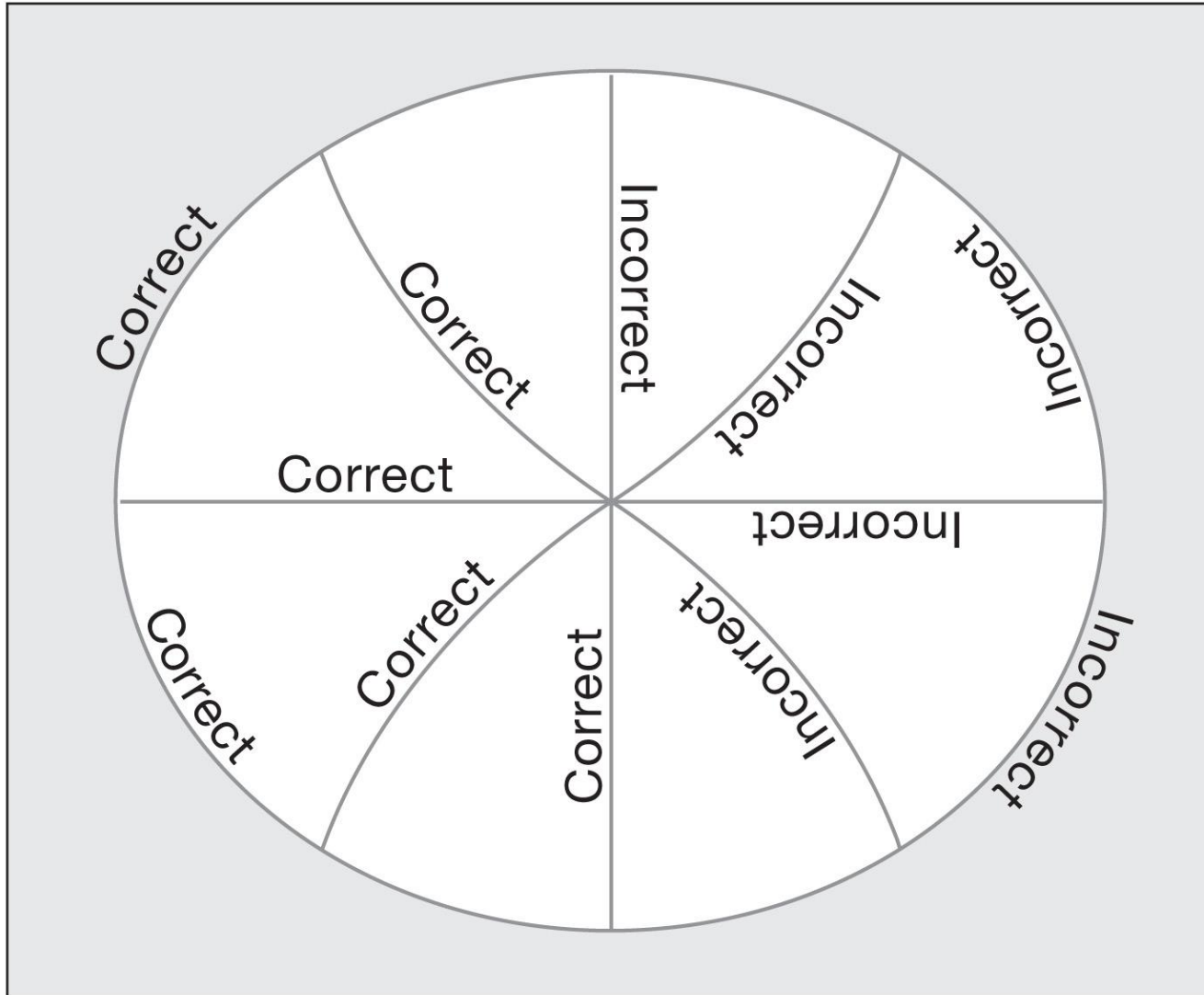


Line labels



A 
B 
C 
D 

Curved labels



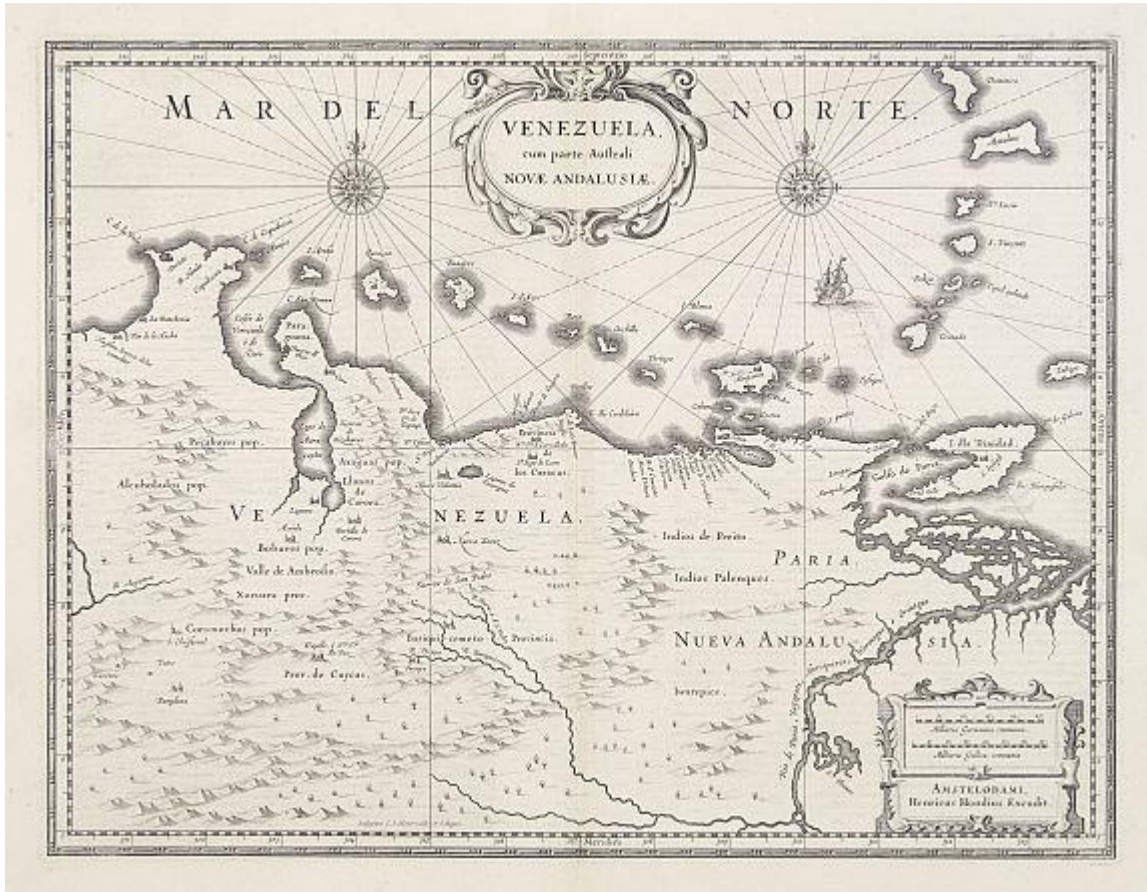
curved labels

a mini tutorial for inkscape

shows how to use inkscape's text object and path tools to create curved text appropriate for geographic labels.



Label extent



Summary

- Text makes a huge difference in a map's perceived quality
- Multiple components
- Many design aspects
- Selection, placement and design of labels
- Rules of precedence and overlap
- Text is a symbol
- Keep numbers of fonts, colors and variants to a minimum