

# Spatial Dimensions of Political Representation:

*Understanding Gerrymandering Through GIS*

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## Justices to states: Redistrict at will

**Political maps** | The U.S. Supreme Court rules that only one House district in Texas must be redrawn

# NW stiffed on energy bill aid

**Federal money** | Oregon and Washington say they need relief, too; it's not just for states with extreme weather

By GAIL KINSEY HILL  
THE OREGONIAN

The U.S. Department of Health and Human Services released an extra \$1 bil-

lion this spring to help low-income Americans pay home heating and cooling bills pushed to record levels by soaring energy prices.

The move was almost universally applauded, as states welcomed millions of additional dollars for their poorest residents.

But there were no cheers in Oregon or Washington. To the dismay of state officials and social service agencies, the two

states were virtually ignored, bypassed by distribution formulas that favored areas with more extreme temperatures.

Oregon and Washington received \$280,430 and \$461,268, respectively, in supplemental grants — 1.1 percent of their allocations under the initial grant for fiscal 2006. Other states received anywhere from an extra 17 percent to 86 percent of their first-round allotments.

"It was absolutely ridiculous," said Jim

Abrahamson, a coordinator for Community Action Directors of Oregon, a statewide association of community service organizations. "We need to right this wrong."

The predicament means community service organizations in the two states have no extra money to help low-income households pay utility bills and keep the power on.

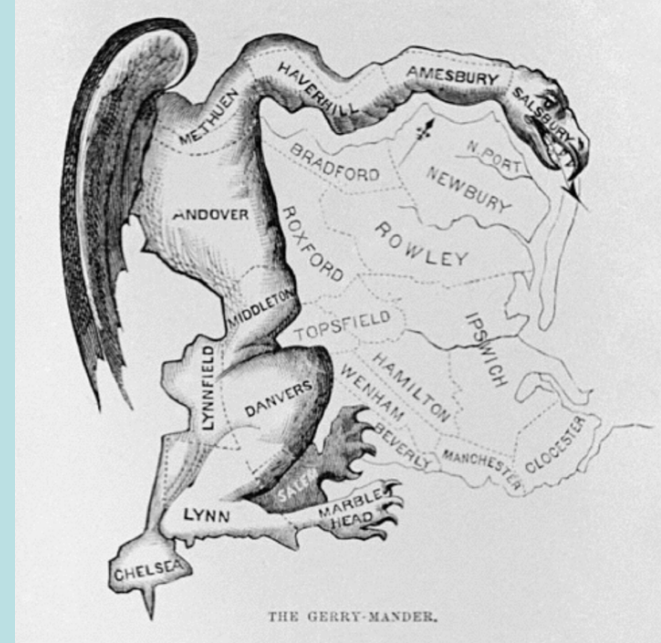
Please see **ENERGY BILL**, Page A11

**Grounded** | Record-breaking rain in Northwest

# Gerrymandering

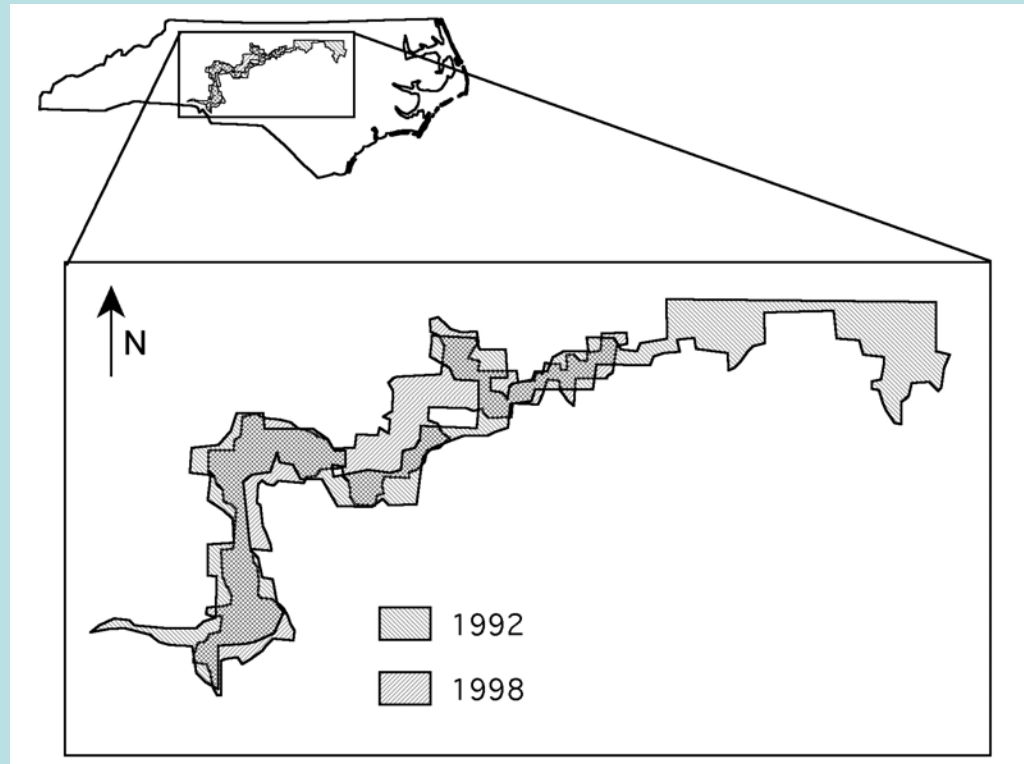
The manipulation of election districts boundaries to “unfairly” reduce or enhance the political power of a ethnic/racial group or political party.

- What is “unfair”?



# “Fair” vs. “Unfair” Redistricting

- Many possible election districts



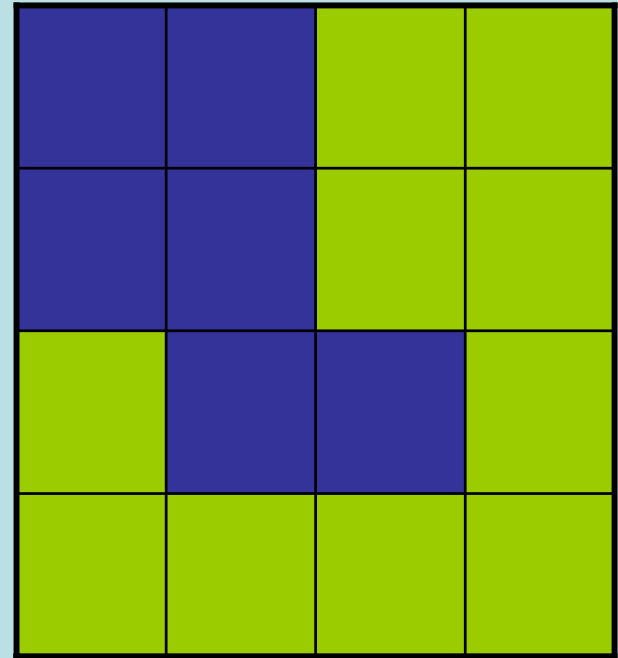
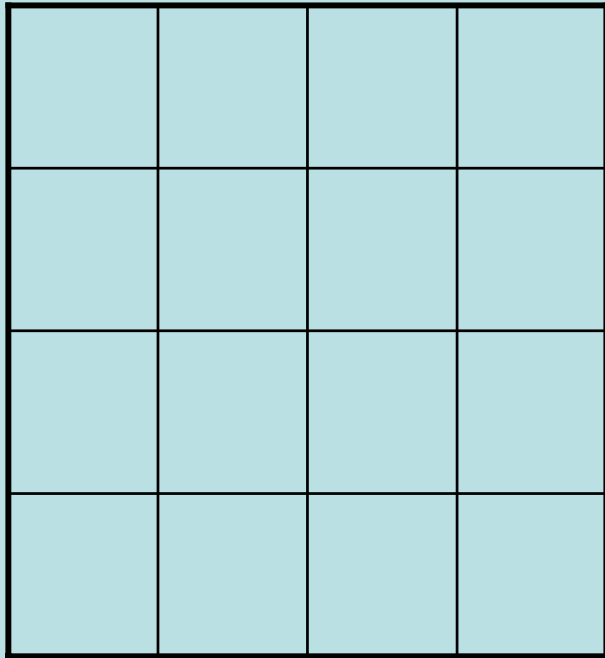
North Carolina 12th Congressional District, 1992 & 1998

# Redistricting: How?

- Districts are composed of *Census tracts and Census blocks*
- Census tracts = ~4300 people (National average)
- Census blocks = ~33 people (National average)

# Redistricting: How?

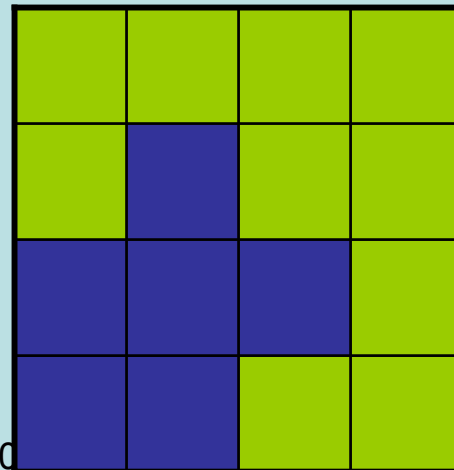
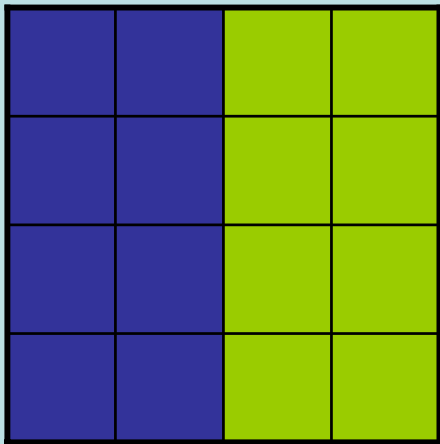
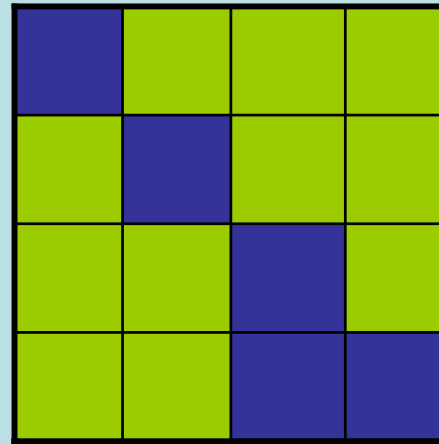
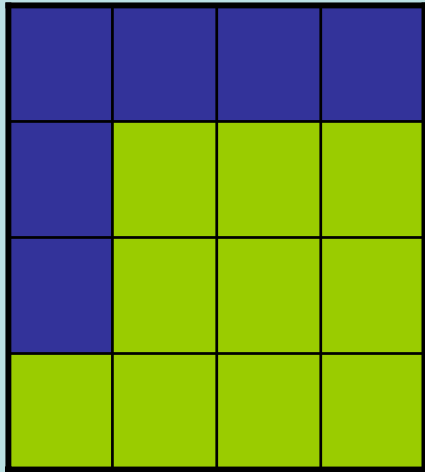
- Redistricting is like a jigsaw puzzle...



16 Census tracts →

2 Districts

...a jigsaw puzzle with many solutions



# Redistricting Houston: Group exercise

**Active learning:** Students create districting plans

**GIS:** ArcMap with Redistricting extension

**Data:** Census and political data

**Spatial thinking:**

- The *same voting* pattern produces *different* results
- *Different* political goals require *different* spatial boundaries



# Redistricting Houston

## Six groups

- 2 partisan
- 2 racial/ethnic
- 1 “anti-factional” (homogeneous)
- 1 incumbent protection

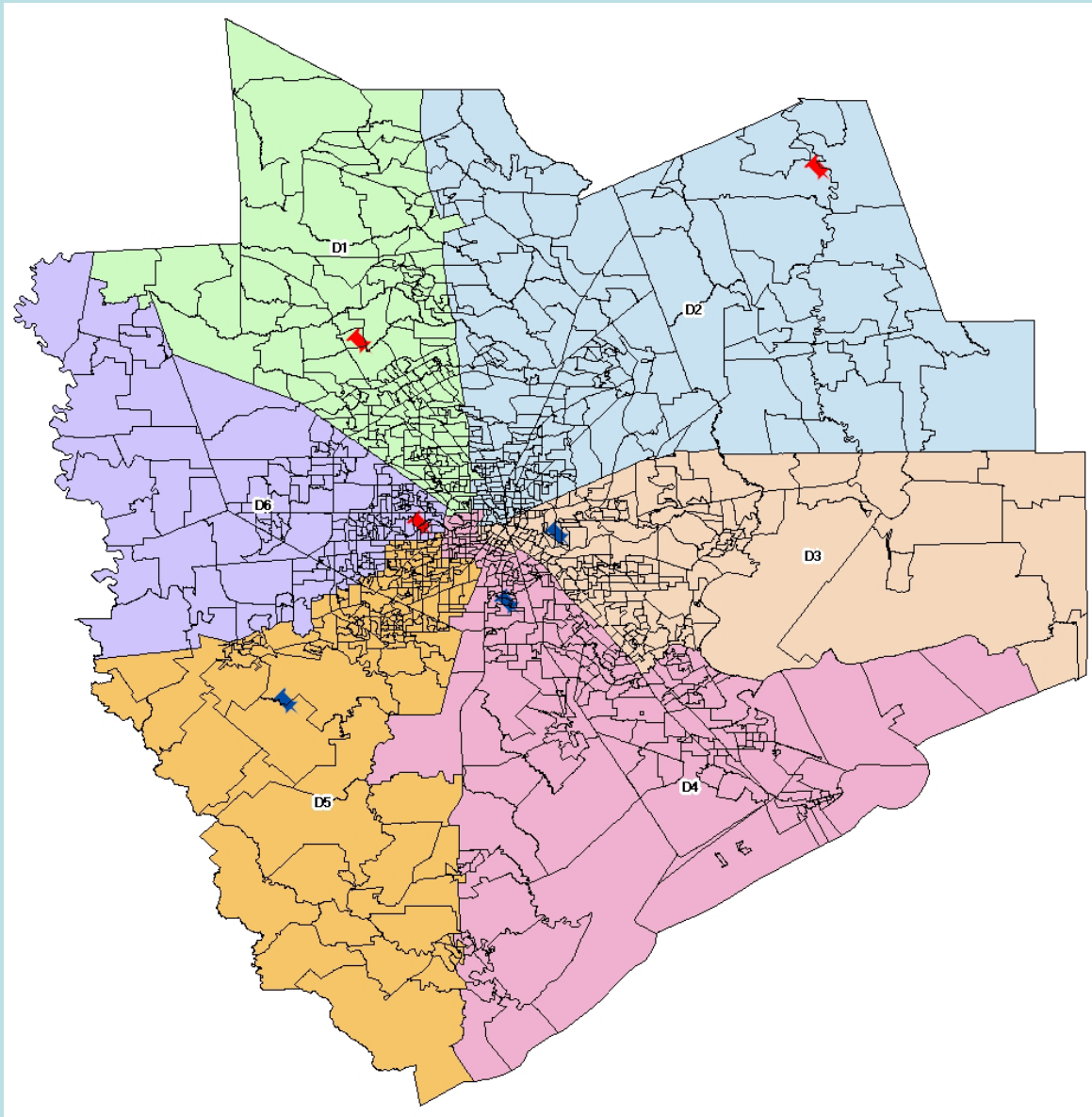
Create a plan with six new districts

# Redistricting Houston

## Goals:

- Population equality
- Voting Rights Act requirements
- Political objectives

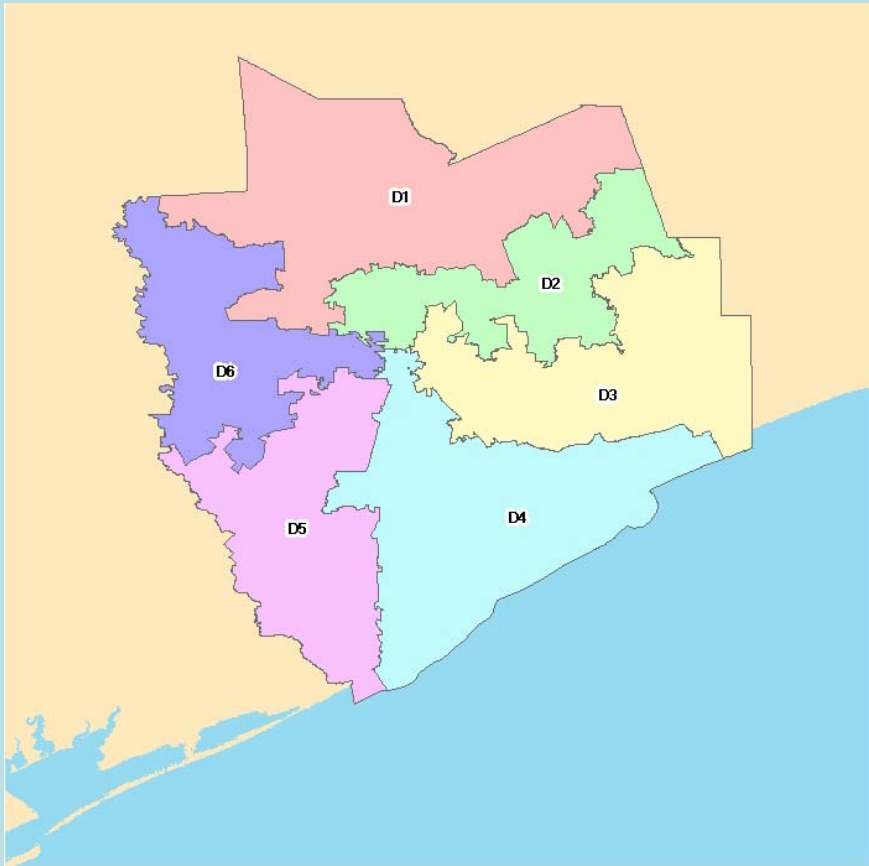
# Redistricting Houston



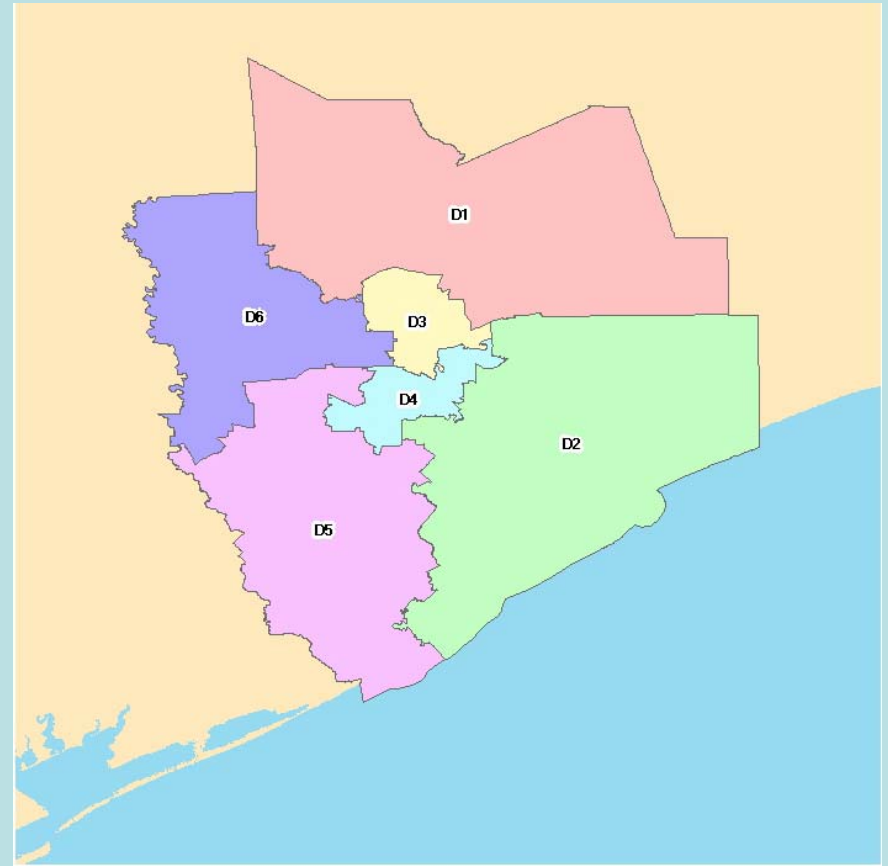
## Initial Districts

- 3 Republicans
- 3 Democrats
  
- 2 Anglo-majority
- 4 open to interpretation

# Redistricting Houston

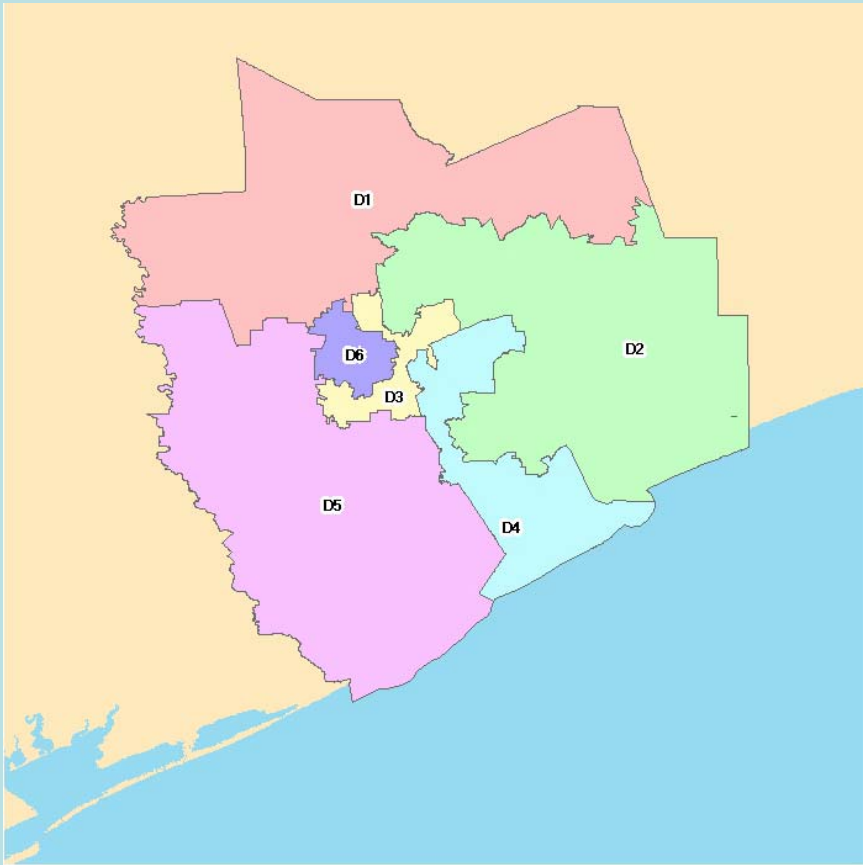


Democratic plan

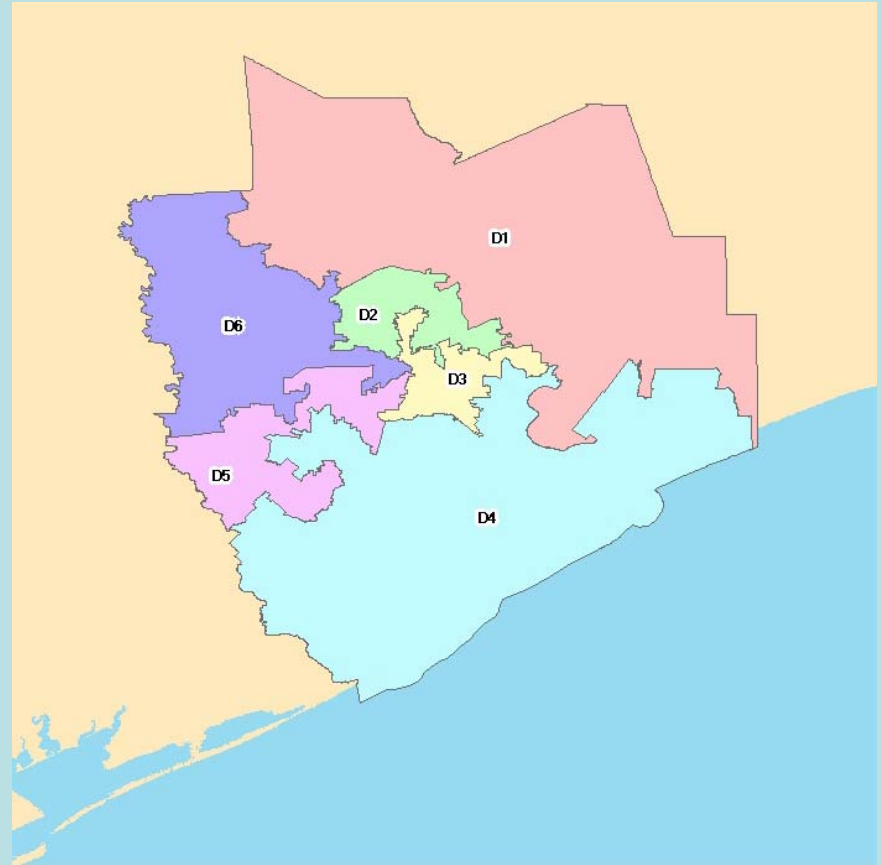


Republican plan

# Redistricting Houston

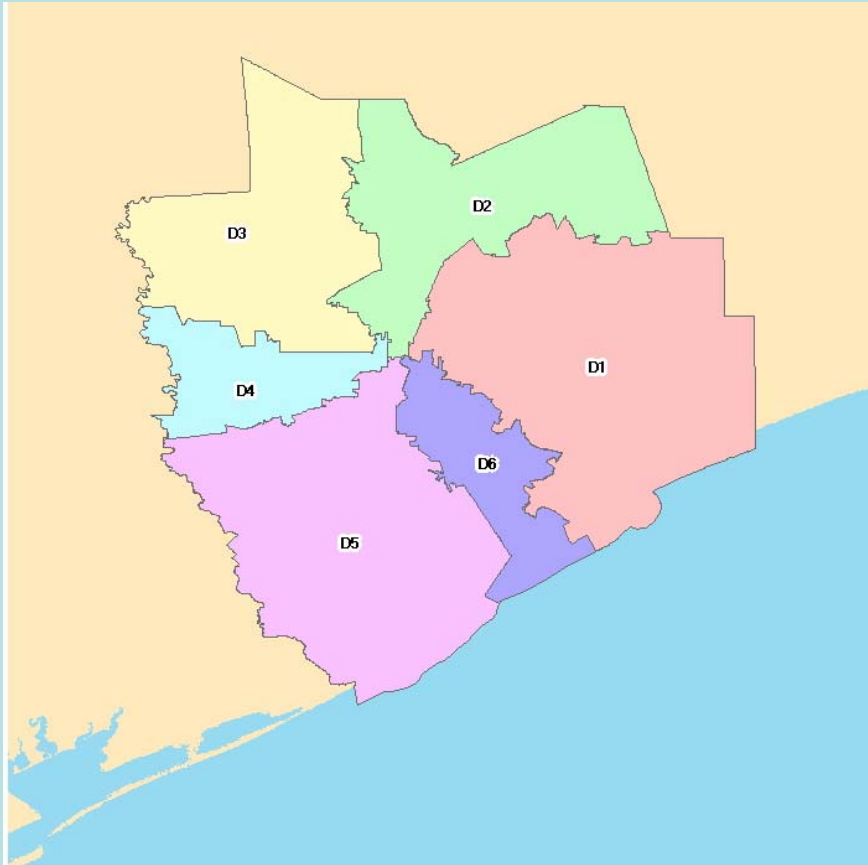


Latino plan

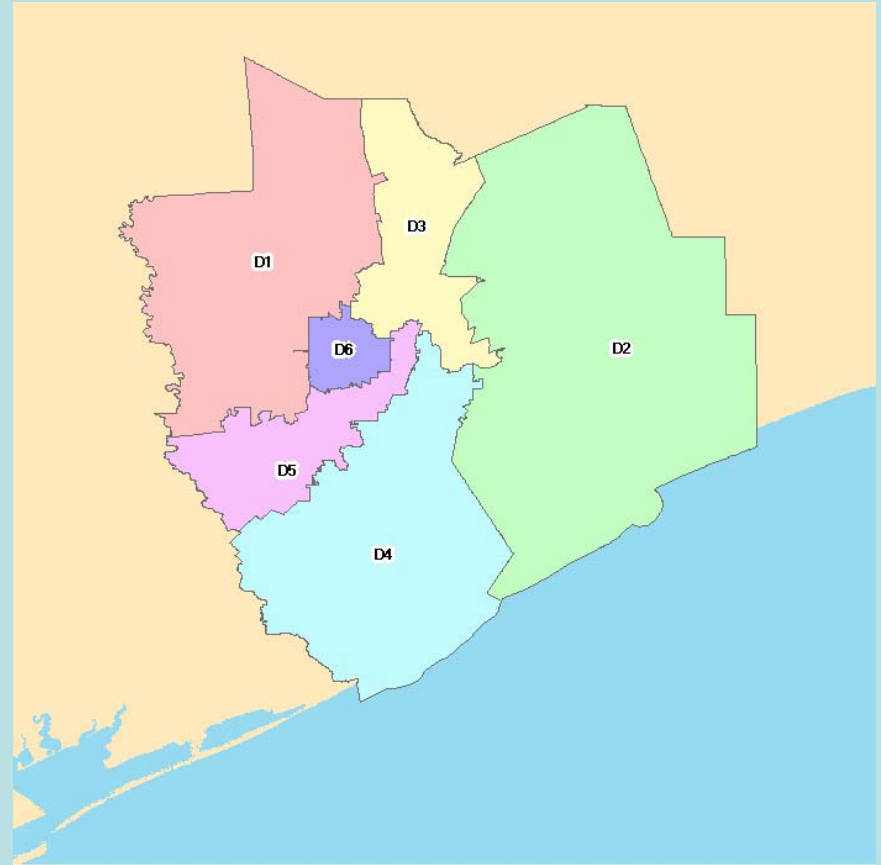


African American plan

# Redistricting Houston



“Anti-factional”  
(Homogeneous) plan



Incumbent protection  
plan\*

# Redistricting Houston

## Results:

- Flexibility and limits of gerrymandering
- Spatial relationships among party and ethnicity/race

New Project:

# Political Representation and Sovereignty in Quebec

- Adapt redistricting exercise to Quebec
- CSISS/SPACE Instructional  
Development Award



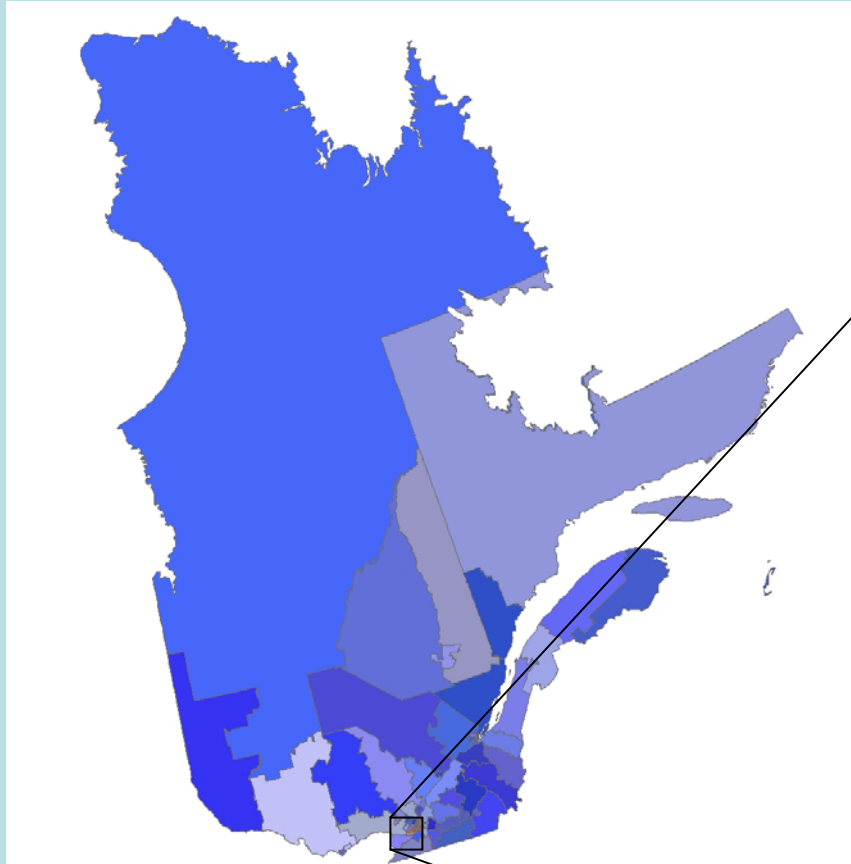


# New Project: Political Representation and Sovereignty in Quebec

- Linguistic, not racial/ethnic division
- Federalist vs. Sovereigntist
- Five major parties
- Up to 25% population deviation

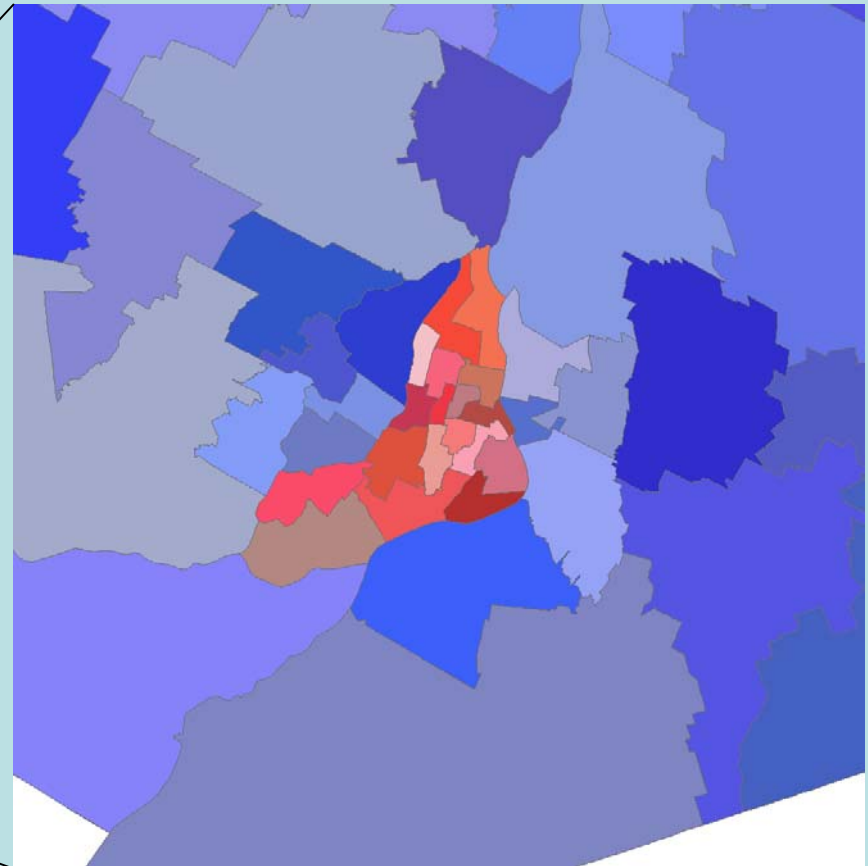


# Representation in Quebec



Quebec

Federal “ridings” (districts)



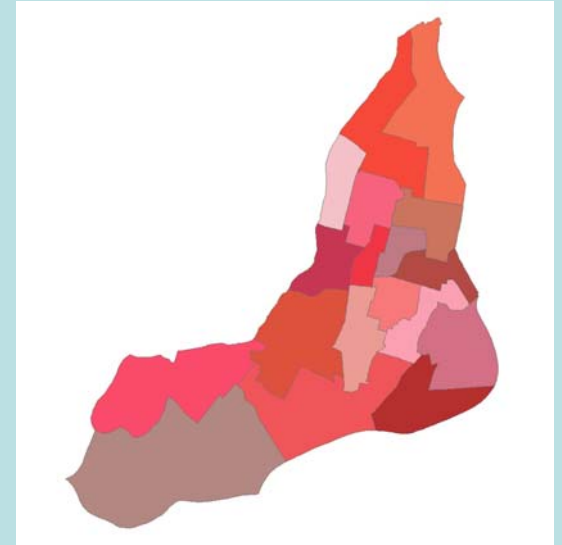
Montreal

# Representation in Quebec

## Part I

### Redistrict Montreal

- 1/3 Anglophone (English)
- 2/3 Francophone (French)



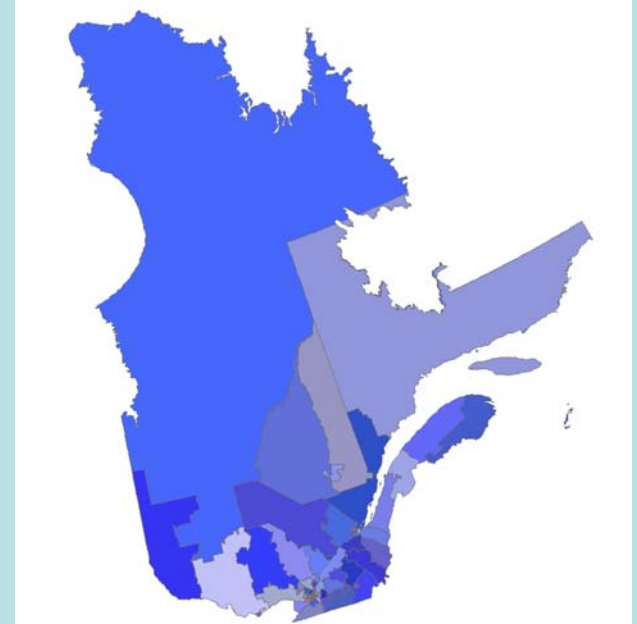
Develop *predictive* models

# Representation in Quebec

## Part II

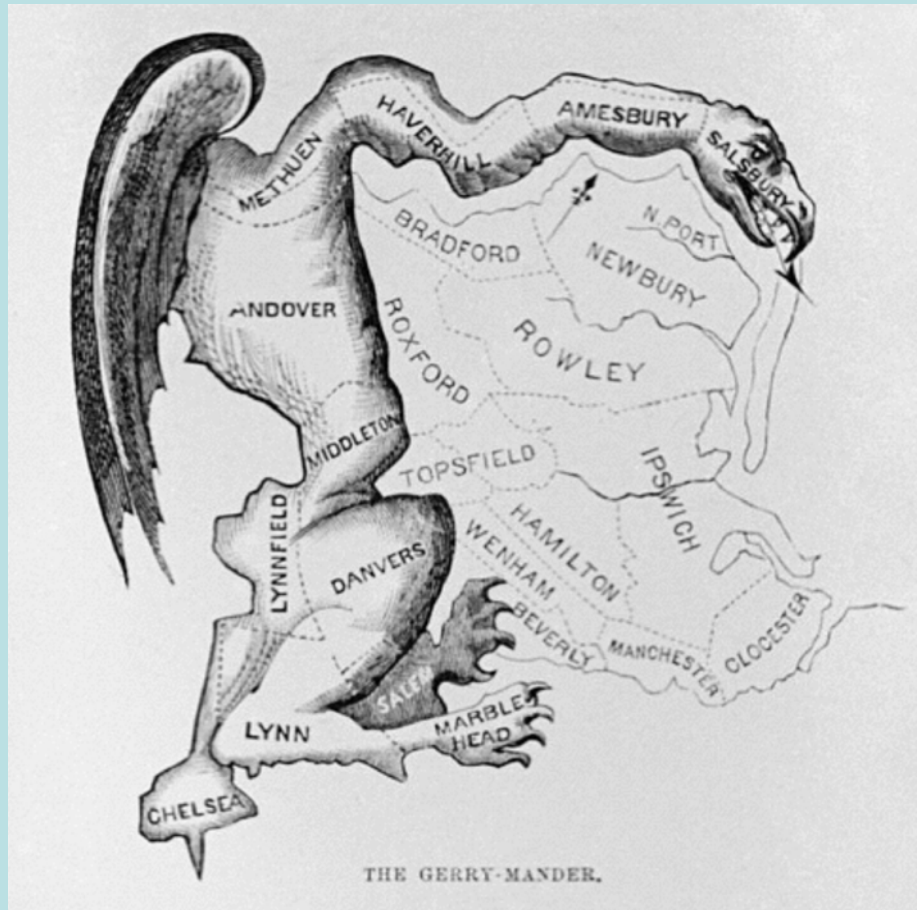
Quebec “national”  
boundaries?

- Separate Federalist  
from Sovereigntist voters



Evaluate different  
boundaries

# Thank you!



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