

## Statistics 4590: Florida Election Data

The 2000 U.S. presidential election was quite controversial, due to allegations of voting irregularities in Palm Beach County, FL. The allegations involved the claim that many people mistakenly cast ballots for Reform Party candidate Patrick Buchanan, when they intended to vote for Al Gore.

You will examine this issue statistically, by performing an appropriate regression analysis of Buchanan's vote over all 67 counties of Florida, using demographic variables and votes for other candidates as explanatory variables. These variables are described below.

In particular, your analysis should deal with, but not be limited to, the following issues:

1. Is any transformation of the data needed?
2. Should you use a multiple linear regression or a generalized linear model?
3. For the model you use, what can you say about the Palm Beach result? Is it an outlier?
4. Can you think of a way to predict the Palm Beach result from the rest of the data, and compare this to the observed Palm Beach result?

The data is on the course website, and can be read into R using the `read.table` command.

The dataset consists of the following variables:

co	County Number (1-67)
lat	Latitude (degrees north)
lon	Longitude (degrees west)
npop	Population (1997)
whit	Percentage of whites (1996)
blac	Percentage of blacks (1996)
hisp	Percentage of Hispanics (includes other races) (1996)
o65	Percentage of population over 65 years (actually this is the 1996 population of those age 65 and over, expressed as a percentage of the 1997 total population)
hsed	Percentage completing high school education (1990)
coll	Percentage completing college education (1990)
inco	Mean income per person (1994)
bush	Votes for Bush / Cheney (REP)
gore	Votes for Gore / Lieberman (DEM)
brow	Votes for Browne / Olivier (LIB)
nade	Votes for Nader / LaDuke (GRE)
harr	Votes for Harris / Trowe (SWP)
hage	Votes for Hagelin / Goldhaber (LAW)
buch	Votes for Buchanan / Foster (REF)
mcre	Votes for McReynolds / Hollis (SPF)
phil	Votes for Phillips / Frazier (CPF)
moor	Votes for Moorehead / La Riva (WVP)

In the list of counties, Palm Beach is **50**.