

Registered Voters in California

Data

Majority of Democrats, Majority of Republicans, Election Year

21, 37, "2004"

23, 35, "2008"

29, 29, "2000"

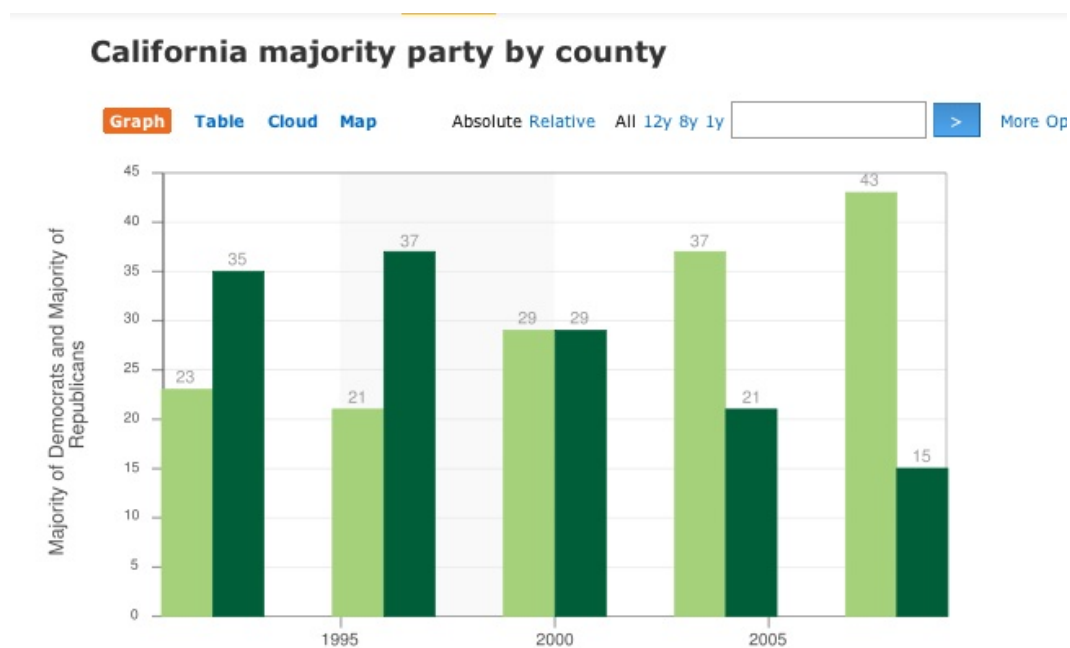
37, 21, "1996"

43, 15, "1992"

Sources: California Secretary of State

http://www.sos.ca.gov/elections/ror/60day-presprim/hist_reg_stats.pdf

Swivel barplot



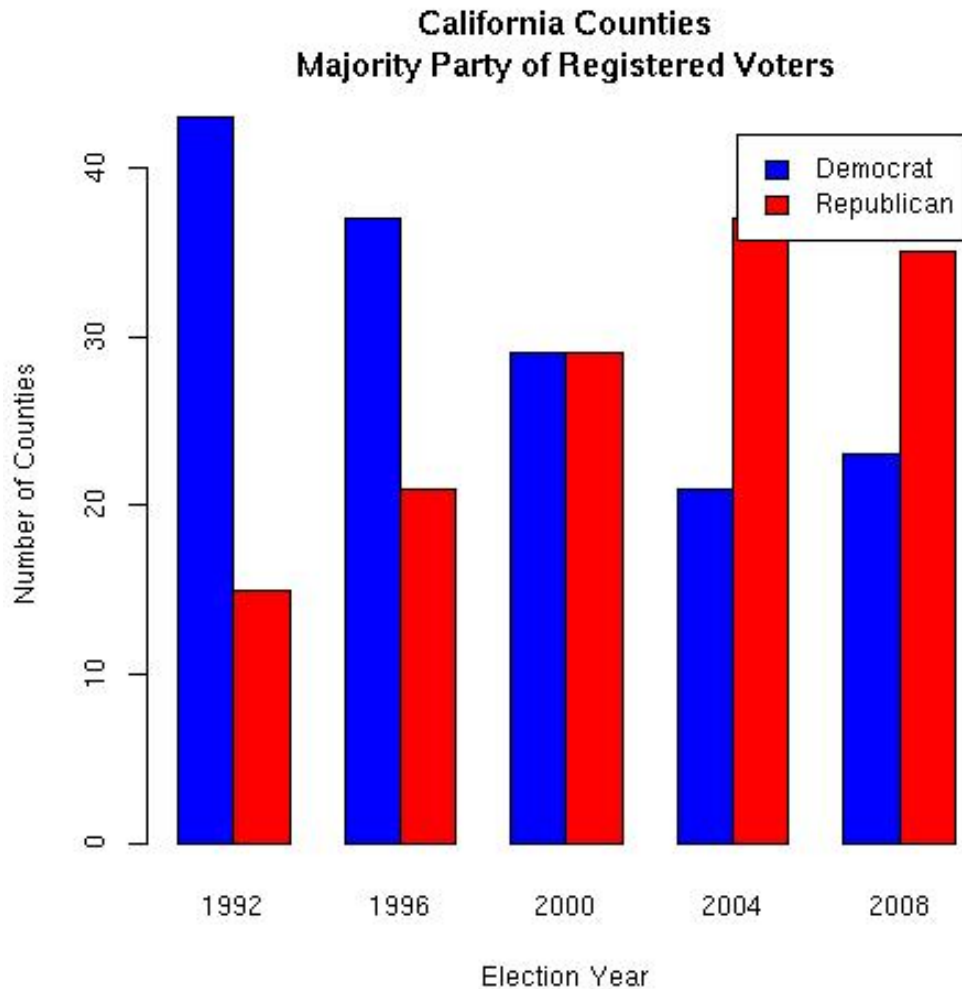
Critique of Basic plotting

- x-axis tick marks poorly located - should be located at election years
- y-axis label misleading - it is number of counties
- use of color could be improved with red/blue recognizable party colors
- data are turned around, i.e. figures for 1996 are really 2008 data

Message How has party registration changed over the past 5 presidential elections?

- More informative if we have registration figures as people vote not counties
- County size may be a lurking variable - small counties tend to be rural and conservative

First pass



```
vs = v[order(v[,3]),]           #reorder the rows by year
tranV = t(as.matrix(vs[,1:2])) #turn into a matrix and transpose
colnames(tranV) = vs[,3]       #add year as column name

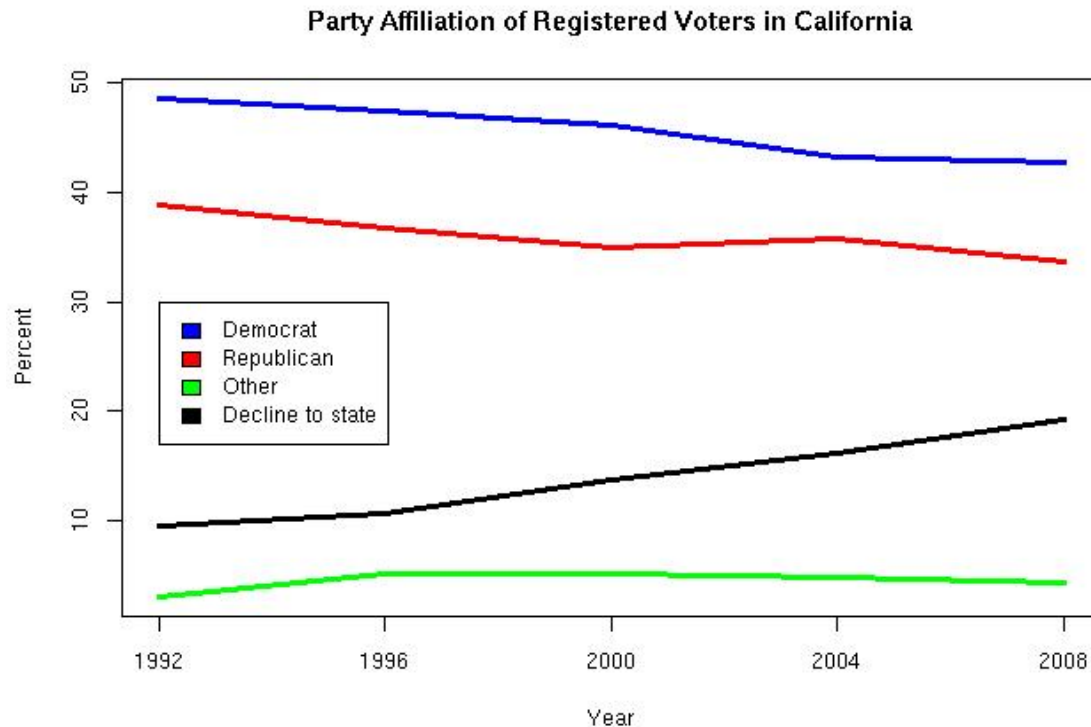
barplot(tranV, beside=TRUE,
        xlab = "Election Year", ylab = "Number of Counties",
        main = "California Counties\nMajority Party of Registered Voters",
        col=c("blue","red"),
        legend.text=c("Democrat","Republican"))
```

Add information Visiting the website we find the following data from same report. Notice that the Other registrations and the “Decline to State” registrations make up nearly 25% of the registrations in 2008. Leaving these party affiliations out of the plot distorts the picture.

```
year, eligible, registered, dem, rep, other, decline
1992, 20612814, 13217022, .485, .389, .031, .095
```

1996,	19298379,	14314658,	.474,	.368,	.052,	.106
2000,	21190865,	14676174,	.462,	.349,	.052,	.137
2004,	21843202,	14945031,	.432,	.357,	.049,	.162
2008,	22987562,	15468551,	.427,	.336,	.044,	.193

Alternative plot There are several possible plots that come to mind. Here is one.



Code to create this plot

```
# prep work for colors and labels
party = c(dem = "Democrat", rep = "Republican",
          other = "Other", decline = "Decline to state")
partyColor = c(dem = "blue", rep = "red",
               other = "green", decline = "black")

# There are many parameters that help you tailor the plot
matplot(voters$year, 100*voters[,4:7],
        type="l", lwd=3, xaxt = "n", lty=1,
        col= partyColor[names(voters)[4:7]],
        xlab="Year", ylab = "Percent",
        main = "Party Affiliation of Registered Voters in California")

# There are also additional functions to get at greater detail
axis(1, at=seq(1992,2008,4))
legend(1992, 30, legend=party,
      fill=partyColor[names(party)])
```