LOGIT MODEL ON 105th HOUSE

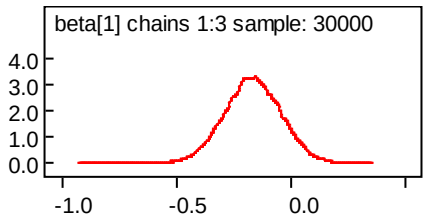
```
model
{
#
#  X[,1] = DW-NOMINATE 1st Dimension
#  X[,2] = DW-NOMINATE 2nd Dimension
#  X[,3] = 1 if Republican, 0 otherwise
#  X[,4] = 1 if South (CQ def.), 0 otherwise
#
#  PRIORS
#
         for (k in 1 : 3) { beta[k] ~ dnorm(0,0.001)} # vague priors
#
# LIKELIHOOD
#
    for (i in 1 : 434)  # loop over congressional districts
    {
#
         X[i,3] ~ dbern(p[i]);
         logit(p[i]) <- mu[i];
         mu[i] <- beta[1]+X[i,2]*beta[2]+X[i,4]*beta[3]
#
#  Borrowed From Simon Jackman
#
         llh[i] <- X[i,3]*log(p[i]) + (1-X[i,3])*log(1-p[i]);
    }
    sumllh <- sum(llh[]);
#
 }
```

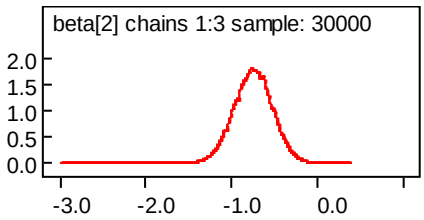
STATA OUTPUT

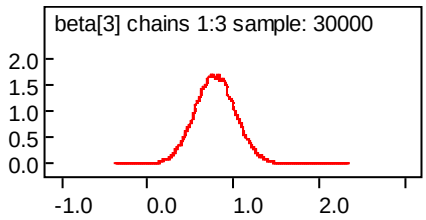
```
Logistic regression                               Number of obs   =        443
                                                  LR chi2(2)      =      16.47
                                                  Prob > chi2     =     0.0003
Log likelihood = -298.41929                       Pseudo R2       =     0.0269

------------------------------------------------------------------------------
    partydum |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
    southdum |   .7884097   .2349389     3.36   0.001      .327938    1.248881
          x2 |  -.7381223   .2196697    -3.36   0.001    -1.168667   -.3075776
       _cons |  -.1775675   .1220183    -1.46   0.146    -.4167189     .061584
------------------------------------------------------------------------------
```

	node	mean	sd	MC error	2.5%	median	97.5%	start	sample
	beta[1]	-0.1672	0.1233	0.001066	-0.4098	-0.1672	0.0715	1	30000
x2	beta[2]	-0.7537	0.2241	0.001697	-1.198	-0.7514	-0.3218	1	30000
south	beta[3]	0.7852	0.2363	0.002197	0.3288	0.7832	1.254	1	30000
	sumlh	-293.8	1.258	0.008034	-297.0	-293.5	-292.4	1	30000

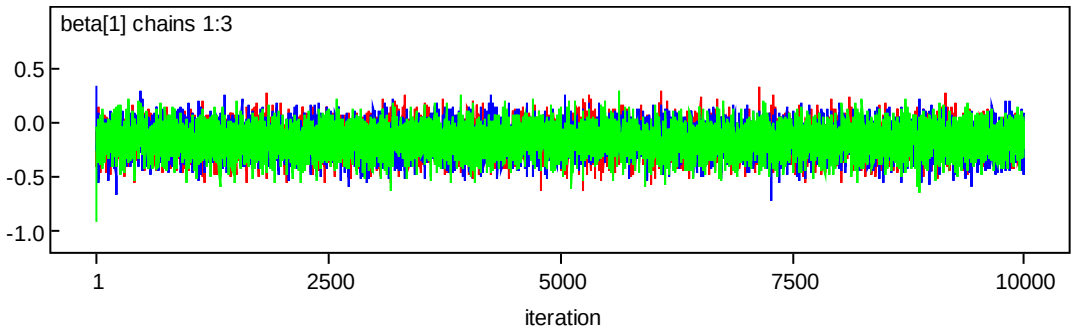
DENSITY PLOTS

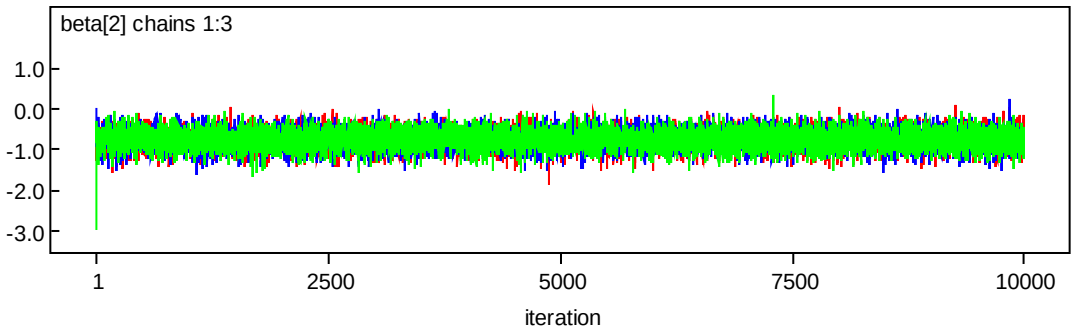


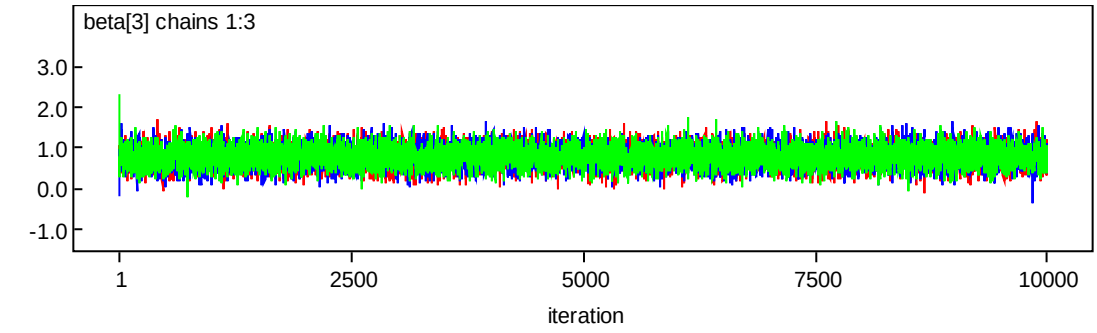


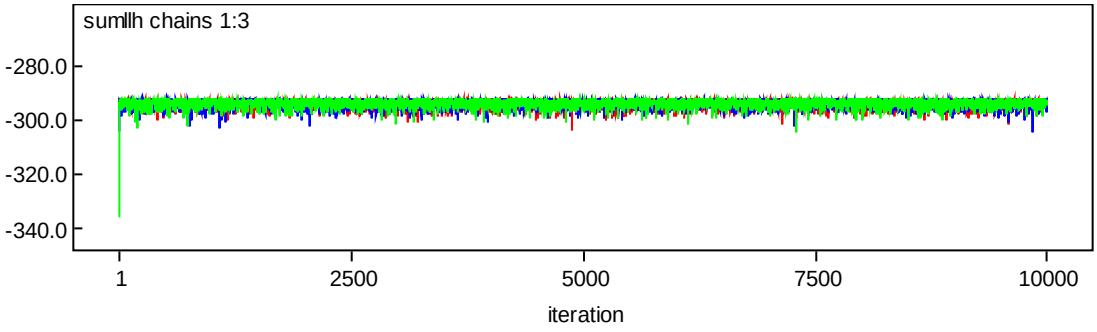


HISTORY PLOTS

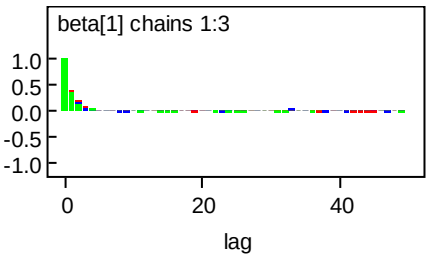


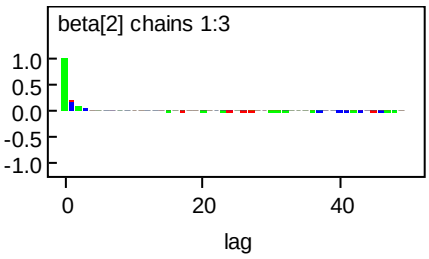


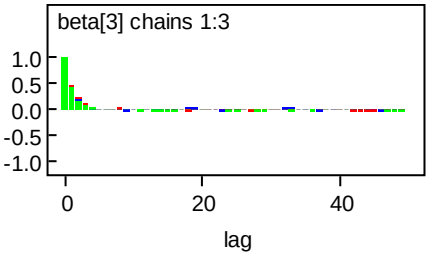




AUTOCORRELATION PLOTS







Gelman-Rubin Statistic