**Where are we?**

Thus far:

Logistic regression for cases where DV is 1/0.

PDF <-- bernoulli

MLE to estimate pi

**In the case of logit**

1. We cant use OLS

2. We use a link function

3. log(pi/1-pi) <-- log odds ratio

LOR = b0 + b1X1 + b2X2 + error

**This week:**

***Nominal Discrete Responses*** – DVs that have no real relationship with one another.

Example: Predicting fav. Color Red, white or Blue?

***Ordinal Response*** – DVs do have relationship. Variables can be ranked in some order that makes sense

Example: Likert Scale (5 or 7 point reponse). Customer ratings on uber, amazon etc.

Use MLE

* Similar issues wrt to statistical tests (wald SEs are not pefect)
* LRT
* anova/Anova

**Multinomial Logit: for nominal responses :** Ex Red, White and Blue

**Ordinal Logistic Regression:**

* Ordinal variable
* Likert Scale

**Carefully think about the model selection!**

**Question**

- In Germany there are 5 parties

- In general, people thnk that parties exist on a liberal to conservative scale.

- You have polling data in which respondents tell you their favorite party out of the 5

DV: 5 possible values

IV: age, income, race

What is the difference between using multinomial logistic regresssion and ordered logistic regression?

What assumptions are you making about the DV?

What assumptions are you making about the relationship between the IV and the DV?