**P507 In-Class Interaction Activity: Multiplicative Interaction Terms (Spring 2017)**

To complete this assignment, go to the class canvas page and download the dataset ‘violentdissent.csv’, which is saved in the in-class activities section under “Dummy Variables and Interaction Terms.” This dataset contains the following variables:

***ccode***: Numeric COW country code

***pop*:** Population in thousands

***rgdpch***: Real GDP/capita

***democracy:*** Behavioral measure of democracy including legislative competition/participation, competitiveness of executive recruitment and participation and others. This is a continuous measure. Higher numbers here mean greater levels of democracy.

***vdiss***: Violent dissent based on terrorist events and fatalities, as well as guerrilla wars and riots. This is a continuous measure bounded between 0 and 1 and gives the probability that the country is in a state of violent conict (as violent conflict is a latent variable).

***vdissdum:*** Binary violent dissent variable (dummy variable) based on the same data as vdiss.

***repression***: Violations of physical integrity rights. This is the result of a measurement model run on the CIRI data on torture, forced disappearances, extrajudicial killings and political imprisonment. This is also a continuous measure. Higher numbers here mean higher levels of repression.

***Assignment***

Some scholars suggest that the pacifying effect of democracy is conditional and works much better in peaceful countries than in countries in a state of violent conflict. You job is to evaluate this hypothesis in a couple of different ways.

1. Run a linear model with repression as the dependent variable and vdissum, democracy, rgdpch and the log of pop as the independent variables all additively related to repression.

2. Run a model similar to the one above, but add a multiplicative term between democracy and vdissum. Compare this to the previous model and discuss whether this new model with the multiplicative interaction term is “better" than the additive model and how you know.

3. Present the results of the second model graphically. You can do this using any of the tools we spoke about in class. Interpret the findings in terms of the hypothesis forwarded above - that the effect of democracy is greater in countries that are not experiencing violent conflict.