GVPT 722: Simpler example of interpreting and illustrating interactive effects — Does religious commitment have a greater impact on the political evaluations of evangelical Protestants than on those of non-evangelical Christians?

(1) Regression of feeling thermometer ratings of conservatives (recoded to range from 0 to 1 – *contherm01*) on a dummy variable for evangelicals (*evang2*), the religious commitment scale (*commit* – ranging from 0 to 1), and their interaction (*evancomm*) for Christian religious traditions only ("*if denom2<5*" means that regression is only for evangelical Protestants, mainline Protestants, black Protestants, and Catholics. Controls are included for region of residence (dummy variable for southerners (*south*)), gender (dummy variable for women (*female*)), race (dummy variable for whites (*white*)), education level (*educ*), income level (*income01*), and feeling thermometer ratings of liberals (recoded to range from 0 to 1 – *libtherm01*).

```
. reg contherm01 evang2 commit evancomm south female white educ income01 libtherm01 if
denom2<5

      Source |       SS       df       MS              Number of obs =     614
-------------+------------------------------           F(  9,   604) =    8.28
       Model |   2.4777554     9  .275306156           Prob > F      =  0.0000
    Residual |  20.0712139   604  .033230487           R-squared     =  0.1099
-------------+------------------------------           Adj R-squared =  0.0966
       Total |  22.5489693   613  .036784615           Root MSE      =  .18229

------------------------------------------------------------------------------
  contherm01 |      Coef.   Std. Err.      t    P>|t|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
      evang2 |  -.1011775   .0525055    -1.93   0.054     -.204293    .0019381
      commit |   .0976955   .0374927     2.61   0.009     .0240637    .1713273
    evancomm |   .1926198   .0735004     2.62   0.009     .0482724    .3369671
       south |   .0324863    .015805     2.06   0.040     .0014469    .0635258
      female |  -.0117823   .0154475    -0.76   0.446    -.0421197     .018555
       white |   .0274139   .0181524     1.51   0.132    -.0082356    .0630633
        educ |   -.011768   .0308271    -0.38   0.703    -.0723093    .0487733
    income01 |   .0708926   .0313034     2.26   0.024     .0094159    .1323693
  libtherm01 |  -.1252726   .0388444    -3.22   0.001     -.201559   -.0489861
       _cons |   .5619846    .043144    13.03   0.000     .4772541     .646715
------------------------------------------------------------------------------
```

(2) Predicting the effect of religious commitment on ratings of conservatives for non-evangelicals and for evangelicals (holding the evangelical dummy at either 0 or 1, allowing commitment to vary across its full range, and holding the control variables constant at their means):

```
. summ south female white educ income01 libtherm01

    Variable |       Obs        Mean    Std. Dev.       Min        Max
-------------+--------------------------------------------------------
       south |      1212    .3440594    .4752567          0          1
      female |      1212    .5330033    .4991155          0          1
       white |      1212    .7227723    .4478147          0          1
        educ |      1211    .5510597    .2680294          0          1
    income01 |      1070    .6338573    .2727689          0          1
-------------+--------------------------------------------------------
  libtherm01 |      1014    .5540237    .2070523          0          1

. gen nonevanslope=_b[_cons]+(_b[evang2]*0)+(_b[commit]*commit)+(_b[evancomm]*0*commit)
+(_b[south]*.34)+(_b[female]*.53)+(_b[white ]*.72)+(_b[educ]*.55)+(_b[income01]*.63)+
(_b[libtherm01]*.55)
(30 missing values generated)

. gen evanslope=_b[_cons]+(_b[evang2]*1)+(_b[commit]*commit)+(_b[evancomm]*1*commit)
+(_b[south]*.34)+(_b[female]*.53)+(_b[white]*. 72)+(_b[educ]*.55)+(_b[income01]*.63)+
(_b[libtherm01]*.55)
(30 missing values generated)
```

(3) Graph of the effect of religious commitment on ratings of conservatives for evangelicals and non-evangelical Christians

```
. twoway (connected nonevanslope commit, sort msymbol(none) clcolor(black) clpat(dash))
(connected evanslope commit, sort msymbol(none) clcolor(black) clpat(solid)),
ytitle(Predicted Ratings of Conservatives, margin(medsmall)) ylabel(0(.2)1)
xtitle(Religious  Commitment, margin(medsmall)) xlabel(0(.2)1) title(The Impact of
Religious Commitment on Ratings of Conservatives, size(medium)) subtitle(for
Evangelical and Non-Evangelical Christians, size(medium)) legend(order(1
"Non-Evangelicals" 2 "Evangelicals"))
```