Ideology, Motivated Reasoning & Cognitive Reflection

Data Guide

1. Introduction

This document is in the nature of a guide for those interested in making use of the data reported and analyzed in "Ideology, Motivated Reasoning, and Cognitive Reflection" *Judgment and Decisionmaking* , vol. 8 (2013).

There are two data files on the JDM site. The first is CRIMR.csv, which contains the "raw data" along with coded variables that were created from them to perform the analyses reported in the paper.

The second is CRIMRIMP.csv. This data file contains the raw data & coded variables contained in CRIMR.csv *plus* missing values generated via multiple imputation. There are effectively six separate data sets in CRIMRIMP.csv: the original data set (including missing values); and five "imputed data sets," in which missing values have been separately imputed (see generally Rubin 2004). The multiply imputed data were generated with the MICE/ice module in Stata (Royston 2004; Royston & White 2011).

The variables are identified in a "codebook," which comprises part 2 of this guide.

Part 3 discusses data analysis. The part includes annotated ".do" scripts, which enable analysis of the data (both those with missing values and the multiply imputed data) in Stata. But it also identifies and describes the nature of the analyses performed so that they could be replicated or refined by someone using an alternative statistics package.

2. Variables

The following variables appear in CRIMR.csv and CRIMRIMP.csv (with the exception of three variables that appear only in CRIMRIMP.csv).

Variable	description	wording	response measure
caseid	Subject identifier		1-1750
CRT_treat	experimental condition		1=control 2=skeptic biased ("skeptic is biased") 3= nonskeptic biased ("believer is bised")
batball		A bat and a ball cost $1.10 in total. The bat costs $1.00 more than the ball. How much does the ball cost?	Open ended
widgets		If it takes 5 machines 5 minutes to make 5 widgets, how long would it take 100 machines to make 100 widgets?	Open ended
lillypad		In a lake, there is a patch of lilypads. Every day, the patch doubles in size. If it takes 48 days for the patch to cover the entire lake, how long would it take for the patch to cover half of the lake?	Open ended
crtbias1	Subject assessment of validity of CRT as measure of reflection and open-mindedness in control condition		1-6 (strongly disagree . . . strongly agree)
crtbias2	Subject assessment of validity of CRT as measure of reflection and open-mindedness in "skeptic is biased" condition		1-6 (strongly disagree . . . strongly agree)
crtbias3	Subject assessment of validity of CRT as measure of reflection and open-mindedness in "believer is biased" condition		1-6 (strongly disagree . . . strongly agree)
gender	Subject gender		1 = male 2 = female
male	Subject gender		0 = female 1 = male
pid7	7-point party id	Would you call yourself a strong Democrat or a not	1= Strong Democrat 2 =Not very strong

		very strong Democrat?*	Democrat 3= [Independent] Lean Democrat 4 = Independent 5 = [Independent] Lean Republican 6= Not very strong Republican 7= Strong Republican
pid3	3-point party id	Generally speaking, do you usually think of yourself as a Republican, a Democrat, or an Independent?	1= Democrat 2 = Republican 3 = Independent 4 = Other 5 = Not sure
race	race		1 = White 2 = Black 3 = Hispanic 4 = Asian 5 = Native American 6 = Mixed 7 = Other 8 = Middle Eastern
educ	Educational attainment		1 = No HS 2 = High school grad 3 = Some college 4 = 2-yr college degree 5 = 4-yr college degree 6 = Post graduate/professional degree
pew_religimp	Religious importance	How important is religion in your life?	1 = very important 2 = somewhat important 3 = Not too important 4 = Not at all important
pew_churatd	Church attendance	Aside from weddings and funerals, how often do you attend religious services…	1 = More than once a week 2 = once a week 3 = once or twice a month, 4= a few times a year 5 = seldom 6= or never
pew_prayer	Frequency of prayer	Outside of attending religious services, do you pray . . .	1 =several times a day 2 = once a day 3 = a few times a week 4 = once a week 5 = a few times a month 6= seldom 7= or never?
ideo5	Liberal-conservative ideology	How would you describe your political views?	1 = very liberal 2 = liberal 3 = moderate 4 = conservative 5 = very conservative
income	Family household income	Which category best describes your total household income?	1 = Less than $10,000 2 = $10,000 - $19,999 3 = $20,000 - $29,999

			4 = $30,000 - $39,999 5 = $40,000 - $49,999 6 = $50,000 - $59,999 7 = $60,000 - $69,999 8 = $70,000 - $79,999 9 = $80,000 - $99,999 10 = $100,000 - $119,999 11 = $120,000 - $149,999 12 = $150,000 - $199,999 13 = $200,000 - $249,999 14 = $250,000 - $349,999 15 = $350,000 - $499,999 16 = $500,000 or more
dem_repub	Recoded party self-identification		1-7 toward identification with Republican Party
white	Recoded race		0 = minority 1 = white
Zpew_churatd	z-score church attendance		
Zpew_prayer	z-score prayer		
Zpew_religimp	z-score religious importance		
religiosity	Summed Likert scale based on previous 3 religion items		
Zreligiosity	z-score of composite religiosity Likert scale		Valenced toward higher religiosity
batball_correct	Correct answer batball		0 = incorrect 1 = correct
widgets_correct	Correct answer widgets		0 = incorrect 1 = correct
lillypad_correct	Correct answer lilypad		0 = incorrect 1 = correct
crtscore	CRT score		0-3 (sum of correct responses)
crt_valid	Subject assessment of validity of CRT as measure of reflection and open-mindedness		1-6 (strongly disagree . . . strongly agree)
zcrt	zscore of crtscore		
libcon	Recoded ideo5		1-5, toward conservativism
Conserv_Repub	Standardized composite Likert item centered at semantically "neutral" political orientation (equivalent to "Moderate," non-leaning "Independent" on ideo5 & pid7)		Valenced toward "conservative Republican"
control	Assignment to "skeptic is biased" condition		0 = unassigned 1 = assigned
skeptic_biased	Assignment to "skeptic is biased" condition		0 = unassigned 1 = assigned

believer_biased	Assignment to "believ-er is biased" condition		0 = unassigned 1 = assigned
Conserv_Repub_x_believer	cross-product interac-tion		
Conserv_Repub_x_skeptic	cross-product interac-tion		
Conserv_Repub_x_crt	cross-product interac-tion, Conserv_Repub & crt		
crt_x_skeptic	cross-product interac-tion, crt & skeptic is biased		
crt_x_believer	cross-product interac-tion, crt & believer is biased		
Conserv_Repub_x_crt_x_skep	cross-product interac-tion		
Conserv_Repub_x_crt_x_believer	cross-product interac-tion		
Conserv_Repub_x_zcrt	cross-product interac-tion, Conserv_Repub & zcrt		
zcrt_x_skeptic	cross-product interac-tion, zcrt & skeptic is biased		
zcrt_x_believer	cross-product interac-tion, zcrt & believer is biased		
Conserv_Repub_x_zcrt_x_skep	cross-product interac-tion		
Conserv_Repub_x_zcrt_x_believer	cross-product interac-tion		
_mj	Data set number (im-puted dataset only)		0 = original dataset 1 = imputed dataset 1 2 = imputed dataset2 3= imputed dataset3 4= imputed dataset4 5= imputed dataset5 6= imputed dataset6
_j	Data set number. Enables operation of Clarify Monte Carlo simulation package, which anticipates "_j" rather than "_mj" (im-puted dataset only)		0 = original dataset 1 = imputed dataset 1 2 = imputed dataset2 3= imputed dataset3 4= imputed dataset4 5= imputed dataset5 6= imputed dataset6
_mi	Observation number		Same as caseid

3. Analyses

3.1. Generally

The paper reports various summary statistics (including zero-order correlations and group means). These statistics were computed using the unimputed data only (CRIMR.csv).

Figure 2 reports a graphic summary of the experiment results. The plotted lines were derived by locally weighted regression "smoothing": CRT_valid was regressed against Conserv_Repub separately in each condition, first for all the subjects (Panel *A*); then for subjects scoring 0 on the CRT (Panel *B*); then for subjects scoring 1 on the CRT (Panel *C*); and then for subjects scoring >1 (i.e., 2 or 3).

Table 2 fits ordered logistic regression models to subject CRT scores. In the first model, Conserv_Repub alone is treated as the predictor. In the second, additional demographic predictors are also included. These analyses were performed with the multiply imputed data (CRIMIMP.csv).

Table 3 fits ordered logistic regression models to CRT_valid, the outcome variable for the experimental component of the study. Model 1 includes predictors for the subjects' political outlooks, the experimental condition, and appropriate cross-product interactions. Model 2 then adds subjects' CRT scores, and cross-product interactions necessary to estimate the impact of subjects' political outlooks on CRT_valid conditional on CRT score and experimental condition. These analyses, too, were performed with the multiply imputed data (CRIMIMP.csv).

The paper also reports predicted probabilities derived via Monte Carlo simulation. The simulation was based on Model 2 in Table 3. The Clarify module in Stata was used for this purpose (King, Tomz & Wittenberg 2000).

Consistent with Monte Carlo methods in this setting, Clarify uses a stochastic algorithm to generate a user-specified number of "simulated" values for the regression model parameters. The algorithm adds to each such parameter estimate some random sum the value of which is determined probabilistically in relation to that model parameter's standard error. This is conceptually equivalent to selecting a value for that parameter estimate from the multivariate normal distribution of values associated with the regression estimate of that parameter.

Typically, 1,000 such values, a number expected to saturate the entire range of values in each parameter's probability distribution, are generated. The 1,000 sets of simulated parameters can then be used to form 1,000 versions of the regression model, each of which can be used in turn to compute 1,000 separate versions of the predicted probability (or mean expected value) of the model outcome measure conditional on specified values for the model predictors. The mean of those 1,000 values can be treated as the predicted outcome, and the values corresponding to the 92.5 and 97.5 percentiles used to characterize the 0.95 confidence interval, associated with the indicated predictor values.

Monte Carlo simulation of this type is an alternative to analytical computation of the point estimate and standard error for the predicted probability (or expected value) of the outcome variable at specified values of the predictor. There is little reason to expect the results derived by one of these methods to differ materially from the other. However, in the case of a logistic regression model, the case for use of Monte Carlo simulation is that there is no determinate analytical solution to deriving the predicted probability at a given level of the predictors, and each of the approximations used for analytical computation are open to theoretical objection and also computationally intricate and thus prone to error. In addition, the distribution of simulated values often enable more effective graphic reporting of the practical signific-

ance of regression model analyses than do methods that involve analytical computation (King, Tomz, Wittenberg 2000; Gelman & Hill 2007).

In the paper, Monte Carol simulation was used to derive the predicted probabilities that a "low-" and "high-CRT-scoring" "Conservative Republican" and a low-" and "high-CRT-scoring" "Liberal Democrat" would "agree" that the CRT was "valid" in each of the three experimental conditions. For this propose, the value for Conserv_Repub were set at the level a subject would have scored had she selected either *"liberal" and "Democrat"* or *"conservative" and "Republican"* on the 5-point liberal-conservative ideology and 7-point partisan self-identification items, respectively. For "low CRT," the value assigned to the CRT predictor was 0 correct, a score that would place those individuals in the bottom 60% within the sample. For "high CRT," the predictor was set at 2 correct.

The predicted probability for selecting *each* of the six response to CRT_valid was determined for each of the indicated sets of predictor values ("low CRT Conservative Republican," "low CRT Liberal Democrat," "high CRT Conservative Republican," and "High CRT Liberal Democrat"). The predicted values associated with 4, 5, or 6—"slightly," "moderately," and "strongly" agree—were then summed, generating for each set of predictors 1,000 values representing the probability of selecting a value greater than 3 on CRT_valid. The point estimates reflected in Figure 2 of the paper are the means of those simulated predicted probabilities; the confidence intervals are the values corresponding to the 92.5 and 97.5 percentiles for each.

3.2. ".do" codes

Below are two sets of annotated ".do" file scripts that can be used to reproduce the analyses performed in reporting the study results. It is anticipated that some users will either be uninterested in using the multiply imputed data to perform such analyses, or will be interested in performing them with an application other than Stata. Accordingly, the first set contains analysis codes intended to be used on the unimputed data; in these analyses, missing observations are excluded via listwise deletion. The second set of analyses use codes designed to analyze the multiply imputed datasets.

Note that the datafile suffixes are ".dat" rather than ".csv," consistent with the expectation that the user will be analyzing the data in Stata.

a. Unimputed data coding scripts

```
*** A. Observational component of study ****


 *** 1.  ordered logistic regression models, Table 1  ***

            ologit crtscore Conserv_Repub
            est store m1
            ologit crtscore Conserv_Repub male white educ income religiosity
            est store m2
            lrtest m1 m2, force

 *** 2. analysis of CRT score for components of Conserv_Repub ***

    *** zero-order correlations ***

          spearman  crtscore libcon dem_repub , stats (rho p)

      *** compute & compare means for liberals & conservs ***

          recode ideo5 (1 2 =1) (4  5 =0) (3 6 = .), gen (lib)
          recode  ideo5 (1 2  =0) (4 5 =1) (3 6 = .), gen (con)
```

```
        gen lib_con=1 if lib==0
        replace lib_con=0 if lib==1
        regress crtscore lib_con

    *** compute & compare means for partisans, excluding all independents ***

        recode pid3 (1=1) (2 3 =0) (4 5 = .), gen (demo)
        recode pid3 (2=1) (1 3 =0) (4 5 = .), gen (repub)
        recode pid3 (3=1) (1 2=0) (4 5 = .), gen (indie)

        regress crtscore demo repub
        lincom repub+_cons
        lincom demo+_cons
        lincom repub-demo

    *** compute & compare means for partisans, including "leaning" ///
    independents ***

        recode dem_repub (1 2 3 =1) (4 5 6 7 = 0), gen (demplus)
        recode dem_repub (1 2 3 4  =0) (5 6 7 = 1), gen (repubplus)
        recode dem_repub (4=1) (1 2 3 5 6 7 = 0), gen (indminus)
        regress crtscore demplus repubplus
        lincom demplus + _cons
        lincom repubplus + _cons
        lincom demplus-repubplus

*** B. Experimental component of study


   *** 1. Graphical Summary, Figure 1 ****

      *** full sample ***

          graph twoway (lpoly crt_valid Conserv_Repub if   CRT_treat==1, ///
          xlabel(-1.5(.5)1.5) graphregion( color(white)) ///
          ylabel(1/6, nogrid angle(horizontal)) ymtick(1) lwidth (thick)  ///
          bw(0.8) color (gs9)  legend(label (1 "control"))) ///
          (lpoly crt_valid Conserv_Repub if   CRT_treat==2,   ///
          lwidth (thick)  bw(0.8) color (blue) legend(off)) ///
          (lpoly crt_valid Conserv_Repub if   CRT_treat==3, ///
          lwidth (thick)  bw(0.8) color (black) legend(off))

      *** CRT = 0 ***

          graph twoway (lpoly crt_valid Conserv_Repub if crtscore==0 & ///
           CRT_treat==1, xlabel(-1.5(.5)1.5) graphregion( color(white)) ///
          ylabel(1/6, nogrid angle(horizontal)) ymtick(1) lwidth (thick)  ///
          bw(0.8) color (gs9)  legend(label (1 "control"))) ///
          (lpoly crt_valid Conserv_Repub if crtscore==0 &  CRT_treat==2,   ///
          lwidth (thick)  bw(0.8) color (blue) legend(off)) ///
          (lpoly crt_valid Conserv_Repub if crtscore==0 &  CRT_treat==3, ///
          lwidth (thick)  bw(0.8) color (black) legend(off))


      *** CRT = 1 ***


          graph twoway (lpoly crt_valid Conserv_Repub if crtscore==1 & ///
           CRT_treat==1, xlabel(-1.5(.5)1.5) graphregion( color(white)) ///
          ylabel(1/6, nogrid angle(horizontal)) ymtick(1) lwidth (thick)  ///
          bw(0.8) color (gs9)  legend(label (1 "control"))) ///
          (lpoly crt_valid Conserv_Repub if crtscore==1 &  CRT_treat==2,   ///
          lwidth (thick)  bw(0.8) color (blue) legend(off)) ///
```

```
        (lpoly crt_valid Conserv_Repub if crtscore==1 &  CRT_treat==3, ///
        lwidth (thick)  bw(0.8) color (black) legend(off))

    *** CRT > 1 ***

        graph twoway (lpoly crt_valid Conserv_Repub if crtscore>1 & ///
         CRT_treat==1, xlabel(-1.5(.5)1.5) graphregion( color(white)) ///
        ylabel(1/6, nogrid angle(horizontal)) ymtick(1) lwidth (thick)  ///
        bw(0.8) color (gs9)  legend(label (1 "control"))) ///
        (lpoly crt_valid Conserv_Repub if crtscore>1 &  CRT_treat==2,   ///
        lwidth (thick)  bw(0.8) color (blue) legend(off)) ///
        (lpoly crt_valid Conserv_Repub if crtscore>1 &  CRT_treat==3, ///
        lwidth (thick)  bw(0.8) color (black) legend(off))

***2. Logistic regression models, Table 2****

        ologit crt_valid Conserv_Repub skeptic_biased believer_biased ///
        Conserv_Repub_x_skeptic Conserv_Repub_x_believer
        est store m1

        ologit crt_valid Conserv_Repub skeptic_biased believer_biased ///
        Conserv_Repub_x_skeptic ///
        Conserv_Repub_x_believer zcrt ///
        Conserv_Repub_x_zcrt zcrt_x_skep zcrt_x_believer  ///
        Conserv_Repub_x_zcrt_x_skep Conserv_Repub_x_zcrt_x_believer
        est store m2
        lrtest m1 m2, force


***3. Monte carlo simulation, Figure 2****

   /* The simulation generates the predicted probabilities plotted in Figure
   2 in the paper. Each predicted probability takes the form of a variable,
   for which there are 1,000 observations—corresponding to the (default) number
   of simulated versions of the specified regression model. The mean for that
   variable is the plotted predicted probability; the 0.95 CIs correspoond to
   values at the 2.5 and 97.5 percentiles for the specified variable.

   The varialbes corresponding to the plotted predicted probabilities in Figure 2
   are as follows:

    cliblo – control, Liberal Democrat, lo CRT
    clibhi – control Liberal Democrat, high CRT
    cconlo – control, Conservative Republican, lo CRT
    cconhi – control, Conservative Republican, high CRT
    sbliblo – skeptic biased, Liberal Democrat, lo CRT
    sblibhi – skeptic biased, Liberal Democrat, high CRT
    sbconlo  – skeptic biased, Conservative Republican, lo CRT
    sbconhi  – skeptic biased, Conservative Republican, high CRT
    bblibhi – believer biased, Liberal Democrat, lo CRT
    bbliblo – believer biased, Liberal Democrat, high CRT
    bbconlo  – believer biased, Conservative Republican, lo CRT
    bbconhi  – believer biased, Conservative Republican, high CRT   */

set more off

estsimp ologit crt_valid Conserv_Repub skeptic_biased believer_biased ///
Conserv_Repub_x_skeptic ///
Conserv_Repub_x_believer crtscore ///
Conserv_Repub_x_crt crt_x_skep crt_x_believer  ///
Conserv_Repub_x_crt_x_skep Conserv_Repub_x_crt_x_believer

*** control ***
```

```
*** liberal lo crt ***

setx mean
setx  Conserv_Repub -0.95 /*
  */ skeptic_biased 0 /*
  */ believer_biased 0 /*
  */ Conserv_Repub_x_skeptic 0 /*
  */ Conserv_Repub_x_believer 0 /*
  */ crtscore 0 /*
  */ Conserv_Repub_x_crt 0 /*
  */ crt_x_skep 0 /*
  */ crt_x_believer 0 /*
  */ Conserv_Repub_x_crt_x_skep 0 /*
  */ Conserv_Repub_x_crt_x_believer 0
simqi, genpr (newvar1 newvar2 newvar3 newvar4 newvar5 newvar6)
gen cliblo = newvar4 + newvar5 + newvar6
summarize cliblo
_pctile cliblo, p(2.5, 97.5)
return list

*/

drop newvar*

*** libreal high crt ***
setx mean
setx  Conserv_Repub -0.95 /*
  */ skeptic_biased 0 /*
  */ believer_biased 0 /*
  */ Conserv_Repub_x_skeptic 0 /*
  */ Conserv_Repub_x_believer 0 /*
  */ crtscore 2 /*
  */ Conserv_Repub_x_crt 0 /*
  */ crt_x_skep 0 /*
  */ crt_x_believer 0 /*
  */ Conserv_Repub_x_crt_x_skep 0 /*
  */ Conserv_Repub_x_crt_x_believer 0
simqi, genpr (newvar1 newvar2 newvar3 newvar4 newvar5 newvar6)
gen clibhi = newvar4 + newvar5 + newvar6
summarize clibhi
_pctile clibhi, p(2.5, 97.5)
return list

*/

drop newvar*

*** conserv lo crt ***

setx mean
setx  Conserv_Repub -0.95 /*
  */ skeptic_biased 0 /*
  */ believer_biased 0 /*
  */ Conserv_Repub_x_skeptic 0 /*
  */ Conserv_Repub_x_believer 0 /*
  */ crtscore 2 /*
  */ Conserv_Repub_x_crt 0 /*
  */ crt_x_skep 0 /*
  */ crt_x_believer 0 /*
  */ Conserv_Repub_x_crt_x_skep 0 /*
  */ Conserv_Repub_x_crt_x_believer 0
simqi, genpr (newvar1 newvar2 newvar3 newvar4 newvar5 newvar6)
```

```
gen cconlo = newvar4 + newvar5 + newvar6
summarize cconlo
_pctile cconlo, p(2.5, 97.5)
return list

*/
drop newvar*
** conserv high crt ****
setx mean
setx   Conserv_Repub 0.95 /*
  */ skeptic_biased 0 /*
  */ believer_biased 0 /*
  */ Conserv_Repub_x_skeptic 0 /*
  */ Conserv_Repub_x_believer 0 /*
  */ crtscore 2 /*
  */ Conserv_Repub_x_crt 0 /*
  */ crt_x_skep 0 /*
  */ crt_x_believer 0 /*
  */ Conserv_Repub_x_crt_x_skep 0 /*
  */ Conserv_Repub_x_crt_x_believer 0

simqi, genpr (newvar1 newvar2 newvar3 newvar4 newvar5 newvar6)
gen cconhi = newvar4 + newvar5 + newvar6
summarize cconhi
_pctile cconhi, p(2.5, 97.5)
return list

*/


drop newvar*


*** skeptic biased ***

  ** liberal lo crt ***

setx mean
setx    Conserv_Repub -0.95 /*
  */ skeptic_biased 0.95 /*
  */ believer_biased 0 /*
  */ Conserv_Repub_x_skeptic -0.95 /*
  */ Conserv_Repub_x_believer 0 /*
  */ crtscore 0 /*
  */ Conserv_Repub_x_crt 0 /*
  */ crt_x_skep 0 /*
  */ crt_x_believer 0 /*
  */ Conserv_Repub_x_crt_x_skep 0 /*
  */ Conserv_Repub_x_crt_x_believer 0

simqi, genpr (newvar1 newvar2 newvar3 newvar4 newvar5 newvar6)
gen sbliblo = newvar4 + newvar5 + newvar6
summarize sbliblo
_pctile sbliblo, p(2.5, 97.5)
return list

*/

drop newvar*

*** libreal high crt ***

setx mean
```

```
setx   Conserv_Repub -0.95 /*
  */ skeptic_biased 0.95 /*
  */ believer_biased 0 /*
  */ Conserv_Repub_x_skeptic -0.95 /*
  */ Conserv_Repub_x_believer 0 /*
  */ crtscore 2 /*
  */ Conserv_Repub_x_crt -2 /*
  */ crt_x_skep 2 /*
  */ crt_x_believer 0 /*
  */ Conserv_Repub_x_crt_x_skep -2 /*
  */ Conserv_Repub_x_crt_x_believer 0
simqi, genpr (newvar1 newvar2 newvar3 newvar4 newvar5 newvar6)
gen sblibhi = newvar4 + newvar5 + newvar6
summarize sblibhi
_pctile sblibhi, p(2.5, 97.5)
return list

*/

drop newvar*

*** conserv lo crt ***

setx mean
setx   Conserv_Repub 0.95 /*
  */ skeptic_biased 0.95 /*
  */ believer_biased 0 /*
  */ Conserv_Repub_x_skeptic 0.95 /*
  */ Conserv_Repub_x_believer 0 /*
  */ crtscore 0 /*
  */ Conserv_Repub_x_crt 0 /*
  */ crt_x_skep 0 /*
  */ crt_x_believer 0 /*
  */ Conserv_Repub_x_crt_x_skep 0 /*
  */ Conserv_Repub_x_crt_x_believer 0
simqi, genpr (newvar1 newvar2 newvar3 newvar4 newvar5 newvar6)
gen sbconlo = newvar4 + newvar5 + newvar6
summarize sbconlo
_pctile sbconlo, p(2.5, 97.5)
return list

*/
drop newvar*

** conserv high crt ****

setx mean
setx    Conserv_Repub 0.95 /*
  */ skeptic_biased 0.95 /*
  */ believer_biased 0 /*
  */ Conserv_Repub_x_skeptic 0.95 /*
  */ Conserv_Repub_x_believer 0 /*
  */ crtscore 2 /*
  */ Conserv_Repub_x_crt 2 /*
  */ crt_x_skep 2 /*
  */ crt_x_believer 0 /*
  */ Conserv_Repub_x_crt_x_skep 2 /*
  */ Conserv_Repub_x_crt_x_believer 0


simqi, genpr (newvar1 newvar2 newvar3 newvar4 newvar5 newvar6)
gen sbconhi = newvar4 + newvar5 + newvar6
summarize sbconhi
```

```
_pctile sbconhi, p(2.5, 97.5)
return list

*/
drop newvar*

*** believer biased ****

  ** liberal lo crt ***

setx mean
setx Conserv_Repub -0.95 /*
  */ skeptic_biased 0 /*
  */ believer_biased 0.95 /*
  */ Conserv_Repub_x_skeptic 0 /*
  */ Conserv_Repub_x_believer -0.95 /*
  */ crtscore 0 /*
  */ Conserv_Repub_x_crt 0 /*
  */ crt_x_skep 0 /*
  */ crt_x_believer 0 /*
  */ Conserv_Repub_x_crt_x_skep 0 /*
  */ Conserv_Repub_x_crt_x_believer 0

simqi, genpr (newvar1 newvar2 newvar3 newvar4 newvar5 newvar6)
gen bbliblo = newvar4 + newvar5 + newvar6
summarize bbliblo
_pctile bbliblo, p(2.5, 97.5)
return list

*/

drop newvar*
*** libreal high crt ***
setx mean
setx  Conserv_Repub -0.95 /*
  */ skeptic_biased 0 /*
  */ believer_biased 0.95 /*
  */ Conserv_Repub_x_skeptic 0 /*
  */ Conserv_Repub_x_believer -0.95 /*
  */ crtscore 2 /*
  */ Conserv_Repub_x_crt 0 /*
  */ crt_x_skep 0 /*
  */ crt_x_believer 2 /*
  */ Conserv_Repub_x_crt_x_skep 0 /*
  */ Conserv_Repub_x_crt_x_believer -2
simqi, genpr (newvar1 newvar2 newvar3 newvar4 newvar5 newvar6)
gen bblibhi = newvar4 + newvar5 + newvar6
summarize bblibhi
_pctile bblibhi, p(2.5, 97.5)
return list

*/

drop newvar*

*** conserv lo crt ***

setx mean
setx   Conserv_Repub 0.95 /*
  */ skeptic_biased 0 /*
  */ believer_biased 0.95 /*
  */ Conserv_Repub_x_skeptic 0 /*
  */ Conserv_Repub_x_believer 0.95 /*
```

```
      */ crtscore 0 /*
      */ Conserv_Repub_x_crt 0 /*
      */ crt_x_skep 0 /*
      */ crt_x_believer 0 /*
      */ Conserv_Repub_x_crt_x_skep 0 /*
      */ Conserv_Repub_x_crt_x_believer 0

   simqi, genpr (newvar1 newvar2 newvar3 newvar4 newvar5 newvar6)
   gen bbconlo = newvar4 + newvar5 + newvar6
   summarize bbconlo
   _pctile bbconlo, p(2.5, 97.5)
   return list



   drop newvar*

   *** conserv high crt ****
   setx mean
   setx  Conserv_Repub 0.95 /*
     */ skeptic_biased 0 /*
     */ believer_biased 0.95 /*
     */ Conserv_Repub_x_skeptic 0 /*
     */ Conserv_Repub_x_believer 0.95 /*
     */ crtscore 2 /*
     */ Conserv_Repub_x_crt 0 /*
     */ crt_x_skep 0 /*
     */ crt_x_believer 2 /*
     */ Conserv_Repub_x_crt_x_skep 0 /*
     */ Conserv_Repub_x_crt_x_believer 2
     simqi, genpr (newvar1 newvar2 newvar3 newvar4 newvar5 newvar6)
   gen bbconhi = newvar4 + newvar5 + newvar6
   summarize bbconhi
   _pctile bbconhi, p(2.5, 97.5)
   return list

   */

   drop newvar*
```

b. Imputed data coding scripts

```
*** A. Observational component of study ****


 *** ordered logistic regression models, Table 1  ***

       mim: ologit crtscore Conserv_Repub

       mim: ologit crtscore Conserv_Repub male white education income religiosity


*** B. Experimental component of study ***

***1.  Regression models, Table 2***

mim: ologit crt_valid Conserv_Repub skeptic_biased believer_biased ///
Conserv_Repub_x_skeptic Conserv_Repub_x_believer

mim: ologit crt_valid Conserv_Repub skeptic_biased believer_biased ///
```

```
Conserv_Repub_x_skeptic ///
Conserv_Repub_x_believer zcrt ///
Conserv_Repub_x_zcrt zcrt_x_skep zcrt_x_believer  ///
Conserv_Repub_x_zcrt_x_skep Conserv_Repub_x_zcrt_x_believer

***2. Monte Carlo simulation ****

   /* Note that in order to use Clarify with the imputed data sets, the imputed
      data sets must first be “split” into separate data files, using the “mislit”
      command: */

   use CRIMRIMP.dat
   misplit, clear
   misave CRIMRIMP, replace

   /* These commands will create and save in the root directory six separate data
      sets with file names “CRIMRIMP1,” “CRIMRIMP2,” ... “CRIMRIMP6.” CRIMRIMP1 is
      the unimputed dataset, which is not used in the simulation. It makes sense,
      of course, to perform this operation once, using a separate coding script,
      rather than repeat it each time a simulation is run. The CRIMRIMP data file
      should be loaded at the outset and the names of the imputed datasets specified
      in the “mi” options field for the Clarify “estsimp” command (see below).

      The simulation for the multiply imputed data uses the same predictor values
      as were used above for the unimputed data. It stores the predicted
      probabilities in the same variables, and derives the mean predicted
      probability and 0.95 CIs by the same means. */


   set more off

   estsimp ologit crt_valid Conserv_Repub skeptic_biased believer_biased ///
   Conserv_Repub_x_skeptic ///
   Conserv_Repub_x_believer crtscore ///
   Conserv_Repub_x_crt crt_x_skep crt_x_believer  ///
Conserv_Repub_x_crt_x_skep Conserv_Repub_x_crt_x_believer, ///
mi(CRIMRIMP2 CRIMRIMP3 CRIMRIMP4 CRIMRIMP5 CRIMRIMP6)

   *** control ***

   *** liberal lo crt ***

   setx mean
   setx  Conserv_Repub -0.95 /*
     */ skeptic_biased 0 /*
     */ believer_biased 0 /*
     */ Conserv_Repub_x_skeptic 0 /*
     */ Conserv_Repub_x_believer 0 /*
     */ crtscore 0 /*
     */ Conserv_Repub_x_crt 0 /*
     */ crt_x_skep 0 /*
     */ crt_x_believer 0 /*
     */ Conserv_Repub_x_crt_x_skep 0 /*
     */ Conserv_Repub_x_crt_x_believer 0
   simqi, genpr (newvar1 newvar2 newvar3 newvar4 newvar5 newvar6)
   gen cliblo = newvar4 + newvar5 + newvar6
   summarize cliblo
   _pctile cliblo, p(2.5, 97.5)
   return list

   */

   drop newvar*
```

```
*** libreal high crt ***
setx mean
setx  Conserv_Repub -0.95 /*
  */ skeptic_biased 0 /*
  */ believer_biased 0 /*
  */ Conserv_Repub_x_skeptic 0 /*
  */ Conserv_Repub_x_believer 0 /*
  */ crtscore 2 /*
  */ Conserv_Repub_x_crt 0 /*
  */ crt_x_skep 0 /*
  */ crt_x_believer 0 /*
  */ Conserv_Repub_x_crt_x_skep 0 /*
  */ Conserv_Repub_x_crt_x_believer 0
simqi, genpr (newvar1 newvar2 newvar3 newvar4 newvar5 newvar6)
gen clibhi = newvar4 + newvar5 + newvar6
summarize clibhi
_pctile clibhi, p(2.5, 97.5)
return list

*/

drop newvar*

*** conserv lo crt ***

setx mean
setx  Conserv_Repub -0.95 /*
  */ skeptic_biased 0 /*
  */ believer_biased 0 /*
  */ Conserv_Repub_x_skeptic 0 /*
  */ Conserv_Repub_x_believer 0 /*
  */ crtscore 2 /*
  */ Conserv_Repub_x_crt 0 /*
  */ crt_x_skep 0 /*
  */ crt_x_believer 0 /*
  */ Conserv_Repub_x_crt_x_skep 0 /*
  */ Conserv_Repub_x_crt_x_believer 0
simqi, genpr (newvar1 newvar2 newvar3 newvar4 newvar5 newvar6)
gen cconlo = newvar4 + newvar5 + newvar6
summarize cconlo
_pctile cconlo, p(2.5, 97.5)
return list

*/
drop newvar*
** conserv high crt ****
setx mean
setx   Conserv_Repub 0.95 /*
  */ skeptic_biased 0 /*
  */ believer_biased 0 /*
  */ Conserv_Repub_x_skeptic 0 /*
  */ Conserv_Repub_x_believer 0 /*
  */ crtscore 2 /*
  */ Conserv_Repub_x_crt 0 /*
  */ crt_x_skep 0 /*
  */ crt_x_believer 0 /*
  */ Conserv_Repub_x_crt_x_skep 0 /*
  */ Conserv_Repub_x_crt_x_believer 0

simqi, genpr (newvar1 newvar2 newvar3 newvar4 newvar5 newvar6)
gen cconhi = newvar4 + newvar5 + newvar6
summarize cconhi
```

```
_pctile cconhi, p(2.5, 97.5)
return list

*/


drop newvar*


*** skeptic biased ***

  ** liberal lo crt ***

setx mean
setx    Conserv_Repub -0.95 /*
  */ skeptic_biased 0.95 /*
  */ believer_biased 0 /*
  */ Conserv_Repub_x_skeptic -0.95 /*
  */ Conserv_Repub_x_believer 0 /*
  */ crtscore 0 /*
  */ Conserv_Repub_x_crt 0 /*
  */ crt_x_skep 0 /*
  */ crt_x_believer 0 /*
  */ Conserv_Repub_x_crt_x_skep 0 /*
  */ Conserv_Repub_x_crt_x_believer 0

simqi, genpr (newvar1 newvar2 newvar3 newvar4 newvar5 newvar6)
gen sbliblo = newvar4 + newvar5 + newvar6
summarize sbliblo
_pctile sbliblo, p(2.5, 97.5)
return list

*/

drop newvar*

*** libreal high crt ***

setx mean
setx   Conserv_Repub -0.95 /*
  */ skeptic_biased 0.95 /*
  */ believer_biased 0 /*
  */ Conserv_Repub_x_skeptic -0.95 /*
  */ Conserv_Repub_x_believer 0 /*
  */ crtscore 2 /*
  */ Conserv_Repub_x_crt -2 /*
  */ crt_x_skep 2 /*
  */ crt_x_believer 0 /*
  */ Conserv_Repub_x_crt_x_skep -2 /*
  */ Conserv_Repub_x_crt_x_believer 0
simqi, genpr (newvar1 newvar2 newvar3 newvar4 newvar5 newvar6)
gen sblibhi = newvar4 + newvar5 + newvar6
summarize sblibhi
_pctile sblibhi, p(2.5, 97.5)
return list

*/

drop newvar*

*** conserv lo crt ***

setx mean
```

```
setx   Conserv_Repub 0.95 /*
  */ skeptic_biased 0.95 /*
  */ believer_biased 0 /*
  */ Conserv_Repub_x_skeptic 0.95 /*
  */ Conserv_Repub_x_believer 0 /*
  */ crtscore 0 /*
  */ Conserv_Repub_x_crt 0 /*
  */ crt_x_skep 0 /*
  */ crt_x_believer 0 /*
  */ Conserv_Repub_x_crt_x_skep 0 /*
  */ Conserv_Repub_x_crt_x_believer 0
simqi, genpr (newvar1 newvar2 newvar3 newvar4 newvar5 newvar6)
gen sbconlo = newvar4 + newvar5 + newvar6
summarize sbconlo
_pctile sbconlo, p(2.5, 97.5)
return list

*/
drop newvar*

** conserv high crt ****

setx mean
setx    Conserv_Repub 0.95 /*
  */ skeptic_biased 0.95 /*
  */ believer_biased 0 /*
  */ Conserv_Repub_x_skeptic 0.95 /*
  */ Conserv_Repub_x_believer 0 /*
  */ crtscore 2 /*
  */ Conserv_Repub_x_crt 2 /*
  */ crt_x_skep 2 /*
  */ crt_x_believer 0 /*
  */ Conserv_Repub_x_crt_x_skep 2 /*
  */ Conserv_Repub_x_crt_x_believer 0


simqi, genpr (newvar1 newvar2 newvar3 newvar4 newvar5 newvar6)
gen sbconhi = newvar4 + newvar5 + newvar6
summarize sbconhi
_pctile sbconhi, p(2.5, 97.5)
return list

*/
drop newvar*

*** believer biased ****

  ** liberal lo crt ***

setx mean
setx Conserv_Repub -0.95 /*
  */ skeptic_biased 0 /*
  */ believer_biased 0.95 /*
  */ Conserv_Repub_x_skeptic 0 /*
  */ Conserv_Repub_x_believer -0.95 /*
  */ crtscore 0 /*
  */ Conserv_Repub_x_crt 0 /*
  */ crt_x_skep 0 /*
  */ crt_x_believer 0 /*
  */ Conserv_Repub_x_crt_x_skep 0 /*
  */ Conserv_Repub_x_crt_x_believer 0

simqi, genpr (newvar1 newvar2 newvar3 newvar4 newvar5 newvar6)
```

```
gen bbliblo = newvar4 + newvar5 + newvar6
summarize bbliblo
_pctile bbliblo, p(2.5, 97.5)
return list

*/

drop newvar*
*** libreal high crt ***
setx mean
setx  Conserv_Repub -0.95 /*
  */ skeptic_biased 0 /*
  */ believer_biased 0.95 /*
  */ Conserv_Repub_x_skeptic 0 /*
  */ Conserv_Repub_x_believer -0.95 /*
  */ crtscore 2 /*
  */ Conserv_Repub_x_crt 0 /*
  */ crt_x_skep 0 /*
  */ crt_x_believer 2 /*
  */ Conserv_Repub_x_crt_x_skep 0 /*
  */ Conserv_Repub_x_crt_x_believer -2
simqi, genpr (newvar1 newvar2 newvar3 newvar4 newvar5 newvar6)
gen bblibhi = newvar4 + newvar5 + newvar6
summarize bblibhi
_pctile bblibhi, p(2.5, 97.5)
return list

*/

drop newvar*

*** conserv lo crt ***

setx mean
setx   Conserv_Repub 0.95 /*
  */ skeptic_biased 0 /*
  */ believer_biased 0.95 /*
  */ Conserv_Repub_x_skeptic 0 /*
  */ Conserv_Repub_x_believer 0.95 /*
  */ crtscore 0 /*
  */ Conserv_Repub_x_crt 0 /*
  */ crt_x_skep 0 /*
  */ crt_x_believer 0 /*
  */ Conserv_Repub_x_crt_x_skep 0 /*
  */ Conserv_Repub_x_crt_x_believer 0

simqi, genpr (newvar1 newvar2 newvar3 newvar4 newvar5 newvar6)
gen bbconlo = newvar4 + newvar5 + newvar6
summarize bbconlo
_pctile bbconlo, p(2.5, 97.5)
return list



drop newvar*

*** conserv high crt ****
setx mean
setx  Conserv_Repub 0.95 /*
  */ skeptic_biased 0 /*
  */ believer_biased 0.95 /*
  */ Conserv_Repub_x_skeptic 0 /*
  */ Conserv_Repub_x_believer 0.95 /*
```

```
  */ crtscore 2 /*
  */ Conserv_Repub_x_crt 0 /*
  */ crt_x_skep 0 /*
  */ crt_x_believer 2 /*
  */ Conserv_Repub_x_crt_x_skep 0 /*
  */ Conserv_Repub_x_crt_x_believer 2
  simqi, genpr (newvar1 newvar2 newvar3 newvar4 newvar5 newvar6)
gen bbconhi = newvar4 + newvar5 + newvar6
summarize bbconhi
_pctile bbconhi, p(2.5, 97.5)
return list

drop newvar*
```

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