Some preliminary-analysis regression models for the CRT-motivated cogniton study

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Ordered logit estimates LR chi 2(1) Prob > chi 2 Pseudo R2

Log likelihood = -1804. 1615

crt	Coef.	Std. Err.	z	P> z	[95% Conf.	Interval]
dem_repub	. 0673146	. 0216044	3. 12	0. 002	. 0249708	. 1096584
_cut1 _cut2 _cut3	. 7219973 1. 639566 2. 870942	. 0981374 . 1052953 . 1294138		(Ancillar	y parameters)	

Regression model used to estimate impact of partisan self-identification on CRT score. "Dem_repub" is standard 7point measure of party affiliation.

Number of obs Ordered logit estimates 27. 24 0. 0000 0. 0074 LR chi 2(1) Prob > chi 2 Pseudo R2 Log likelihood = -1837.7757

crt	Coef.	Std. Err.	z	P> z	[95% Conf.	Interval]
Zrel i gi osi ty	2492808	. 0477889	- 5. 22	0. 000	3429454	1556163
_cut1 _cut2 _cut3	. 4859958 1. 412115 2. 637241	. 0495981 . 0604305 . 0951115		(Ancillary	parameters)	

Regression model used to estimate impact of religiosity on CRT score. Zreligiosity is a composite Likert measure formed by aggregaton of church attednance, importance of God, and importance of prayer.

Iteration 2: Iteration 3:	log likelihe log likelihe log likelihe log likelihe	ood = -2685. ood = -2685.	7451 7417			
Ordered logistic regression Log likelihood = -2685.7417			Number LR chi Prob > Pseudo	1577 15. 38 0. 0015 0. 0029		
crtbi as	Coef.	Std. Err.	z	P> z	[95% Conf.	Interval]
z_conservr~b skepti c_bi ~d nonskepti c~d	1636118 075998 1682204	. 0451196 . 1092246 . 1087078	-3.63 -0.70 -1.55	0. 000 0. 487 0. 122	2520445 2900742 3812837	075179 . 1380782 . 0448429
/cut1 /cut2 /cut3 /cut4 /cut5	-1.001437 3772476 .3846447 1.417287 2.403202	. 0841236 . 0802391 . 0802916 . 0892902 . 1122788			-1.166316 5345134 .2272761 1.242281 2.183139	8365575 2199819 . 5420133 1. 592292 2. 623264
Iteration 0: Iteration 1: Iteration 2: Iteration 3: Ordered logist	-	ood = -2648. ood = -2648. ood = -2648.	1754 0475	LR chi Prob >		1577 90. 77 0. 0000
rod 11 Kel 1 Dooc	= -2648.0474	•		rseudo	chi 2 =	0. 0169
crtbias	Coef.	Std. Err.	z	P> z		0. 0169
crtbias z_conservr-b skeptic_bi~d nonskeptic-d z_conservr z_conservr			z -1. 64 -0. 78 -1. 44 -4. 83 3. 72		R2 -	0. 0169
crtbias z_conservr~b skepti c_bi~d nonskepti c~d z_conservr.	Coef 1304747 0855652 1567811 5452478	Std. Err. .0797148 .1098194 .1090117 .1128249	-1. 64 -0. 78 -1. 44 -4. 83	P> z 0. 102 0. 436 0. 150 0. 000	[95% Conf. 2867127 3008072 3704401 7663805	0.0169 Interval] .0257634 .1296768 .0568779 324115
crtbias z_conservr~b skepti c_bi ~d nonskepti c_d z_conservr. z_conservr. z_conservr. /cut1 /cut2 /cut3 /cut4	Coef13047470855652156781154524784119097 - 1.03948439379023967532 - 1.46286 - 2.466436	Std. Err. .0797148 .1098194 .1090117 .1128249 .1107427 .0850675 .0808726 .0809382 .0905793	-1. 84 -0. 78 -1. 44 -4. 83 3. 72	P> z 0. 102 0. 436 0. 150 0. 000	[95% Conf. - 2867127 - 38080072 - 3704401 - 7663805 - 1948579 -1. 206214 - 5522975 - 2381172 1. 285128	0.0169 Interval] .0257634 .1296768 .0568779 .324115 .6289615 -8727552 -2352828 .5553891 1.640192

Iteration 0: Iteration 1: Iteration 2: Iteration 3:	log likelih log likelih log likelih log likelih	ood = -2646. ood = -2646.	9869 8555			
Ordered logist	ic regression	•		LR chi	r of obs =	1577 93. 15
Log likelihood	1 = -2646. 855	4		Prob : Pseud	> chi 2 = 0 R2 =	0. 0000 0. 0173
crtbi as	Coef.	Std. Err.	z	P> z	[95% Conf.	Interval]
z_conservr~b	139267	. 0800888	-1.74	0.082	2962382	. 0177043
skeptic_bi~d	082243	. 1102055	-0.75	0. 456	2982418	. 1337558
nonskepti c~d	1450861	. 1093738	- 1. 33	0. 185	3594548	. 0692826
z_conservr	5433568	. 1131357	-4.80	0.000	7650988	3216149
z_conservr	. 413895	. 1109903	3. 73	0.000	. 1963579	. 631432
z_crt	. 0455212	. 0741232	0.61	0. 539	0997577	. 1908
z_cons~z_crt	. 059763	. 0435584 . 1084553	1. 37	0. 170	0256099	. 1451359 . 1804337
z_crt_x_sk~c z_crt_x_no~c	0321348 0621476	. 105674	-0.30 -0.59	0. 767 0. 556	2447032 2692648	. 1449696
/cut1	- 1. 033839	. 085284			- 1. 200993	8666856
/cut2	- 1. 033639	. 0811542			- 1. 200993 5466505	2285321
/cut3	4034996	. 0812494			. 2442537	. 5627456
/cut4	1. 469798	. 0908806			1. 291675	1. 647921
/cut5	2. 473695	. 1140883			2. 250086	2. 697304
		st store M	3			
	1	rtest M2 M6	3			
ub_x_skeptic	z_conservre	ologit crtbi pub_x_nonske	as z_cons ptic z_c	servrepub rt z_cons	skeptic_bias ervrepub_x_z_	ed nonskep crt z_crt_
> ic/* > Iteration 0:	z_conservrej */ z_co log likelih log likelih	pub_x_nonske onservrepub_ ood = -2693. ood = -2641	sptic z_crt_ z_z_crt_ 4327 l. 709	rt z_cons	skeptic_bias ervrepub_x_z conservrepub_	crt z_crt_
> ic/* > Iteration 0: Iteration 1: Iteration 2:	z_conservrej */ z_c	pub_x_nonske onservrepub_ ood = -2693. ood = -2641.	sptic z_crt_ z_z_crt_ 4927 I. 709 5437	rt z_cons	ervrepub_x_z_	crt z_crt_
> ic/* > Iteration 0: Iteration 1: Iteration 2: Iteration 3:	*/ z_conservrej */ z_conservrej log likelihe log likelihe log likelihe log likelihe	pub_x_nonske onservrepub_ ood = -2693. ood = -2641. ood = -2641.	sptic z_crt_ z_z_crt_ 4927 I. 709 5437	rt z_conse z_skep z_e Number IR ch	ervrepub_x z_conservrepub_ r of obs =	2 crt z crt
> ic/* > Iteration 0: Iteration 1: Iteration 2: Iteration 3: Ordered logist	*/ z_conservrej */ z_co log likelih log likelih log likelih log likelih cic regression	pub_x_nonske poservrepub_ pod = -2893. pod = -2841. pod = -2841.	sptic z_crt_ z_z_crt_ 4927 I. 709 5437	rt z_conse z_skep z_e Number IR ch	conservrepub_	art z_art_ z_z_art_z_ 1577
> ic/* > Iteration 0: Iteration 1: Iteration 2: Iteration 3: Ordered logist	*/ z_conservrej */ z_co log likelih log likelih log likelih log likelih cic regression	pub_x_nonske poservrepub_ pod = -2893. pod = -2841. pod = -2841.	sptic z_crt_ z_z_crt_ 4927 I. 709 5437	rt z_conse z_skep z_e Number IR ch	ervrepub_x z_conservrepub_ r of obs =	1577 103.78 0.0000 0.0193
iteration 0: Iteration 1: Iteration 2: Iteration 3: Ordered logist Log likelihood crtbias	<pre>*/ z_conservrej */ z_col log likelih log likelih log likelih log likelih ic regression 1 = -2841.543* Coef1277481</pre>	pub_x_nonske puservrepub_ pod = -2893. pod = -2841.	x z crt 3 4327 1. 709 5437 5437	Number P> z 0.111	r of obs = 12(11) = 26h2 = 0 B2 = 195% Conf.	1577 103.78 0.0000 0.0193
iteration 0: iteration 1: teration 2: teration 3: ordered logist Log likelihood crtbias conservr-b	*/ z_conservrej	pub_x_nonske conservrepub_ cod = -2893. cod = -2841.	x z_crt_ 4327 1. 709 5437 5437 -1. 59 -0. 76	Number LB chi Prob: Pseud 0.111 0.446	r of obs = 12(11) = > chi2 = 0 B2 = 195% Conf2849673300106	1577 103.78 0.0000 0.0193 Interval]
iteration 0: iteration 1: iteration 2: iteration 3: brdered logist crtbias crtbias conservr-b akeptic_bi-d	*/ z_conservre */ z_ci log likelih log likelih log likelih log likelih ici regression = -2841.543* Coef. 127748108399391418057	pub_x_nonske pub_x_nonske puservrepub_ pod = -2893. pod = -2841. pod =	# Z cart 4327 1. 709 5437 5437 5437 5437 2 -1. 59 -0. 76 -1. 30	Number LR chi Prob: P> z 0.111 0.446 0.195	r of obs = 12(11) = 5 chi 2 = 6 E2 = 12(10) = 7 chi 2 = 12(10) = 7 chi	1577 103.78 0.0000 0.0193 Interval] .0294711 .1321183
> ic/* > ' ' Iteration 0: Iteration 1: Iteration 3: Iteration 3: Ordered logist Log likelihood crtbias z_conservr-b skeptic_bi-d nonskeptic-d z_conservr.	*/ z_conservrej */ z_conservrej */ z_conservrej log likelih log likelih log likelih log likelih log likelih - 12841.543* Coef. - 1277481 - 0839939 - 1418057 - 5477638	pub_x_nonske pub_x	x z_crt_ 4327 1. 709 5437 5437 -1. 59 -0. 76 -1. 30 -4. 83	Number	r of obs = 2(11) = > chi2 = 0 B2 = 0 B2 = 0 0 0 0 B2 = 0 0 0 0 B2 = 0 0 0 0 0 0 B2 = 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	1577 103.78 0.0000 0.0193 Interval] .0294711 .1321183 .0728702
teration 0: iteration 1: iteration 2: iteration 3: Drivered logist Log likelihood crtblas z_conserv-b skeptic_bd-d z_conservr.	*/ z_conservrej */ z_ci log likelih log likelih log likelih log likelih ici regressior 2841.543* Coef. 1277481083993914180575477638877933	pub_x_nonske pub_x_nonske puservrepub_ pod = -2893. pod = -2841. pod =	x z_crt_ 4327 1. 709 5437 5437 -1. 59 -0. 76 -1. 30 -4. 83	Number	r of obs = 12(11) = 5 chi 2 = 6 E2 = 12(11) = 5 chi 2 = 6 E2 = 12(11) = 70(10) = 70(1577 103.78 0.0000 0.0193 Interval] .0294711 .1321183 0.728732 -3253044 0056381
> ic/* > teration 0: teration 1: teration 3: ter	**Z_conservre; */ Z_ci log likelih log likelih log likelih log likelih cic regression **Coef.** - 1277481 - 083999 - 1418057 - 547788 - 3873037 - 0435788	pub_x_nonske mservrepub_ ood = -2891, ood = -2841, ood =	z_crt_ 4327 1.709 5437 5437 5437 2 -1.59 -0.76 -1.30 -4.83 3.48 0.59	Number	r of obs = .2(11) =	1577 103.78 0.0000 0.0193 Interval] 0.0294711 1.321183 0.726702 - 3253044 0.056381 1.883033
teration 0: iteration 1: iteration 2: iteration 3: brdered logist Log likelihood crtbias z_conserv-bakeptic_bi-da z_conserv-da_conservr. z_conservr. z_conservr. z_conservr. z_conservr. z_conservr.	z_conservre;	pub_x_nonske mservrepub_ ood = -2694; ood = -2841; ood = -2841; 7 Std. Err. .0802154 .1102633 .1094285 .1135018 .1135017 .0738404	### A ST	Number	r of obs = 12(11) = 22(11) = 24(11) = 2	1577 103.78 0.0000 0.0198 Interval] 0.0294711 1321188 0.728702 - 3255044 8055981 1883033 0.0922531
> ic/* > Iteration 0: Iteration 1: Iteration 2: Iteration 3: Dries of logist Log likelihood crtbias z_conservr-b skeptic_bi-d domongervr-d z_conservr-d z_conse	**Z_conservre; */ Z_ci log likelih log likelih log likelih log likelih cic regression **Coef.** - 1277481 - 083999 - 1418057 - 547788 - 3873037 - 0435788	pub_x_nonske mservrepub_ ood = -2891, ood = -2841, ood =	x_z_crt_ 4327 1.709 5437 5437 2 -1.59 -0.76 -1.30 -4.83 3.48 0.59 -0.99 -0.99	Number 2 Number 2	r of obs = .2(11) =	1577 103.78 0.0000 0.0193 Interval 1.321188 0.726702 - 3253044 0.056381 1.883033 0.022531 1.767525
Creation 0: Iteration 0: Iteration 2: Iteration 2: Iteration 3: Iteration 3: Iteration 3: Iteration 3: Iteration 3: Iteration 3: Iteration 3: Iteration 4: Iteration 4: Iterat	**Z_conservre; */ Z_c: 1	pub_x_nonski nnservrepub. nood = -2893, nood = -2841, nood = -2	### ASP	Number	r of obs = 12(11) = 2	1577 103.78 0.0000 0.0193 Interval 1.321188 0.0264711 1.321188 0.0726702 2.3253044 0.056381 1.833033 0.922531 1.767525 1.740766 2276838 2276838
teration 0: teration 1: teration 2: teration 3: Drdered logist Log likelihood crtbias conservr-bakeptic-bi-di conservr-c	2conservee	pub_x nonske maservrepub. 2841. od = -2841. od = -2841. od = -2841. of -2841. of -2841. oscillation of the construction of the constructio	x_z_crt_ 4327 1.709 5437 5437 2 -1.59 -0.76 -1.30 -4.83 3.48 0.59 -0.99 -0.99	Number E. chi Prob Pseudo Pse	r of obs = .2(11) = .0 E2 =	1577 103.78 0.0000 0.0193 Interval] 0294711 1321183 0726702 - 3253044 8056981 1883033 0922531 1767525
> ic/* > 's/* Iteration 0: Iteration 1: Iteration 2: Iteration 3: Drdered logist Log likelihood crtbias z_conservr-b skeptic_bi-d z_conservr-c, conservr-z, c	2 conserve; 2 conserve; 2 conserve; 2 conserve; 2 conserve; 3 conserve; 3 conserve; 4 conserve; 5 conserve; 6 conserve; 6 conserve; 7 conserve; 7 conserve; 8 conserve; 8 conserve; 9 cons	pub_x_nonsk nonservrepub. nonservrepub. nonservrepub. nonservrepub. nonservrepub. nonservrepub. nonservrepub. Std. Err. .0802154 .110203 .1135018	ZZ -1.59 -0.76 -1.80 -4.827 -1.59 -0.76 -1.80 -4.83 -4.80 .59 -0.83 -0.82 0.16	Number	r of obs = 22(11) = 0 E2 = 0 E	1577 103.78 0.0000 0.0183 1321183 0.0294711 1321183 0.0294711 1321183 0.022532 1.140768 2.276838 - 2.276838 - 2.2768388764659876460876460876460876460876460876460876460876460
z_conservr-b skeptic_bi-d nonskeptic-d z_conservr z_conservr z_conservr z_crt_z_sk-c z_crt_x_sk-c z_crt_x_no-c z_crt	2 conserve; 2 cons	pub_x nonske onservrepub. ond = -2893. ood = -2841. ood = -2841.	ZZ -1.59 -0.76 -1.80 -4.827 -1.59 -0.76 -1.80 -4.83 -4.80 .59 -0.83 -0.82 0.16	Number	r of obs - 12(11) o kl2	15777 103.78 0.0000 0.0108 Interval] 0.0294711 1321188 0.726702 0.725702 1.3821188 0.725702 1.3821188 0.725702 1.3821188 0.725702 1.3825044 0.75585 1.7447585 1.7447585 1.7447585 1.7447685 2.276856
> 1c/* > Iteration O: Iteration I: Iteration 1: Iteration 2: Iteration 3: Iteration 4: Iteration	2 conserve; 2 conserve; 1 og 11ke1 ih 1 c regressi of 1 = -2841.543 Coef. 1 277481 1 - 0839839 1 - 0435788 1 - 0435788 1 - 0435788 1 - 0435788 1 - 0435788 2 - 04357888 2 - 0435788 2 - 04357888 2 - 04357888 2 - 04357888 2 - 043578	pub_x_nonsk nonservrepub. pod = _2603. pod = _2641. pod = 2641. pod = 2641. p	ZZ -1.59 -0.76 -1.80 -4.827 -1.59 -0.76 -1.80 -4.83 -4.80 .59 -0.83 -0.82 0.16	Number	r of obs - 12(11) - 5 chl2 - 7 coservrepub_ r of obs - 12(11) - 5 chl2 - 7 coservrepub_ [95% Coef.* 300103 - 700231 - 100234 - 101457 - 193445 - 2405749 - 1017864 - 1.21131 - 1.21131 - 1	15777 103.78 0.0000 0.0183 Interval 0.024711 1.321188 0.726702 - 3253044 0.056981 1.787728 1.787728 2.276386 5.1740706 - 2.276386 5.576455 - 5.576455 - 5.576455
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Regression model used to test experimental hypotheses and estimate graphically presented experimental effects. Variables are entered in stages. In the first, Zconserv_repub (a composite Likert scale formed by combining the 5point liberal-conservative ideology measure and the 7-point party-self-identification measure) is shown to predict disagreement with the proposition that CRT is a valid measure controlling for experimental condition (i.e., as subjects become more Republican and more conservative, they are more likely to disagree). In model 2, crossproduct interaction terms are added. The show that the impact of being Republican and conservative predicts greater likelihood of disagreement, and being Democrat and liberal greater likelihood of agreement, in the "skeptic-biased" condition relative to the control; and that those effects are reversed ni the "non-skeptic biased" condition. (Note Chris Mooney & friends: the model assumes the impact of the experimental assignment is linear with respect to ideology/party affiliation; you can't tell from the model—you have to test a polynomial fit to figure out if there is aysmmetry! I haven't seen that done in the literature. I'll do it in next post w/ this data in next post!). Model 3 adds CRT and also CRT x experimental treatment interaction terms; CRT score does not predict the dispositoin to see the CRT test as a valid measure of reflection and open-mindedness—in any of the conditions—independently of ideology. But there is a CRT-ideology/party interaction. That's what model 4 shows by adding 3-way interactions for party/ideology, CRT, and experimental treatment. There is a significant 3-way interaction effect - you can see that by looking at the Likelihood Ratio test (G-statistic), which confirms that the addition of the variables in model 4 added a statistically significant increment of explanatory power. But 3-way interactions are hard to interpret w/o graphic data illustration—which I supply in the post.