13 Appendix B: Individual Multinomial Logit Results

Note to editor and reviewers: This information could be moved to a website upon acceptance for publication.

Table 8: Multinomial Logit Results, 1964

		Democrat vs. Abstain		**Republican vs. Abstain**	
		Coefficient	Std.Err.	Coefficient	Std.Err.
	(Intercept)	-5.3005	0.0952	-8.7697	0.2049
Economy	No difference	0.0424	0.1359	0.7933	0.1434
	Better w/Republican	-1.5806	0.1848	0.1606	0.1742
Party Identification	Weak Democrat	-0.3382	0.1251	0.7314	0.0674
	Leaning Democrat	-0.3696	0.0817	0.0415	0.0770
	Independent	-0.6397	0.0762	0.4616	0.0809
	Leaning Republican	-0.5876	0.0950	2.5158	0.0793
	Weak Republican	-0.1227	0.1211	2.3554	0.1008
	Strong Republican	-0.8593	0.0886	2.9466	0.0738
Contacted by	Democrats	0.2145	0.0783	0.3715	0.0657
	Republicans	0.7655	0.0937	1.3041	0.0959
Church Attendance	Seldom	0.2745	0.1108	0.3317	0.0935
	Monthly	0.7491	0.1042	1.0799	0.0901
	Weekly	0.5832	0.1069	0.5747	0.0970
Education	High School	0.4466	0.1114	0.7342	0.0769
	Past High School	0.8578	0.0757	1.0856	0.0770
	Bachelors Degree	0.2817	0.0602	0.9744	0.0603
Catholic		0.3677	0.0975	0.0309	0.0685
Born Again		-0.7147	0.1143	-0.4273	0.0581
Married		0.1671	0.1554	0.0648	0.1069
Internal Efficacy		-0.3628	0.1332	-0.3431	0.0952
External Efficacy		0.2101	0.1358	0.2046	0.0832
Political Trust		0.6784	0.0689	-1.2141	0.1114
Impt. Party Diffs		0.3480	0.1223	0.5134	0.0642
Age		0.1370	0.0139	0.1170	0.0147
Age Squared		-0.0012	0.0002	-0.0009	0.0002
Care About Outcome	Not Much	0.2632	0.1247	-0.0683	0.1194
	Depends	0.5159	0.0714	-0.6959	0.1646
	Pretty Much	0.6212	0.1083	0.2174	0.0924
	Very Much	0.6381	0.1103	0.2861	0.0825
Political Interest	Slightly	0.5272	0.1112	1.4334	0.0947
	Fairly	1.2571	0.0940	1.7319	0.0787
	Very	1.4984	0.0901	2.6434	0.1023
Issue Knowledge		-0.0360	0.0597	-0.0290	0.0821
Candidate Evaluation	Johnson	0.0988	0.0531	-0.2299	0.0701
	Goldwater	0.2648	0.0660	-0.3312	0.0836
Medicare	Middle	0.1077	0.1102	0.5887	0.2311
	Oppose	-0.1142	0.1415	0.7099	0.1417
Job Guarantee	Middle	-0.2108	0.1299	-0.0630	0.1880
	Oppose	0.0493	0.1277	0.5578	0.1358
Equal Jobs	Middle	0.3628	0.1632	0.6323	0.1975
	Oppose	-0.0594	0.1358	0.1904	0.1545

Table 9: Multinomial Logit Results, 1976

		Democrat vs. Abstain		**Republican vs. Abstain**	
		Coefficient	Std.Err.	Coefficient	Std.Err.
	(Intercept)	-7.9130	0.2969	-8.4961	0.2873
Economy	Same	0.0296	0.1084	-0.1206	0.0830
	Worse	0.0973	0.0830	-0.2180	0.0849
Party Identification	Weak Democrat	-0.5515	0.1115	-0.1600	0.1085
	Leaning Democrat	-0.3812	0.1152	0.2255	0.0916
	Independent	-1.1420	0.0962	0.2574	0.1236
	Leaning Republican	-1.6058	0.0717	0.8481	0.0798
	Weak Republican	-1.2027	0.0963	0.9252	0.1265
	Strong Republican	-2.0238	0.1058	1.7590	0.0943
Contacted by	Democrats	0.2916	0.0879	0.3166	0.0786
	Republicans	0.5522	0.0649	0.6942	0.0648
Church Attendance	Seldom	0.5314	0.0941	0.2401	0.1066
	Monthly	1.0582	0.1142	0.7794	0.0851
	Almost Weekly	0.9794	0.1070	1.1506	0.1071
	Weekly	1.2253	0.1373	1.1257	0.1147
Education	9 to 11	-0.0447	0.0681	0.4954	0.0708
	High School	0.4599	0.0900	0.8349	0.0848
	Past High School	1.0603	0.0962	1.4336	0.1000
	Junior College	2.7783	0.0943	2.6942	0.0853
	Bachelors Degree	0.3868	0.0879	1.1617	0.1031
	Advanced Degree	0.4847	0.0479	1.5693	0.0706
Catholic		0.2722	0.0857	0.0389	0.0847
Born Again		-0.0485	0.1022	-0.2173	0.1105
Married		0.3089	0.0883	0.4377	0.0743
Internal Efficacy		0.3338	0.0969	0.2649	0.0918
External Efficacy		0.6974	0.0865	0.7938	0.0912
Political Trust		0.0397	0.1698	-0.4596	0.1679
Impt. Party Diffs		0.0170	0.0951	-0.1166	0.0930
Age		0.1359	0.0119	0.0994	0.0106
Age squared		-0.0012	0.0001	-0.0008	0.0001
Care About Outcome		0.3637	0.0979	0.3859	0.0983
Political Interest	Fairly	0.3722	0.0935	0.5154	0.0941
	Very	0.7076	0.0781	0.5486	0.0744
Issue Knowledge		1.3240	0.0655	1.2961	0.0719

Table 9: Continued, Multinomial Logit Results, 1976

		Democrat vs. Abstain		**Republican vs. Abstain**	
		Coefficient	Std.Err.	Coefficient	Std.Err.
Race	Black	-0.0340	0.0561	-0.7629	0.1290
	Latino	-1.0578	0.1583	-1.5416	0.1154
Children		0.4656	0.0727	0.2685	0.0643
Government Inflation	Fair	0.7406	0.0997	0.0134	0.1102
	Poor	0.8219	0.1134	-0.4308	0.1269
Government Unploymt	Fair	-0.2551	0.1006	-0.2949	0.1033
		0.2771	0.1150	-0.2936	0.1304
Aid to Minorities	scale=2	-0.0329	0.0637	0.0839	0.1774
	scale=3	0.2276	0.1666	0.3917	0.1949
	scale=4	0.0080	0.1418	0.4779	0.1731
	scale=5	0.0202	0.1320	0.4865	0.2297
	scale=6	-0.1427	0.1658	0.6306	0.1639
	scale=7	-0.3293	0.1377	0.6008	0.1751
Abortion Allowed When	Rape	-0.1278	0.1043	-0.1825	0.1016
	Necessary	0.0636	0.1298	-0.2227	0.1071
	Always	0.3758	0.1070	-0.1013	0.0986
Trust Gerald Ford	scale=2	0.3867	0.0913	0.7755	0.3158
	scale=3	0.3910	0.0823	1.4167	0.2342
	scale=4	0.3538	0.1168	1.5502	0.2103
	scale=5	0.4354	0.1150	2.2589	0.2435
	scale=6	0.2425	0.0828	2.6035	0.2245
	scale=7	-0.3682	0.0670	2.5445	0.2201
Trust Jimmy Carter	scale=2	0.3715	0.1866	-0.3686	0.1585
	scale=3	0.5372	0.1407	-0.0356	0.1841
	scale=4	1.0814	0.1500	-0.3540	0.1502
	scale=5	1.0019	0.1491	-0.5370	0.1150
	scale=6	1.3193	0.1320	-1.1084	0.1483
	scale=7	1.6155	0.1336	-0.9347	0.1217
Approve of Pardon		-0.2335	0.0913	0.5889	0.1068
Equal Jobs	scale=2	0.6795	0.1575	0.3387	0.2716
	scale=3	0.3271	0.1959	0.5528	0.2628
	scale=4	0.3505	0.1398	0.6714	0.2127
	scale=5	0.1953	0.1635	0.6199	0.1772
	scale=6	0.7355	0.1555	1.0674	0.2061
	scale=7	0.6122	0.1468	1.0163	0.2320

Table 10: Multinomial Logit Results, 1984

		Democrat vs. Abstain		**Republican vs. Abstain**	
		Coefficient	Std.Err.	Coefficient	Std.Err.
	(Intercept)	-5.4021	0.2470	-6.9882	0.2044
Economy	Same	0.2384	0.1196	-0.1550	0.1357
	Worse	0.0545	0.1125	-0.4497	0.0882
Party Identification	Weak Democrat	-0.9677	0.1235	-0.1479	0.1263
	Leaning Democrat	-0.8563	0.0887	0.1086	0.0784
	Independent	-1.5161	0.0958	0.9195	0.0717
	Leaning Republican	-2.6305	0.0790	0.5740	0.1471
	Weak Republican	-2.0156	0.0852	0.8539	0.1433
	Strong Republican	-3.0858	0.1302	1.2427	0.1371
Contacted by	Democrats	0.2258	0.0917	0.2249	0.1001
	Republicans	0.9548	0.0685	0.7661	0.0838
Church Attendance	Seldom	0.4278	0.1457	0.3642	0.1515
	Monthly	0.5252	0.1411	0.2031	0.1282
	Almost Weekly	1.1859	0.1018	1.2554	0.1638
	Weekly	1.2628	0.1147	1.4034	0.1420
Education	9 to 11	-0.1492	0.1031	0.1572	0.0927
	High School	0.3097	0.1364	0.4011	0.1300
	Past High School	0.2353	0.1262	0.8137	0.1250
	Junior College	1.4724	0.0926	1.2155	0.0671
	Bachelors Degree	1.1506	0.0878	1.2811	0.0998
	Advanced Degree	0.9284	0.0745	1.0427	0.0648
Black		-0.4662	0.0908	-0.6154	0.0362
Catholic		0.3372	0.1220	0.2205	0.1243
Born Again		-0.0732	0.1091	-0.0055	0.1267
Married		0.5643	0.1723	0.6295	0.1604
Internal Efficacy		-0.1328	0.1071	-0.1540	0.1267
External Efficacy		0.4619	0.0878	0.3792	0.1033
Political Trust		-0.2463	0.1211	-0.0319	0.1046
Impt. Party Diffs		0.1335	0.1641	-0.1554	0.1858
Knowledge of Issues		0.6726	0.0834	0.2656	0.0978
Age		0.0795	0.0204	0.0935	0.0196
Age squared		-0.0006	0.0002	-0.0007	0.0002
Political Interest	Somewhat	0.5876	0.1067	0.5326	0.1011
	Very Much	1.0853	0.0931	0.9418	0.0879

Table 10: Continued, Multinomial Logit Results, 1984

		Democrat vs. Abstain		**Republican vs. Abstain**	
		Coefficient	Std.Err.	Coefficient	Std.Err.
Mondale Integrity		0.2243	0.0982	0.1249	0.1118
Mondale Competence		0.0270	0.1005	-0.4934	0.1057
Mondale Empathy		0.2582	0.0972	-0.2862	0.1080
Reagan Integrity		-0.3481	0.0783	0.7563	0.0739
Reagan Competence		-0.1262	0.0922	-0.1805	0.0874
Reagan empathy		-0.2914	0.1137	0.2752	0.1120
Abortion Allowed When	Rape	-0.2816	0.1274	0.2780	0.1188
	Necessary	-0.1421	0.1309	0.6918	0.1250
	Always	0.2755	0.1273	0.6918	0.1178
Environmental Spending	Same	0.0306	0.1535	0.0905	0.1393
	Decrease	-0.0472	0.0779	0.2460	0.1008
Aid to Blacks	scale=2	-0.0790	0.1729	0.6081	0.1771
	scale=3	0.3248	0.1389	0.6796	0.2387
	scale=4	0.1926	0.1632	0.7805	0.2342
	scale=5	0.3101	0.1150	0.6768	0.2178
	scale=6	0.0912	0.0983	0.9995	0.2075
	Blacks Help Selves	-0.0876	0.1636	0.7119	0.2298
Spending Services	scale=2	0.0891	0.2782	-0.0469	0.2010
	scale=3	0.0260	0.2299	-0.3888	0.2210
	scale=4	0.5075	0.2359	-0.4850	0.1867
	scale=5	0.3804	0.2578	-0.6952	0.2002
	scale=6	0.5206	0.2508	-1.1685	0.1942
	Reduce Spending	0.0153	0.1833	-0.8082	0.2429
President on Economy	Approve	0.7515	0.1304	0.1218	0.1350
	Disapprove	1.1490	0.1231	-0.2003	0.1193
	Strongly Disappr.	1.1008	0.1318	-0.5397	0.1528
Refusal		-0.8833	0.1926	0.1514	0.0269

Table 11: Multinomial Logit Results, 2000

		Democrat vs. Abstain		**Republican vs. Abstain**	
		Coefficient	Std.Err.	Coefficient	Std.Err.
	(Intercept)	-3.0297	0.2448	-8.4662	0.1546
Economy	Better	0.6705	0.1197	0.5125	0.0893
Retrospective	Same	0.4085	0.1098	0.4451	0.1253
	Worse	0.4022	0.1301	-0.1501	0.0794
	Much Worse	0.2072	0.0942	0.3749	0.1095
National Econ. Wording		0.0834	0.1132	-0.0037	0.1047
Party Identification	Weak Democrat	0.0206	0.1435	0.7858	0.1415
	Leaning Democrat	-0.4316	0.1206	1.3114	0.1197
	Independent	-0.5782	0.0942	1.2346	0.1214
	Leaning Repub.	-1.1616	0.1349	2.0116	0.1751
	Weak Repub.	-1.1736	0.1186	2.2066	0.1762
	Strong Repub.	-2.3403	0.1313	2.3326	0.1446
Contacted by	Democrats	0.6028	0.0987	0.7912	0.1000
	Republican	0.5379	0.0995	0.4923	0.1053
Church Attendance	Seldom	-0.1075	0.0936	0.0479	0.0804
	Monthly	0.8729	0.0962	0.6215	0.0833
	Almost Weekly	0.6472	0.1019	0.6995	0.0659
	Weekly	0.1084	0.1171	0.1705	0.1034
Education	9 to 11	-0.2502	0.0764	0.0478	0.1598
	High School	0.3109	0.1220	0.3291	0.1392
	Past High School	0.3962	0.1273	0.6350	0.1725
	Junior College	0.7625	0.0606	0.6932	0.1308
	Bachelors Degree	1.1465	0.1048	1.1250	0.1817
	Advanced Degree	1.3548	0.0888	1.4701	0.1315
Black		0.6971	0.0918	-0.3274	0.1115
Latino		-0.2118	0.0412	-0.7945	0.0601
Catholic		0.3971	0.1002	1.0317	0.0948
Born Again		0.1473	0.0787	0.9080	0.0777
Black×Born Again		-0.2931	0.0793	-1.1927	0.1652
Married		0.4068	0.1048	0.4590	0.0998
Internal Efficacy		-0.0253	0.0791	0.3553	0.0682
External Efficacy		0.9910	0.1034	0.9856	0.1398
Trust		0.6330	0.1987	0.1497	0.1709
Important differences		-0.0206	0.1276	0.0870	0.1084
Issue Knowledge		0.5091	0.0594	0.5168	0.0701
Age		0.0320	0.0227	0.0385	0.0250
Age Squared		-0.0001	0.0002	-0.0002	0.0002
Care About Outcome		0.8258	0.1032	0.9093	0.1165
Have Children		-0.1048	0.0915	-0.0362	0.0845
Interest	Somewhat	0.8436	0.0940	0.3895	0.0956
	Very Much	1.0451	0.0823	0.2938	0.0813

Table 12: Continued, Multinomial Logit Results, 2000

		Democrat vs. Abstain		**Republican vs. Abstain**	
		Coefficient	Std.Err.	Coefficient	Std.Err.
Clinton Economic	Approve	0.1443	0.1247	0.1951	0.1288
Job Approval	Disapprove	-0.5078	0.1290	-0.0419	0.1224
	Strongly Disapp.	-1.2976	0.0861	-0.1163	0.0989
Gore Integrity		0.0332	0.1153	-0.1033	0.1180
Gore Empathy		0.3629	0.1284	-0.4353	0.1257
Gore Competence		0.0634	0.1199	-0.4823	0.1310
Bush Integrity		-0.0165	0.1816	0.3245	0.1191
Bush Empathy		-0.5172	0.1419	0.2295	0.1032
Bush Competence		-0.5212	0.1486	0.6329	0.1192
Moral Issues		-0.7708	0.1449	-0.2181	0.1836
Service Issues		-0.1038	0.3778	0.9905	0.1438
Race Issues		-0.4636	0.1551	-0.0022	0.2868
Environment Issues		0.3290	0.3228	0.6308	0.2905
Discussants	All Favored Bush	-1.1573	0.0715	0.2629	0.0958
	All favored Gore	0.5482	0.1086	0.0970	0.0735
	Number	0.3107	0.0682	0.1104	0.0720
Refusal		-0.2511	0.0603	-0.3622	0.0507

Appendix C: Coding for 1984

Note to editor and reviewers: This information could be moved to a website upon acceptance for publication.

SPSS was used to input data and perform initial data manipulations. R was used to estimate MNL models and generate probabilities of voting Democratic, voting Republican, and abstention.

```
***  SPSS code to select variables and initial recodes ***

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DATA LIST FILE=DATA /
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  V38 137-137
  V59 191-192
  V60 193-194
  V61 195-195
  V71 215-215
  V72 216-216
  V73 217-217
  V74 218-218
  V75 219-219
  V80 224-224
  V81 225-225
  V227 463-463
  V228 464-464
  V260 502-502
  V261 503-503
  V312 652-652
  V313 653-653
  V314 654-654
  V319 659-659
  V320 660-660
  V321 661-661
  V322 662-662
  V323 663-663
  V324 664-664
  V325 665-665
  V326 666-666
  V327 667-667
  V328 668-668
  V329 669-669
  V330 670-670
  V331 671-671
  V332 672-672
  V333 673-673
  V334 674-674
  V335 675-675
  V336 676-676
  V337 677-677
  V338 678-678
  V339 679-679
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V340 680-680
V341 681-681
V342 682-682
V343 683-683
V344 684-684
V345 685-685
V346 686-686
V347 687-687
V348 688-688
V349 689-689
V350 690-690
V373 713-713
V374 714-714
V375 715-715
V378 718-718
V379 719-719
V382 722-722
V385 725-725
V386 726-726
V391 731-731
V392 732-732
V398 738-738
V399 739-739
V404 744-744
V405 745-745
V411 751-751
V412 752-752
V417 757-757
V418 758-758
V423 763-763
V429 773-774
V430 775-775
V438 788-789
V687 1164-1166
V688 1167-1167
V708 1208-1208
V709 1209-1209
V722 1224-1224
V783 1357-1357
V787 1361-1361
V788 1362-1362
V812 1390-1390
V813 1391-1391
V814 1392-1392
V815 1393-1393
V816 1394-1395
V817 1396-1397
V843 1423-1423
V844 1424-1424
V845 1425-1425
V846 1426-1426
V866 1446-1446
V867 1447-1447
V996 1640-1640

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  V1063 1722-1722
  V1064 1723-1723
  V1065 1724-1724
  V1066 1725-1725
  V1078 1737-1737
  V1080 1739-1739
  V1111 1772-1772
  V1112 1773-1773
  V1113 1774-1774
  V1114 1775-1775
  V1115 1776-1776
  V1116 1777-1777
  V1133 1823-1823
  .
MISSING VALUES
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  V60 (0)
  V71 (9)
  V72 (9)
  V73 (9)
  V74 (9)
  V80 (8 thru highest)
  V227 (8 thru highest)
  V228 (8 thru highest, 0)
  V260 (8 thru highest)
  V261 (8 thru highest, 0)
  V312 (8 thru highest)
  V313 (8 thru highest)
  V314 (8 thru highest)
  V315 (8 thru highest)
  V319 (8 thru highest)
  V320 (8 thru highest)
  V321 (8 thru highest)
  V322 (8 thru highest)
  V323 (8 thru highest)
  V324 (8 thru highest)
  V325 (8 thru highest)
  V326 (8 thru highest)
  V327 (8 thru highest)
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  V330 (8 thru highest)
  V331 (8 thru highest)
  V332 (8 thru highest)
  V333 (8 thru highest)
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  V336 (8 thru highest)
  V337 (8 thru highest)
  V338 (8 thru highest)
  V339 (8 thru highest)
  V340 (8 thru highest)
  V341 (8 thru highest)
  V342 (8 thru highest)
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V343 (8 thru highest)
V344 (8 thru highest)
V345 (8 thru highest)
V346 (8 thru highest)
V347 (8 thru highest)
V348 (8 thru highest)
V349 (8 thru highest)
V350 (8 thru highest)
V373 (8 thru highest, 0)
V374 (8 thru highest, 0)
V375 (8 thru highest, 0)
V378 (8 thru highest, 0)
V379 (8 thru highest, 0)
V380 (8 thru highest, 0)
V382 (8 thru highest, 0)
V385 (8 thru highest, 0)
V386 (8 thru highest, 0)
V391 (8 thru highest, 0)
V392 (8 thru highest, 0)
V393 (8 thru highest, 0)
V398 (8 thru highest, 0)
V399 (8 thru highest, 0)
V404 (8 thru highest, 0)
V405 (8 thru highest, 0)
V406 (8 thru highest, 0)
V411 (8 thru highest, 0)
V412 (8 thru highest, 0)
V413 (8 thru highest, 0)
V414 (8 thru highest, 0)
V415 (8 thru highest, 0)
V416 (8 thru highest, 0)
V417 (8 thru highest, 0)
V418 (8 thru highest, 0)
V423 (8 thru highest)
V429 (0)
V430 (9)
V438 (98 thru highest)
V687 (996 thru highest)
V688 (8 thru highest, 0)
V708 (9)
V709 (8 thru highest)
V722 (8 thru highest)
V783 (8 thru highest)
V788 (8 thru highest, 0)
V812 (8 thru highest)
V813 (8 thru highest, 0)
V814 (8 thru highest)
V815 (8 thru highest, 0)
V816 (98 thru highest, 0)
V817 (0)
V843 (8 thru highest)
V844 (8 thru highest, 0)
V845 (8 thru highest)
V846 (8 thru highest, 0)

```
  V866 (7 thru highest, 9)
  V867 (8 thru highest, 0)
  V996 (8 thru highest)
  V1063 (8 thru highest)
  V1064 (8 thru highest)
  V1065 (8 thru highest)
  V1066 (8 thru highest)
  V1080 (8 thru highest, 0)
  V1111 (9)
  V1112 (9)
  V1113 (9)
  V1114 (9)
  V1115 (9)
  V1116 (9).

cro tables= v788 v783 v787 by v1133.


comment * outcome variable - vote choice *
compute rvote = 9.
if (v1133 eq 1 and v788 eq 1) rvote = 2.
if (v1133 eq 1 and v788 eq 2) rvote = 1.
if (v1133 eq 1 and v787 eq 5) rvote = 0.
if (v1133 ge 3 and v1133 le 7) rvote = 0.
if (v1133 ge 8 and v788 eq 1) rvote = 2.
if (v1133 ge 8 and v788 eq 2) rvote = 1.
if (v1133 ge 8 and v783 eq 5) rvote = 0.
missing values rvote (9).
value labels rvote 0 'abstain' 1 'Mondale'  2 'Reagan'.
var labels rvote 'Vote recoded'.
fre var = rvote.
select if (rvote ne 9).
compute vote = rvote.

comment * retrospective evaluation of economy *.
compute natecon = v227.
value labels natecon 1 'much better' 3 'same' 5 'much worse' 8 'dk' 9 'ref' 0
'na'.
missing values natecon (8,9,0).
var labels natecon 'National economy over past year'.

compute prezecon = v261.
value labels prezecon 1 'Approve str' 2 'Approve' 4 'Disapprove' 5 'Disapp
str'.
missing values prezecon (0,8,9).

compute partyid = v866.
value labels partyid 0 'SD' 6 'SR'.
missing values partyid (7,8,9).

compute mondint = 5 - (mean.3(v335, v336, v337, v340, v341, v350)).
compute mondcomp = 5 - (mean.3(v338,v339,v342,v343,v344,v346)).
compute mondemp = 5 - (mean.3(v345,v347,v348,v349)).
compute reagint =  5 - (mean.3(v319,v320,v321,v324,v325,v334)).
```

```
compute reagcomp = 5 - (mean.3(v322,v323,v326,v327,v328,v330)).
compute reagemp = 5 - (mean.3(v329,v331,v332,v333)).
value labels mondint, mondcomp, mondemp, reagint, reagcomp, reagemp 1 'not
well' 4 'extremely well'.
descriptives var = mondint, mondcomp, mondemp, reagint, reagcomp, reagemp.

compute abortion = v423.
missing values abortion (7,8,9).

compute envspnd = v996.
missing values envspnd (8,9).

compute aidblack = v382.
missing values aidblack (8,9,0).

compute services = v375.
missing values services (8,9,0).

compute contactd = 0.
if (v813 eq 3 or v813 eq 5 or v816 eq 50) contactd = 1.

compute contactr = 0.
if (v813 eq 3 or v813 eq 1 or v816 eq 1) contactr = 1.

compute church = 9 .
compute church = (5 - v688) / 4.
if (v687 eq 998) church = 0.
missing values church (9).
var labels church 'Church attendance'.

recode v438 (1,2=0) (3,4=.16666) (5,6=.33333) (7=.5) (8=.66666) (9=.83333)
(10=1) (98,99=sysmis) into educ.
var labels educ 'Education'.


recode v708 (2=1) (1,3,4,7=0) (9=sysmis) into black.

recode v709 (1,2,3=1) (4=0) (8,9=sysmis) into latino.

recode v687 (200 = 1) (996,999=sysmis) (else=0) into catholic.

recode v1080 (1=1) (5,8,9,0=0) into bornagin.
if (v1078 eq 9) bornagin = 9.
missing values bornagin (9).

recode v430 (1=1) (3 thru 7 = 0) (9 = sysmis) into married.
compute kids = 9.
if (v71 eq 0 and v72 eq 0 and v73 eq 0 and v74 eq 0) kids = 0.
if ((v71 ne 0 and v71 ne 9) or (v72 ne 0 and v72 ne 9) or (v73 ne 0 and v73 ne
9) or (v74 ne 0 and v74 ne 9)) kids = 1.
missing values kids (9).
recode v314 (1=0) (5=1) (8,9=sysmis) into inteff.
var labels inteff 'Internal efficacy'.
recode v312 (1=0) (5=1) (8,9=sysmis) into exteff1.
```

```
recode v313 (1=0) (5=1) (8,9=sysmis) into exteff2.
compute exteff = mean.1 (exteff1, exteff2).
var labels exteff 'External efficacy'.
recode v1063 (1=1) (3=.5) (5=0) (else=sysmis) into trust1.
recode v1064 (1=1) (3=.5) (5,7=0) (else=sysmis) into trust2.
recode v1065 (1=1) (5=0) (else=sysmis) into trust3.
recode v1066 (1=1) (3=.5) (5=0) (else=sysmis) into trust4.
compute trust = mean.4 (trust1, trust2, trust3, trust4).
var labels trust 'Political Trust'.
recode v867 (1=1) (5,8=0) (9,0 = sysmis) into imptdiff.
var labels imptdiff 'Important Differences'.
do repeat k = klibcon, kspnd, kblack, kcamer, kdef, kwomen, krussia, kjobs /
               klow = v373, v379, v385, v392, v398 , v404, v411, v417  /
               khigh = v374, v378, v386, v391, v399, v405, v412, v418 /
               kdist = kdlibcon, kdspnd, kdblack, kdcamer, kddef, kdwomen,
kdrussia, kdjobs.
compute k = 0.
if (klow lt khigh and khigh le 7 and klow ge 1) k = 1.
compute kdist = (khigh - klow) ** 2.
end repeat.
compute kissues = mean.8 (klibcon, kspnd, kblack, kcamer, kdef, kwomen,
krussia, kjobs).
compute kdist = mean.2 (kdlibcon, kdspnd, kdblack, kdcamer, kddef, kdwomen,
kdrussia, kdjobs).
var labels kissues 'Knowledge issue placements'
               kdist 'Average squared distance between parties'.
compute age = v429.
missing values age (0).
recode v80 (1=1) (3=0) (8,9,0=sysmis) into care.
recode v722 (1=1) (3=0.5) (5=0) (8,9,0=sysmis) into interest.
compute refusal = v38.
compute caseid = v4.
save outfile = 'd:\nes84v.sav' / keep caseid, vote, natecon, prezecon,
partyid, mondint, mondcomp, mondemp, reagint, reagcomp,
  reagemp, abortion, envspnd, aidblack,services, contactd, contactr, church,
educ, black, latino, catholic, bornagin, married,
  kids, inteff, exteff, trust, imptdiff, kissues, kdist, age, care, interest,
refusal, v1111 to v1116 / compressed.
get file = 'd:\nes84v.sav'.
recode all (missing = sysmis) (else = copy).
save outfile = 'd:\nes84v.sav' / compressed.

***  R code to read data from SPSS file ***

# read data
library(foreign)
temp.df <- as.data.frame(read.spss("d:/Nes84.sav"))

nes1984.df <- NULL
nes1984.df$caseid <- temp.df$CASEID
nes1984.df$vote<- temp.df$VOTE
nes1984.df$natecon<- temp.df$NATECON
nes1984.df$prezecon<- temp.df$PREZECON
nes1984.df$partyid<- temp.df$PARTYID
```

```
nes1984.df$mondint<- temp.df$MONDINT
nes1984.df$mondcomp<- temp.df$MONDCOMP
nes1984.df$mondemp<- temp.df$MONDEMP
nes1984.df$reagint<- temp.df$REAGINT
nes1984.df$reagcomp<- temp.df$REAGCOMP
nes1984.df$reagemp<- temp.df$REAGEMP
nes1984.df$abortion<- temp.df$ABORTION
nes1984.df$envspnd<- temp.df$ENVSPND
nes1984.df$aidblack<- temp.df$AIDBLACK
nes1984.df$services<- temp.df$SERVICES
nes1984.df$contactd<- temp.df$CONTACTD
nes1984.df$contactr<- temp.df$CONTACTR
nes1984.df$church<- temp.df$CHURCH
nes1984.df$educ<- temp.df$EDUC
nes1984.df$black<- temp.df$BLACK
nes1984.df$catholic<- temp.df$CATHOLIC
nes1984.df$bornagin<- temp.df$BORNAGIN
nes1984.df$married<- temp.df$MARRIED
nes1984.df$kids<- temp.df$KIDS
nes1984.df$inteff<- temp.df$INTEFF
nes1984.df$exteff<- temp.df$EXTEFF
nes1984.df$trust<- temp.df$TRUST
nes1984.df$imptdiff<- temp.df$IMPTDIFF
nes1984.df$kissues<- temp.df$KISSUES
nes1984.df$kdist<- temp.df$KDIST
nes1984.df$age<- temp.df$AGE
nes1984.df$care<- temp.df$CARE
nes1984.df$interest<- temp.df$INTEREST
nes1984.df$refusal<- temp.df$REFUSAL
nes1984.df$V1111<- temp.df$V1111
nes1984.df$V1112<- temp.df$V1112
nes1984.df$V1113<- temp.df$V1113
nes1984.df$V1114<- temp.df$V1114
nes1984.df$V1115<- temp.df$V1115
nes1984.df$V1116<- temp.df$V1116

rm (temp.df)
attach(nes1984.df)
my.desc(nes1984.df)

my.order.factor <- function(x,y) {
 x <- factor(as.ordered(x))
 #levels(x) <- y
 table(x,exclude=c(NaN)) }

my.order.factor (nes1984.df$natecon,c('better','same','worse'))
my.order.factor (nes1984.df$prezecon,c('Approve
str','Approve','Disapprove','Disapp str'))
my.order.factor (nes1984.df$abortion,c('Never','Rape','Necessary','Always'))
my.order.factor (nes1984.df$envspnd,c('Increased','Same','Decrease'))
my.order.factor (nes1984.df$aidblack,c('Govt help blacks','2','3','4','5','6',
            'Blacks help themselves'))
my.order.factor (nes1984.df$services, c('Increase
spending','2','3','4','5','6',
```

```
            'Reduce spending'))
my.order.factor (nes1984.df$church,c('Never','Few times a year',
          'Once or twice a month','Almost every week','Every week'))
my.order.factor (nes1984.df$educ,c('8 or less','9 to 11','High School',
         'More than high school','Jr college','Bachelor','Adv Degree'))
my.order.factor (nes1984.df$interest,c("not much","somewhat","very much"))


nes1984.df$partyid <- factor(partyid)
 # levels(nes1984.df$partyid) <- c("Strong Democrat","Weak Democrat",
        #   "Leaning Democrat","Independent","Leaning Republican",
        #   "Weak Republican","Strong Republican")
table(partyid,exclude=c(NaN))

my.write.table <- function(df,out.file) {
 write.table(df,file=out.file,sep=" ", quote=F,row.names=F,col.names=T) }

my.write.table (nes1984.df,"i:nes1984.dat")

***  R code for multiple imputation ****

library(nnet)
library(mice)
source("c:/Temp/mice.R")
anes.1984.mat <- read.table("i:nes1984.dat",header=T)
imp.1984.anes <- mice(anes.1984.mat,m=10)
anes.1984.imp.mat.1 <- complete(imp.1984.anes,1)
anes.1984.imp.mat.2 <- complete(imp.1984.anes,2)
anes.1984.imp.mat.3 <- complete(imp.1984.anes,3)
anes.1984.imp.mat.4 <- complete(imp.1984.anes,4)
anes.1984.imp.mat.5 <- complete(imp.1984.anes,5)
anes.1984.imp.mat.6 <- complete(imp.1984.anes,6)
anes.1984.imp.mat.7 <- complete(imp.1984.anes,7)
anes.1984.imp.mat.8 <- complete(imp.1984.anes,8)
anes.1984.imp.mat.9 <- complete(imp.1984.anes,9)
anes.1984.imp.mat.10 <- complete(imp.1984.anes,10)

# read imputed dataset and restore levels

#run 10 times (once for each imputed dataset)

for (k in 1:10) {

if (k == 1)
 nes1984i.df<-data.frame(anes.1984.imp.mat.1)
if (k == 2)
 nes1984i.df<-data.frame(anes.1984.imp.mat.2)
if (k == 3)
 nes1984i.df<-data.frame(anes.1984.imp.mat.3)
if (k == 4)
 nes1984i.df<-data.frame(anes.1984.imp.mat.4)
if (k == 5)
 nes1984i.df<-data.frame(anes.1984.imp.mat.5)
if (k == 6)
```

```
 nes1984i.df<-data.frame(anes.1984.imp.mat.6)
if (k == 7)
 nes1984i.df<-data.frame(anes.1984.imp.mat.7)
if (k == 8)
 nes1984i.df<-data.frame(anes.1984.imp.mat.8)
if (k == 9)
 nes1984i.df<-data.frame(anes.1984.imp.mat.9)
if (k == 10)
 nes1984i.df<-data.frame(anes.1984.imp.mat.10)

names(nes1984i.df) <- names(nes1984.df)

attach(nes1984i.df)

my.ofactor <- function(x,y) {
 x <- factor(as.ordered(x))
 levels(x) <- y
 table(x,exclude=c(NaN))
  x }

nes1984i.df$natecon <-my.ofactor
(nes1984i.df$natecon,c('better','same','worse'))
nes1984i.df$prezecon <- my.ofactor(nes1984i.df$prezecon,c('Approve
str','Approve','Disapprove','Disapp str'))
nes1984i.df$abortion <- my.ofactor
(nes1984i.df$abortion,c('Never','Rape','Necessary','Always'))
nes1984i.df$envspnd <- my.ofactor
(nes1984i.df$envspnd,c('Increased','Same','Decrease'))
nes1984i.df$aidblack <- my.ofactor (nes1984i.df$aidblack,c('Govt help
blacks','2','3','4','5','6',
            'Blacks help themselves'))
nes1984i.df$services <- my.ofactor (nes1984i.df$services, c('Increase
spending','2','3','4','5','6',
            'Reduce spending'))
nes1984i.df$church <- my.ofactor (nes1984i.df$church,c('Never','Few times a
year',
         'Once or twice a month','Almost every week','Every week'))
nes1984i.df$educ <- my.ofactor (nes1984i.df$educ,c('8 or less','9 to 11','High
School',
        'More than high school','Jr college','Bachelor','Adv Degree'))
nes1984i.df$interest <- my.ofactor (nes1984i.df$interest,c("not
much","somewhat","very much"))

nes1984i.df$partyid <- factor(partyid)
  levels(nes1984i.df$partyid) <- c("Strong Democrat","Weak Democrat",
            "Leaning Democrat","Independent","Leaning Republican",
            "Weak Republican","Strong Republican")
table(nes1984i.df$partyid,exclude=c(NaN))

if (k == 1)
 nes1984.i1.df <- nes1984i.df
if (k == 2)
 nes1984.i2.df <- nes1984i.df
if (k == 3)
```

```
 nes1984.i3.df <- nes1984i.df
if (k == 4)
 nes1984.i4.df <- nes1984i.df
if (k == 5)
 nes1984.i5.df <- nes1984i.df
if (k == 6)
 nes1984.i6.df <- nes1984i.df
if (k == 7)
 nes1984.i7.df <- nes1984i.df
if (k == 8)
 nes1984.i8.df <- nes1984i.df
if (k == 9)
 nes1984.i9.df <- nes1984i.df
if (k == 10)
 nes1984.i0.df <- nes1984i.df

detach(nes1984i.df)
rm(nes1984i.df)
 } # end k loop

rm (anes.1984.imp.mat.1)
rm (anes.1984.imp.mat.2)
rm (anes.1984.imp.mat.3)
rm (anes.1984.imp.mat.4)
rm (anes.1984.imp.mat.5)
rm (anes.1984.imp.mat.6)
rm (anes.1984.imp.mat.7)
rm (anes.1984.imp.mat.8)
rm (anes.1984.imp.mat.9)
rm (anes.1984.imp.mat.10)
rm (imp.1984.anes)
rm (anes.1984.mat)

***  Multinomial logit model  ***

# run the mnl model 10 times

library(nnet)

for (k in 1:10) {
if (k == 1) nes1984i.df <- nes1984.i1.df
if (k == 2) nes1984i.df <- nes1984.i2.df
if (k == 3) nes1984i.df <- nes1984.i3.df
if (k == 4) nes1984i.df <- nes1984.i4.df
if (k == 5) nes1984i.df <- nes1984.i5.df
if (k == 6) nes1984i.df <- nes1984.i6.df
if (k == 7) nes1984i.df <- nes1984.i7.df
if (k == 8) nes1984i.df <- nes1984.i8.df
if (k == 9) nes1984i.df <- nes1984.i9.df
if (k == 10) nes1984i.df <- nes1984.i0.df

attach(nes1984i.df)
agesq <- nes1984i.df$age ^ 2
nes1984i.df<-data.frame(nes1984i.df,agesq)
```

```
anes.multinom <- multinom(vote ~ natecon + prezecon + partyid + mondint +
mondcomp +
  mondemp + reagint + reagcomp + reagemp + abortion + envspnd + aidblack +
services +
  contactd + contactr + church + educ + black + catholic + bornagin + married
+
  inteff + exteff + trust + imptdiff + kissues + age + agesq +
  interest + refusal,
  data=nes1984i.df)

se.anes <- sqrt(diag(vcov.multinom(anes.multinom)))

nv <- 61
nv1 <- nv + 1
nv2 <- nv * 2

anes.out.table <- round( cbind( coef.multinom(anes.multinom)[1,],
coef.multinom(anes.multinom)[1,]-1.96*se.anes[1:nv],

coef.multinom(anes.multinom)[1,]+1.96*se.anes[1:nv],
              coef.multinom(anes.multinom)[2,],
coef.multinom(anes.multinom)[2,]-1.96*se.anes[nv1:nv2],

coef.multinom(anes.multinom)[2,]+1.96*se.anes[nv1:nv2] ),4 )
dimnames(anes.out.table)[[2]] <- c("Dem vs. Abs","95% Lower","95% Upper","Rep
vs. Abs","95% Lower","95% Upper")
anes.out.table

if (k == 1) {
anes.out.1.table <- anes.out.table
anes.out.1<-round( cbind(coef.multinom(anes.multinom)[1,],se.anes[1:nv],

coef.multinom(anes.multinom)[2,],se.anes[nv1:nv2]),4) }

if (k == 2) {
anes.out.2.table <- anes.out.table
anes.out.2<-round( cbind(coef.multinom(anes.multinom)[1,],se.anes[1:nv],

coef.multinom(anes.multinom)[2,],se.anes[nv1:nv2]),4) }
if (k == 3) {
anes.out.3.table <- anes.out.table
anes.out.3<-round( cbind(coef.multinom(anes.multinom)[1,],se.anes[1:nv],

coef.multinom(anes.multinom)[2,],se.anes[nv1:nv2]),4) }
if (k == 4) {
anes.out.4.table <- anes.out.table
anes.out.4<-round( cbind(coef.multinom(anes.multinom)[1,],se.anes[1:nv],

coef.multinom(anes.multinom)[2,],se.anes[nv1:nv2]),4) }
if (k == 5) {
anes.out.5.table <- anes.out.table
anes.out.5<-round( cbind(coef.multinom(anes.multinom)[1,],se.anes[1:nv],

coef.multinom(anes.multinom)[2,],se.anes[nv1:nv2]),4) }
```

```
if (k == 6) {
anes.out.6.table <- anes.out.table
anes.out.6<-round( cbind(coef.multinom(anes.multinom)[1,],se.anes[1:nv],

coef.multinom(anes.multinom)[2,],se.anes[nv1:nv2]),4) }
if (k == 7) {
anes.out.7.table <- anes.out.table
anes.out.7<-round( cbind(coef.multinom(anes.multinom)[1,],se.anes[1:nv],

coef.multinom(anes.multinom)[2,],se.anes[nv1:nv2]),4) }
if (k == 8) {
anes.out.8.table <- anes.out.table
anes.out.8<-round( cbind(coef.multinom(anes.multinom)[1,],se.anes[1:nv],

coef.multinom(anes.multinom)[2,],se.anes[nv1:nv2]),4) }
if (k == 9) {
anes.out.9.table <- anes.out.table
anes.out.9<-round( cbind(coef.multinom(anes.multinom)[1,],se.anes[1:nv],

coef.multinom(anes.multinom)[2,],se.anes[nv1:nv2]),4) }
if (k == 10) {
anes.out.0.table <- anes.out.table
anes.out.0<-round( cbind(coef.multinom(anes.multinom)[1,],se.anes[1:nv],

coef.multinom(anes.multinom)[2,],se.anes[nv1:nv2]),4) }

rm(nes1984i.df, anes.multinom, se.anes, anes.out.table, agesq)

  } # end k loop

#anes.out.array is the output of the multinomial logit models
# 61 rows (variables)
# 4 columns (coeff 1, s.e. 1, coeff 2, s.e. 2)
# 10 levels (imputations)

R <- 61

anes.out.array<-array(matrix(anes.out.1,byrow=T,ncol=1),dim=c(R,4,1))
anes.out.array<-array(c(anes.out.array,matrix(anes.out.2,byrow=T,ncol=1)),dim=
c(R,4,2))
anes.out.array<-array(c(anes.out.array,matrix(anes.out.3,byrow=T,ncol=1)),dim=
c(R,4,3))
anes.out.array<-array(c(anes.out.array,matrix(anes.out.4,byrow=T,ncol=1)),dim=
c(R,4,4))
anes.out.array<-array(c(anes.out.array,matrix(anes.out.5,byrow=T,ncol=1)),dim=
c(R,4,5))
anes.out.array<-array(c(anes.out.array,matrix(anes.out.6,byrow=T,ncol=1)),dim=
c(R,4,6))
anes.out.array<-array(c(anes.out.array,matrix(anes.out.7,byrow=T,ncol=1)),dim=
c(R,4,7))
anes.out.array<-array(c(anes.out.array,matrix(anes.out.8,byrow=T,ncol=1)),dim=
c(R,4,8))
anes.out.array<-array(c(anes.out.array,matrix(anes.out.9,byrow=T,ncol=1)),dim=
c(R,4,9))
```

```
anes.out.array<-array(c(anes.out.array,matrix(anes.out.0,byrow=T,ncol=1)),dim=
c(R,4,10))

#calculate matrix with coefficients and standard errors across imputations
#new matrix is R rows (variables) by 4 columns (coeff 1, s.e. 1, coeff 2, s.e.
2)
anes.out.matrix<-matrix(data=NA,nrow=R,ncol=4)

#calculate means of coefficients across levels
 anes.out.matrix[,1]<-round(apply(anes.out.array[,1,],1,mean),4)
 anes.out.matrix[,3]<-round(apply(anes.out.array[,3,],1,mean),4)

#compute variance 1   s.e. 1
v1<-matrix(data=NA,nrow=R,ncol=10)
  v1[,]<-anes.out.array[,2,]^2

#within imputation variance is the mean of the variances
w1<-vector(length=R)
  w1<-apply(v1,1,mean)

#between imputation variance is the variance of the estimated coefficients
b1<-vector(length=R)
  b1<-apply(anes.out.array[,1,],1,var)

#pool within and between variance
anes.out.matrix[,2] <- round(((w1 + (11/10)*b1) ^ 0.5),4)

#repeat steps for second set of coefficients and s.e.
v2<-matrix(data=NA,nrow=R,ncol=10)
  v2[,]<-anes.out.array[,4,]^2
w2<-vector(length=R)
  w2<-apply(v2,1,mean)
b2<-vector(length=R)
  b2<-apply(anes.out.array[,3,],1,var)
anes.out.matrix[,4] <- round(((w2 + (11/10)*b2) ^ 0.5),4)

#the following dimnames commands inexplicably don't work
colnames(anes.out.matrix) <- c(
  "Dem vs. Abs",
  "s.e.(Dem vs Abs)",
  "Rep vs. Abs",
  "s.e.(Rep vs Abs)")
rownames(anes.out.matrix) <- rownames (anes.out.0)
anes.out.matrix

rm(w1,b1,w2,b2,v1,v2,R)

*** Produce the tables ****

# run the mnl model

V4 <- rep(1,length(nes1984.i1.df$vote))
library(nnet)
validate.table <- NULL
```

```
p.vote.table.array <- NULL
p.turnout.table.array <- NULL
turnout.table.array <- NULL

for (kimpute in 1:10) {

if (kimpute == 1) nes1984i.df <- nes1984.i1.df
if (kimpute == 2) nes1984i.df <- nes1984.i2.df
if (kimpute == 3) nes1984i.df <- nes1984.i3.df
if (kimpute == 4) nes1984i.df <- nes1984.i4.df
if (kimpute == 5) nes1984i.df <- nes1984.i5.df
if (kimpute == 6) nes1984i.df <- nes1984.i6.df
if (kimpute == 7) nes1984i.df <- nes1984.i7.df
if (kimpute == 8) nes1984i.df <- nes1984.i8.df
if (kimpute == 9) nes1984i.df <- nes1984.i9.df
if (kimpute == 10) nes1984i.df <- nes1984.i0.df

agesq <- nes1984i.df$age ^ 2
nes1984i.df<-data.frame(nes1984i.df,agesq)
attach(nes1984i.df)

anes.multinom <- multinom(vote ~ natecon + prezecon + partyid + mondint +
mondcomp +
  mondemp + reagint + reagcomp + reagemp + abortion + envspnd + aidblack +
services +
  contactd + contactr + church + educ + black + catholic + bornagin + married
+
  inteff + exteff + trust + imptdiff + kissues + age + agesq +
  interest + refusal,
  data=nes1984i.df)

se.anes <- sqrt(diag(vcov.multinom(anes.multinom)))

x <- predict.multinom(anes.multinom, nes1984i.df)
table (vote)
table (x)
table (vote, x)
rm (x)

anes.sub.mat <- cbind(vote, natecon, prezecon, partyid, mondint, mondcomp,
  mondemp, reagint, reagcomp, reagemp, abortion, envspnd, aidblack, services,
  contactd, contactr, church, educ, black, catholic, bornagin, married,
  inteff, exteff, trust, imptdiff, kissues, age, agesq,
  interest, refusal)

# create an out matrix of dummy variables based on variable v with c values
my.dummy <- function (v,c) {
 out <- NULL
 out <- matrix(0,nrow=nrow(anes.sub.mat),ncol=c)
 j <- as.numeric(v)
 for (i in 1:nrow(anes.sub.mat))
   out[i,j[i]] <- 1
 out <- out[,-1]
 out
```

```
  }
natecon.mat <- my.dummy(natecon,3)
prezecon.mat <- my.dummy(prezecon,4)
partyid.mat <- my.dummy(partyid,7)
abortion.mat <- my.dummy(abortion,4)
envspnd.mat <- my.dummy(envspnd,3)
aidblack.mat <- my.dummy(aidblack,7)
services.mat <- my.dummy(services,7)
church.mat <- my.dummy(church,5)
educ.mat <- my.dummy(educ,7)
interest.mat <- my.dummy(interest,3)

predict.mat <- cbind(intercept=rep(1,length(vote)), natecon.mat, prezecon.mat,
partyid.mat,
  mondint, mondcomp,
  mondemp, reagint, reagcomp, reagemp, abortion.mat, envspnd.mat,
aidblack.mat,
  services.mat,
  contactd, contactr, church.mat, educ.mat, black, catholic, bornagin,
married,
  inteff, exteff, trust, imptdiff, kissues, age, agesq,
  interest.mat, refusal)

rm(natecon.mat, prezecon.mat, partyid.mat, abortion.mat, envspnd.mat,
 aidblack.mat, services.mat, church.mat, educ.mat, interest.mat)

logit <- function (y) {
  out <- 1 / (1 + exp(-y))
  out
  }
dem.vector <- NULL
for (i in 1:nrow(predict.mat))
    dem.vector <- c(dem.vector, logit (sum( predict.mat[i,] *
coef.multinom(anes.multinom)[1,] ) ))
rep.vector <- NULL
for (i in 1:nrow(predict.mat))
    rep.vector <- c(rep.vector, logit (sum( predict.mat[i,] *
coef.multinom(anes.multinom)[2,] ) ))

lograt.dem <- log(dem.vector/(1-dem.vector))
lograt.rep <- log(rep.vector/(1-rep.vector))

prob.abst <- 1/(1 + exp(lograt.dem) + exp(lograt.rep))
prob.dem <- exp(lograt.dem)*prob.abst
prob.rep <- exp(lograt.rep)*prob.abst

nes1984p.df<-data.frame(nes1984i.df, prob.abst, prob.dem, prob.rep)
rm (predict.mat, dem.vector, rep.vector, lograt.dem, lograt.rep, prob.abst,
prob.dem, prob.rep)

detach(nes1984i.df)
rm(nes1984i.df)
attach(nes1984p.df)
```

```
table (vote)

wtv4 <- function (x) {
 y <- x * V4
 y
 }

#Calculate the estimated votes based on p's - weighted by V4
demvote <- (sum (wtv4(prob.dem)) / sum (V4)) * 100
repvote <- (sum (wtv4(prob.rep)) / sum (V4)) * 100
abstain <- (sum (wtv4(prob.abst)) / sum (V4)) * 100
c(abstain, demvote, repvote)

#unweighted
n <- length (prob.dem)
demvote <- (sum (prob.dem) /n) * 100
repvote <- (sum (prob.rep) /n) * 100
abstain <- (sum (prob.abst)  /n) * 100
c(abstain, demvote, repvote)
rm (n)


# weighted actual vote
x <- vote + 1
vote.mat<-my.dummy(x,3)

demvote <- (sum (wtv4(vote.mat[,1])) / sum (V4)) * 100
repvote <- (sum (wtv4(vote.mat[,2])) / sum (V4)) * 100
abstain <- 100 - (demvote + repvote)
c(abstain, demvote, repvote)

rm (abstain, demvote, repvote)

#conditional probabilities of voting Dem given vote
p.dem.vote <- prob.dem / (1 - prob.abst)
#conditional probabilities of voting Rep given vote
p.rep.vote <- prob.rep / (1 - prob.abst)
my.desc(cbind(p.dem.vote,p.rep.vote))

attach(nes1984p.df)

#calculate cutpoints for abstainers
x.prob.abst <- NULL
 for (i in 1:length(prob.abst)) {
   if (vote[i] == 0)
   x.prob.abst <- c(x.prob.abst,prob.abst[i])
    }
table(vote)
length(x.prob.abst)

cutpoint.abst <-
quantile(x.prob.abst,c(.10,.20,.30,.40,.50,.60,.70,.80,.90),names=F)
length(cutpoint.abst)
```

```
#calculate cutpoints for voters
x.prob.abst <- NULL
 for (i in 1:length(prob.abst)) {
   if (vote[i] > 0)
   x.prob.abst <- c(x.prob.abst,prob.abst[i])
    }
table(vote)
length(x.prob.abst)

cutpoint.vote <-
quantile(x.prob.abst,c(.10,.20,.30,.40,.50,.60,.70,.80,.90),names=F)
length(cutpoint.vote)
rm (x.prob.abst)

#create categories based on vote and prob.abst
x.jv <- length(cutpoint.vote)
x.ja <- length(cutpoint.abst)

jcat <- rep(NA,length=length(prob.abst))
 for (i in 1:length(prob.abst)) {
 for (j in 1:x.jv) {
   if (vote[i] > 0 && prob.abst[i] > cutpoint.vote[j]) jcat[i] <- j + 1  }
#end j loop
   if (vote[i] > 0 && prob.abst[i] <= cutpoint.vote[1]) jcat[i] <- 1
 for (j in 1:x.ja) {
   if(vote[i] == 0 && prob.abst[i] > cutpoint.abst[j]) jcat[i] <- j + x.jv + 2
} #end j loop
   if(vote[i] == 0 && prob.abst[i] <= cutpoint.abst[1]) jcat[i] <- x.jv + 2
                                                          } #end i loop
table(jcat,vote)
summary(jcat)


xv4 <- NULL
wtxv4 <- function (x) {
 y <- x * xv4
 y
 }

#Cycle through categories of jcat (based on probabilities of abstaining)
x.j <- x.jv + x.ja + 2  #turnout levels desired in analysis (+2 if up to 100%)
#  rm(x.jv, x.ja)
turnout.table <- NULL
p.turnout.table <- matrix (NA, nrow = 9, ncol = x.j)
p.vote.table <- matrix (NA, nrow = 8, ncol = x.j)
turnout <- NULL

#for each level of turnout (j)
 for (j in 1:x.j) {
  xv4 <- NULL
  x.demvote <- NULL
  x.repvote <- NULL
    x.partyid <- NULL
 for (i in 1:length(prob.abst)) {
```

```
  if (jcat[i] <= j) {
   xv4 <- c(xv4, V4[i])
   x.demvote <- c(x.demvote, p.dem.vote[i])
   x.repvote <- c(x.repvote, p.rep.vote[i])
     x.partyid <- c(x.partyid, partyid[i])
   }  #end if
   }  #end i loop
    nvotes <- sum(wtxv4(x.demvote)) + sum(wtxv4(x.repvote))
    turnout[j] <- 100 * (nvotes / (sum(V4)))
       #sum(V4) is the weighted total number in the sample
    dempct <- (sum(wtxv4(x.demvote)) / nvotes)
    lower <- dempct - 1.96 * ((dempct * (1-dempct)) / nvotes) ^ 0.5
    upper <- dempct + 1.96 * ((dempct * (1-dempct)) / nvotes) ^ 0.5
    dempct <- dempct * 100
    lower <- lower * 100
    upper <- upper * 100
    threshold <- NA
    threshold[j <= x.jv] <- cutpoint.vote[j]
    threshold[j > (x.jv + 1)] <- cutpoint.abst[j - x.jv - 1]
    turnout.table <- rbind(turnout.table,
       c("iteration"=j,
         "threshold"=round(threshold,3),
         "votes"=round(nvotes,1),
         "turnout"=round(turnout[j],1),
         "Dem vote"=round(dempct,1),
         "95% lower"=round(lower,1),
         "95% upper"=round(upper,1)))


#begin partisan analysis
      p.demv <- NULL
      p.repv <- NULL

      for (p in 1:7) {
      pxv4 <- NULL
      xp.demvote <- NULL
      xp.repvote <- NULL
       for (i in 1:length(x.partyid)) {
       if (x.partyid[i] == p) {
          pxv4 <- c(pxv4, xv4[i])
          xp.demvote <- c(xp.demvote, x.demvote[i])
          xp.repvote <- c(xp.repvote, x.repvote[i]) } #end if
                                                  } #end i loop

 #Partisan composition of the electorate at varying levels of turnout
       # total percent in each partisan category for each j level of turnout
       p.turnout.table[p,j] <- 100 * (sum(pxv4) /nvotes)

       #sum the Democratic and Republican votes in each partisan category
       p.demv[p] <- sum(xp.demvote * pxv4)
       p.repv[p] <- sum(xp.repvote * pxv4)

} #end p loop
```

```
#Partisan tilt in the electorate at varying levels of turnout
#Row 8 - Democratic tilt with leaners
p.turnout.table[8,j] <- sum(p.turnout.table[1:3,j]) -
sum(p.turnout.table[5:7,j])
#Row 9 - Democratic tilt without leaners
p.turnout.table[9,j] <- sum(p.turnout.table[1:2,j]) -
sum(p.turnout.table[6:7,j])


# Votes by partisanship at varying levels of turnout
  # row 1 - Democrats loyal
  p.vote.table[1,j] <- 100 * (sum(p.demv[1:3])) / nvotes
  # row 2 - Democrats defect
  p.vote.table[2,j] <- 100 * (sum(p.repv[1:3])) / nvotes
  # row 3 - Independents voting Democratic
  p.vote.table[3,j] <- 100 * (p.demv[4]) / nvotes
  # row 4 - Independents voting Republican
  p.vote.table[4,j] <- 100 * (p.repv[4]) / nvotes
  # row 5 - Republicans defect
  p.vote.table[5,j] <- 100 * (sum(p.demv[5:7])) / nvotes
  # row 6 - Republicans loyal
  p.vote.table[6,j] <- 100 * (sum(p.repv[5:7])) / nvotes
  # row 7 - Democratic defection rate
  p.vote.table[7,j] <- 100 * (p.vote.table[2,j] / (p.vote.table[2,j] +
p.vote.table[1,j]))
  # row 8 - Republican defection rate
  p.vote.table[8,j] <- 100 * (p.vote.table[5,j] / (p.vote.table[5,j] +
p.vote.table[6,j]))


   }  #end j loop

rm (p.repv, p.demv, xp.demvote, xp.repvote, pxv4, nvotes, dempct, lower,
upper)

#Correlations of actual votes and estimated probabilities

x.abst.dummy <- rep(NA,length=length(vote))
x.abst.dummy[vote == 0] <- 1
x.abst.dummy[vote > 0] <- 0
table (x.abst.dummy)
x1 <- cor(wtv4(x.abst.dummy),wtv4(prob.abst),use="complete.obs")

xd.vote <- rep(NA,length=length(vote))
xd.vote[vote == 1] <- 1
xd.vote[vote == 2] <- 0
table (xd.vote)
x2 <- cor(wtv4(xd.vote),wtv4(prob.dem),use="complete.obs")  #unconditional
probability
x3 <- cor(wtv4(xd.vote),wtv4(p.dem.vote),use="complete.obs")  #conditional
probability given vote

xr.vote <- rep(NA,length=length(vote))
xr.vote[vote == 1] <- 0
```

```
xr.vote[vote == 2] <- 1
table (xr.vote)
x4 <- cor(wtv4(xr.vote),wtv4(prob.rep),use="complete.obs")  #unconditional
probability
x5 <- cor(wtv4(xr.vote),wtv4(p.rep.vote),use="complete.obs")  #conditional
probability given vote

    validate.table <- rbind(validate.table,
       c("imputation"=kimpute,
         "abst corr"=round(x1,3),
         "dem corr (uncond)"=round(x2,3),
         "dem corr (cond)"=round(x3,3),
         "rep corr (uncond)"=round(x4,3),
         "rep corr (cond)"=round(x5,3)))



p.vote.table.array <-
array(c(p.vote.table.array,matrix(p.vote.table,byrow=F,ncol=x.j)),
  dim=c(8,x.j,kimpute))
p.turnout.table.array <-
array(c(p.turnout.table.array,matrix(p.turnout.table,byrow=F,ncol=x.j)),
  dim=c(9,x.j,kimpute))
turnout.table.array <-
array(c(turnout.table.array,matrix(turnout.table,byrow=T,ncol=1)),
  dim=c(x.j,7,kimpute))

rm (xr.vote, xd.vote, x.abst.dummy, x1 ,x2, x3, x4, x5, x.j, x.partyid,
x.demvote, x.repvote)

  } # end kimpute loop


#turnout.table.array is 20 rows (turnout rates)
# by 7 columns (data calculated from each turnout rate)
# by 10 levels (imputations)
#calculate means across imputations
turnout.table <- apply(turnout.table.array,(1:2),mean)
colnames(turnout.table)<- c(
 "Iteration",
 "Threshold",
 "Votes",
 "Turnout",
 "Dem Vote",
 "95% lower",
 "95% upper")
turnout.table

#p.turnout.table.array is 9 rows (7 partisan categories plus 2 tilt measures)
# by 20 columns (simulated turnout rates)
# by 10 levels (imputations)
#calculate means across imputations
p.turnout.table <- apply(p.turnout.table.array,(1:2),mean)
colnames(p.turnout.table)<-as.character(round(turnout,1))
```

```
rownames(p.turnout.table)<- c(
 "Str Dem",
 "Weak Dem",
 "Lean Dem",
 "Ind",
 "Lean Rep",
 "Weak Rep",
 "Str Rep",
 "Dem tilt (incl lean)",
 "Dem tilt (w/o lean)")
#print only ten turnout rates (nifty, eh?)
round(p.turnout.table[,(0:10)*2],1)

#p.vote.table.array is 8 rows (6 partisan*vote categories plus 2 defect rate
measures)
# by 20 columns (simulated turnout rates)
# by 10 levels (imputations)
#calculate means across imputations
p.vote.table <- apply(p.vote.table.array,(1:2),mean)
colnames(p.vote.table)<-as.character(round(turnout,1))
rownames(p.vote.table)<- c(
 "Dems loyal",
 "Dems defect",
 "Ind v/ Dem",
 "Ind v/ Rep",
 "Reps defect",
 "Reps loyal",
 "Dem defection rate",
 "Rep defection rate")
#print only ten turnout rates
round(p.vote.table[,(0:10)*2],1)

#validate table presents correlations between actual behavior and
probabilities
apply(validate.table,2,mean)
```