Narratives and the Economics of the Family: Online Supplement

Robert Akerlof   Luis Rayo

A. Description of Clustering Methodology

Table 1 uses data from years 1977 to 2016 of the GSS and Table 2 uses data from Waves 5 and 6 of the WVS. These tables were constructed as follows:

- We classified respondents into traditional and modern clusters using the k-means algorithm.

- We standardized the variables used by the algorithm.

- We performed 1,000 repetitions of the algorithm, each with a different randomly-generated seed.

- We reported the version that maximizes the distance between cluster centers.

Both the GSS and WVS oversample certain populations. Representativeness weights make it possible to de-bias. We used these weights as follows:

- For the GSS, we used representativeness weights to calculate population means and to form clusters.

- For the WVS, we used representativeness weights only to calculate population means.

Tables S.1 and S.2 extend Tables 1 and 2, respectively, along two fronts:

1. They report a broader set of survey questions.

2. They report, for each question, the fraction of the 1,000 repetitions for which the average response differed at the 10% significance level across clusters.

Table S.3 presents a modified version of Table 1 where the average response for each cluster is computed after controlling for the income, age, gender, and education level of the respondent, and for the survey year. Table S.4 uses the same clusters as Table 1 and reports for each type (modern and traditional) the labor force status and household duties of men and women.

B. Tables

Table S.1: Extended Version of Table 1

Variable	(1) Modern (average)	(2) Traditional – Modern (average)	(3) p-value	(4) N	(5) % of clusters
Demographics					
Age of respondent‡	41.796	8.404	0.000	27213	1.000
Female‡	0.515	0.088	0.000	27296	0.598
Married‡	0.460	0.331	0.000	13791	0.992
Ever married‡	0.720	0.136	0.000	27288	0.992
Separated or divorced‡	0.220	-0.090	0.000	18391	0.962
Ever been separated or divorced‡	0.254	-0.077	0.000	16053	0.962
Number of persons in household‡	2.925	0.036	0.126	27295	0.000
Age when first child born‡	24.252	-0.795	0.000	12681	0.992
Age when first married‡	22.295	-0.235	0.035	8105	0.318
Respondent's socioeconomic index (2010)	0.050	-0.149	0.000	25704	1.000
Subjective class identification: upper class	0.018	-0.054	0.000	27158	1.000
Occupation and Income					
Working fulltime (ages 25-55)‡	0.692	-0.056	0.000	16142	1.000
Working part time (ages 25-55)‡	0.104	0.010	0.105	16142	0.000
Keeping house (ages 25-55)‡	0.109	0.061	0.000	16142	1.000
Family income in constant dollars	0.074	-0.222	0.000	24540	1.000
Respondent's income in constant dollars	0.036	-0.124	0.000	17074	0.962
Respondent's occupational prestige score (2010)	0.030	-0.088	0.000	25704	1.000
Socioeconomic index (1980) of first occupation	0.078	-0.209	0.004	877	0.962
Percentage of same gender in occupation‡	0.678	0.036	0.000	17480	0.992
Education					
Respondent's highest degree: graduate	0.087	-0.254	0.000	27252	1.000
Highest year of school completed‡	13.504	-1.009	0.000	27243	1.000
Group Affiliations					
Religious attendance: more than once a week	-0.298	0.867	0.000	27053	0.962
Membership in church group: no	0.232	-0.602	0.000	5448	0.962
Number of group memberships	-0.020	0.052	0.079	5480	0.421
Political party affiliation: strong republican	-0.078	0.224	0.000	22657	0.992
Think of self as liberal or conservative: conservative	-0.178	0.526	0.000	26293	0.992
Number of strong conservatives acquainted with	-0.132	0.364	0.002	371	0.598
Number of strong liberals acquainted with	0.093	-0.263	0.045	366	0.962
Belong to a political party: never belonged	0.033	-0.142	0.132	806	0.000
Political meeting or rally attendance: none	-0.025	0.105	0.248	818	0.083
Participated in charitable org in past year: no	0.045	-0.127	0.136	736	0.000
Participated in neighborhood assoc in past year: no	-0.011	0.031	0.699	737	0.000
Behavior					
Ever drink too much: yes‡	0.414	-0.183	0.000	3787	0.962
Spend evening at bar: almost every day	0.214	-0.622	0.000	27238	0.962
Went bankrupt in past year: yes‡	0.012	-0.001	0.932	1366	0.000
Prison or jail ever: yes‡	0.151	-0.039	0.118	1077	0.000
Have sex other than spouse while married: no‡	0.809	0.071	0.000	12355	0.962
Had sex with casual date in last year: no	-0.029	0.191	0.001	2821	0.598
Ever have sex paid for or being paid since 18: no‡	0.920	0.023	0.000	16628	0.598
Relation to last sex partner: no, no relationship	0.018	-0.059	0.006	12799	0.421
Used pornographic site in past 30 days	0.051	-0.200	0.019	673	0.705
Have gun in home‡	0.391	0.066	0.000	14065	1.000
Pistol or revolver in home‡	0.221	0.030	0.000	14018	0.992
Rifle in home‡	0.240	0.041	0.000	14018	1.000
Shotgun in home‡	0.240	0.045	0.000	14018	1.000
Does respondent hunt: yes‡	0.168	-0.019	0.006	14245	0.318
Favor or oppose gun permits: oppose‡	0.216	0.022	0.008	14066	1.000

Done volunteer work for a charity in past year: no	0.047	-0.147	0.001	3134	0.598
Donated blood in past year: no	0.004	-0.014	0.756	3137	0.000
Recycle cans and bottles: never	-0.055	0.164	0.000	3799	0.992
Boycotted products for political reasons: haven't and wouldn't	-0.076	0.325	0.000	797	0.962
Contributed money in arts, culture, etc: no	-0.045	0.144	0.048	804	1.000
Given money to a charity in past year: no	0.092	-0.287	0.000	3135	0.879
Given food or money to homeless in past year: no	0.019	-0.060	0.164	3127	0.000
Contributed money in political org. etc: no[‡]	0.926	-0.021	0.395	802	0.000
Contributed money in religious org: no[‡]	0.596	-0.251	0.000	863	0.879

Beliefs and Values

Labor Force and Gender Roles

Better for man to work, woman tend home: strongly agree[†]	-0.274	0.796	0.000	27296	1.000
Being a housewife as fulfilling as paid work: strongly agree	-0.103	0.315	0.000	2906	0.992
Men should earn money, women keep house: strongly disagree	0.219	-0.715	0.000	2120	1.000
Husband should work, wife look after home: strongly disagree	0.256	-0.740	0.000	3122	1.000
Should women work: disapprove	-0.118	0.321	0.000	14267	1.000
Preschool kids suffer if mother works: strongly disagree	0.172	-0.502	0.000	26887	1.000
Mother working doesn't hurt children: strongly disagree	-0.152	0.442	0.000	27112	1.000
Family life suffers if mom works full-time: strongly disagree	0.190	-0.568	0.000	4585	1.000
Wife should help husband's career first: strongly disagree	0.258	-0.701	0.000	14177	1.000
Job is best way for woman to be independent: strongly disagree	-0.068	0.187	0.000	1761	0.879
Husband/wife should both contribute to income: strongly disagree	-0.135	0.383	0.000	2676	0.992
Should woman with preschooler work: stay home	-0.163	0.480	0.000	2546	1.000
Women should take care of home not country: disagree	0.208	-0.568	0.000	14092	1.000
Should mom work after marriage, before kids: stay home	-0.119	0.327	0.000	1588	1.000
Should hire and promote women: strongly disagree	-0.012	0.038	0.195	7224	0.113
Likelihood less qualified woman gets job instead of man: unlikely	0.042	-0.136	0.000	6565	1.000
Likelihood less qualified man gets job instead of woman: unlikely	0.015	-0.049	0.106	6599	0.000
Importance of women's rights issue: not important at all	-0.107	0.311	0.000	938	0.992
How often pay attention to women's issues: never	-0.111	0.319	0.000	945	1.000
Women not suited for politics: disagree	0.142	-0.419	0.000	25924	1.000
Would vote for woman to be president: no[‡]	0.059	0.115	0.000	16703	1.000
Think of yourself as a feminist: no	-0.050	0.145	0.047	904	0.992
Having job is enjoyable even if money not needed: strongly disagree	-0.045	0.133	0.009	2086	0.992
Importance of having a fulfilling job: not at all important	-0.070	0.192	0.007	1022	0.962
Importance of social usefulness in a job: not important at all	0.021	-0.062	0.215	2102	0.000
Allow workers more flexible hours: no, should not offer this option	-0.029	0.083	0.287	928	0.000
Importance of high income in a job: not important at all	-0.022	0.064	0.200	2099	0.000
Should working women have paid maternity leave: strongly disagree	-0.055	0.152	0.046	851	0.897
Men hurt family when focus on work too much: strongly disagree	0.073	-0.229	0.000	14502	1.000
Importance of advancement in a job: not important at all	-0.027	0.080	0.113	2102	0.000
Work satisfaction: very dissatisfied	0.036	-0.113	0.000	20911	0.879
Importance of security in a job: not important at all	0.003	-0.009	0.857	2116	0.000

Views on Homosexuality

Homosexual sex relations: always wrong	-0.333	0.933	0.000	13695	0.992
Homosexuals should have right to marry: strongly disagree	-0.288	0.945	0.000	5326	0.992

Sexuality

Sex before marriage: always wrong[†]	-0.661	1.924	0.000	27296	0.962
Sex with person other than spouse: not wrong at all	0.194	-0.550	0.000	14143	0.962
People should live together before marriage: strongly disagree	-0.423	1.176	0.000	1646	0.962
Living together as an acceptable option: strongly disagree	-0.426	1.331	0.000	2873	0.962
Punishment for downloading porn at office: life in prison	-0.116	0.303	0.000	819	0.962
Sex education in public schools: oppose	-0.211	0.624	0.000	26740	0.992
Birth control for teenagers if parents disapprove: strongly disagree	-0.229	0.747	0.000	647	0.992
Pornography leads to breakdown in morals: no[‡]	0.462	-0.328	0.000	3831	0.992

Trust

Can people be trusted: can't be too careful	-0.024	0.071	0.000	13904	1.000
Would trust my family: not at all	0.042	-0.117	0.103	869	0.000
Must be corrupt to get to top in America: strongly disagree	-0.069	0.204	0.012	759	0.421
Afraid to walk at night in neighborhood: no‡	0.651	-0.080	0.000	14182	0.879
How safe interviewer thinks neighborhood is: very unsafe	0.000	0.002	0.976	1819	0.113

Abortion/Euthanasia/Suicide

Allow incurable patients to die: no‡	0.194	0.333	0.000	25666	0.962
Abortion if woman wants for any reason: no‡	0.477	0.338	0.000	13780	0.992
Suicide if incurable disease: no‡	0.287	0.378	0.000	26361	0.992
Suicide if bankrupt: no‡	0.886	0.073	0.000	26929	0.992
Suicide if dishonored family: no‡	0.886	0.073	0.000	26859	0.992
Suicide if tired of living: no‡	0.793	0.130	0.000	26623	0.992

Aid/Altruism

Gov't should assist low-income college students: definitely not	-0.050	0.168	0.000	2826	0.962
Gov't should provide housing to poor: definitely not	-0.018	0.060	0.188	2793	0.000
Gov't should provide childcare: definitely not	-0.079	0.226	0.013	682	0.879
Gov't should provide for unemployed: definitely not	-0.020	0.061	0.098	4194	0.318
Gov't should redistribute wealth: disagree strongly	-0.016	0.045	0.459	1396	0.000
Gov't should reduce income differences: definitely not	-0.019	0.060	0.074	4858	0.962
Experience a connection to all of life: almost never	0.105	-0.287	0.000	829	0.879
Respondent has tender feelings for less fortunate: yes	-0.091	0.248	0.000	1735	0.598
Respondent not very sorry for people with problems: yes	0.069	-0.187	0.001	1734	0.705
Respondent protective towards people taken advantage of: yes	-0.095	0.259	0.000	1737	0.705
Others misfortunes do not disturb respondent: yes	0.080	-0.218	0.000	1735	0.705
Respondent does not feel pity for people treated unfairly: yes	0.043	-0.117	0.039	1728	0.598
Should take care of oneself and one's family first: strongly disagree	-0.042	0.118	0.170	734	0.000
Concerned about environment: very concerned	0.047	-0.159	0.018	1372	0.788
Accept cut in living standards to help environment: not at all willing	-0.057	0.168	0.000	3814	0.992
Pay higher taxes to help environment: not at all willing	-0.070	0.211	0.000	3813	0.992
Better off people should help less well-off friends: strongly disagree	0.070	-0.198	0.027	718	0.879
People should help less fortunate others: strongly disagree	0.043	-0.135	0.003	3130	0.598
Take care of yourself first, before others: strongly disagree	-0.049	0.137	0.009	1963	0.598
People need not overly worry about others: strongly disagree	-0.047	0.145	0.001	3124	0.421
Respondent is a selfish person: not a good description at all	0.016	-0.045	0.646	722	0.083

Family/Morality

Spouses pool some/all money together: yes‡	0.631	-0.007	0.828	1157	0.319
Everyone benefits from traditional family: no‡	0.386	-0.165	0.000	803	0.992
Divorce should be easier or more difficult: more difficult	-0.190	0.551	0.000	25984	0.992
Divorce is best solution to marital problems: strongly disagree	-0.129	0.423	0.000	2099	0.879
Bad marriage better than none at all: strongly agree	-0.083	0.227	0.000	1761	1.000
Respondent's marriage is happy: not too happy	0.042	-0.108	0.000	13509	0.705
Should feuding parents stay together for kids: strongly disagree	0.191	-0.533	0.000	856	0.992
Kidless people lead empty lives: strongly disagree	0.128	-0.352	0.000	1717	1.000
Kids are life's greatest joy: strongly disagree	0.066	-0.201	0.000	2970	0.879
Those wanting kids should get married: strongly disagree	0.212	-0.647	0.000	2987	0.992
What is ideal number of kids for family: seven or more	-0.099	0.309	0.000	2823	0.962
Obedience in children: important	-0.187	0.563	0.000	11695	0.992
Children think for themselves: important	0.119	-0.358	0.000	11695	1.000
Children are hard-working: important	0.060	-0.182	0.000	11695	0.992
Children help others: important	0.004	-0.013	0.548	11698	0.402
Should children be obedient or think for selves: be obedient	-0.176	0.491	0.000	2551	0.992
Favor spanking to discipline child: strongly agree	-0.110	0.328	0.000	24127	1.000
Immoral person corrupts society: disagree strongly	0.121	-0.367	0.000	5400	0.992
Important that friends are responsible: not at all important	0.056	-0.154	0.020	1024	0.318

GSS respondents are classified as modern or traditional using the k-means algorithm. Questions used to cluster are marked with †. All variables without ‡ have been standardized. Response after the colon (:) corresponds to the largest numeric value of the variable. 1,000 repetitions with different randomly-generated seeds were computed. Columns 1 through 3 report results from the repetition that maximizes the distance between cluster centers. Column 4 reports the number of observations for each question. Column 5 reports the percent of repetitions for which cluster averages differ at a 10% significance level. Standard errors are heteroskedasticity robust.

Table S.2: Extended Version of Table 2

Variable	(1) Modern (average)	(2) Traditional − Modern (average)	(3) p-value	(4) N	(5) % of Clusters
If jobs are scarce, men should have more right: agree†	-0.480	0.783	0.000	239864	0.995
Being a housewife as fulfilling as paid work: agree strongly†	-0.117	0.188	0.000	239864	1.000
Husb and wife should both contribute income: strongly disagree	-0.013	0.015	0.028	115011	0.897
Problem if woman has more income than husband: agree strongly	-0.137	0.229	0.000	55455	0.973
Prostitution: never justifiable†	-0.783	1.269	0.000	239864	0.994
Divorce: never justifiable†	-0.821	1.343	0.000	239864	0.993
Sex before marriage: never justifiable	-0.728	1.202	0.000	60162	0.993
Homosexuality: always justifiable	0.778	-1.263	0.000	234808	0.994
Abortion: never justifiable	-0.627	1.023	0.000	237620	0.993
Homosexuals as neighbors: would not like†	-0.631	1.030	0.000	239864	0.994
Unmarried couples as neighbors: would not like	-0.313	0.543	0.000	117993	0.993
People with criminal record as neighbors: would not like	-0.231	0.350	0.000	121359	0.974
Drug addicts as neighbors: would not like	-0.170	0.276	0.000	239853	0.994
People of a different religion as neighbors: would not like	-0.186	0.309	0.000	148206	0.993
Unmarried couples as neighbors: would not like	-0.313	0.543	0.000	117993	0.993
Marriage is an out-dated institution: disagree	-0.147	0.227	0.000	168094	0.994
Woman as a single parent: disapprove	-0.381	0.613	0.000	174015	0.993
Sexual freedom: approve	0.074	-0.113	0.000	71346	0.994
Ever married‡	0.624	0.090	0.000	239446	1.000
Importance of family: very important	-0.063	0.098	0.000	239329	0.998
Importance of leisure time: not at all important	-0.140	0.234	0.000	237480	0.993
Importance of work: very important	-0.089	0.148	0.000	237094	0.973
Importance of religion: not at all important	0.341	-0.549	0.000	236834	0.973
Importance of feeling of happiness: not at all important	-0.034	0.066	0.000	237637	0.973
Independence in children: important	0.115	-0.183	0.000	239857	0.973
Children are hard-working: important	-0.197	0.324	0.000	239863	0.994
Unselfishness in children: important	0.017	-0.028	0.000	239856	0.995
Obedience in children: important	-0.150	0.244	0.000	239851	0.973
Child needs a home with father and mother: tend to agree	-0.248	0.401	0.000	170641	0.993
A woman needs children to be fulfilled: agree	-0.332	0.499	0.000	113950	0.973
Ideal number of children	-0.159	0.248	0.000	113044	0.993
How many children do you have‡	1.591	0.481	0.000	234957	0.999
Church or religious organization: active member	-0.079	0.134	0.000	174490	0.875
Environmental organization: not a member	0.001	0.001	0.782	175191	0.123
Charitable/humanitarian organization: not a member	-0.048	0.091	0.000	175182	0.973
Most people can be trusted: can't be too careful	-0.104	0.168	0.000	230183	0.973
New or old ideas generally best: old ideas	-0.085	0.135	0.000	91498	0.998
Would give part of income for environment: strongly disagree	0.068	-0.114	0.000	97606	1.000
Increase taxes to prevent environmental pollution: strongly agree	0.022	-0.037	0.000	155049	0.902
Men make better political leaders: agree strongly	-0.332	0.554	0.000	214676	0.995
University is more important for boys : agree strongly	-0.219	0.371	0.000	218242	0.997
Men make better business executives: agree strongly	-0.308	0.554	0.000	115833	0.997
Sign a petition: would never do	-0.328	0.553	0.000	216640	0.993
Join in boycotts: would never do	-0.189	0.308	0.000	212816	0.993
Attend lawful/peaceful demonstrations: would never do	-0.190	0.313	0.000	217972	0.999
Self positioning in political scale: right	-0.095	0.168	0.000	185372	0.999
Confidence in police: a great deal	-0.024	0.041	0.000	233388	0.902
Political system with strong leader: very good	-0.125	0.207	0.000	202949	0.999
Political system with army rule: very good	-0.204	0.349	0.000	202129	0.993
Good pay in a job: important	-0.097	0.152	0.000	111911	0.973
Security in job: important	-0.115	0.179	0.000	111911	0.973
Respected in job: important	-0.214	0.330	0.000	111911	0.994
Good hours in job: important	-0.097	0.155	0.000	111911	0.974
Can achieve something in job: important	-0.006	0.007	0.288	111911	0.099

WVS respondents are classified as modern or traditional using the k-means algorithm. Questions used to cluster are marked with †. All variables without ‡ have been standardized. Response after the colon (:) corresponds to the largest numeric value of the variable. 1,000 repetitions with different randomly-generated seeds were computed. Columns 1 through 3 report results from the repetition that maximizes the distance between cluster centers. Column 4 reports the number of observations for each question. Column 5 reports the percent of repetitions for which cluster averages differ at a 10% significance level. Standard errors are heteroskedasticity robust.

Table S.3: Version of Table 1 with Controls for Income, Age, Gender, Education, and Year

Variable	(1) Modern (average)	(2) Traditional − Modern (average)
Sex before marriage: always wrong[†]	-0.666	1.920***
Better for man to work, woman tend home: strongly agree[†]	-0.278	0.660***
Being a housewife as fulfilling as paid work: strongly agree	-0.133	0.252***
Bad marriage better than none at all: strongly agree	-0.075	0.124*
Homosexual sex relations: always wrong	-0.297	0.854***
Can people be trusted: can't be too careful	-0.046	0.028
Should children be obedient or think for selves: be obedient	-0.179	0.427***
Favor spanking to discipline child: strongly agree	-0.088	0.329***
Ever married[‡]	0.80	0.043***
Age when first child born[‡]	24.048	-0.357***
Percentage of same gender in occupation[‡]	0.688	0.016***
Have gun in home[‡]	0.423	0.053***

This table is a modified version of Table 1 where the average response for each cluster is computed after controlling for the income, age, gender, and education level of the respondent, and for the survey year. Questions used to cluster are marked with †. All variables without ‡ have been standardized. Response after the colon (:) corresponds to the largest numeric value of the variable. Standard errors are heteroskedasticity robust. *** 0.01, ** 0.05, * 0.1.

Table S.4: Labor Force Status and Household Duties of Men and Women (GSS)

Variable	Men		Women	
	Modern (average)	Traditional − Modern (average)	Modern (average)	Traditional − Modern (average)
Working fulltime (ages 25-55)*	0.818	0.028**	0.577	-0.079***
Keeping house (ages 25-55)*	0.016	0.005	0.194	0.075***
Who cleans house: always spouse	0.563	0.356***	-0.533	-0.202**

This table reports averages for each gender using the same clusters as Table 1. Variables without ‡ have been standardized. Response after the colon (:) corresponds to the largest numeric value of the variable. Standard errors are heteroskedasticity robust. *** 0.01, ** 0.05, * 0.1.