

Table 1: Categorization Accuracy		
Model	Categorization Accuracy (Average)	(NYT) Categorization Accuracy (Average)
Centroid	0.62	0.23
kNN Model	0.57	0.29
Naive Bayes Model	0.57	0.13
TwoTier	0.62	0.25
TwoTier_kNN	0.61	0.24

Table 2: Spearman and Pearson Correlations (NGRAM)				
Centroid Pearson	Centroid Spearman	kNN Model Pearson	kNN Model Spearman	year
0.30	0.22	0.14	-0.03	1990
0.13	-0.07	0.38	0.02	1980

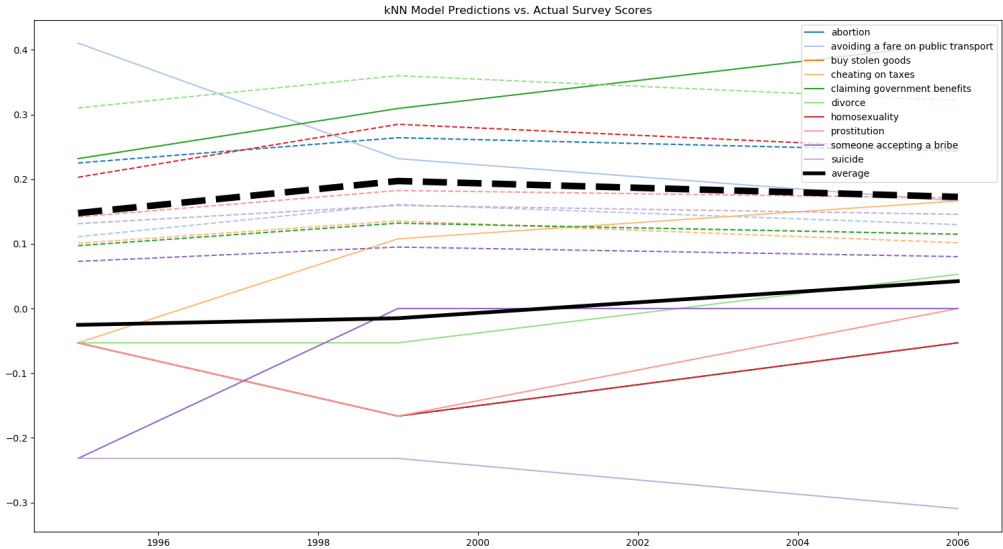
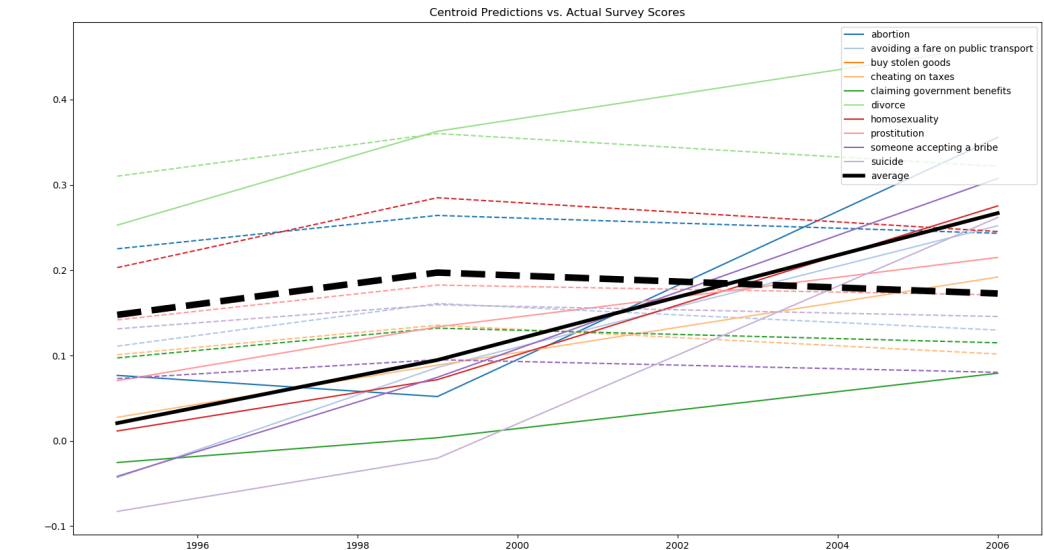


Table 3: Spearman and Pearson Correlations (NYT)				
Centroid Pearson	Centroid Spearman	kNN Model Pearson	kNN Model Spearman	year
				1981
0.85	0.64	-0.05	0.25	1995
0.67	0.35	-0.45	-0.47	1999
0.71	0.55	-0.27	-0.42	2006

Table 4: Log Odds Ratio (Raw scores for Table 3)

concept	Centroid	kNN Model	score	year
claiming government benefits			1.6740	1981
avoiding a fare on public transport			1.9303	1981
cheating on taxes			2.0559	1981
someone accepting a bribe			1.4271	1981
homosexuality			2.2176	1981
prostitution			2.2920	1981
abortion			3.4052	1981
divorce			4.5351	1981
euthanasia			3.4477	1981
suicide			1.9019	1981
buy stolen goods			1.6671	1981
claiming government benefits	-0.0260	1.0986	1.5901	1995
avoiding a fare on public transport	-0.0439	1.9459	1.8158	1995
cheating on taxes	0.0281	-0.2513	1.6511	1995
someone accepting a bribe	-0.0425	-1.0986	1.1926	1995
homosexuality	0.0117	-0.2513	3.3223	1995
prostitution	0.0719	-0.2513	2.3191	1995
abortion	0.0782	-0.2513	3.6835	1995
divorce	0.2577	-0.2513	5.0765	1995
euthanasia			4.3016	1995
suicide	-0.0844	-1.0986	2.1479	1995
buy stolen goods	-0.0396	-0.7885	1.3606	1995
claiming government benefits	0.0037	1.4663	2.1608	1999
avoiding a fare on public transport	0.0877	1.0986	2.6342	1999
cheating on taxes	0.0905	0.5108	2.2175	1999
someone accepting a bribe	0.0759	0.0000	1.5558	1999
homosexuality	0.0731	-0.7885	4.6633	1999
prostitution	0.1362	-0.7885	2.9875	1999
abortion	0.0529	-0.7885	4.3233	1999
divorce	0.3700	-0.2513	5.8942	1999
euthanasia			5.0042	1999
suicide	-0.0208	-1.0986	2.6100	1999
claiming government benefits	0.0808	1.9459	1.8807	2006
avoiding a fare on public transport	0.2570	0.7885	2.1241	2006
cheating on taxes	0.1957	0.7885	1.6653	2006
someone accepting a bribe	0.3135	0.0000	1.3139	2006
homosexuality	0.2807	-0.2513	4.0144	2006
prostitution	0.2191	0.0000	2.7998	2006
abortion	0.3626	-0.2513	3.9808	2006
divorce	0.4728	0.2513	5.2658	2006
euthanasia			4.4668	2006
suicide	0.2668	-1.4663	2.3843	2006
claiming government benefits			2.0896	2011
Stealing property			1.5529	2011
Parents beating children			1.6953	2011
Violence against other people			1.9368	2011
avoiding a fare on public transport			2.3611	2011
cheating on taxes			1.7406	2011
someone accepting a bribe			1.5865	2011
homosexuality			5.1550	2011
abortion			4.6093	2011
divorce			5.9606	2011
suicide			2.8970	2011
Sex before marriage			5.6438	2011

Table 5: Temporal Correlations

model	concept	Pearson	Spearman
Centroid	abortion	-0.1141	-0.5000
Centroid	avoiding a fare on public transport	0.3050	0.5000
Centroid	cheating on taxes	-0.1241	0.5000
Centroid	claiming government benefits	0.2796	0.5000
Centroid	divorce	0.2459	0.5000
Centroid	homosexuality	0.2359	0.5000
Centroid	prostitution	0.6432	0.5000
Centroid	someone accepting a bribe	0.1427	0.5000
Centroid	suicide	0.1831	0.5000
kNN Model	abortion	-0.8857	-0.8660
kNN Model	avoiding a fare on public transport	-0.6004	-0.5000
kNN Model	cheating on taxes	0.2809	0.5000
kNN Model	claiming government benefits	0.4423	0.5000
kNN Model	divorce	-0.2961	0.0000
kNN Model	homosexuality	-0.8566	-0.8660
kNN Model	prostitution	-0.4636	-0.5000
kNN Model	someone accepting a bribe	0.7564	0.8660
kNN Model	suicide	-0.0134	0.0000