Supplementary Material

1 Data Collection

In Table 1 we present the number of arguments of each motion in each of the datasets we release. Note that because we are filtering annotators as part of the generation of the *IBMRank* dataset, it is possible that the determined stance (and motion) of certain arguments has changed as well.

Motion	#IBM-ArgQ-Pairs		#IBM-ArgQ-Args	
	14k	9.1k	6.3k	5.3k
Flu vaccination should be mandatory	591	384	204	121
Flu vaccination should not be mandatory	574	347	174	111
Gambling should be banned	399	244	342	329
Gambling should not be banned	391	259	382	371
Online shopping brings more good than harm	219	135	215	207
Online shopping brings more harm than good	249	143	198	189
Social media brings more good than harm	1982	1301	686	615
Social media brings more harm than good	2000	1286	879	831
We should abandon cryptocurrency	542	335	160	74
We should adopt cryptocurrency	573	384	172	87
We should abandon vegetarianism	748	516	179	104
We should adopt vegetarianism	805	557	221	142
We should allow the sale of violent video games to minors	408	243	244	190
We should ban the sale of violent video games to minors	422	241	275	223
We should ban fossil fuels	187	118	146	143
We should not ban fossil fuels	193	145	116	119
We should ban doping in sport	625	386	215	155
We should legalize doping in sport	613	351	212	146
We should limit autonomous cars	556	362	313	277
We should promote autonomous cars	1114	855	480	416
We should discourage information privacy laws	115	77	93	94
We should support information privacy laws	697	456	355	354

Table 1: Motion list and number of arguments in released datasets.

2   Experiments

Test motion	Train size	Test size	Arg-Classifier		GPPL	
			Acc.	AUC	Acc.	AUC
Flu vaccination should be mandatory (PRO)	8741	384	0.74	0.81	0.70	0.80
Flu vaccination should not be mandatory (CON)	8778	347	0.67	0.71	0.58	0.62
Gambling should be banned (PRO)	8881	244	0.86	0.92	0.79	0.88
Gambling should not be banned (CON)	8866	259	0.80	0.88	0.71	0.77
Online shopping brings more good than harm (CON)	8990	135	0.76	0.82	0.64	0.68
Online shopping brings more harm than good (PRO)	8982	143	0.83	0.88	0.73	0.81
Social media brings MORE GOOD than harm	7824	1301	0.81	0.88	0.71	0.79
Social media brings MORE HARM than good	7839	1286	0.82	0.88	0.74	0.81
We should abandon cryptocurrency (CON)	8790	335	0.83	0.91	0.76	0.83
We should adopt cryptocurrency (PRO)	8741	384	0.85	0.93	0.78	0.86
We should abandon vegetarianism (CON)	8609	516	0.86	0.92	0.71	0.80
We should adopt vegetarianism (PRO)	8568	557	0.81	0.87	0.69	0.76
We should allow the sale of violent video games to minors (CON)	8882	243	0.81	0.89	0.73	0.80
We should ban the sale of violent video games to minors (PRO)	8884	241	0.74	0.78	0.67	0.72
We should ban fossil fuels (PRO)	9007	118	0.69	0.80	0.70	0.78
We should not ban fossil fuels (CON)	8980	145	0.77	0.82	0.58	0.59
We should ban doping in sport (CON)	8739	386	0.76	0.81	0.68	0.74
We should legalize doping in sport (PRO)	8774	351	0.81	0.87	0.79	0.87
We should limit autonomous cars (PRO)	8763	362	0.77	0.81	0.70	0.75
We should promote autonomous cars (CON)	8270	855	0.80	0.86	0.71	0.77
We should discourage information privacy laws (CON)	9048	77	0.81	0.88	0.82	0.86
We should support information privacy laws (PRO)	8669	456	0.82	0.87	0.70	0.79

Table 2: The size of the training set and test set for each of the folds on the *IBMPairs* data, and the accuracy and roc auc of Arg-Classifier and GPPL.

Test motion	Train size	Test size	Arg-Ranker	
			r	ρ
Flu vaccination should be mandatory (PRO)	5356	121	0.39	0.37
Flu vaccination should not be mandatory (CON)	5365	112	0.25	0.27
Gambling should be banned (PRO)	5146	331	0.47	0.49
Gambling should not be banned (CON)	5087	390	0.41	0.38
Online shopping brings more good than harm (CON)	5243	234	0.63	0.56
Online shopping brings more harm than good (PRO)	5287	190	0.57	0.53
Social media brings more good than harm	4788	689	0.53	0.53
Social media brings more harm than good	4645	832	0.33	0.32
We should abandon cryptocurrency (CON)	5402	75	0.59	0.47
We should adopt cryptocurrency (PRO)	5390	87	0.30	0.33
We should abandon vegetarianism (CON)	5370	107	0.54	0.46
We should adopt vegetarianism (PRO)	5335	142	0.34	0.30
We should allow the sale of violent video games to minors (CON)	5282	195	0.36	0.38
We should ban the sale of violent video games to minors (PRO)	5253	224	0.35	0.32
We should ban fossil fuels (PRO)	5334	143	0.48	0.44
We should not ban fossil fuels (CON)	5356	121	0.52	0.46
We should ban doping in sport (CON)	5319	158	0.35	0.32
We should legalize doping in sport (PRO)	5331	146	0.28	0.24
We should limit autonomous cars (PRO)	5198	279	0.34	0.34
We should promote autonomous cars (CON)	5047	430	0.52	0.50
We should discourage information privacy laws (CON)	5363	114	0.40	0.38
We should support information privacy laws (PRO)	5120	357	0.31	0.32

Table 3: The size of the training set and test set for each of the folds on the *IBMRank* data, and the Pearson's (r) and Spearman's (ρ) correlation of Arg-Ranker.