

Preset SE, Normalization, Scope_Expansion

verb rule [subj] and new rule for all other verbs: [obja,objd,objc,obji,s,objp-*,subj]

0 – new best	Standard	0.1 Baseline_window4_both	0.2 Baseline_one_rule
F_SE	100	100	100
Precision Shifter	64.84	42.13	30.59
Recall Shifter	52.99	55.97	44.4
F-Score Shifter	58.32	48.08	36.23

Compare different rule configurations for transitive and intransitive verbs

Old best config: two verb rules: *intransitive verbs*: [subj] verb and *transitive verbs*: [obja,objd,objc,obji,s,objp-*] verb

1 – old best	Standard	1.1 Baseline_window4_both	1.2 Baseline_one_rule
F_SE	100	100	100
Precision Shifter	67.34	42.13	30.59
Recall Shifter	49.25	55.97	44.4
F-Score Shifter	56.9	48.08	36.23
F compared to best:		-1.42	

Only 1 verb rule: [obja,objd,objc,obji,s,objp-*]

2	Standard		
F_SE	100		
Precision Shifter	64.80		
Recall Shifter	47.39		
F-Score Shifter	54.74	-3.58	(compared to best config)

different verb rule for intransitive ([subj]) verbs: [subj,obja,objd,objc,obji,s,objp-*]

3	Standard		
F_SE	100		
Precision Shifter	64.42		
Recall Shifter	50.00		
F-Score Shifter	56.3	-2.02	(compared to best config)

different verb rule for intransitive verbs: [subj,obja,objd,objc,obji,s,objp-*] AND new rule for all other verbs: [obja,objd,objc,obji,s,objp-*,subj]

4	Standard		
F_SE	100		
Precision Shifter	62.33		
Recall Shifter	53.73		
F-Score Shifter	57.72	-0.6	(compared to best config)

Only 1 verb rule: [obja,objd,objc,obji,s,objp-*,subj]

5	Standard		
F_SE	100		
Precision Shifter	65.37		
Recall Shifter	50		
F-Score Shifter	56.67	-1.65	(compared to best config)

Rule for intrasitive verbs: [subj] and for all others: [obja]

6	Standard		
F_SE	100		
Precision Shifter	73.13		
Recall Shifter	43.66		
F-Score Shifter	54.67	-3.65	(compared to best config)

Keep best rules, change other parameters

No Scope Expansion

7	Standard		
F_SE	100		
Precision Shifter	67.03		
Recall Shifter	45.52		
F-Score Shifter	54.22	-4.1	(compared to best config)

With orientation lookup

8	Standard		
F_SE	100		
Precision Shifter	69.31		
Recall Shifter	48.88		
F-Score Shifter	57.33	-0.99	(compared to best config)

No Normalization

9	Standard		
F_SE	100		
Precision Shifter	67.46		
Recall Shifter	31.72		
F-Score Shifter	43.15	-15.17	(compared to best config)

Turn off parts of normalization

No conjunction normalization				
9.01	Standard			
F_SE	100			
Precision Shifter	64.38			
Recall Shifter	52.61			
F-Score Shifter	57.91	-0.41		(compared to best config)

No active-passive normalization				
9.02	Standard			
F_SE	100			
Precision Shifter	62.39			
Recall Shifter	50.75			
F-Score Shifter	55.97	-2.35		(compared to best config)

No general normalization				
9.03	Standard			
F_SE	100			
Precision Shifter	67.72			
Recall Shifter	32.09			
F-Score Shifter	43.54	-14.78		(compared to best config)

Lexicon based evaluation

Lexicon_standard: Lexicon, Normalisierung, POS lookup				
10	10.0 Standard	10.1 Baseline_window4_both	10.2 Baseline_one_rule	
F_SE	64.31	64.31	64.31	
Precision Shifter	47.06	25.96	21.83	
Recall Shifter	32.84	35.45	30.22	
F-Score Shifter	38.68	29.97	25.35	

Lexicon_no_POS: Lexicon, Normalization, No POS lookup		
11	11.0 Standard	
F_SE	64.39	
Precision Shifter	46.81	
Recall Shifter	32.84	
F-Score Shifter	38.60	

POS-lookup yields slight improvement

Lexicon_extended: germanlex_extended, Normalization, POS lookup			
12	12.0 Standard	12.1 Baseline_window	12.2 Baseline_one_rule
F_SE	85.01	85.01	85.01
Precision Shifter	55.90	31.96	24.88
Recall Shifter	47.76	49.25	39.18
F-Score Shifter	51.51	47.06	30.43

Extending germanlex yields huge SE-improvements

Baseline window evaluation – find the best n

Preset-SE, Normalization, right side of shifter		
N=1	F-Score Shifter:	14.10
N=2	F-Score Shifter:	30.53
N=3	F-Score Shifter:	35.29
N=4	F-Score Shifter:	35.56
N=5	F-Score Shifter:	34.56
N=6	F-Score Shifter:	33.89

Preset-SE, Normalization, left side of shifter		
N=1	F-Score Shifter:	20.83
N=2	F-Score Shifter:	30.20
N=3	F-Score Shifter:	30.06
N=4	F-Score Shifter:	30.86
N=5	F-Score Shifter:	30.57
N=6	F-Score Shifter:	30.07

Both directions		
N=1	F-Score Shifter:	29.19
N=2	F-Score Shifter:	46.15
N=3	F-Score Shifter:	47.46
N=4	F-Score Shifter:	48.08
N=5	F-Score Shifter:	48.06
N=6	F-Score Shifter:	47.82
N=7	F-Score Shifter:	47.51