

Preset SE, Normalization, Scope_Expansion

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

1	Standard	1.1 Baseline_window4_both	1.2 Baseline_one_rule
F_SE	100	100	100
Precision Shifter	66.39	42.13	30.59
Recall Shifter	59.70	55.97	44.4
F-Score Shifter	62.87	48.08	36.23
old clause version	64.88		
	58.58		
	61.57	-1.3	

Compare different rule configurations for transitive and intransitive verbs

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

2

2	Standard		
F_SE	100		
Precision Shifter	66.67	3.8	
Recall Shifter	52.99	-6.71	
F-Score Shifter	59.04	-3.83	(compared to best config)

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

3

3	Standard		
F_SE	100		
Precision Shifter	64.03	1.16	
Recall Shifter	60.45	0.75	
F-Score Shifter	62.19	-0.68	(compared to best config)

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

4

4	Standard		
F_SE	100		
Precision Shifter	75.93	13.06	
Recall Shifter	45.90	-13.8	
F-Score Shifter	57.21	-5.66	(compared to best config)

Only 1 verb rule: [obja]

4.5

4.5	Standard		
F_SE	100		
Precision Shifter	78.15	15.28	
Recall Shifter	44.03	-15.67	
F-Score Shifter	56.32	-6.55	(compared to best config)

Keep best rules, change other parameters

No Scope Expansion

5

5	Standard		
F_SE	100		
Precision Shifter	68.5	2.11	
Recall Shifter	51.2	-8.5	
F-Score Shifter	58.55	-4.32	(compared to best config)

With orientation lookup

6

6	Standard		
F_SE	100		
Precision Shifter	70.50	4.11	
Recall Shifter	52.61	-7.09	
F-Score Shifter	60.27	-2.6	(compared to best config)

No Normalization

7

7	Standard		
F_SE	100		
Precision Shifter	69.77	3.38	
Recall Shifter	33.58	-26.12	
F-Score Shifter	45.34	-17.53	(compared to best config)

Turn off parts of normalization

No conjunction normalization

7.01

7.01	Standard		
F_SE	100		
Precision Shifter	65.98	-0.41	
Recall Shifter	59.33	-0.37	
F-Score Shifter	62.48	-0.39	(compared to best config)

No active-passive normalization

7.02

7.02	Standard		
F_SE	100		
Precision Shifter	64.73	-1.66	
Recall Shifter	58.21	-1.49	
F-Score Shifter	61.3	-1.57	(compared to best config)

Lexicon based evaluation

Lexicon_standard: Lexicon, Normalisierung, POS lookup				
8	10.0 Standard	10.1 Baseline_window4_both	10.2 Baseline_one_rule	
F_SE	64.31	64.31	64.31	
Precision Shifter	47.52	25.96	21.83	
Recall Shifter	35.82	35.45	30.22	
F-Score Shifter	40.85	29.97	25.35	

Lexicon_no_POS: Lexicon, Normalization, No POS lookup	
9	11.0 Standard
F_SE	64.4
Precision Shifter	47.29
Recall Shifter	35.82
F-Score Shifter	40.76

POS-lookup yields slight improvement

Lexicon_extended: germanlex_extended, Normalization, POS lookup			
10	12.0 Standard	12.1 Baseline_window	12.2 Baseline_one_rule
F_SE	85.01	85.01	85.01
Precision Shifter	65.44	31.96	24.88
Recall Shifter	52.99	49.25	39.18
F-Score Shifter	54.93	47.06	30.43

Extending germanlex yields huge SE-improvements
Better precision here probably overfitting. Ambiguity is a problem.

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

Baseline rule evaluation with clause

BaselineRule classic –with clause case		
11	Standard	
F_SE	100	
Precision Shifter	31.5	
Recall Shifter	46.27	
F-Score Shifter	37.52	1.29 (compared to baseline without clause case)

Only negation in shifterLex

Negation only	
12	Standard
F_SE	100
Precision Shifter	76.32
Recall Shifter	10.82
F-Score Shifter	18.95