Colexification networks encode affective meaning

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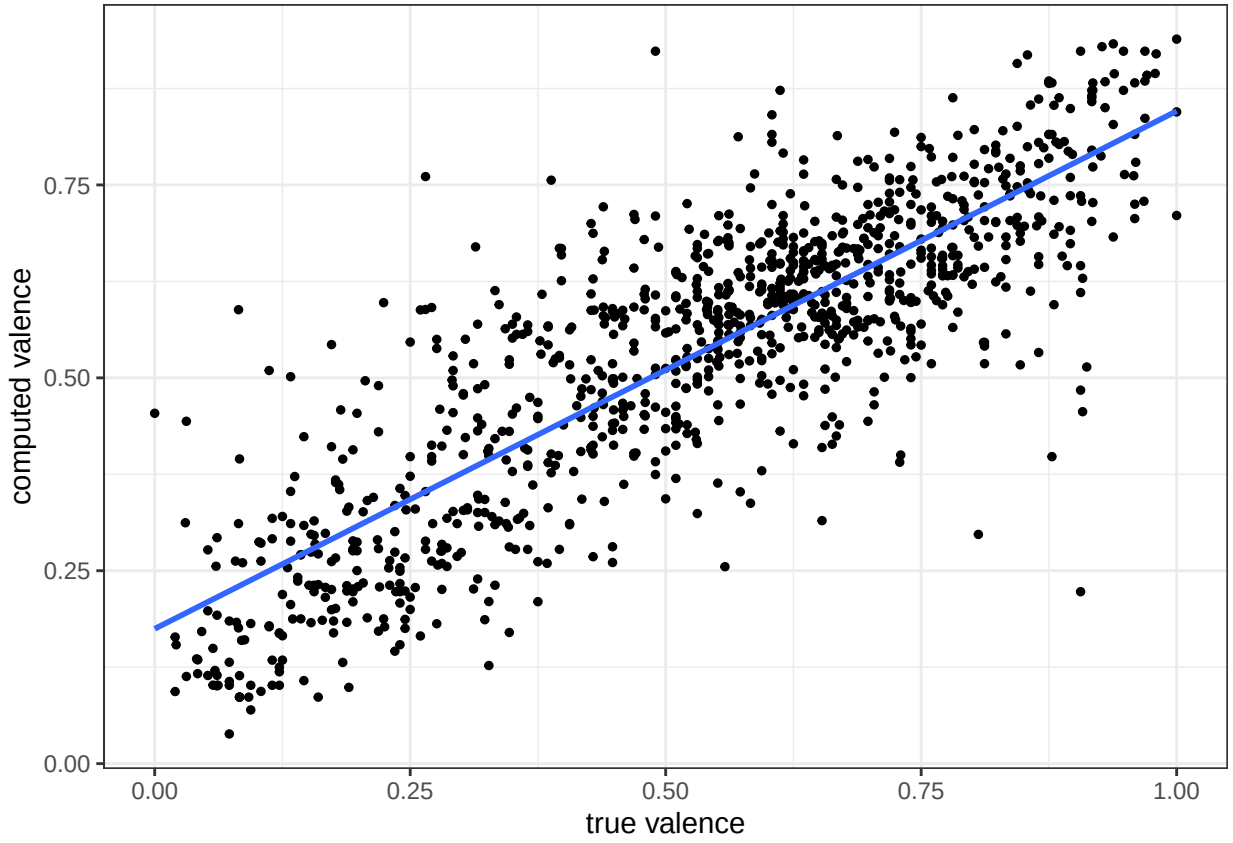
Analysis of the CLICS3, OmegaWiki and FreeDict networks in relation to the ratings of valence, arousal and dominance

Table 2. Words in the affective lexica that are mapped in the colexification networks

network	lexicon	num.words	percent.in.network	percent.in.lexicon
clics3	WKB	1263	77	9
clics3	NRCVAD	1337	81	7
omegawiki	WKB	3872	38	28
omegawiki	NRCVAD	4841	47	24
freedict	WKB	8707	31	63
freedict	NRCVAD	11718	42	59

Computation of the ratings of all nodes in the network

Figure 5. Correlation between estimated and true values in the case of the OmegaWiki network and the NRC VAD lexicon

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## [1] "correlation coefficient: 0.839"
```

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## [1] "confidence interval: [0.82,0.856]"
```
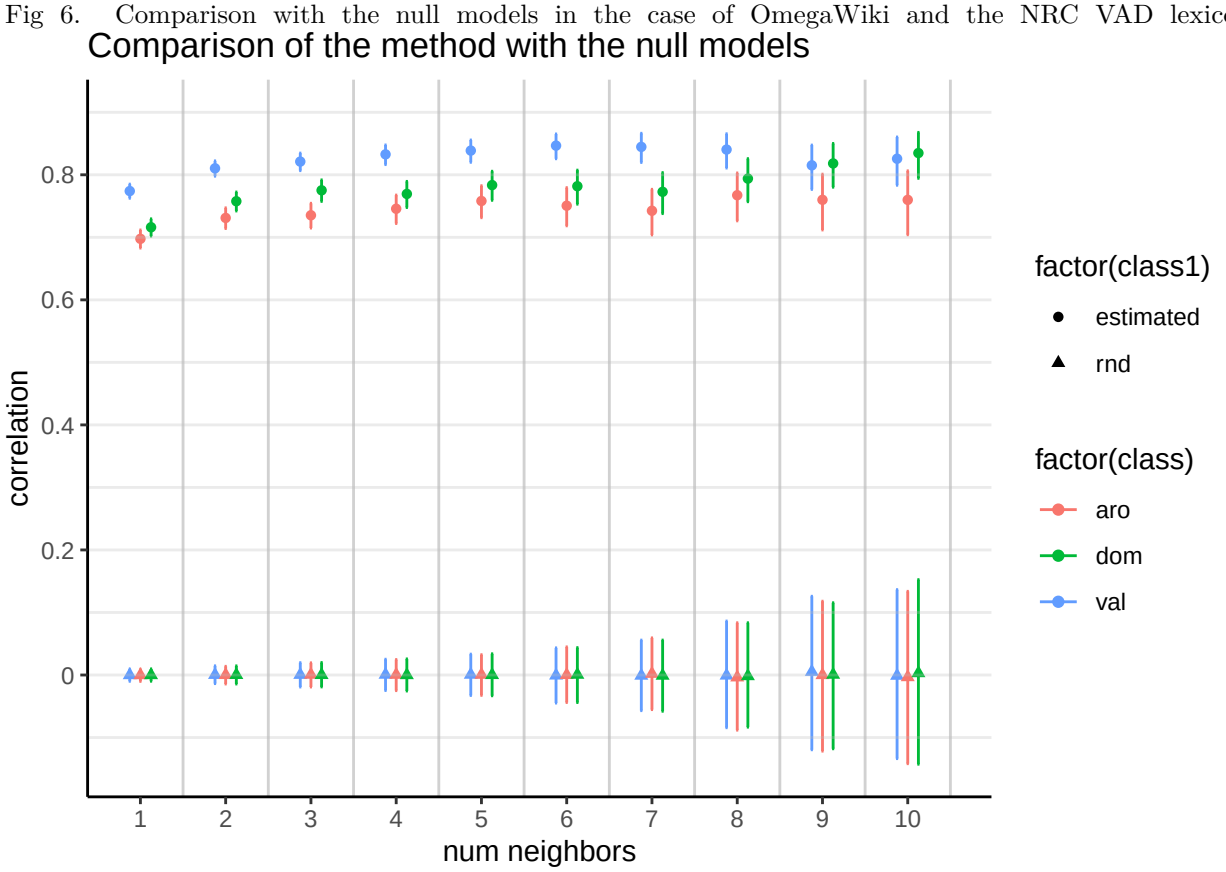

Table 3. Correlation between computed and true values

network	lexicon	new_words	perc_coverage	V	A	D
clics3	WKB	351	98.0	0.688	0.481	0.534
clics3	NRCVAD	284	98.4	0.688	0.638	0.635
omegawiki	WKB	2700	63.7	0.728	0.527	0.646
omegawiki	NRCVAD	2323	69.4	0.774	0.698	0.716
freedict	WKB	11304	71.6	0.741	0.575	0.649
freedict	NRCVAD	8756	73.3	0.794	0.720	0.749

Fig 6. Comparison with the null models in the case of OmegaWiki and the NRC VAD lexicon



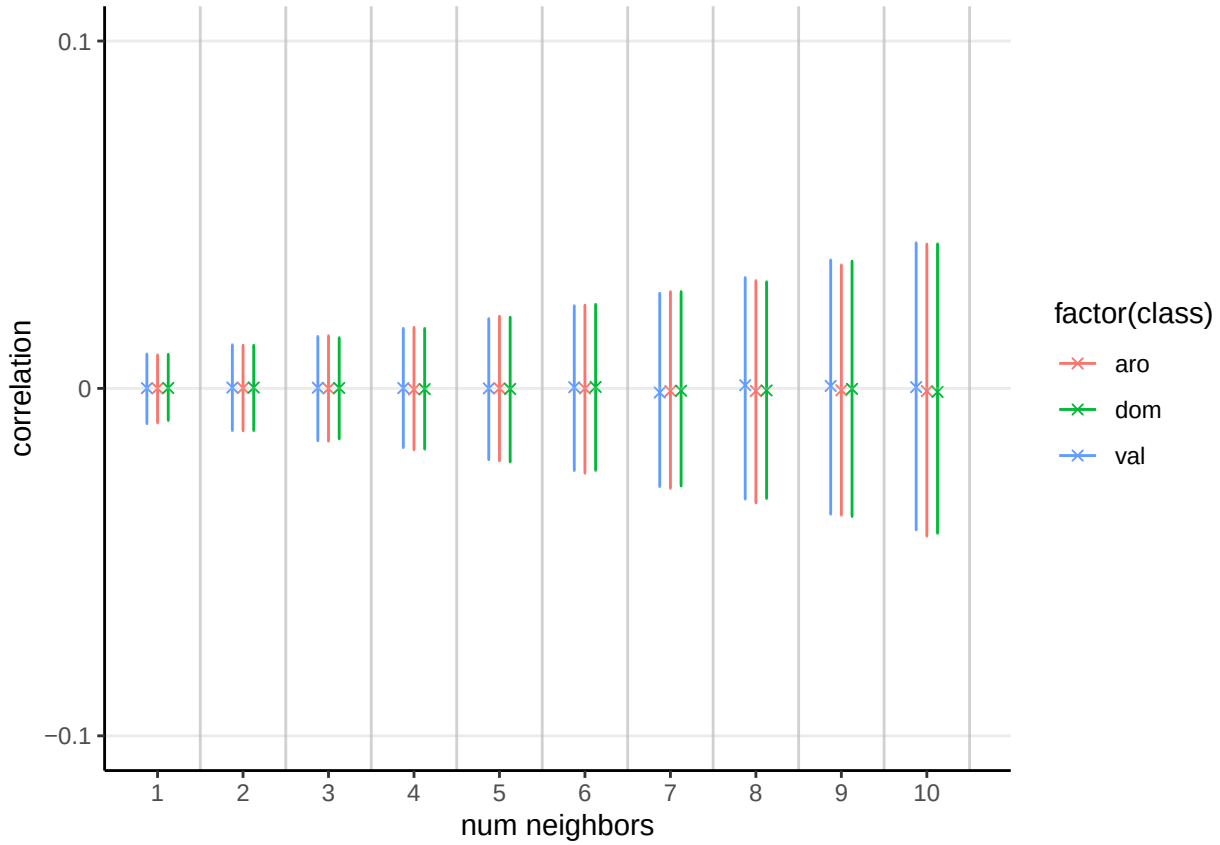
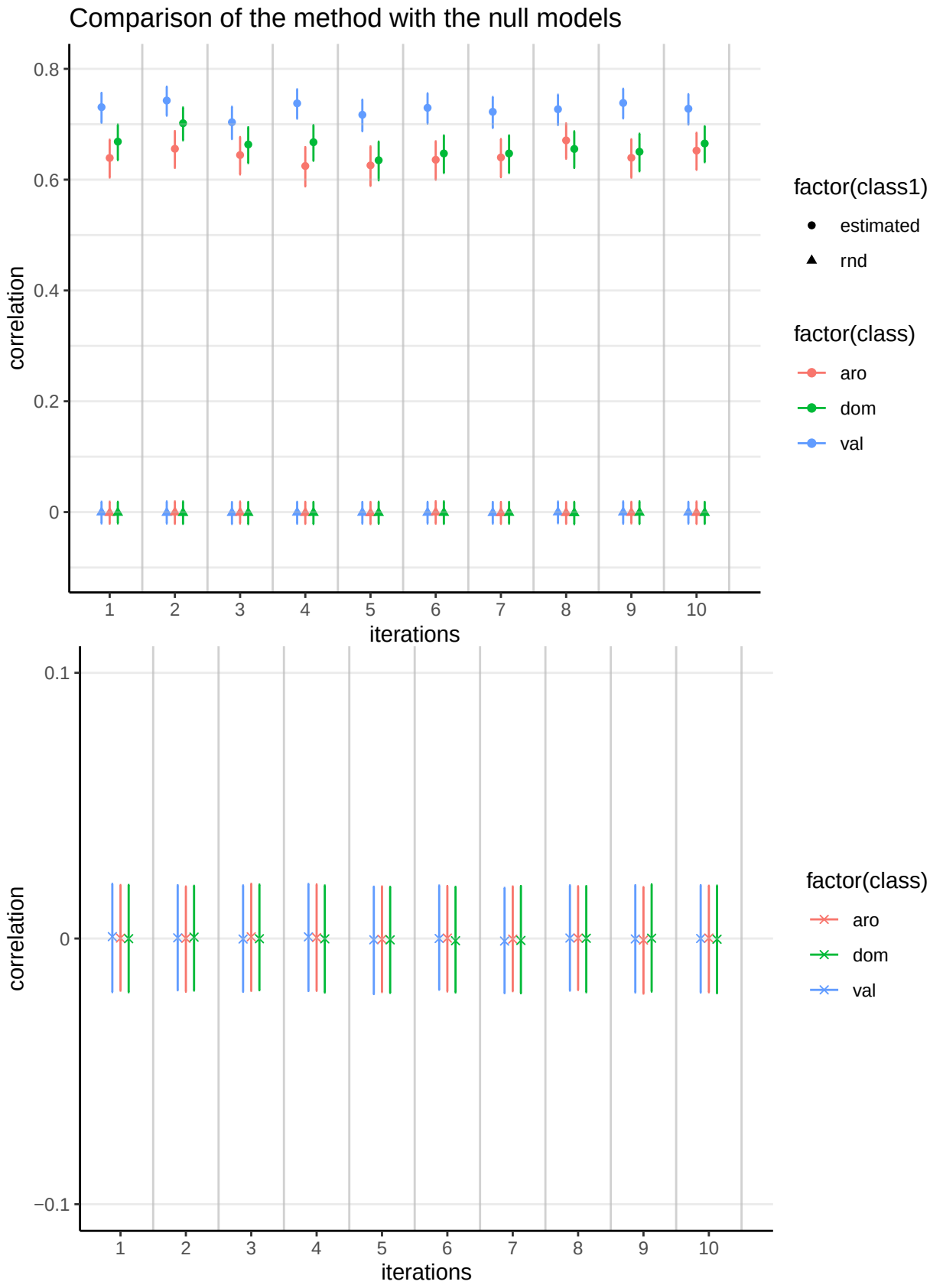


Table 4. Results of the 75/25 split cross validation on 10 iterations

network	lexicon	perc_computed_words	V	A	D
clics3	WKB	99.1	0.663	0.431	0.524
clics3	NRCVAD	99.3	0.649	0.619	0.607
omegawiki	WKB	94.5	0.653	0.422	0.557
omegawiki	NRCVAD	94.6	0.728	0.643	0.661
freedict	WKB	98.7	0.668	0.467	0.561
freedict	NRCVAD	98.6	0.747	0.666	0.700

Figure 7. Comparison with the null models in the case of OmegaWiki and the NRC VAD lexicon


Comparison of the method with the null models
correlation
0.8
0.6
0.4
0.2
0
1
2
3
4
5
6
7
8
9
10
iterations
factor(class1)
estimated
rnd
factor(class)
aro
dom
val
correlation
0.1
0
−0.1
1
2
3
4
5
6
7
8
9
10
iterations
factor(class)
aro
dom
val