Building gold-standard treebanks for Norwegian

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THE TREEBANKS

- Språkbanken at the National Library of Norway is currently developing gold-standard Dependency Grammar treebanks for Norwegian Bokmål and Nynorsk
- Manually annotated for morphological features, syntactic functions and dependency relations
- Beta versions available at Språkbanken's web page

Size of current beta version (0.4):

204 000 tokens for Bokmål and 156 000 tokens for Nynorsk

Distribution of texts:

Newspaper text	79 %
Government reports	9 %
Parliament debates	6 %
Blog posts	6 %

MORPHOLOGY AND LEMMATIZATION

- Lemmatization, POS-tags and morphological features mostly follow the Oslo Bergen Tagger (OBT)

Form	**Lemma**	**POS**	**Features**
Se	se	verb	imp
innslaget	innslag	subst	appell|nøyt|be|ent
her	her	prep	_
.	$.	clb	<punkt>

- Non-standard forms are marked with the additional tag *unorm*

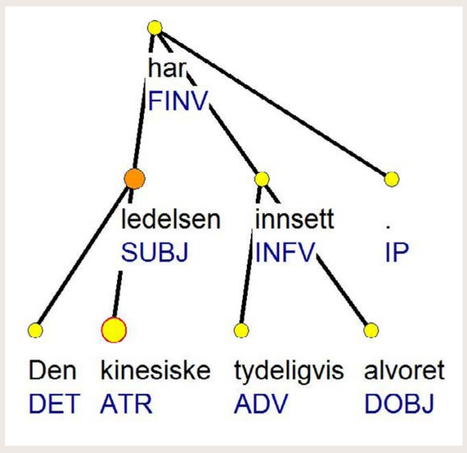
Form	**Lemma**	**POS**	**Features**
kallet	kalle	verb	perf-part|unorm

SYNTACTIC ANNOTATION

- Syntactic annotation guidelines have been developed specifically for this project

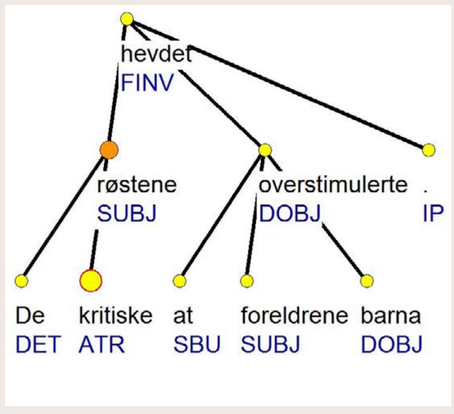
(1)

Den kinesiske ledelsen har tydeligvis innsett alvoret.
the Chinese administration+the has evidently realized seriousness+the
'The Chinese administration has evidently realized the seriousness.'



(2)

De kritiske røstene hevdet at foreldrene overstimulerte barna.
the critical voices claimed that parents+the overstimulated children+the
'The critical voices claimed that the parents overstimulated the children.'



USE

Testing and training of NLP tools

- We have obtained a labeled attachment score of 85.77 % from the *MaltParser*, a data-driven dependency parser, trained on the Bokmål treebank

Linguistic research

- A useful tool for research within linguistic disciplines such as morphology, lexicography and syntax
- It is possible to make queries for very specific syntactic constructions, e.g. fronted non-subjects in complement clauses
- You can retrieve all lemmas which occur with the same syntactic function, e.g. indirect object

Contact

Inquiries regarding the treebanks can be sent to *sprakbanken@nb.no*

Nasjonalbiblioteket
National Library of Norway