PARSEME Corpus Release 1.3

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PARSEME corpus

- Collective effort towards **annotation guidelines** for verbal MWEs (VMWEs)
    - Unified across many languages from various genera
- 5 VMWE major **categories**, annotation **decision diagrams**, multilingual **examples**
- **Corpora** in **26 languages** annotated according to these guidelines
- **Shared tasks** on automatic identification of verbal MWEs
- **Editions** 1.0 (2017), 1.1 (2018) and 1.2 (2020):
    - Guidelines, corpora and shared task tightly **intertwined**
    - Overlapping but varying language lists
    - **Morpho-syntactic** annotation - manual vs. automatic, heterogeneous sources
    - Increasing compatibility with **Universal Dependencies (UD)**

VMWE categories in PARSEME

- Universal
  - VID (verbal idiom) e.g. (de) ***schwarz fahren*** (lit. ‘black drive’) ‘take a ride without a ticket’
  - LVC (light-verb construction)
    - LVC.full, e.g. (hr, sr) ***držati govor*** (lit. ‘hold a speech’) ‘give a talk’
    - LVC.cause, e.g. (ro) ***da bătăi de cap*** (lit. ‘give strikes of head’) ‘give a hard time’
- Quasi-universal
  - IRV (inherently reflexive verbs), e.g. (pt) ***se queixar*** ‘complain’
  - VPC (verb-particle construction)
    - VPC.full, e.g. (en) ***do in***
    - VPC.semi, e.g. (en) ***eat up***,
  - MVC (multi-verb construction), e.g. (fr) ***laisser tomber*** (lit. ‘let fall’) ‘give up’.
- Language-specific categories
  - ICV (inherently clitic verb): (it) ***smetterla*** (lit. ‘quit it’) ‘knock it off’
- Experimental
  - IAV (inherently adpositional verbs), e.g. (es) ***entender de*** *algo* (lit. ‘understand of something’) ‘know about something’

PARSEME corpus - objectives for edition 1.3

- Gather all past **26 languages** in the same release
- Cover **new languages**
- Achieve full **UD compatibility**
- **Detach** the corpus releases from shared tasks
- Define a process of **continuous improvement** and systematic releasing (following the UD model)

New languages

- Arabic
  - Examples added to the guidelines
  - Covered in previous annotation campaigns but the corpus itself is not available
  - New corpus created from scratch
  - Built upon the Prague Arabic Dependency Treebank (PADT) (Hajic et al., 2004)
  - 7,500 sentences; 4,700 VMWEs
  - Single annotator per sentence; double-annotated fraction for IAA calculation
- Serbian
  - Examples added to the guidelines
  - Morphosyntactic layers generated with UDPipe (Straka, 2018)
  - 3,586 sentences; 1,300 VMWEs
  - Single annotator per sentence

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Enlarged corpora

- Greek
  - 5,000 new sentences; also informal register
- Swedish
  - 1,700 new sentences; full parallelism with the UD Talbanken treebank
  - Extensive use of the consistency checker
- Chinese
  - 9,000 new sentences
  - Double annotation + adjudication for each sentence

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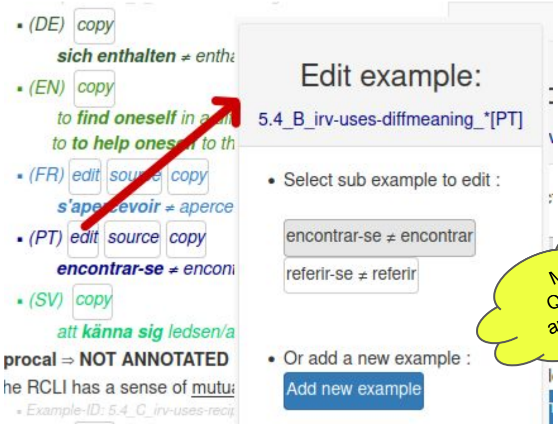
Other enhancements

- Quality enhancements in particular languages
  - Croatian - alignment with gold UD annotations
  - Romanian - new category annotated (IAVs)
  - English and Polish - thorough consistency and quality checks
  - Irish - controversial category (IRV) removed
  - Turkish - manual revision of morphosyntax
  - Czech and Maltese - partial upgrade from version 1.0 to 1.3
- Full UD compatibility:
  - 11 languages: synchronisation of manual UD layers with UD release 2.11
  - 16 languages: re-generation of automatic morphosyntactic layers with UDPipe 2.10
  - All 26 corpora now use **UD 2 tagsets**
- Corpus re-split
  - Adopting shared task 1.2 strategy (controlled number of unseen VMWEs in test and dev)

Enhanced infrastructure



- (DE) copy
  sich enthalten ≠ entha
- (EN) copy
  to **find oneself** in a
  to **to help ones** to th
- (FR) edit source copy
  s'apercevoir ≠ aperce
- (PT) edit source copy
  encontrar-se ≠ encon
- (SV) copy
  att **känna sig** ledsen/a

procal ⇒ NOT ANNOTATED

he RCLI has a sense of mutu

- Example-ID: 5.4_C_irv-uses-recip

Edit example:

5.4_B_irv-uses-diffmeaning_*[PT]

- Select sub example to edit :

encontrar-se ≠ encontrar

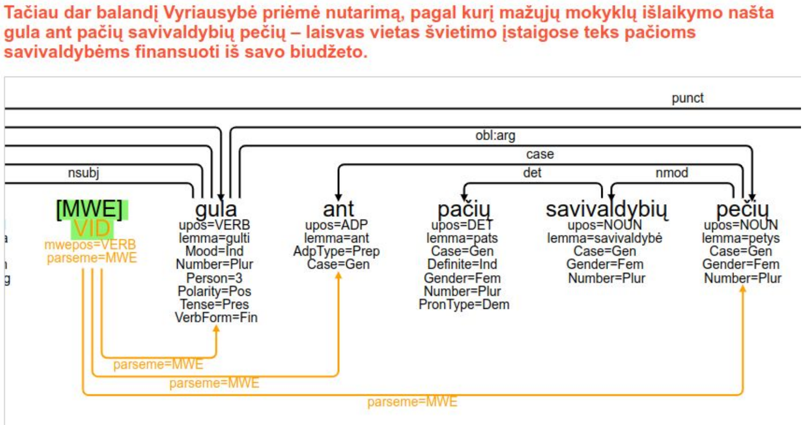
referir-se ≠ referir

- Or add a new example :

Add new example

Many thanks to Quentin Barrouyer and Baptiste Souche

- Annotation guidelines
  - Easier edition of multilingual examples
  - New examples added (2,000 in total in edition 1.3)
- Versioning via a common Gitlab project
- Rich Wiki documentation of the corpora, procedures and tools
- Grew-match corpus browser - one instance per corpus version (Guillaume, 2021)

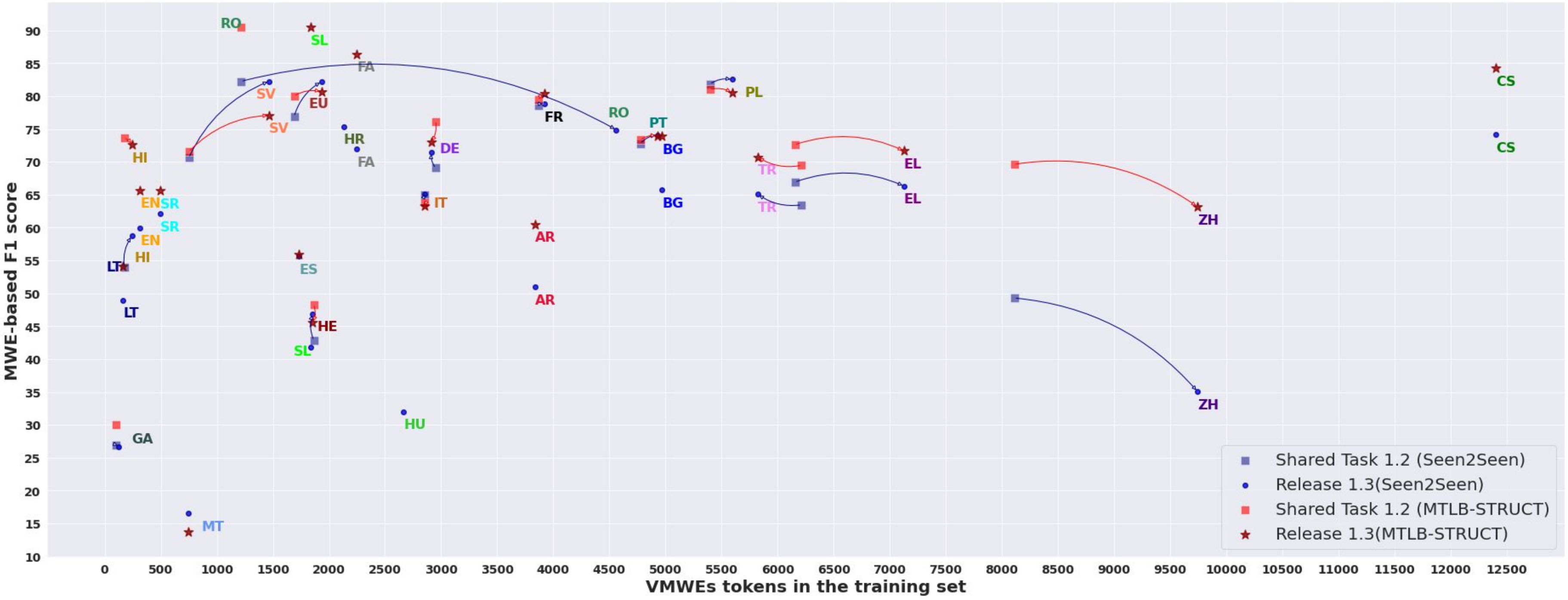


Tačiau dar balandį Vyriausybė priėmė nutarimą, pagal kurį mažųjų mokyklų išlaikymo našta gula ant pačių savivaldybių pečių – laisvas vietas švietimo įstaigose teks pačioms savivaldybėms finansuoti iš savo biudžeto.

VMWE identification

- Task: automatically annotating VMWE occurrences in running text
  - Addressed by the PARSEME shared tasks 1.0, 1.1, 1.2
- Critical hardness of the items unseen in training data
- 2 winner systems of the PARSEME shared task 1.2
  - Seen2Seen (Pasquer et al., 2020) - rule-based, fully interpretable, fast training
  - MTLB-STRUCT (Taslimipoor et al., 2020) - BERT-based, single- or multi-tasking, long training
- Both re-trained on the 1.3 release (after re-split)

Corpus sizes vs. system results



Conclusions and future work

- 1.3 release corpus with all past 26 languages
- 9 million tokens; 455,000 sentences; 127,000 VMWE annotations
- Full UD compatibility
- Universality confirmed for VIDs and LVC.full
- VMWE identification remains challenging despite larger and better corpora
- Next steps:
  - Stronger automation in the spirit of CI/CD (ongoing)
  - Extending the guidelines to other MWE categories
  - Stronger convergence with UD