Abstract
• The key semantic domains method implemented in Wmatrix (versions 1 to 4) extends the keywords approach which has been widely applied in corpus linguistics research.
• However, one important drawback is that key semantic domains are currently restricted to one language only due to the inclusion of the CLAWS Part-of-Speech (POS) tagger and the UCREL Semantic Analysis System (USAS) for English.
• In recent years, semantic taggers for other languages have been developed utilising freely available POS taggers and lemmatisers for new languages.
• This paper describes how the semantic taggers for further languages are being incorporated into Wmatrix. Crucially, there is a need to support community crowdsourcing involvement for the extension and checking of the new semantic lexicons which are under varying stages of development to improve their coverage and accuracy.
• This work will enable key semantic domains for monolingual analysis beyond English corpus, but also facilitate crosslingual comparisons.

Key Semantic Domains
• Key semantic domains facilitates the discovery of concepts and groups of words collected within semantic fields which are unusually frequent or infrequent compared to a reference corpus.
• Key semantic domains have proved useful in a number of different areas of linguistic research: literary characterisation (Balossi et al., 2014), language of psychopaths (Hancock et al., 2013), corpus linguistic research: literary characterisation (Leedham et al., 2020), enhancing critical thinking in higher education (O’Halloran, 2020), and the construction of newsworthiness (Potts et al., 2015).

• Mini case study: Wmatrix corpus analysis of UK General Election Manifestos 2017 https://ucrel.lancs.ac.uk/wmatrix/ukmanifestos2017/
• Figure 1: Labour Key Word Cloud

• Figure 2: Labour Key Semantic Tag Cloud

The Future ... New Semantic Taggers Currently Planned
• Arabic
  - Nouran Khalil (Leeds, UK), Elvis de Souza (PUC-Rio, Brazil), Mahmoud El-Haj (Lancaster, UK)
• Indonesian
  - Prihantoro (Lancaster, UK)
• Korean
  - Se-Eun Jhang (KMU, Corpus Linguistics Research Association under the auspices of The Korean Association of Language Sciences, Korea)
• Persian
  - Mehrdad Vaseghani Farahani (Leipzig, Germany)

Requirements For Adding New Languages
• Reference corpora for each language.
• Corpus indexing system: MatrixDB and/or LexiDB (Coole, 2021).
• Personal (private) lexicons versus system (public) lexicons.
• Support for crowdsourcing and checking of new semantic lexicons.
• Manually checked gold standard data.
• Existing POS tagger and lemmatiser.
• Bootstrapping methods to create initial semantic lexicon (bilingual dictionary, parallel corpus, MT, NER, ML/DL, vector-based).

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