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Introduction: Receptive multilingualism

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This special issue of the *Nordic Journal of Linguistics* is devoted to RECEPTIVE MULTILINGUALISM (RM), and includes papers presented in the conference Receptive Multilingualism: Multilingual Resources in the Service of Mutual Understanding, held at the University of Eastern Finland, Joensuu, in 2015. RM refers to a language contact situation in which hearers' or readers' understanding of a non-native language is based on their skills in either their first language or languages that they have learned later in life. In such situations comprehension can be based on linguistic similarity of the languages, on acquired knowledge of the language skills: the hearer or the reader does not necessarily actively command the language they are able to understand. In its most interactive form RM refers to a situation in which every conversation participant can use their native language and be understood by the others.

Research on RM was established as a specific field of study in the first decade of the 21st century, although the field has had acknowledged predecessors in the latter half of the previous century. During the current decade, the scope of research has widened, and nowadays under the umbrella of the concept of RM fit several different research topics, such as the mutual intelligibility of related languages, receptively multilingual interaction between speakers with different linguistic backgrounds, and language ideologies and language policies related to practicing RM. RM studies can be divided roughly into two categories: those that focus on RM interaction in different language constellations (with speakers of related or unrelated languages) and those that focus on mutual intelligibility or cross-linguistic similarity between



languages. In this special issue, the main focus is on the latter category: on linguistic distances and utilizing the similarities between different languages in text or speech comprehension.

At the core of comprehending a related language is the notion of SIMILARITY, a relation existing between two languages; of interest are both OBJECTIVE (ACTUAL) and SUBJECTIVE (PERCEIVED AND ASSUMED) similarity, i.e. the hearer's or the reader's perceptions of similarities between the new language and the previously learned language(s). Comprehension is a crucial prerequisite for the first stages of learning a language, receptive skills always preceding productive skills, and therefore research on RM is closely connected to second and third language acquisition studies. The concept of similarity also lies behind the instances of CROSS-LINGUISTIC INFLUENCE, i.e. cases in which one language affects another in the language use of individual speakers, a typical phenomenon in all multilingual interaction. Cross-linguistic influence relies on the similarities between languages as perceived by language learners or language users.

Closely related languages have the most similarities, appearing in a form that is easiest to perceive; consequently, the bulk of RM research has concentrated on related languages representing several language families. One trend has been to contemplate the objective similarity between cognate languages by applying various computational means to compare the languages; another trend is to approach perceived similarity by carrying out test procedures, in which the respondents estimate the similarity or difference of carefully chosen test material. The concept of subjective similarity has hitherto received little theoretical and empirical attention, and there is still no clear understanding of how the similarities between closely related languages are utilized in comprehension and which linguistic and extra-linguistic factors affect this process. The present thematic issue aims at filling this gap and offering new perspectives to this complex aspect of receptive multilingualism. A common factor in several articles is that they discuss both objective and subjective similarity and attempt to compare these different but interrelated forms of similarity.

This special issue includes five articles, which focus above all on methodology. RM is a relatively new field and initially the studies were explorative in nature, aiming at determining how comprehension of a related language occurs in practice and what kinds of factors affect the process of comprehension. As the scope of RM has expanded, the methodological choices have been diversified and researchers now have a better understanding of how similarity and mutual intelligibility can be methodologically approached. In these articles, new methodologies are introduced and the contributors provide methodological solutions which can open new empirical and theoretical perspectives to cross-linguistic similarity and influence. In the following, we briefly describe each paper, concentrating on the methodological dimensions. Methodology is a central component of the article 'Linguistic and extra-linguistic predictors of mutual intelligibility between Germanic languages' by CHARLOTTE GOOSKENS and FEMKE SWARTE. The method used for measuring mutual intelligibility is a cloze test, conducted for both written and spoken language. The main aim of the project was to discover which of the carefully operationalized linguistic and extra-linguistic factors are important as predictors of intelligibility. Linguistic factors included lexical distance, orthographic stem distance, affix distance, phonological distance and syntactic distance. Extra-linguistic factors were attitude, and exposure to the language. The scale of the test was wide: twenty combinations of five Germanic languages (Danish, Dutch, English, German and Swedish) were tested using the same uniform methodology. Previous studies concerning intelligibility across the Germanic languages have used variable methodology and this study thus represents an important step: for the first time, all the results for all language combinations are commensurable.

In the article 'Perceived similarity between written Estonian and Finnish: Strings of letters or morphological units?' ANNEKATRIN KAIVAPALU and MAISA MARTIN address the similarity between two closely related Finnic languages. Their methodological starting point is to compare two distinct methods, the Levenshtein Distance (LD) and the Index of Perceived Similarity (IPS). The former is a mathematical formula, based on the number of different, missing or additional letters when comparing words or word forms from different languages. The latter method is a measure developed by the authors in an earlier study; the scores come from a test in which Estonian and Finnish respondents rated pairs of Estonian and Finnish nouns (inflected in number and case) as 'similar', 'somewhat similar' or 'different'. LD is implemented as a symmetrical measure of objective similarity between the languages, whereas IPS measures similarity as it is subjectively perceived by the language users. The results of the study provide further evidence for the earlier observation that the subjective similarity between languages is not symmetrical: IPS reveals that Finns see more similarity between Finnish and Estonian than Estonians do. Another important finding is that deletions and additions, the basic operations in LD, are not of equal value in this comparison: it appears that deletions are more transparent for the participants in terms of subjective similarity than additions.

In their article 'Modeling the impact of orthographic coding on Czech–Polish and Bulgarian–Russian reading inter-comprehension', IRINA STENGER, KLÁRA JÁGROVÁ, ANDREA FISCHER, TANIA AVGUSTINOVA, DIETRICH KLAKOW and ROLAND MARTI address the question of how orthographic intelligibility between Slavic languages can be measured and predicted. The study introduces three computational methods for calculating linguistic distance: the Levenshtein algorithm, conditional entropy and adaptation surprisal. The material used consists of an ample collection of parallel cognate lists in the language pairs investigated. As discussed in the previous research, the Levenshtein Distance as a completely symmetrical mathematical distance fails to describe the often asymmetrical distances perceived by language users. Both conditional entropy and adaptation surprisal allow for revealing or predicting asymmetrical difficulties in reading stimuli (e.g. Czech readers may have more difficulties in reading Polish stimuli than vice versa). The predictive potential of these three methods will later be explored by the authors in web-based experiments between the same language pairs. The overall aim is to develop a metric for linguistic distance that takes into account the way language users decode stimuli presented in a foreign language.

PIRKKO MUIKKU-WERNER's study 'Lexical inferencing and the mutual intelligibility of Estonian and Finnish' approaches the comprehension of an Estonian text by Finnish readers. Previously, it has been demonstrated that similarities in orthography, phonology and the lexicon facilitate the understanding of a related language. Muikku-Werner aims at demonstrating that in addition to similarity, various reading comprehension skills in native (L1) Finnish promote understanding of the Estonian text; these skills include lexical inferencing based on world knowledge, the textual context and the semantic relationships manifested in phraseological units. The article presents results from two tests, in which material was presented to one group of Finnish informants in Finnish (a cloze test) and to another group in Estonian (a translation test). The core element of the test text were five pairs of words (primes and targets) which utilize the phenomenon of semantic priming. In the cloze test, the targets were removed and in the translation test, the respondents had to translate the targets from Estonian into Finnish. The article focuses on the lexical inferencing demonstrated when filling in the gaps or translating the targets. This test combination is novel in the RM context and provides evidence for the claim that L1 reading comprehension strategies can support reading a text in a related second language (L2).

The article 'Learner language morphology as a window to cross-linguistic influences: A key structure analysis', by ILMARI IVASKA and KIRSTI SIITONEN, presents an approach rather different from that of the other papers: it uses corpus linguistic and statistical methodology, and corpus data of learner Finnish. It is connected to the field of RM through the notion of cross-linguistic influence, which is based on the similarity between L1 and L2 (in this case the influence of learners' L1 constructions in L2 Finnish). Form or construction-specific typological similarity or dissimilarity between L1 and Finnish affects the frequencies of linguistic features in learner Finnish, and these frequencies can be explored with the help of corpus linguistic tools. The study divides the International Corpus of Learner Finnish into several sub-corpora according to the L1 of the learners and then uses computational techniques to detect repeated quantitative differences between the sub-corpora. The authors' methodology of choice is Key Structure Analysis, a step-wise methodological procedure combining several established corpus linguistic methods.

This methodology can be used to link quantitative differences between sub-corpora with linguistic intelligibility and qualitatively defined linguistic phenomena. The results show that the existence of structurally similar constructions in the L1 and Finnish is likely to increase the frequency of the construction in written learner Finnish data. The results of the study indicate that the detection-based methodological procedure is a useful tool in identifying similarities between L1 and L2.

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