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Introduction: Communicating across linguistic borders

Rough estimates of how many languages are spoken in the world today usually range between 6 500 and 7 000. The 2013 edition of the Ethnologue lists even 7 106 living languages (Lewis et al. 2013). If speakers of different languages communicate with each other, they have to find a way of communicating across a linguistic border, and typologically speaking, with more than 7 000 languages, there are currently more than 25 million linguistic borders in the world.

There are several strategies of bridging those borders. Speakers can choose to switch to the native language of one of the involved speakers. This way of communicating is often chosen in situations where one of the languages has a higher status or is more widespread than the other language(s). An example from Western Europe is a situation where a native speaker of Dutch communicates with a native speaker of German. It is more likely that the communication will take place in German than in Dutch, because many speakers of Dutch have basic knowledge of German, but not vice versa. When a native speaker of Dutch communicates with a speaker of Frisian, however, the conversation is more likely to be held in Dutch, because almost all speakers of Frisian have thorough knowledge of Dutch, but not vice versa.

Another strategy of bridging linguistic borders is switching to a *lingua franca*, i.e., a language which is spoken and understood by all involved speakers to a certain extent. In many parts of the Western world, English is one of the most widespread lingua francas. Other widely used lingua francas include French, Portuguese, and Spanish in many African countries, and Arabic in Northern

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African and Middle East countries. In addition, there are many other lingua francas in particular regions.

A third way of communicating across linguistic borders is using receptive multilingualism, where interlocutors use their own language while speaking to each other. Arguably, this way of communication is only possible if the listeners are either familiar with the language spoken by the speakers, or if the languages are so closely related that they are mutually intelligible. Since only a small proportion of the languages spoken in the world today are isolates, most of the world's languages have related languages with varying degrees of similarities between them.

In some areas receptive multilingualism is not only widespread, but also encouraged and even financially supported by local and national authorities because of the unifying effect it can have on speakers. An example for such a region is Scandinavia (cf. *Declaration on a Nordic Language Policy* 2007). However, even in countries where using receptive multilingualism is generally encouraged, there have been concerns about the growing dominance of large *lingua francas*. In Scandinavia, there is evidence that young people tend to prefer communicating in English rather than in their native languages (Delsing and Lundin Åkesson 2005). Börestam sheds more light on this topic and reports on a longitudinal study investigating the intelligibility of spoken Danish, Norwegian, and Swedish on Iceland, a former colony of Denmark, where Danish was taught at school until the last millennium. Using an approach similar to the research design in Labov's classical department store study (Labov 1966), her data shows a dramatic decline in the ability and willingness to understand spoken mainland Scandinavian languages across generations. The author relates this finding to the increasingly higher status of English as opposed to Danish in Iceland. Using a longitudinal approach for this investigation makes the claims of this investigation particularly strong, as it makes evident that the changing degree of mutual intelligibility takes place in real time. In other words, Börestam's study shows that it is not the case that older speakers are generally more mutually intelligible to each other than younger speakers, but that the older generation was better at decoding the neighboring languages when they were younger than the current young generation is.

In general, little is known about how well the young generation, i.e., children and adolescents, can decode closely related varieties. It has been shown that American infants react towards the difference between American and Australian English, while Australian infants do not (Kitamura et al. 2006). This has been explained with a more extensive exposure of Australian infants to American English than vice versa, e.g., television programs. However, in the first year of life, the ability to discriminate two linguistic varieties decreases. When infants start identifying irrelevant phonetic information and filter it out, they seem to cluster

closely related linguistic varieties into the same language group (Kitamura et al. 2006). However, we know little about how intelligible those closely related linguistic varieties are to children and adolescents. The question how well young speakers of Germanic languages can understand closely related Germanic languages has been addressed by two contributions in this issue. The study by Schüppert et al. focuses on East Scandinavian languages and investigates mutual intelligibility of Danish and Swedish in 7-to-16-year old children and adolescents. They show that mutual intelligibility develops gradually and improves with age. They also investigate the role of language attitudes for the success of receptive multilingualism between young speakers of Danish and Swedish. By conducting a matched-guise study (Lambert 1960), consciously and subconsciously held attitudes are elicited in 154 children and adolescents in Denmark and Sweden. The results indicate that Danish-speaking participants generally hold a more positive attitude towards Swedish than vice versa. Correlations between individual attitudes and individual intelligibility scores are low, but significant. This might suggests that increasing the statuses of the potentially mutually intelligible languages in Scandinavia might increase the success of receptive multilingualism in this area. However, the causal relationship of attitude and intelligibility is still a matter of discussion.

The second study shedding more light on the intelligibility of closely related languages in the young generation was conducted by Gooskens et al. This study further extends the scope of this issue to including receptive multilingualism of speakers of West Germanic languages, viz. Dutch and German. This study is of particular interest, because in the Netherlands, German has traditionally been taught at school for many decennia, which results in very high intelligibility of German in the Netherlands, and thereby asymmetric intelligibility scores. This often leads to communication situations where speakers of German and Dutch communicate in German, rather than using receptive multilingualism. The methodological strength of the present study is in eliciting mutual intelligibility of Dutch and German in participants that have not acquired the neighboring language, viz. 9-to-12-year old pupils. By investigating mutual intelligibility in this group of subjects, the factor of L2 knowledge is entirely excluded, and the authors are able to answer the question whether the asymmetric intelligibility scores are mainly due to L2 knowledge in older people, or whether linguistic factors contribute to this asymmetry as well. The authors show that the asymmetry reported from adults is also present in schoolchildren of this age, a finding that is discussed in the light of regular sound correspondences across the two languages. The authors conclude that phonetic detail may play an important role in the intelligibility of cognate words in closely related linguistic varieties, but point out that the ways in which sound correspondences interact with other linguistic

and extra-linguistic factors have not been addressed adequately by previous research.

Indeed, the contribution of regular sound correspondences for receptive multilingualism has been scarcely investigated so far, as previous studies have focused on the role of linguistic distances between closely related languages. Linguistic distances generally do not differentiate between regular and irregular sound correspondences. Previous research has convincingly shown that the intelligibility of closely related languages can be reliably predicted by such distances, in particular by lexical, orthographic, phonetic or morphosyntactic distances. Lexical distances are defined as the percentage of words that share form and meaning ('cognate words') across the involved vocabularies (Séguy 1973), while syntactic distances are based on the degree of deviation of syntactic structures (cf. Spruit 2008, Heeringa et al. Submitted). Likewise, orthographic and phonetic distances reflect how deviant cognate words are spelt and pronounced across the involved linguistic varieties (cf. Kessler 1995; Nerbonne et al. 1996). For some North and West Germanic languages, Gooskens (2007) showed that phonetic distances are a better predictor of intelligibility than lexical distances, and Hilton et al. (2013) found that phonetic distances predict intelligibility more reliably than morphosyntactic distances. The difference between regular and irregular sound changes is addressed in the study by Möller and Zeevaert. In contrast to the first three papers in this issue, their study investigates the intelligibility of written language forms. More specifically, the reading comprehension of isolated words in Dutch, Frisian, Danish, Norwegian, Swedish, Icelandic, Luxemburgish, and Low German, as well as the intelligibility of a Swedish text by speakers of German is elicited. In addition to analyzing the translations of the participants, they evaluate the participants' comments during the translation task. This adds valuable qualitative on-line information of the decoding process to the quantitative off-line intelligibility scores. The authors report that using phonetic similarities or regular sound changes is only one of the strategies that are employed by the participants. Rather, phonetic distances interact with semantic knowledge, and often, the influence of semantic knowledge overrides the influence of phonetic distances.

Most studies that have tried to predict linguistic and extra-linguistic mutual intelligibility have been conducted on European languages, particularly on the Germanic language family (cf. Gooskens et al. 2008 and Heeringa et al. 2008 for various Scandinavian varieties; Moberg et al. 2007, Kürschner et al. 2008, and Schüppert 2011 for Danish and Swedish; Hilton et al. 2013 for Norwegian and Danish, van Bezooijen et al. 2012 for Dutch, Frisian and Danish, Gooskens 2007 for Afrikaans, Dutch, and Frisian). The study by Tang and Van Heuven takes us from Europe to Asia. The authors report on the mutual intelligibility of 15 Chi-

nese dialects and show that speakers of Mandarin dialects have fewer problems understanding other Mandarin dialects than understanding non-Mandarin dialects. They also show that Non-Mandarin dialects are mutually less intelligible than Mandarin dialects are. Using different measures of linguistic distances, they report that lexical distance and lexical frequency of syllable rhymes shared by a pair of dialects are the best predictors of mutual intelligibility.

The vast majority of studies in receptive multilingualism investigate mutual intelligibility of written and spoken languages, but surprisingly little is known about the intelligibility of signed languages. While the main spoken languages of Great Britain and the United States are mutually intelligible (and even have the same name: English), this is not true for the signed languages of those countries. British Sign language (BSL) is largely unintelligible to signers of American Sign Language (ASL). In addition, some sign languages have developed among different routes than spoken languages have. For example, Aarons and Akach (1998) point out that ASL is historically related to Old French Sign Language since the first teachers of the hearing impaired in the USA came from France. Likewise, they claim that South African Sign Language has more roots in Irish Sign Language than in British Sign Language. Aarons and Akach (1998) argue that the various South African sign language varieties are largely mutually intelligible, and conclude that these sign languages are rather to be regarded as different varieties of one South African Sign Language. The study by Sáfár et al. is of particular interest because it adds to our knowledge of mutual intelligibility of closely related sign languages. The authors investigate the intelligibility of the official sign language used in Flanders (the northern part of Belgium) by signers of the language used in Wallonia (the southern part of Belgium) and signers of the language used in the Netherlands. While Flemish and Walloon use the same manual components, Flemish and Netherlandic sign language share the mouthing. By presenting the stimulus material in two different conditions, viz. with and without mouthings, the authors show that the intelligibility of Flemish sign language is significantly higher for the Walloon participants than for the Dutch participants, but that the high similarity of mouthings between the Netherlandic and the Flemish sign language has a facilitating effect mainly on the Netherlandic participants.

In 2006, the European Commission established the High Level Group on Multilingualism (HLGM). One of the core duties of the HLGM was to contribute "to the promotion and preservation of Europe's multilingual heritage", as the then Commissioner Ján Figel' put it (European Commission Press Release IP/06/1221). In 2007, the High Level Group on Multilingualism (HLGM) published an overview of research topics that should be investigated to improve crosslinguistic communication in Europe while ensuring that the linguistic diversity found

within Europe is retained. Among other things, the HLGM noted a lack of knowledge about the possibilities for communicating through receptive multilingualism. This volume fills this knowledge gap in various ways. It comprises six papers that investigate receptive multilingualism in different regions and with different research foci. They have in common that they identify factors that could stand in the way of successful communication, and evaluate strategies developed by the speakers to make receptive multilingualism possible.

Taken together, the papers in this issue point to opportunities as well as obstacles for communication across linguistic borders. In many linguistic communities, receptive multilingualism seems to be a promising way of communicating across language borders. A wider use of receptive multilingualism as an alternative to using a lingua franca may strengthen the role of globally small languages and contribute to increasing their status within and outside their speaker community. However, this goal can only be achieved by a deeper understanding of the linguistic and non-linguistic factors that play a role in receptive multilingualism.

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