

Cross-modal typology

Oral/poster

Cross-modal typology focuses on the relationship between typological variation and the effects of language modality when comparing signed languages (SL) and spoken languages (SpL).

Sign Language Typology (e.g. Zeshan 2006, Zeshan & Perniss 2008) has demonstrated that cross-linguistic variation is comparable in SL and SpL. The observations here use two of the largest SL data collections:

- Negatives, with 38 SL (Zeshan 2004)
- Cardinal numerals, with 29 SL (Zeshan & Sagara, in prep.)

Information from SpL is based on secondary sources from typological literature e.g. Dryer (1988, 2011) for negation, Barriga Puente (1988) and Comrie (2011) for numerals.

Figures 1 and 2 represent structural aspects of numerals and negation. The intersection of the circles is a typological space occupied by both SL and SpL, while the extreme right and left are unique to each modality. Where a label spans across lines, this indicates occurrence predominantly, but not exclusively, in one modality. Thus in Figure 1, digital numerals are common across SL, but marginal in SpL. As the representation focuses on modality differences, absolute frequencies are disregarded. In Figure 1, "Spatial" and "Iconic" occupy the same section of the diagram as they are both unique to SL, but using iconicity is universal in the SL sample, while a spatial numeral construction occurs only once.

The results show two kinds of modality effects:

Absolute modality effects:

Here a feature occurs in one of the modalities only and is not found in the other modality. This may be due to physical articulatory characteristics, for example spatial morphology in SL numerals, or cognitive-perceptive aspects of the linguistic signal, such as ready availability of iconicity in SL numerals and negatives. Sometimes

there is no straightforward explanation. For instance, conjunctions (“and”, “with”) are unattested in SL numerals, although there is nothing in the modality itself that would prevent this. Conversely, in SpL, a digital numeral strategy derived from writing (like saying “one zero zero” for 100) is marginal and never used as the only strategy, though nothing in the spoken modality prevents its use.

Relative modality effects:

This concerns features found in both SL and SpL, but with a very different distribution . An example is the use of non-manual suprasegmentals in SL negation, most commonly a headshake co-occurring with manual signs. The SpL equivalent, intonational features marking negation, is attested, but very rare. Morphological negation is common in SpL, but restricted in SL. Negative affixes in SL do not apply to an entire word class, and there are fewer options, as only suffixes and enclitics, but not prefixes and proclitics, are attested in SL.

In some cases, typological variation seems to have nothing to do with language modality. For instance, both SL and SpL use addition and multiplication in cardinal numerals, while subtraction is rare in both modalities. There is, presumably, no modality-specific pressure towards the type of arithmetic operation.

Each cross-modal typological space exhibits complex patterns of intra-modal and inter-modal variation, and cross-modal typology is needed for further grammatical domains in the future.

500 words

Figure 1: Cross-modal typological space: Numerals

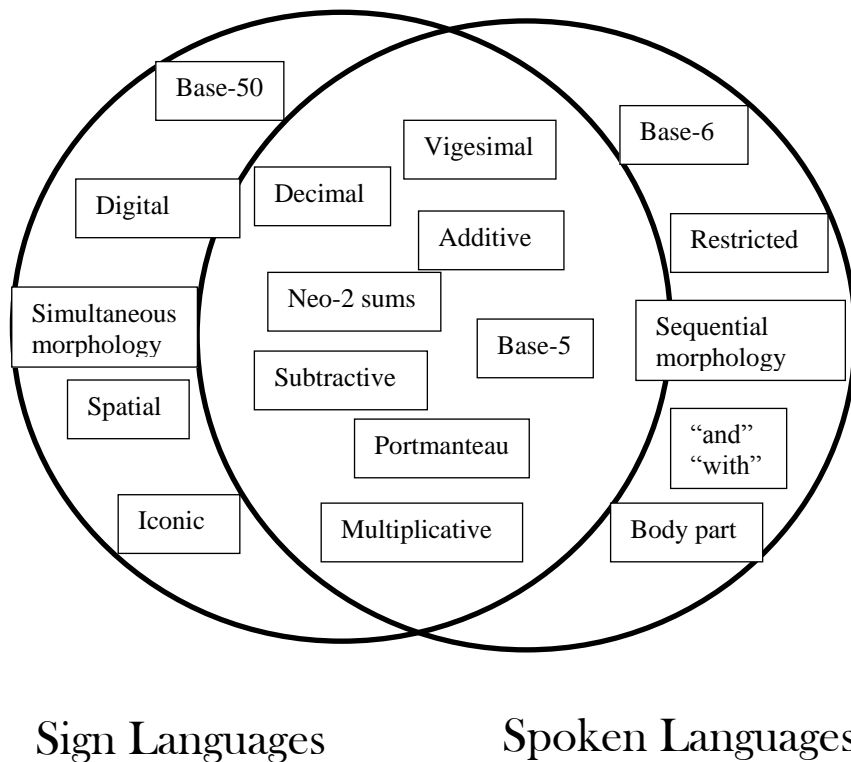
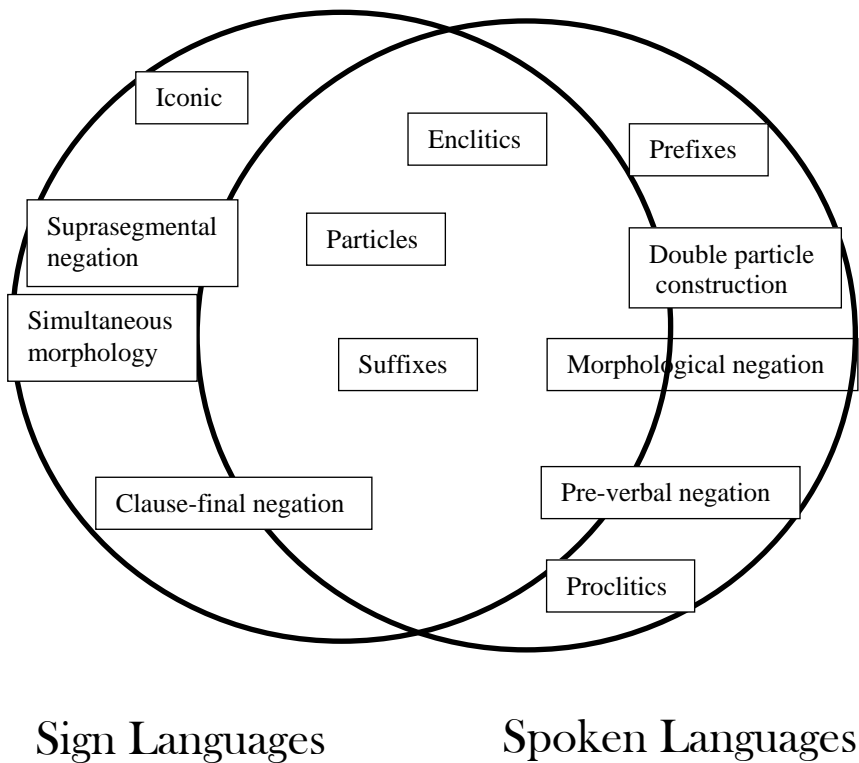


Figure 2: Cross-modal typological space: Negation



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