Typology I: Solution to Homework for Lecture 4

(The questions marked with **(*)** are research questions you can use to deepen your understanding, the others could be exam questions.)

1. **Which are the two scales according to which languages are classified into morphological types?**

    (a) *Degree of fusion* of the affixes with each other and with the root. Scale: [(isolating) - agglutinative - fusional]

    (b) *Degree of synthesis* of the components of the sentence into more or less complex words. Scale: [analytic - synthetic - polysynthetic]

2. **For each of the two scales from Question 1, name two languages for each of its two extremes. (This means you have to mention eight languages. Note that no language is entirely at the extreme end of either scale. You are asked to name languages that are as close as possible to the extremes.)**

    - Agglutinative (low on the fusion scale): e.g. Turkish, Mongolian, Basque, Hungarian, Korean, Japanese
    - Fusional (high on the fusion scale): e.g. Sanskrit, Latin, Ancient Greek, Lithuanian, Slovene, Semitic languages (Arabic, Hebrew)
    - Analytic (low on the synthesis scale): e.g. Mandarin Chinese, Thai, Vietnamese, Khmer (all of these are isolating, too)
    - Polysynthetic (high on the synthesis scale): e.g. Abkhaz and other Northwest Caucasian languages, Ainu (Japan), Chukchi (Chukotko-Kamchatkan), Inuktitut (Eskimo-Aleut), Mayan languages

3. **(*) Why do both scales together form a triangle rather than a rectangle? (Hint: Explain why two corners in the rectangle are impossible.)**

    Since there are two scales, we would expect a morphological spectrum that forms a rectangle. But neither languages with a low synthesis index nor language with a high synthesis index can have a high fusion index. Excluding these combinations, the remaining spectrum forms a triangle, as depicted in Figure 1, where the red areas are excluded. This phenomenon can be explained by the following two observations:

    (a) Languages with a very low synthesis index don't have (many) affixes, thus they are automatically classified as isolating languages, which also gives them a low value on the fusion scale.

    (b) Languages usually don't have a high fusion and synthesis index at the same time. This can be explained functionally via learnability considerations: polysynthetic fusional languages would have an extremely high number of irregular morpheme combinations and would therefore be unlearnable.

4. **Which mechanisms can cause the fusion and synthesis indices of a language to shift? For each mechanism, name at least one exemplary instance from a language you know well.**

   - **reduction of independent words to affixes** may lead to an increase of a language's synthesis index.
     Example from German: preposition + Det: *zu dem → zum, an dem → am, in dem → im, zu der → zur* (but: *in der → *ir*)
     Example from English: *it is → it's*, this is gradually being extended beyond pronouns ("God's not dead", a movie title)

   - **fusion of neighboring morphemes** may lead to an increase of a language's fusion index.
     Example from English: *ain't*, this could be analysed as a single morpheme expressing negation, third person singular, and present tense.
     Example from German: the infinitive ending has a tendency towards fusion with the verb stem: *haben* [ha:m], *gehen* [ge:n]

   - **morpheme loss** may lead to an decrease of a language's synthesis index, which may also influence the fusion index.
     Example from English: loss of past tense marking after stems in [t]: *hitted → hit, putted → put*
     Example from German: loss of dative marker in singular masculine and neuter: *dem Manne → dem Mann, dem Kinde → dem Kind*

5. **(*) Find a possible explanation for the fact that English has developed a word order which is generally less free than it was in Old English.**

   Grammatical relations are universally marked by a combination of the following strategies: word order, case marking, and agreement. While Old English still had complete case marking and extensive agreement, modern English has lost the case marking almost completely, and retains only rudimentary agreement (e.g. only 3rd Person Singular '-s' marking in present tense). The word order strategy has therefore become vital for the task of marking the grammatical relations. With free word order, there would not be sufficient marking of the grammatical relations any longer.
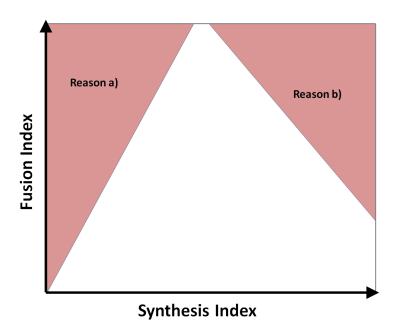
Figure 1: Morphological spectrum spanned by fusion and synthesis scales.