

# Logical language

## Goals

The primary goal of my logical language is *grammatical transparency*. Lojban attempts this, Toaq completely ignores it and Eberban gets closer. Ideally, apart from the meanings of root words, there should be enough information encoded directly in a sentence to recover the referents of all pronouns, logical and syntactic structure and even the number and types of noun slots in predicates. This will impose strict limitations on the forms of root words.

## Move as much as is reasonable onto predicates and out of the grammar

Lojban grammaticalises way too much. In the language, only particles that affect the way words relate to each other would be included. This excludes tense, aspect, mood, gender, definiteness and emotions from the grammar. Attitudinals would be translated with a SEI-like construction. Grammatical minimalism also makes the language easier to make and use. Ideally the language should be *semantically neutral*, particles should only affect how words are interpreted in relation to each other with anything that could be considered inherent meaning handled by root words.

## Root words should have their places encoded directly

Ideally the vowels could be used for this purpose, but what Xextan calls a predicate type is encoded directly and could be recovered by a parser. This limits the number of places that words can realistically have but that's fine as a cap of 3 seems reasonable.

## Terminators are systematically derived from their starters

For selma'o of one particle, this makes terminators much easier to remember. For selma'o of multiple particles (which I expect to be rare given the goal of

grammatical minimalism), this allows even more efficient elision of terminators than in Lojban, as different types of particle can be distinguished on the terminator.

## **SSM based on choice of consonant clusters**

A list of allowable consonant clusters will be vital to establish early on, as it will be very important to how root words are formed. The clusters may start root words, and then middle clusters are the reverse, taking advantage of the vowel in front they can "lean on" if difficult in isolation like ts or ls. CV syllables may be possible between initial and an ending middle cluster. Syllables that would otherwise be interpreted as particles may be possible in the middle of words.

## **Valency saturation as a method to close subclauses**

Toaq does this, but here it would be an alternative to using a terminator where it might otherwise be necessary.

## **All selma'o are distinct**

Eberban does this and it's a very cool design feature.

## **Everything is a full clause**

The equivalent of Lojban articles just start a clause where the first unfilled place (or perhaps an explicitly filled place?) corresponds to the thing that is the noun. With verb-termination, this adds no significant additional terminators to normal speech. This applies to many things across the language.

## **S-VO-I default word order**

Just as in Lojban, a predicate followed by an argument fills the second argument place first. But as there's only a limited number of arguments, with the number given by the root word, invalid objects or indirect objects "wrap around" to the first available place.

For normal transitive verbs, all six major word orders require at most one reordering particle:

- S V O
- S O V
- V O S
- V fa S O
- fe O V S
- fe O S V

## Verb termination

All particles that start a clause will offer a choice between *verb-terminated* and *saturation-terminated* scope. Verb-terminated scope is what it sounds like, a mandatory SOIV word order because the verb marks the end of the clause. Saturation-termination retains word order flexibility but is harder to terminate. Saturation-termination also offers a terminator particle but can also be escaped by saturating the valency of its verb as in Toaq. Saturation-termination could be divided even further into *non-looping* and *looping* variants. A non-looping clause doesn't wrap back around to the S place after I, making it useful for clauses where the subject is left unfilled. There may be special rules about the interpretation of unfilled places as in Lojban relative clauses. This very elegantly handles Lojban's `lo selbri be...` construction.