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A proof of concept wordnet design for South African Sign Language (SASL)

Prepared by Marissa Griesel

SADiLaR

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A PROOF OF CONCEPT WORDNET DESIGN FOR SOUTH AFRICAN SIGN LANGUAGE (SASL)

1. Introduction

This section presents initial research, hypothetical solutions and a description of what the development of a wordnet for South African Sign Language (SASL) would entail. This proposed design takes into account current international collaboration opportunities, as well as existing resources identified as possible starting points for such a development.

2. Background

2.1 What is a wordnet?

A wordnet is a type of large, electronic lexical database that is organised hierarchically and semantically. Synsets can be seen as the building blocks for wordnets and most simply refers to a group of synonyms that describe and define a single concept such as “car” or “tree”. Synsets are linked to each other with semantic relations such as antonymy, hypo/hypernymy, meronymy, etc. Each synset is further enriched with a definition and usage example. Below in Figure 1 is a graphic representation of the meaning network that is created when different synsets are linked via semantic relations. In this example, the relations between different body parts in Sesotho sa Leboa are shown, with English translation equivalents for ease of reference.

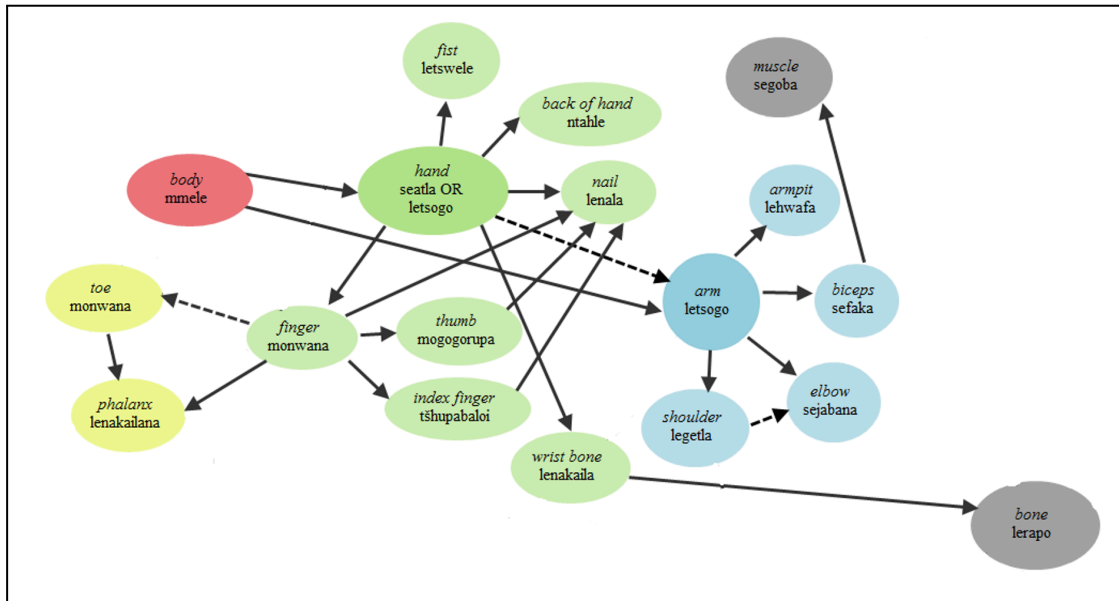


Fig. 1. Synsets to do with different body parts in Sesotho sa Leboa

The English [Princeton WordNet](#) (PWN) was the first large scale development of a wordnet for any written language (Miller, WordNet: A lexical database for English, 1995, p. 39) and currently consists of more than 117 000 synsets. Many wordnets describing different written languages have since been developed and a non-exhaustive list can be found on the Global Wordnet Association website.

Wordnets for signed languages also exist and follow the same conceptual organisation structure and largely the same development methodology. This will be discussed in more detail in Section 2.3.

2.2 Popular methods for developing wordnets

2.2 What can it be used for

2.3 Related work

2.3.1 The African Wordnet Project

2.3.2 The Open Multilingual Signed Wordnet

3. A proposed design for SASL

3.1 Required components

3.2 A proof of concept

4. Possible collaborators

4.1 UFS

4.2 SPU

4.3 NID

4.4 HandLab

5. Roadmap for further development