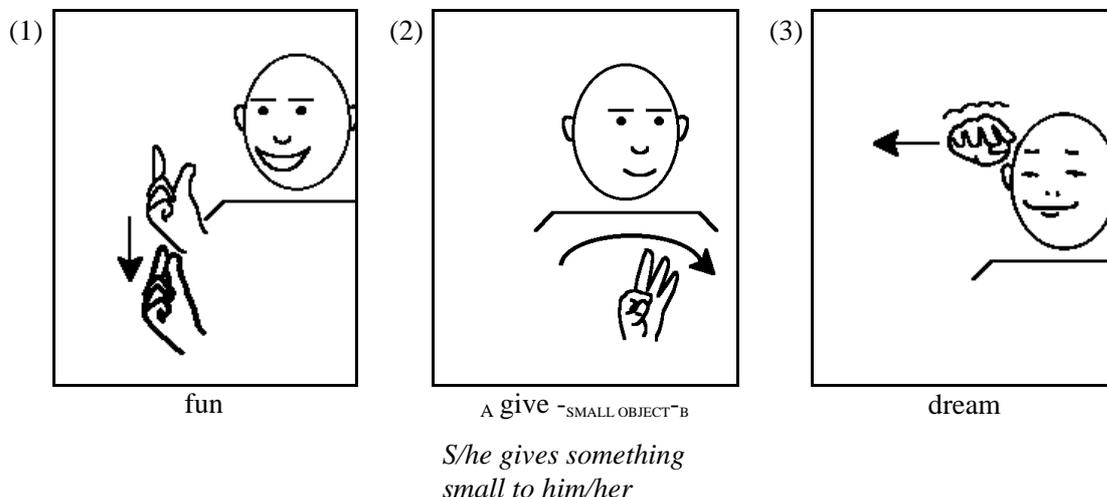


The morphophonological structure of "words" in sign language

Through time, the status of the sign language "word" has been and still is unclear. Until and even after the sixties, signs were seen as holistic units, without any internal structure. A first investigation of signs (Stokoe, 1960), however, showed that signs are built up from smaller, meaning distinguishing units: movements, places of articulation and handshapes. Later, orientations of the hand and non-manual components were added. These phonemic units are expressed partly in sequential, partly in simultaneous clusters. Namely, the articulation of handshape, orientation, movement, place of articulation and nonmanual signals show partial or total time overlap. See for an example the sign for "fun" in (1). This sign has a downward movement of the hand, during which the handshape changes. The movement is present during the whole process of handshape change. The sign has two places of articulation: both are near the body, but the starting point is higher than the end point. The places of articulation are temporally linked to the full realization of the different handshapes. To account for the phonological representation of signs, different phonological models have been devised in the last decades (Liddell & Johnson, 1984; Sandler, 1987; Perlmutter, 1992; Brentari, 1998).

It is acknowledged that signs, next to their phonological structure, can have internal morphological structure, too. Among others Klima & Bellugi (1979) and Supalla (1982) have shown convincingly that single signs can be built up from meaningful elements. Interestingly, these meaningful elements are (a subset of) the elements that are considered phonemic. For instance, movements can be meaningful in themselves. They can be combined with meaningful handshapes (so-called classifiers) and agreement morphemes, i.e. meaningful locations in signing space, can be affixed to them. This is illustrated in (2): the handshape indicates a small object, while the locations to the left and right of the signer are connected with two different referents. Together with the movement, this sign conveys that the referent to the left of the signer gives something small (e.g. a pen) to the referent to the right of the signer. In short: in a number of signs, the phonological unit also behaves like a morphological unit. In most phonological accounts, these complex signs are not taken into consideration; the focus is on monomorphemic signs.

However, with the morphosyntactic information on the possible complexity of signs in mind, we need to acknowledge that many (though not all) of the signs that are considered monomorphemic are in fact complex. I claim that place of articulation (or location), movement and handshape can all have meaning, together forming a morphologically complex sign. (This might even hold for orientation and some non-manual component, too.) These three components are used productively in the formation of new (complex) signs. See for example the sign for "dream" in (3). In this sign, the handshape, place of articulation and movement can be argued to be meaningful, standing for a) (many) vague things, b) the brain area and c) a motion away from the head. Together they construct the concept of (many) vague thoughts emerging and floating away from the seat of cognition. (The nonmanual component, that consists of a dreamy facial expression adds to the meaning of the sign as well.)



This means that many of the present phonological accounts of signs become less straightforward. In the first place, we have to separate complex from simple signs when investigating the internal phonological structure of monomorphemic signs. In the second place, we need to account for the phonological structure and processes of complex single signs. In the third place, we want to account for the internal (partly simultaneous) morphological structure of single signs.

For spoken languages, models have been devised that account both for phonological processes and for non-concatenative morphology, namely autosegmental phonology (Goldsmith, 1976). In an autosegmental model, the smallest phonological units are features (like [nasal], [voiced] and [high]). Features are terminal elements, (unorderedly) associated with constituents. Constituents are groups of features that function together in phonological rules. Features all have their own tier, on which they are ordered linearly. Constituents are associated with root nodes (segments). Associations are expressed by association lines, that show patterns of alignment or overlap. Because of the different tiers and the possibilities of overlap, the model is well equipped to account for non-concatenative morphology (viz. morphemes that consist of sequential but nonadjacent phonological features) in Arabian languages and for tonal morphology (viz. morphemes that occur simultaneously with other morphemes) in Bantu languages.

In my talk, I will claim that autosegmental models are well equipped to account for phonological processes and simultaneous morphology in sign languages as well. Morphemes may overlap, just like tones in Bantu languages, although in sign languages there is even more overlap since more simultaneous morphemes are involved. Thus, autosegmental models can do justice to the internal structure - phonological and morphological - of signs.

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