This thesis describes several patterns of phonetic variation in Sign Language of the Netherlands. While lexical variation between different regions has been found in the Netherlands, little is known about phonetic or phonological variation - for example between different signers or between different communicative situations.

Phonetic variation in the realization of some of the traditional handshape and orientation features is analyzed in detail. Furthermore, data were elicited from different registers: short-distance signing (whispering) was compared to long-distance signing (shouting).

Results show that differences between registers lead not only to variation in movement size, but also to changes in the traditional phonological categories. In enlarged realizations, as in shouting, handshape and orientation changes may be enhanced by a location change; in reduced forms, as in whispering, location changes may be realized as changes in orientation or handshape. While the distinction between the three parameters handshape, orientation and location remains valid, it is argued that their definition needs to be stated in global perceptual targets rather than in detailed articulatory terms in a comprehensive analysis of the various differences between registers.

The data thus provide evidence for a strict separation of perceptual and articulatory characterizations of signs. The lexical specification contains only perceptual targets. The strong claim is made that states of the joints of the arm and hand need not be specified until the phonetic implementation stage of sign production. The variants of signs that are found are thereby analyzed as different articulations of a constant perceptual target. The variation is thus not generated by a phonological process, but is a matter of phonetic implementation.

This study is of interest to linguists studying sign languages, and to researchers interested in the phonetics-phonology interface.