

LSF poetry and its spoken translation: any shared prosodic contours?

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The translation of LSF poetry into French is a new field of exploration for both sign language (SL) linguistics and translation studies. In this study, we look for the footprint of this gestural prosodic organization in the spoken (Sp) translations of LSF poems. First, we expect to find correspondences between some prosodic phenomena in SL and in their oralized translation (Blondel & Le Gac 2007, Brentari et al. 2015, Catteau et al. 2016, Wilbur 1999). Secondly, we expect a correspondence between the prosodic hierarchical structure of the SL and the SpL: hip rotation will undoubtedly play a role in how these groups are delimited and entrenched (Boyes-Braem 1999).

We recorded five deaf poets with motion capture systems as they reveal precise movement information (amplitude, duration, speed and acceleration), and is complementary with our analysis, which is based on video and manual annotation (Jantunen 2013, Tyrone et al. 2010); we submitted this collection of poems to seven poetic translation experts and obtained fifty-seven translations into spoken French. Mocap provided us with information on the rotation of the hips (*Figure 1*), the amplitude and speed of manual movements (*Figure 2*). We then extracted pitch and intensity from the voice signal in the translations (*Figure 3*).

Our first results indicate that the prosodic contours identified in the gestural signal correspond to analogous ones in the vocal signal. We observed that contrasts in the amplitude of movements lead to notable contrasts in vocal intensity, and that gestural contours delimited by rotation of the hips are vocally transposed. Other prosodic phenomena are still to be analyzed, and, by extending our analysis to all the collected data, we will learn more about the prosodic structure of SL poetry, how it is translated, and to what extent SL prosody can impact its spoken translations.

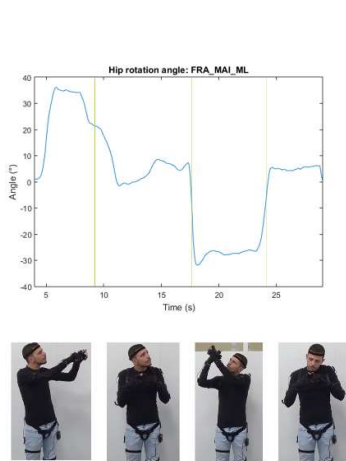


Figure 1: Hip rotation segment sequence in four prosodic groups

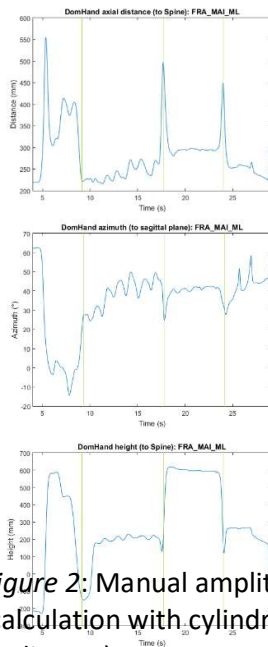


Figure 2: Manual amplitude (calculation with cylindrical coordinates) segment sequence in the same four prosodic groups

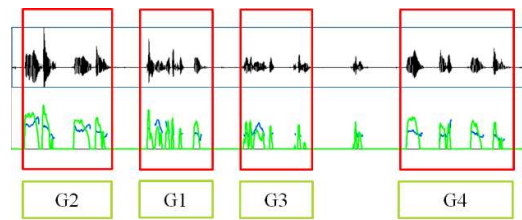


Figure 3: Vocal signal of the translation of the extract in Figure 1 (oscillogram in black, pitch curve in blue and intensity curve in green)

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