

Abstract FEAST 2023

Laura Volpato, PhD at Ca' Foscari University of Venice

Title: A preliminary description of haptices in Italian social-haptic communication: a phonological perspective

Type of contribution: mini-presentation

This contribution discusses the “phonological” structure of haptices, i.e., the components of social-haptic communication used by deafblind individuals and their caretakers, and their interpreters.

According to the Nordic definition, deafblindness is a combined vision and hearing impairment of such severity that it is hard for the impaired senses to compensate for each other. To varying degrees, deafblindness limits activities and restricts full participation in society (World Federation of the Deafblind). Deafblind people use a wide variety of communication methods, mostly based on touch.

Social-haptic communication (SHC) is a communication method consisting of brief tactile messages performed on the body of the deafblind person to convey environmental information and the emotional feedback of the interlocutor (Raanes & Berge, 2017; 2021). Social-haptic messages (*haptices* or *haptic signals*) are articulated on different body areas (mostly back, upper arm, hand, leg/knee, and foot – Bjørge et. al. 2015). SHC can help deafblind people to understand better what happens around them and, hence, to be more in control of the situation. SHC can be used by any deafblind person, disregarding the preferred communication method.

SHC originated in the 90s in Northern Europe from the negotiation between deafblind individuals and their communication partners (e.g., interpreters, family members, etc.). Since then, different countries developed and spread different SHC codes (e.g., Denmark, Finland, Norway, Sweden, the Netherlands, etc.), while remaining mostly unknown in many other countries. Within the Erasmus+ project *Social Haptic Signs for Deaf and Blind in Education*, new haptices were created in Italy, where only a few haptic signals existed and were informally used in home environments. The Italian deafblind community was involved since the very beginning of the project as co-creator of the project outcomes (inspired by Community-based participatory research - CBPR -, Coughlin et al. 2017). 9 deafblind individuals with different degrees of residual hearing/sight, coming from the North of Italy, were involved in the collection and co-creation of haptices. Despite COVID-19, training sessions about SHC were provided, followed by online negotiation meetings, resulting in a first in-person test of the haptices in Summer 2022. The negotiated haptices are now 87.

Even if social-haptic communication is attested as a method of communication and not as a natural language, a phonological-like structure can be observed if we consider the smallest units of touch individuated by Lahtinen (2008) called *haptemes* (handshape, place of articulation, pressure, duration, speed, movement, and size of movement). Haptemes can create minimal contrast in haptices.

In this contribution, the haptices will be discussed from a “phonological” perspective. In particular, haptemes such as the place of articulation and the handshape will be analyzed, illustrating the factors that may possibly influence their choice. Handshapes will be described adopting the same coding used for the handshapes in Italian sign language. Amongst others, ergonomics and touch

sensitivity will be addressed as possible factors determining the selection of a specific place of articulation and a specific handshape.

Touch sensitivity seems to play an important role in the choice of both the place of articulation and the handshape. Different body surfaces have different density of tactile receptors (Corniani & Saal, 2020; Gallace & Spence, 2014), therefore the degree of perception that a handshape can guarantee on different body areas is a relevant factor in the phonology of haptics. For instance, handshape 5 (all five fingers – spread, not spread, flat closed, curved open, closed) (Branchini & Mantovan 2020) was repeatedly selected, possibly due to the large contact surface that it offers – hence the clearer perception that it permits. Instead, G handshape (the index finger is extended and other fingers are closed) offers a more limited contact surface and has been chosen for a lower number of haptics (usually when a precise line needs to be drawn).

Selected references

- Bjørge, H. K., Rehder, K. G., Øverås, M., & Helen Keller National Center. (2015). *Haptic Communication: The Helen Keller National Center's American Edition of the Original Title Haptisk Kommunikasjon*. Helen Keller National Center.
- Branchini, C., & Mantovan, L. (2020). *A Grammar of Italian Sign Language (LIS)* (p. Book_477). Fondazione Università Ca' Foscari. <https://doi.org/10.30687/978-88-6969-474-5>
- Coughlin, S. S., Smith, S. A., & Fernandez, M. E. (A c. Di). (2017). *Handbook of Community-Based Participatory Research*. Oxford University Press. <https://doi.org/10.1093/acprof:oso/9780190652234.001.0001>
- Corniani, G., & Saal, H. P. (2020). Tactile innervation densities across the whole body. *Journal of Neurophysiology*, 124(4), 1229–1240. <https://doi.org/10.1152/jn.00313.2020>
- Gallace, A., & Spence, C. (2014). *In touch with the future: The sense of touch from cognitive neuroscience to virtual reality* (First edition). Oxford University Press.
- Lahtinen, R. M. (2008). *Haptics and haptemes: A case study of developmental process in social-haptic communication of acquired deafblind people* (1st ed). A1 Management UK.
- Raanes, E., & Berge, S. S. (2017). Sign language interpreters' use of haptic signs in interpreted meetings with deafblind persons. *Journal of Pragmatics*, 107, 91–104. <https://doi.org/10.1016/j.pragma.2016.09.013>
- Raanes, E., & Berge, S. S. (2021). Intersubjective Understanding in Interpreted Table Conversations for Deafblind Persons. *Scandinavian Journal of Disability Research*, 23(1), 260–271. <https://doi.org/10.16993/sjdr.786>
- World Federation of the Deafblind. *WFDB - The World Federation of the Deafblind*. <https://wfdb.eu/>. Last accessed 29/03/2023.