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An Ordering System for SignWriting

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Abstract. In the preparation of dictionaries, databases, encyclopedias and other expositions of signed languages both with spoken language glosses and without them, an ordering system is needful in order to discuss 1) relative points of view, 2) spacial locations, 3) orientation of hands, faces, and other body parts, 4) contact, 5) articulation, 6) movement, 7) simultaneity, 8) speed, 9) facial expression, and 10) body posture. This essay is a brief overview of a proposed system of ordering, using a modified form of the Sign-Symbol-Sequence developed by Valerie Sutton and examples from both American Sign Language (using the dictionary that comes with the SignWriter 4.4 shareware program as one data source) and Libras (using original research developed by members of the SignNet Project at the Pontifical Catholic University of Porto Alegre Museum of Science and Technology (MCT-PUCRS), the Catholic University of Pelotas (UCPEL) and the Association of the Deaf of Pelotas (ASP).

1 Purpose for Ordering

In the preparation of dictionaries, databases, and encyclopedias of signed languages using SignWriting, both with spoken language glosses and without them, a way is needed to order the signs similar to the order of the Roman Alphabet (ABC) into a logical sequence.

2 Logic of the Order

The author, using the teaching sequence in Valerie Sutton's Lessons in SignWriting [1] (see also, http://www.signwriting.org/lessons/lessons.html) translated into Portuguese and Libras by Marianne Rossi Stumpf with input from Valerie Sutton and Charles Butler, needed a way to sequence the signs of a Libras-Portuguese/Portuguese-Libras dictionary so that an index of signs could be prepared by handshape and other markers for later database and encylopedic development.

The order of the system (reduced to two pages in the attachment, is as follows).

1. The writing is 1st-person, from the signer's point of view. The complete SignWriting system allows for both 1st-person and 3rd-person writing, the dictionary is based on the signer's point of view.

2. The writing is right-hand primary. Examples are currently taken from the right hand primary viewpoint. Left hand primary signs are not currently included in the corpus under discussion. A separate later article will discuss left-hand primary signing and the overall order of the system.

3. As the system, as a writing system, often assumes “signer space”, the body of the signer is not shown as a relative position marker unless it is necessary for understanding, such as face or body contact or spacial location. Signs that occur in ”neutral” space come first in the system, followed by signs which include the head or body as spatial locations.

4. A sign which uses the hands only comes first, followed later in the system by signs which only use the face, the head, or the body posture and not the hands.

5. With signs which use the hands, the first marker that is addressed is the primary hand, in this case, the right hand.

6. From what Group does the primary hand shape come from? (from the 10 groups of hands used by the SignWriting system, articulated by which fingers are being used)

7. Which particular handshape within those groups is being used on the primary hand? The handshapes are ordered by the way in which they are taught in the Manual, plus the way they appear in the SignWriter software. The system in the graphic file below includes all handshapes appearing in the corpus of the dictionary in the order in which they appear.

8. Which orientation (of the six available, palm-toward-reader, palm-facing-left, palm-away-from-reader, palm-up-hand-pointing-out-from reader, palm facing left-hand-pointing-out-from-reader, palm-down-pointint out from reader).

9. Which rotation (counter-clockwise) of the right hand (starting with the up position and rotation by 45 degrees).

10. Are the fingers being articulated? Joint movements are ordered here (first knuckle open, first knuckle close, second knuckle open, second knuckle closed)

11. Does the hand touch or move close to a portion of the body which is included in the writing sample? (A body touch, for example, even if the body is not shown, such as the sign for ”meu,”, ”minha”, or ”mine” all touch the center of the body with the open flat hand..) If so, the order is top of head to bottom of feet, top to bottom, left to right. The graphic shows most of the positions appearing in the corpus.

12. What kind of touch is being articulated. The order is touch, hold, strike, in-between, brush, rub.

13. What speed is the articulation, fast or slow?

14. Is there a facial expression? Facial expressions are top to bottom, left to right, depending on which parts of the face are being articulated. The blank face comes first (used when you simply want to show that the hand moves across the face) followed by particular expressions.

15. Is there a change in body posture? Shoulders, body tilts, other positions are not yet articulated by order in this system as the corpus, as studied by the author, has not yet needed them.

16. Is there a second hand involved? Note that only after you have exhausted a single hand in a particular orientation, and rotation do you move on to the second hand being involved (in this case the left hand).

17. The second hand involvement is in the same order (1-16) as the first hand, with the rotation being clockwise toward the center line, starting with straight up. This is the system articulated by Valerie Sutton in her exposition of the Sign Symbol Sequence.

    In the figures at the end of the paper, is the system in a reduced form.

References

[1] Sutton, V. *Lessons in SignWriting - Textbook and Workbook*. Deaf Action Committee for SignWriting, La Jolla, Ca., 1995. (2nd. Edition).

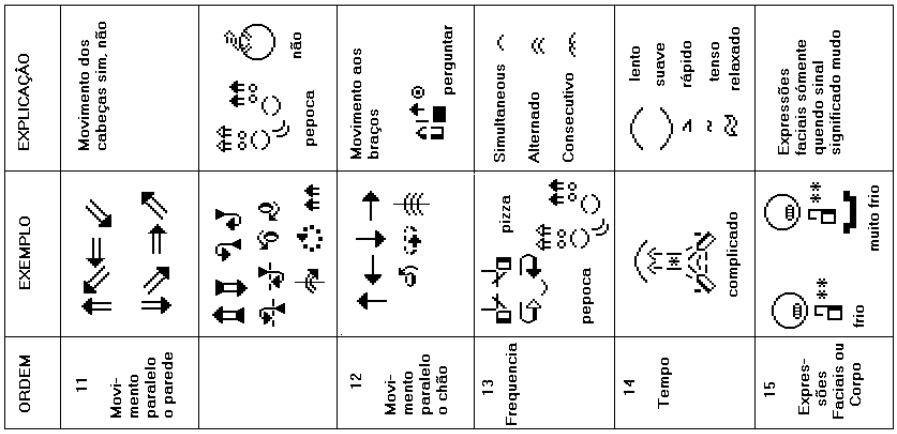

Figure 1: Explanation of the System

Figure 2: Table of Contents to the Dictionary

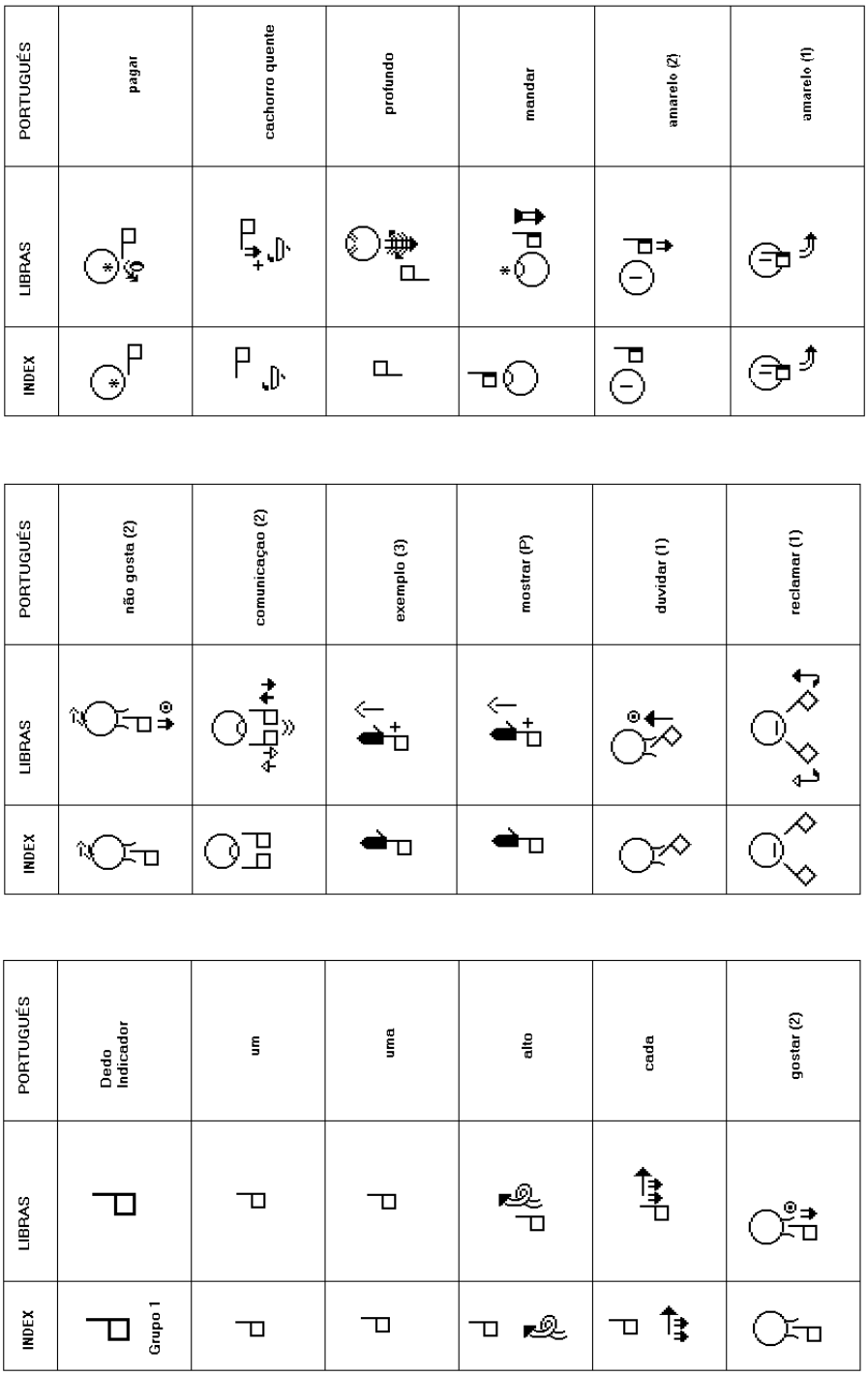

Figure 3: First Page of Libras-Portuguese section of dictionary