***Appendix A: Visualisation of the Dependency Model with feature values for manual articulations (van der Kooij, 2002, pp. 280, Figure 5.43).***

******

***Appendix B: Overview of handshapes mentioned in the paper***

|  |  |
| --- | --- |
| ***Handshape (KOMVA)*** | ***Handshape representation*** |
| 1 | ***A black and white drawing of a hand  Description automatically generated with low confidence*** |
| 1\_curved | ***A picture containing underwear  Description automatically generated*** |
| 5 | ***A picture containing text  Description automatically generated*** |
| A | ***A picture containing hanger  Description automatically generated*** |
| B |  |
| Beak |  |
| Baby\_beak |  |
| C\_spread  | ***A picture containing hanger  Description automatically generated*** |
| ILY | ***A picture containing hanger  Description automatically generated*** |
| S | ***A picture containing hanger, underwear  Description automatically generated*** |
| Y  |  |

***Appendix C: Coding Scheme***

|  |  |  |  |
| --- | --- | --- | --- |
| **Tier** | **Coding dimensions** | **Coding values** | **Explanation** |
| Main gloss | Gloss of sign | CV:gloss | CV indicates a child sign that deviates from the adult targetgloss indicates the adult target |
| non dominant hand | CV:gloss |
| CV\_type | comma-separated list | omissionadditionsubstitutionbody contactassimilationproximalization | lists aspects where the sign varies |
| CV\_summary | comma-separated list |  | summary of all relevant tiers |
| CV\_form | free description | Any | free description of child form |
| handshape | RH:handshape; LH:handshape | handshapes available from Global Signbank (addition if needed); else NA | handshape of right and left hand |
| handshape change | values from Global Signbank | openingclosingcurvingbendingspreadingunspreadingwigglingrubbingNA | Describes whether or not there is a handshape change, if so, what |
| movement | movement direction; movement shapevalues from Global Signbank | Direction:upDownBackforwardsetc. Shape: straightcirclezigzagarcetc. | Describes the (path) movement in two dimensions |
| location | values from Global Signbank | **Head**back of headcheekcheekbonechineareyefaceforeheadHead (top or side)mouthnecknosetempletongueupper lip**Body**backbellytrunkchestflankshoulderhip**Extremities**armkneelegweak hand: +specupper armelbowlower armwrist**Space**neutral spacehorizontal planeR locvariable | Describes place of articulation |
| contact | contact type; contact location | Type: brushinitialfinal continuousetc.Location:see locationNA | Describes the type of the contact and where the hands make contact (e.g., in space with each other or with the body) |
| non-manual | free description | own wordsNA | Describes use or lack of non-manuals in the sign |
| palm orientation | Initial palm position | forwardsbackwardsinwards outwards | Describes the initial position of the palm(s) |

***Appendix D: Overview of number of child modification tokens per minute of recordings, broken down per recording session.***

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| ***Focus Child*** | ***Age in days at recording*** | ***Modification tokens*** | ***Length of recording (min)*** | ***Ratio modification per minute of recording*** |
| CSA | 479 | 74 | 235 | 0.31 |
| CSA | 500 | 0 | 79 | 0 |
| CSA | 523 | 43 | 116 | 0.37 |
| CSA | 556 | 20 | 221 | 0.09 |
| CSA | 584 | 34 | 147 | 0.23 |
| CSA | 630 | 24 | 189 | 0.13 |
| CSA | 663 | 12 | 58 | 0.21 |
| CSA | 673 | 37 | 168 | 0.22 |
| CSC | 468 | 20 | 252 | 0.08 |
| CSC | 502 | 17 | 247 | 0.07 |
| CSC | 530 | 59 | 289 | 0.2 |
| CSC | 560 | 21 | 240 | 0.09 |
| CSC | 585 | 61 | 241 | 0.25 |
| CSC | 614 | 159 | 260 | 0.61 |
| CSC | 648 | 59 | 303 | 0.19 |
| CSC | 676 | 62 | 304 | 0.2 |
| CSC | 711 | 29 | 329 | 0.09 |
| CSC | 742 | 91 | 366 | 0.25 |
| CSC | 772 | 54 | 290 | 0.19 |
| P3 | 716 | 6 | 33 | 0.18 |
| P3 | 719 | 12 | 60 | 0.2 |
| P3 | 720 | 33 | 61 | 0.54 |
| P3 | 741 | 7 | 61 | 0.11 |
| P3 | 753 | 8 | 24 | 0.33 |
| P3 | 820 | 7 | 50 | 0.14 |
| P3 | 829 | 0 | 17 | 0 |
| P3 | 832 | 1 | 53 | 0.02 |
| P3 | 846 | 9 | 90 | 0.1 |
| P3 | 862 | 1 | 19 | 0.05 |
| P3 | 874 | 0 | 1 | 0 |
| P3 | 877 | 0 | 29 | 0 |
| P3 | 911 | 1 | 43 | 0.02 |
| P3 | 982 | 13 | 182 | 0.07 |
| P3 | 997 | 5 | 61 | 0.08 |
| P3 | 1011 | 3 | 61 | 0.05 |
| P3 | 1028 | 2 | 56 | 0.04 |
| P3 | 1082 | 5 | 43 | 0.12 |
| SS | 745 | 0 | 36 | 0 |
| SS | 773 | 11 | 29 | 0.38 |
| SS | 848 | 3 | 44 | 0.07 |
| SS | 852 | 14 | 53 | 0.26 |
| SS | 866 | 14 | 90 | 0.16 |
| SS | 897 | 9 | 22 | 0.41 |
| SS | 925 | 4 | 26 | 0.15 |
| SS | 1002 | 12 | 182 | 0.07 |
| SS | 1017 | 8 | 61 | 0.13 |
| SS | 1029 | 17 | 88 | 0.19 |
| SS | 1048 | 18 | 61 | 0.3 |
| SS | 1083 | 7 | 60 | 0.12 |
| SS | 1102 | 4 | 15 | 0.27 |
| SS | 1104 | 9 | 58 | 0.16 |

***Appendix E: Sign-level combinations (all data)***

