

We present some of the properties of the expression of number in Langue des Signes Québécoise (LSQ), the sign language of the Deaf community in the province of Quebec in Canada.

Cardinality. Cardinal numerals are expressed by a specific handshape for units up to ten, and by a combination of two handshapes for other units. The first handshape corresponds to the unit and the second one to the tens.

As for its external properties, a cardinal numeral can be concatenated with the Noun which it quantifies as in (1), or incorporated in the handshape when it's a measurement Noun (TWO-HOUR, FOUR-HUNDRED). It may also be incorporated in the shape of the hand which is signing the verb, whether the N is the subject of the verb (2) or its object (3) (The capitalized words correspond to glosses of gestural signs which will be presented on videos with subtitles).

(1) STUDENT_a THREE_a BOOK GIVE-ME “Three student are giving me a book”

(2) STUDENT_a THREE_a-MEET-ME “Three students are coming to meet me”

(3) STUDENT_a ME-MEET_a-THREE “I am going to meet three students”

In a sign language, a Noun is introduced by producing its corresponding sign. Typically, the Noun is also assigned a locus in the signing space by a *pointer* (such as pointing to a locus with the index, directing the gaze at it, or inclining the body towards it). The verb sign relates such established loci: a distinction such as subject/object is indicated either by signing the verb from one locus to another (directional verbs) or by using pointers that follow the verb and relate it to argument loci.

Collectivity. The distinction between a collective/group reading and an atomic/individual reading is made at the initial assignment of a locus: if the pointer is directed at a point in the locus, the N gets an atomic reading (4); if the pointer traces a circular movement, indicating a zone in the locus, the N gets a collective reading (5).

(4) MARY_a POINTER_a JOHN_b POINTER_b BOOK_b GIVE_a “John gives Mary a book”

(5) STUDENTS POINTER_{zone-a} BOOK ME-GIVE_a “I give the students a book”

Distributivity. When a few loci have been established in the signing space, a distributive reading can be obtained by directing a verb or its accompanying pointer not to a particular locus, but rather across the relevant loci in a sweeping gesture.

(6) JOHN_a PAUL_b MARY_c BOOK ME-GIVE_{a+b+c} “I give a book to (each of) John, Paul and Mary.”

(7) JOHN_a PAUL_b MARY_c BOOK_{a+b+c} GIVE-ME “(Each of) John, Paul and Mary give me a book.”

Iterativity. With pre-established loci, it is also possible to obtain an iterative reading by repeating the relevant part of the sign with each locus one after another.

(8) JOHN_a PAUL_b MARY_c BOOK ME-GIVE_a ME-GIVE_b ME-GIVE_c
“I give a book to John, and then to Paul, and then to Mary.”

(9) JOHN_a PAUL_b MARY_c BOOK_a GIVE-ME_b GIVE-ME_c GIVE-ME
“John gives me a book, and then Paul does, and then Mary does.”

We will also discuss at length an external property of all expressions of number in LSQ: there is never agreement in number. The point versus zone marking at the initial assignment of locus is a kind of inflection. Moreover, it is a recurrent property of sign languages that the loci are reused, either in an anaphoric function to recall a discourse element, or when a different verb assigns a grammatical function to the argument associated with a locus (with possibly several signs produced between the assignment of the locus and its reuse). Yet when a locus is reused, it is always with a point marking, never a zone marking. It however retains its collectivity interpretation even if it was originally assigned a zone marking. We will argue that this lack of number agreement is not an accidental property, but that it derives from initial conditions imposed by the gestural-visual modality. The reason why loci can be reused is that their assignment takes place in space, so this assignment has a certain temporal permanency. In comparison, oral languages are highly restricted to temporal chains of elements which have no permanency: once pronounced, these elements cannot be reused; therefore, to reactivate an argument, a new form must be produced. There must however be, at the same time, some indication of permanency. The new form must recall a previously established element. This distinctive function is fulfilled by the paradigmatic membership of the agreement inflection. But since the gestural-visual modality inherently has such a property of permanency through its use of space, no such agreement features are necessary.