

Number Agreement in a Sign Language

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Abstract

Several authors have described agreement in American Sign Language in terms of abstract features (Padden 1983; Bahan 1996), of locative case (Janis 1995) or relatively to a two-person (Meier 1990). However, others have questioned the relevance of the notion of agreement for ASL, on the basis that there is an infinite number of variations for the third person (Liddell 2000). We show that there are no paradigmatic features of agreement in sign languages, notably in Langue des Signes québécoise. Why is that so? To answer this question, we must understand how the differences in modality affect the functioning of agreement in the linguistic system of oral languages and gestural languages. We concentrate on the case of Number agreement in LSQ.

Keywords: number agreement, quantification, Sign language, LSQ, space.

1. Introduction

There are numerous phenomena of agreement in oral languages, e.g., between a pronoun and its antecedent, or a noun phrase and a predicate. There are no instances of agreement in Langue des Signes Québécoises (LSQ, the sign language used by deaf people in the province of Quebec). We show that this absence of agreement is not fortuitous, but that it is due to a fundamental difference between some properties of the substance of the form in an oral language and a sign language. Agreement takes place in oral languages either because the signifier is short-lived and we must produce a new one to reactualize its denotation, or in order to facilitate parsing by introducing redundancy in the information which is provided. In a sign language, the elements which correspond to the ephemeral oral elements have a certain permanency in space, and this is why there is no agreement. Moreover, gestural information is typically more precise, less ambiguous, and grammatical parsing can operate without problems in the cases which

correspond to those which necessitate redundant agreement in oral languages. Therefore, agreement has no function to fulfill in sign languages and we predict that agreement should be absent from all sign languages. We show that cases which have been analysed as agreement are actually something else. In this paper, we illustrate this with the example of Number agreement, which in sign language is actually either quantification or aspect. In order to clarify the place of grammatical Number in the system, we describe the expression of plurality in LSQ and compare it with how it is expressed in an oral language with a fairly rich morphology in this regard, i.e., French. Next we clarify what agreement is and its function in grammar. We then analyze the LSQ constructions which are equivalent to those where there is Number agreement in oral languages and we show that there is never agreement in those cases in LSQ. We conclude with some thoughts on language universals.

2. The expression of quantity

Quantity in languages can be about the actants of the event expressed by a sentence (like singularity or plurality of the individuals to which a nominal expression refers). The quantity of individuals is expressed either by quantifiers with quite varied meanings (all, many, some, every, half, etc.), or by grammatical inflections of Number, which are relatively restricted semantically (singular, plural, sometimes dual, rarely more). Quantifiers can appear in nominal expressions (1) or as adverbials in the sentence (2).

It should be numbered with Arabic numerals (1,2,3, etc.) in parentheses and indented:

- (1) *Tous ces journaux originaux sont internationaux.*
[All these original newspapers are international.]
- (2) *Les journaux originaux sont tous internationaux.*
[(The) original newspapers are all international.]

The Number inflections can appear on various elements. As can be seen in (1), in French, there can be Number inflections on a noun (*journaux*, vs singular *journal*), on a determiner (*ces*, vs singular *ce*), on a quantifier (*tous*, vs singular *tout*), on an attributive adjective (*originaux*, vs singular *original*), on a verb (*sont*, vs singular *est*), on a predicative adjective (*internationaux*, vs singular *international*). The determiner bears the semantically meaningful Number in French; the Number inflections on the other elements are due to agreement and no meaning of quantity is attributed to them (as

shown in Bouchard 2002).

In addition to quantity about the individuals denoted by nominal expressions, languages may also express quantity about the events and sub-events expressed by a sentence (aspect, aktionsart). In this paper, we look mainly at the expression of the quantity of individuals referred to by a nominal.

2.1. Number inflections in LSQ

In order to understand how quantity is expressed in a nominal expression in sign languages, it is important to know how nouns are introduced in discourse in these languages. The substance of the signifier of a noun is spatial: a noun is introduced when its sign is produced in space. The noun may simply be produced without any particular localization in space (3), or, more typically, it is also assigned a locus in the signing space. This locus assignment can be done by directly signing the noun on the locus in space (4), or by a *pointer* (5) (a manual sign, but also possibly a glance (6) or an inclination of the torso (7) “pointing” to the locus) (Parisot and Rinfret, to appear). The loci assigned this way remain in the discourse until they are changed (Lillo-Martin 1986).

- (3) NOT-EASY FOR DEAF.¹
[It’s not easy for a/some/the(plur/sing) deaf-person(s).]
- (4) PHONE(loc) TO-RING.
[The phone is ringing.]
- (5) ME TO-GUESS PHONE *pointer*.
[I guess that it’s the phone (which is there that is ringing)]
- (6) WHEN TO-WANT TO-CALL FRIEND(glance) DEAF ...]
[When I want to call a deaf friend...]
- (7) FIFTY PERCENT MINUS REBATE FOR DEAF(shoulder)
[It’s a special fifty percent rebate for the deaf.]

This assignment is a way to associate a noun with a locus. The locus can then be used to associate the noun with a predicate to assign it a grammatical function (subject if it is the first locus associated with the verb, object if it is the second one). Grammatical Number is expressed by the shape of the pointer at the initial assignment

¹ The examples (3) to (7) are taken from a public interview in LSQ of a native deaf signer, broadcasted during a program called *La parole en mains*.

of a locus to the noun. If the pointer is a point on the locus, this corresponds to singular; if the pointer traces a circular movement which designates a zone in the locus (8), this corresponds to plural (Padden 1990).²

- (8) STUDENT pointer (zone) BOOK GIVE-1
[The students give me a book.]

2.2. *Quantifiers in LSQ*

LSQ has signs corresponding to quantifiers like EVERY, SOME, ALL. For instance, universal quantification can be expressed or by using a linear movement across a series of loci:

- (9) DOOR pointer (linear movement) MAN CLOSE
[The man closes all the doors.]

Quantification can also take place by incorporating a quantifier of cardinality which assimilates phonologically to a noun expressing time (2-HOUR), money (5-PENNY), or number (4-THOUSAND).

Because they operate in space, sign languages have a greater potential of iconicity. For instance, it is possible to express a plural quantity by assigning several loci to a noun as in (10), or by indicating several points inside the zone of a locus (11) (see Pizzuto and Corazza 1996, among others).

- (10) SHOE pointer pointer pointer MARIE GIVE -1
[Marie gives me shoes.]

The number of loci does not correspond to an exact amount but is an indication of a certain quantity. This kind of reduplication appears in many sign languages. For instance, Johnston and Schembri (2007) mention that reduplication of the noun to express plural is optional in Australian Sign Language. In LSQ, this kind of modification is rare. It is typically found in cases of semantic plurals like FOREST (many trees) or LEXICON (many words), in a few cases where grammaticalization is productive like CHILDREN, or in contexts of iconic specification concerning the layout

² Note that some nouns are semantically incompatible with the assignment of grammatical Number. For instance, LUMIÈRE ('light') expresses a non-countable concept and a special classifier must be used if we want to attribute a countable quantity to it by a point or a zone locus.

of units like CHAIRS (row of chairs) or BOOKS (pile of books).

Iconicity also makes it possible to use a zone-locus to indicate the size of a referent. If the referent is small (AMOEBA) or unique (CAT), it is assigned a point-locus. If it is big (REGION) or numerous (CHILDREN), it is assigned a zone-locus. When the referent is a collectivity, its zone corresponds to the type of quantity involved: a set of atomic units receives a series of point-loci, whereas a set expressed as a singularity receives a delimited zone. Collective zones can be divided in sub-zones to express a partition of the quantity (some of these units, half of the set, etc.). This partition can be highly iconic, as in (11), where the first point-pointer situates MONTREAL whereas the circular movement of the zone-pointer situates the collective REGION in which the nearby suburbs LONGUEUIL, LAVAL and ST-HUBERT are actualized, followed by another point-pointer which situates the geographically more distant SOREL.

- (11) FOR MONTRÉAL POINTER(point) REGION POINTER(zone)
[LONGUEUIL LAVAL ST-HUBERT] SOREL POINTER(point)
[[The services are] for here, in Montreal, [for the other cities of the region]
Longueuil, Laval, St-Hubert, and [further away] Sorel]

It is also possible to express quantity by assigning to the noun a locus with different kinds of arrangements as, for example, on a linear dimension (12).

- (12) CHILD (linear movement) 1-GIFT
[I give a present to the children.]

3. Agreement

Since quantifiers and Number inflections often involve the locus assigned to the noun, and since the locus is also used to establish a link between the noun and the predicate with which it has a grammatical relation (subject, object), these modifications of the shape of the locus are often analyzed as verbal inflections of agreement in Number (and person). But as we will now see, that is not the case. These are either simple assignments of grammatical functions, or aspectual markings bearing on the number of sub-events instead of the number of individuals.

3.1. Definition and function of agreement

In order to determine whether there is agreement or not, we must agree on a definition of what agreement is. We propose a classical definition: there is agreement when a word depends on another word or phrase for some of its features. Typically, the features involved are associated with morphological markings such as gender, Number or person, but they need not, as in *Mary, a joyful woman/*man, stepped forward*. The morphological features can be associated with a referential or semantic content, such as *them* in (13a) which refers to more than one individual, distinct from the speaker or hearer, or the morphological features can be purely formal, like all the plural markings in (13b) except the one on *ces*.

- (13) a. Mary doesn't see them.
b. *Ces journaux originaux sont internationaux.*

It is not surprising that theories to account for agreement phenomena oscillate between these two poles—semantic-discursive vs formal. For instance, Lehmann (1988) and Barlow (1992) propose a discursive approach in which agreement operates on features which have an informative value about the reference of the elements.³ This approach can account for cross-sentential agreement, which cannot depend on syntactic operations, these being restricted to intra-sentential dependencies.

- (14) Mary and John came by yesterday. She left you some flowers.

Others, like Lapointe (1980, 1988), have defined grammatical agreement in a purely semantic perspective.⁴ He includes in agreement the morphological features of nouns which vary according to grammatical functions, i.e., case markings.

In contrast, some adopt a strictly formal perspective, where agreement is a correlation of morphological features, including some features which are uninterpretable both semantically and phonologically, as in the minimalist program since Chomsky

³ “Agreement according to this theory consists not of a matching of features at a syntactic level, but rather a matching of properties contained in discourse referents equivalent to the source and target” (Barlow, 1992, p. 155). “[...] agreement is referential in nature. It helps identify or reidentify referents. It does this by giving information on grammatical properties of its referent and, thus, of the NP representing it if one is around. The function of agreement in the marking of syntactic relations derives from this primary function” (Lehmann, 1988, p. 55).

⁴ “The term *agreement* will be applied to those morphosyntactic cooccurrences in which there is an overt controller and overt controllee and in which the form of the controllee depends on universally specified semantic categories of the controller” (Lapointe, 1988, p. 70).

(1995).

The theory of agreement of Bouchard (1984, 1987, 1995) is based on the notion of coherence. It covers all these variants of agreement—referential, semantic and formal— because coherence can operate on various types of elements : a reference, an interpretation, or a structure. Moreover, this approach allows us to understand the function of agreement, which is to ensure the coherence of the interpretation of the elements in order to facilitate parsing. This coherence can operate on the discursive/referential level as in pronominal reaccessing: for instance, a plural marking on a pronoun helps to determine its antecedent by reducing the potential antecedents to those which are more than one. When coherence operates on the formal level, as in *ces journaux originaux*, it serves to make the phrasal cohesion more salient in order to facilitate syntactic parsing.

We can now ask why there is agreement in a language like French (and other oral languages). In oral languages, abstract feature agreement is necessary when we want to actualize a referent anew because the perceptual substance of these languages restricts utterances to temporal sequences of elements which have no permanency. Any oral signifier is ephemeral: once pronounced, it cannot be reused (Bouchard 2002). For example, once we have said *La comtesse est sortie à cinq heures* ('The countess went out at five'), we cannot reuse this instance of the phrase *la comtesse*: we must say once again *la comtesse*, or introduce another specialized signifier, like a pronoun, to reactualize the information. There must be a new signifier, yet at the same time there must be an indication of permanency, of a recall of a previously established actualization. Since this cannot be done by a signifier which has a certain permanency like the locus in sign languages, the means used in oral languages to establish a certain permanency must be indirect: it is done through a paradigm of abstract features, and it is this paradigm which has permanency— in this case, the paradigmatic slot [+FEM; +SING; 3PERS] of *la comtesse*. So only pronouns with these feature values (such as *elle* or *la*) are appropriate to reactualize the information of *la comtesse*, because their morphological features are coherent with those of *la comtesse*. As mentioned by Lehmann (1988: 61), the referent is not identified by specifying all its attributes each time it is reactualized in discourse. It is identified by specifying only some of its features, for the sake of economy: it is less costly to use only a subset of its features. However, this economy comes with a certain lack of precision. For instance, the set of feature values [+FEM; +SING; 3PERS] may correspond to several antecedents in the context. However, discursive strategies usually restrict the possibilities to one element which is more salient at a given moment of discourse.

In contrast, in sign languages, the perceptual substance operates in space and the elements of the utterances are not as strongly restricted to temporal sequences, nor are they as momentary as in oral languages. The assignment of a locus to a noun is unique and non-ambiguous. According to Liddell (2000), a locus represents an entity directly and iconically in the sign space. Moreover, a locus assignment remains in the discourse unless it is changed (Lillo-Martin 1986). Therefore, loci have a certain permanency, in the sense that we can reuse the same locus—a tangible element, a signifier—whereas this is not possible for a signifier in an oral language. This special property allows a locus signifier not only to actualize a referent, but also to be reused, either with an anaphoric function to recall a discourse element, or to establish a grammatical relation between an argument and a verb (by producing the sign of the verb toward this locus, for example), all of this regardless of the number of signs produced between the assignment of the locus and its reuse (Parisot 2003). Because a locus assignment is relatively durable, a sign language need not have recourse to the permanency of a paradigm of features nor to restrictive discourse strategies in order to reactualize a referent. All the theories of agreement appeal to notions of agreement features (a partial set of features of the controller which are also on the target), and to morphosyntactic marking. But the need to mark an element with a set of formal features in an agreement relation seems to come from factors of articulation and economy arising from the exclusively temporal modality of oral languages rather than from a universal component. The oral modality has the property that its signifiers are momentary. On the other hand, in sign languages, there is no need for this kind of marking with morphosyntactic features coming from a paradigm, because their modality allows the signifier-loci to remain active during an exchange.

3.2. Agreement with a predicate in LSQ

We propose that there is no agreement in sign languages because the need for morphosyntactic paradigms is a consequence of the modality of oral languages, which makes their signifiers ephemeral: belonging to a paradigm allows a certain permanency to reactualize actants. This proposal contrasts with several analyses which view certain phenomena in sign languages as instances of agreement. For instance, there are two classes of verbs in sign languages which directly relate with loci: directional verbs create a path towards a locus, or between two loci, and locative verbs are signed on a

locus.⁵ According to Padden (1983, 1990), these are inflected verbs because they spatially agree in person and Number with their syntactic arguments. Padden assumes that the initial and final loci of the path of a directional verb are a subject marking and an object marking, respectively, which are added to the root of these verbs. The choice of signing a locative verb on a different locus depending on its subject or object, is also considered by Padden to be an agreement marker. Similarly, Bahan (1996) claims that anchored verbs also agree, by means of nonmanual markings, with features of person and Number of their arguments. In these analyses, the loci are defined as formal features of the nouns, the structural elements of the verb which are changed (place of articulation and orientation) are assumed to be agreement morphemes, and the association of the verb and the locus is seen as a relation of verbal agreement.

However, Liddell (2000) questions the relevance of the notion of agreement for ASL, on the basis that there is an infinite number of variations for the third person in ASL. He does not consider the reuse of loci as agreement morphemes. He even rejects the idea that the association of the verb to loci is a grammatical process. He claims that signs are located in space with respect to mental representations and not grammatical representations: the loci represent a conceptualization of the entities, as if they were present.

We partly agree with Liddell. These phenomena are not instances of agreement; however, they do partake in grammatical processes. They are not cases of agreement because there is no appeal to an abstract paradigm, *in absentia*: the verb is directly superimposed on a locus, *in praesentia*. It is therefore a syntagmatic signifier which expresses a grammatical function, just like a particular juxtaposition of a noun phrase with the verb can signify a particular grammatical function, as in *Paul loves Mary*. Producing a verb on a locus is a signifier belonging to the spatial substance, which is why we don't find it in oral languages; apart from that, there is nothing particular about it (Bouchard 1996, 2002). Establishing grammatical relations by means of loci is not an instance of agreement, but of syntagmatic relation. If it was an instance of agreement in features, in particular of Number, we would expect to find distinctions in the pointers which relate the verbs and the loci: the loci of the singular arguments should be reused by point-pointers, whereas those of plural arguments should be reused by zone-pointers. In fact, the pointers of verbs do not distinguish singular (15) from plural (16) in ASL (nor in LSQ). We never find a verb with plural agreement by a zone-pointer, even when

⁵ The same strategies as those described for the assignment of a noun to a locus are used to identify the locus of an argument of a verb: directly signing the verb on the locus assigned to the argument, or by a *pointer* to that locus (a manual sign, a glance or an inclination of the torso). There is a third class, that of verbs anchored on the body: these cannot be displaced in space to create a link with the actants, so pointers must be used in this case.

the argument was initially identified as plural by associating it with a zone-locus.

(15) $_1$ INDEX $_1$ ASK $_j$ $_2$ INDEX GO

[I ask her if she is leaving.]

(16) $_{ipl}$ INDEX i HATE $_j$ $_{jpl}$ INDEX

[They hate them.]

However, several specialists of ASL consider that the verb can agree in Number with its object, due to examples with exhaustive plural (17) or multiple plural (18), and sometimes it appears to agree with its subject in case of dual agreement (19) and (20).⁶

(17) PAST CHRISTMAS C-0 o GIFT $_j$,exhaus $_{jpl}$ INDEX WORK+Ag TURKEY

[Last Christmas the company gave a turkey to each worker.]

(18) PRESIDENT STAND-UP O INFORM $_{i,mult}$

[The president stood up and informed them.]

(19) SISTER BROTHER 1 ASK $_{i,du}$

[I asked my sister and my brother.]

(20) BOTH CHILDREN I,du ASK 1 SIMULTANEOUSLY

[The two children asked me [that] at the same time.]

Figure 1, taken from Sandler and Lillo-Martin (2006), shows the movement of the verb for agreement with a dual object (a), each unit of the object (b), or with all the units of the object (c).

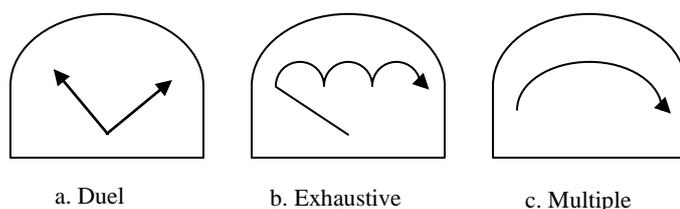


Figure 1. Schema of three types of additions of quantity, reproduced from Sandler et Lillo-Martin (2006: 39)

The analysis of these cases is doubtful, however. The change in the verb never

⁶ Examples (15) to (20) are taken from Padden (1983).

seems to be an instance of formal agreement, with only some redundancy to facilitate the parsing: there is always some meaning of quantification which is added. For instance, example (18) actually expresses universal quantification on individuals (INFORM-EVERYONE). In general, the parts of paths schematized above seem to attribute a quantification bearing on the sub-events, hence aspect. Engberg-Pedersen (1993) considers that this type of movement of the verb in space has a distributive function in Danish Sign Language: “In Danish Sign Language, verbs are never modified for Number just because their arguments are nonsingular. Signs in predicative use, with an added linear, circular, semicircular, or random movement, with or without reduplication, have a distributive meaning beside denoting Number.” Klima and Bellugi (1979: 280) had already noted that “[t]he grammatical categories of Number and distributional aspect are so interrelated in ASL that we have treated them together as expressions of numerosity.” The change in the path of the verb has been abundantly described as a means to express variations in different aspects of an action, such as distributivity, continuity, or accomplishment (Cuxac, 1997 ; Dubuisson *et al.*, 1996 ; Engberg-Pedersen, 1993 ; Supalla and Newport, 1978 ; among others). Therefore, there is no formal agreement with the verb in Number (or any other feature): either it is an instance of a syntagmatic relation which establishes a grammatical function, or there is aspectual quantification.

3.3. Agreement inside a DP in a sign language

As we saw in (1) and (2), in French, there can be Number inflections in a nominal expression on various elements (a noun, a determiner, a quantifier, or an attributive adjective). We also saw that in LSQ, the pointer expresses a singular or a plural depending on whether we designate a point-locus or a zone-locus. However, there is no inflection of Number on the noun: if there is an indication of quantity for the noun, it is not a simple inflection but the incorporation of a quantifier of cardinality (5-PENNY). The noun may be repeated on several loci, but this reduplication is an assignment of multiple loci: it relates to the link between the noun and loci and is not a Number inflection on the noun itself. As for the adjective, it never agrees in Number in LSQ. Therefore, the only indication of grammatical Number in LSQ shows up when the locus is assigned (point or zone): this is not agreement, not a redundant indication to help parsing, but rather the expression of semantic Number.

3.4. Anaphoric agreement in a sign language

In sign language, a locus can be reused in an anaphoric function to recall an element of the discourse. A locus reused in this way assumes a function similar to the one of a pronoun in oral languages. However, contrary to pronouns which often exhibit Number agreement with their antecedents, the reuse of loci never shows Number agreement. A locus is always reused by a point-pointer, without a circular movement delimiting a zone, even when the original assignment of a noun to that locus was as a plural, a zone. This lack of reuse of a locus by a zone-pointer holds both when there is anaphoric recall and when a grammatical relation is established with a verb.

3.5. Some thoughts on the absence of agreement in sign languages

Grammatical agreement is widespread among oral languages. It has a function of distinctivity. To operate this distinctivity, we associate an element with a slot in a paradigm. This slot is defined by a set of values for abstract features. For instance, a pronoun in English may have values for gender, Number and person which reduce the search space of identification to the elements evoked in the context which bear the same set of features: thus, the features allow us to distinguish this subset of elements. These three features are partially motivated at the semantic/conceptual level and are grammaticalized as abstract features. Agreement is a constraint on the distribution of the features of an element relative to those of another element. This constraint does not require that the material forms be identical, but that they express identical values of abstract features in a paradigmatic slot. In the terms of Saussure (1916: 171), this relation established by means of abstract features is an associative relation which unites terms *in absentia* in a virtual mnemonic series.

The absence of agreement in Number (or any other paradigmatic feature) in sign languages is due to the use of loci which is made possible by the spatial substance of their modality. A locus is a point in space which is physically present all through the exchange between signers: so it has a certain temporal permanency which makes it possible for us to reuse it to recall a discourse element. Since it is *in praesentia*, a locus operates a unique and unambiguous distinction among the elements. A language with this precise means of distinctivity does not have to resort to means *in absentia*, such as the use of abstract paradigmatic features. So in a sign language, reference is not ambiguous, even minimally, because locus assignment is precise, unique, whereas paradigmatic diversity is not extensive enough nor flexible enough to ensure unambiguity in an oral

language. Similarly, whereas the spatial relations between the elements of a sentence are unique and precise in sign languages, this is not the case in oral languages, where ambiguities are frequent, which is why oral languages often resort to redundancy by agreement in order to facilitate parsing. Grammatical agreement therefore seems to come from a property of the modality of oral languages, i.e., the ephemeral nature of their material content. The absence of agreement phenomena follows in languages with another modality that has material content that is not as ephemeral, like sign languages.

4. References

- Bahan, Benjamin. 1996. *Non-Manual Realization of Agreement in American Sign Language*, Doctoral Dissertation, Boston, University of Graduate School.
- Barlow, Michael. 1992. *A Situated Theory of Agreement*, New York, Garland.
- Bouchard, Denis. 1984. *On the Content of Empty Categories*, Studies in Generative Grammar 14, Foris, Dordrecht.
- Bouchard, Denis. 1987. "A Few Remarks on Past Participle Agreement", *Linguistics and Philosophy*, 10, p. 449-474.
- Bouchard, Denis. 1995. *The Semantics of Syntax*, Chicago, The University of Chicago Press.
- Bouchard, Denis. 1996. "Sign Languages and Language Universals: The Status of Order and Position in Grammar", *Sign Language Studies*, no 91, p. 101-160.
- Bouchard, Denis. 2002. *Adjectives, Number and Interfaces: Why Languages Vary*, North-Holland Linguistics Series, Linguistics Variations Volume 61, Oxford, Elsevier.
- Bouchard, Denis. & Dubuisson, Colette. 1995. "Grammar, Order and the Position of wh-signs in Quebec Sign Language", *Sign Language Studies*, no 87, p. 99-139.
- Chomsky, Noam. 1995. *The Minimalist Program*, Cambridge (MA), The MIT Press
- Cormier, Kearsy. 2002. *Grammaticization of Indexic Signs: How American Sign Language Expresses Numerosity*, Doctoral Dissertation,, University of Texas at Austin.
- Cuxac, Christian. 1997. "Iconicité et mouvement des signes en langue des signes française", *Le mouvement: des boucles sensorimotrices aux représentations langagières*, Actes de la 6^e École d'été de l'Association pour la recherche cognitive, p. 205-218.
- Dubuisson, Colette, et al. 1996. *Grammaire descriptive de la LSQ, Tome 2 : Le lexique*, Montréal, Université du Québec à Montréal, 1996.
- Dubuisson, Colette, et al. 2001. "Utilisation morphosyntaxique de l'espace dans des discours narratifs en LSQ", *Actes de l'Association canadienne de linguistique*, p. 101-106.
- Engberg-Pedersen, Elisabeth. 1993. *Space in Danish Sign Language*, Hamburg, Signum Verlag.

- Janis, Wynne. 1995. "A Crosslinguistic Perspective on ASL Verb Agreement", In K. Emmorey et J. Reilly, *Language, Gesture and Space*, Hillsdale (NJ), Lawrence Erlbaum Associates, p. 195-223.
- Johnston, Trevor. & Schembri, Adam. 2007. *Australian Sign Language*, Cambridge (UK), Cambridge University Press.
- Klima, Edward. & Ursula Bellugi, U. 1979. *The Signs of Language*, Cambridge (MA): Harvard University Press.
- Lapointe, Steven. 1980. A Theory of Grammatical Agreement, Doctoral Dissertation, University of Massachusetts.
- Lapointe, Steven. 1988. "Toward a Unified Theory of Agreement", In M. Barlow and C. A. Ferguson (eds.), *Agreement in Natural Language. Approaches, Theories, Description*, Stanford (CA): CSLI, p. 67-87.
- Lehmann, Christian. 1988. "On the Function of Agreement", In M. Barlow and C. A. Ferguson (ed.), *Agreement in Natural Language. Approaches, Theories, Descriptions*, Stanford (CA), CSLI, p. 55-65.
- Liddell, Scott. 2000. "Indicating verbs and pronouns", In K. Emmorey and H. Lane, *The Signs of Language Revisited*, Mahwah (NJ), Lawrence Erlbaum Associates, p. 303-320.
- Lillo-Martin, Diane. 1986. "Two kinds of Null Arguments in ASL", *Natural Language and Linguistic Theory*, no 4, p. 415-444.
- Sandler, Wendy. & Lillo-Martin, Diane. 2006. *Sign Language and Linguistic Universals*, New York, Cambridge University Press.
- Meier, Richard. P. 1990. "Person Deixis in American Sign Language", In S. Fischer and P. Siple (eds.), *Theoretical Issues in Sign Language Research, volume 1: Linguistics*, Chicago: University of Chicago Press, p. 175-190.
- Neidle, Carol. & Kegl, Judy., MacLaughlin, Dawn., Bahan, Benjamin, Lee, Robert G. 2000. *The Syntax of American Sign Language. Functional Categories and Hierarchical Structure*, Cambridge (MA), The MIT Press.
- Padden, Carol. 1983. Interaction of Morphology and Syntax in American Sign Language, Doctoral Dissertation, San Diego, University of California.
- Padden, Carol. 1990. "The Relation between Space and Grammar in ASL Verb Morphology", In C. Lucas, *Sign Language Research: Theoretical Issues*, Washington (DC): Gallaudet University Press, p. 118-132.
- Parisot, Anne-Marie. 2003. Accord et cliticisation : le cas des verbes à forme rigide en LSQ, Doctoral Dissertation, Université du Québec à Montréal.
- Pizzuto, Elena., Corazza, Serena. 1996, "Noun Morphology in Italian Sign Language", *Lingua*, no 96, p. 169-196.
- Supalla, Ted. & Newport, Elissa L. 1978. "How Many Seats in a Chair? The Derivation of Nouns and Verbs in American Sign Language", In P. Siple (ed.), *Understanding Language Through Sign Language Research*, New York, Academic Press, p. 91-131.