Back to back(wards) and moving on: on agreement, auxiliaries and verb classes in sign languages

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1. Introduction

The standard tripartite classification of sign language verbs (Padden 1983/1988) relies on the assumption that the agreement shown by spatial and agreement verbs is of a different kind: while the former display locative agreement (i.e. with the loci associated with locative arguments), the latter agree morphologically with subject and object arguments (that is, with the loci linked to their referents). Still, both spatial predicates expressing motion *and* agreement verbs resort to the same type of morphological element to realize the allegedly different sort of agreement: PATH (Meir 1998; DIR in Meir 2002). The semantic contribution of this morpheme in the two classes would be essentially the same: in spatial verbs the initial and final slots of PATH are aligned with locations and in agreement verbs they are aligned with subject and object loci. Since agreement verbs seem to denote transfer of a theme either in a literal or in an abstract sense, the semantic generalization is established that the slots of the directional PATH morpheme can be assigned the source and goal theta-roles in both classes of predicates (Fischer & Gough 1975). For spatial verbs, this is quite straightforward; for agreement verbs, source and goal are restricted to [+human], so they can be relabelled as agent and benefactive, respectively.

However appealing this picture might be, it also has to face some serious challenges. Probably the best addressed one is the problem posed by the subclass of agreement verbs called "backwards": in such predicates, the path alignment is not with subject and object, but with source and goal, which results in a path that goes from the object locus to the subject locus. Meir's (1998) solution is to separate morphological agreement with source and goal from syntactic agreement with the object, which is overtly marked by facing of the hand in ISL.[1]

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[1] Meir (2002) offers a more elaborate version of this line of analysis based on her original proposal.

Nevertheless, the received view on verb agreement in SL has to address further issues that have received little or no attention in the relevant literature. In this paper we review the guiding ideas in the different approaches and, then, we elaborate on some of them, thus contributing to a more accurate characterization of agreement, verb typology and so-called auxiliary predicates in SLs. In order to support the claims, fresh evidence is discussed from Brazilian Sign Language (LSB) and Catalan Sign Language (LSC).

2. Verb agreement and verb classes in SLs

2.1 Syntactic vs thematic agreement

There is a classical discussion in sign language literature about the status of agreement in this type of languages. The morphological realization of agreement is understood as the movement between two points associated with the arguments of certain verbs. Researchers like Kegl (1985), Padden (1983/1988), Janis (1992, 1995), Fischer (1996) and Mathur (2000) presented different analyses identifying agreement as something determined by syntactic and/or semantic motivations and granting a distinct status to syntactic and spatial agreement. On one hand, syntactic (and/or semantic) agreement is interpreted as a grammatical relation established with the subject and/or with the object arguments of the predicate (Fischer 1973) and it is morphologically realized by path movement and/or orientation.[2] On the other hand, spatial agreement is a locative relationship established with points in the signing space corresponding to locations. When these points constitute the beginning and the end of a movement, they are interpreted as locative arguments of the motion verb (SOURCE-GOAL). However, there is disagreement about this proposal. Kegl (1985), for instance, observed that both agreement and spatial verbs may agree with SOURCE-GOAL, a line of analysis developed in Meir's (1998, 2002) work.

The most common American Sign Language (ASL) verb classification follows Padden's (1983/1988, modified in 1990:119) tripartite grouping: (1) plain verbs which do not inflect for number or person and do not take locative affixes either; (2) agreement verbs which inflect for person and number and do not take locative affixes,

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[2] For the sake of simplicity, in this paper we put aside the issue of orientation (facing in Maier's terms) as expression of morphological agreement on the verb.

and (3) spatial verbs which do not inflect for number, person or aspect, but do take locative affixes. Note that Padden differentiated between inflection and affixation with agreement and spatial verbs, respectively (syntactic and morphological agreement).

According to Aronoff, Meir and Sandler (2005), syntactic agreement consists in copying referential indices freely under certain syntactic conditions (involving checking of features). Morphological agreement in SLs would amount to the overt realization of those syntactic indices. In the agreement relationship in general there is a controller and a target of the agreement. The first is the nominal from which the index is copied, while the second is the element onto which the index is copied. Usually the verb carries a marker that reflects certain morphological features of the subject controller. The specificity in sign languages is that the agreement is expressed through referential indices directly, that is, through copying of the R(eferential)-loci onto the corresponding morphological slots of the agreeing verb. Arnoff, Meir and Sandler analyze the specific case of morphological agreement in sign language verbs as having two open location slots that will determine the PATH of the sign à la Meir (1998). For agreement verbs, there is agreement with the grammatical arguments. For spatial verbs, there are locations in which the path of the verb is a direct representation of the trajectory of the moving object. Then, in the sense proposed by Meir (1998), the direction of the path with agreement verbs is determined by thematic roles of the arguments (SOURCE-GOAL arguments), while the facing of the hand is determined by the syntactic role of the object arguments. As for the semantic interpretation involved, agreement verbs denote TRANSFER and spatial verbs MOTION. From this perspective, verb semantics is what determines verb classes.

The terminology adopted for verbal classes in ASL is not universally accepted. Some researchers such as Loew (1984), Lillo-Martin (1986), and Emmorey (1991) align with Padden in her classification and use the term 'agreement verbs'. Others, though, such as Supalla (1990), called these verbs 'movement verbs'. Fischer (1973), Fischer & Gough (1978), and Baker & Cokely (1980) called them 'directional verbs'. Padden (1983) initially named these verbs 'inflecting verbs', but after Padden (1990), she adopted the term 'agreement verbs' instead, recognizing that inflecting verbs include agreement and spatial verbs, as well as any other kind of inflection that could be attached to any verb. Janis (1995) uses the terminology 'locative agreement' and 'non-locative agreement' to refer to locative inflection and agreement inflection, respectively. The reason for the proliferation of terms is probably related to the form that the

inflection attached to the verb takes and also because of the status of the agreement itself. Also, there seem to exist fuzzy verbs that do not strictly fit into the tripartite classification, since their thematic and grammatical properties can fall in more than one class. Kegl (1985:35) notes that the need to appeal to thematic notions such as agent, patient, source and goal "arises from the fact that in languages like English there is no fixed correlation between semantic/thematic roles and grammatical relations". This caveat is an important one, as it also applies to sign languages.

2.2 Thematic agreement: incorporating backward verbs into the picture

The status attributed to agreement by Meir (1998, 2002) is restricted to semantic relations established by the PATH. Meir (1998) shows that directionality must be singled out because of the existence of backward verbs. Backward verbs are agreeing predicates in which the starting position of the sign is the location of the object and the final position is that of the subject, contrary to other agreement verbs. In Meir's analysis, "the direction of the path movement marks the semantic (or thematic) relations among the arguments of the verb while the facing of the hand(s) marks the syntactic relations between the arguments of the verb" (Meir 1998). Meir (1998) argues that directionality is not the relevant phonological element for characterizing grammatical relations of arguments, but rather, it is the facing of the hands. Facing is the direction towards which the palm (and/or fingertips) are oriented in agreement verbs, determined by the referential locus assigned to the object argument of the verb.

Backward verbs are the most appropriate examples in support of Meir's argument. In such predicates, the direction of the movement does not initiate in the position associated with the grammatical subject and terminate in the object position but the other way round. Still, the facing of the hand towards the object location is preserved. Therefore, Meir proposes the existence of double marking, that it is, thematic path agreement (SOURCE-GOAL) and syntactic agreement (facing towards the object). Some of her example verbs following this backward pattern both in ASL and ISL (Israeli Sign Language) are COPY, INVITE, TAKE or TAKE-ADVANTAGE-OF.

Her analysis differs crucially from Padden's account for backwards, which offers a syntactic approach only, that is, backward verbs show reverse agreement with the subject and the object. A strong argument offered by Padden in favor of this approach is agreement marker omission in ASL, whereby subject marking can be

optionally omitted across regular and backward verbs. This would be unexpected under a thematic approach like Meir's, as we should specify that in regular agreeing verbs the optionally omitted argument is the one bearing the SOURCE, while the missing agreement in backwards verbs is the one associated with the GOAL argument.

2.3 Syntactic vs. Locative agreement

Padden provides three tests that are intended to discriminate between the syntactic and the locative nature of agreement in cases where the superficial similarity of the morphemes involved might lead to an identification of the two sorts. She distinguishes between 'person agreement', in which person morphemes differentiate between first and non-first-person, and 'spatial location', in which what is referred to is any physical point on or around the singer's body.

First, with spatial verbs the interpretation of agreement is locative, as it gets interpreted as movement between specific location in space (1a); syntactic agreement implies person interpretation of the vectors involved in the movement, that is, the initial and final points of the movement correspond to the positions associated with the subject and object arguments (1b).

(1)   a.   a-CARRY-BY-HAND-b
                'I carry it from here to there.'
        b.   1-GIVE-2
                'I give you.'

Padden claims that in the first example, there is agreement with the subject; that is, the first person is marked through the initial position of the sign that involves a location near the signer's body. In the second example, the starting point is also near the signer's body. However, in the second case there is a locative morpheme instead of person agreement with the first person, even though it may look like person agreement. She shows this difference by listing the possible variations in (1a): I carry it from here (near my chin) to here, I carry it from here (near my chest) to here, I carry it from here (near of the lower part of my body) to here. However there are not any meaningful variations for (1b), i.e., (1b) will be always understood as having first person as the subject of the sentence without changes in the location of the sign.

Second, distributive marking (also know as exhaustive marking) can only appear with person agreement (2a). A similar form occurring with a spatial verb yields a locative interpretation (2b).

(2)   a.   1-GIVE-3dist

             'I give it to (each of) them.'

    b.   PUT-a PUT-b PUT-c

             'I put them there, there and there.'

Third, reciprocal marking only occurs with agreement verbs (3a). Analogous forms with spatial verbs receive a locative interpretation (3b).

(3)   a.   a-GIVE-b/b-GIVE-a

             'They gave something to each other.'

    b.   a-PUT-b/b-PUT-a

             'I put one in each other's place.'

Rathmann & Mathur (in press) provide some additional syntactic tests that are argued to tease agreement and spatial verbs apart, which amounts to distinguishing between syntactic and locative agreement.

First, no SOURCE XP surfaces with an agreement verbs (4a), while that is possible with spatial verbs (4b).

(4)   a.   *PAPER JOHN-i BILL-j MARY-k j-GIVE-k

             'John gave paper from Bill to Mary.'

    b.   PAPER JOHN-i HOME-a SCHOOL-b a-BRING-b

             'John brought paper from home to school.'

Second, agreement verbs cannot modify the path, while spatial verbs can. According to these authors, interrupting the movement halfway with an agreement verbs yield and ungrammatical reasult (5a), whereas the same modification on a spatial path simply gives a different interpretation (5b).

(5)   a.   *PAPER JOHN-i MARY-j i-GIVE-j (halfway)

'John gave paper halfway to Mary.'

b.   PAPER   JOHN-i   SCHOOL-a   BRING-a (halfway)

         'John brought paper halfway to school.'

Third, the argument bearing the GOAL theta-role in agreement verbs cannot be questioned by WHERE (6a), while in spatial verbs it can (6b).

(6)   a.   WHO/*WHERE   JOHN-i   i-GIVE   PAPER

         'Who/*where did John give paper to?'

    b.   *WHO/WHERE   JOHN-i   BRING-a   PAPER

         '*Who/where did John bring paper to?'

Later on we will return to some of these empirical arguments, either to question their validity or to use them in defense of the proposal put forth in this paper.

Rathmann and Mathur (in press) analyze verb agreement in signed languages as the result of a linguistic innovation that allows the interaction of linguistic properties of agreement verbs with gesture: if a verb selects for two animate arguments, it can participate in agreement with the subject and the object in person and number features. It is important to note that this position reduces verb agreement to agreement with animate arguments, thereby excluding person agreement with inanimate ones. As we will see below, this proposal faces the empirical challenge of accountig for so-called agreement verbs that agree with an inanimate argument. This aspect will become crucial in the further elaboration of our proposal.

In this respect, Janis (1992, 1995) adopts a significantly different view in the sense that she disposes of verbs classes and establishes that agreement is SLs is actually case agreement, controlled by the case that the argument of the verbs bear and not by their thematic role. Agreement is either with locative case or with direct case (non-locative, grammatical agreement), the former having prominence over the latter in the ranking of controller features. Janis (1992:192) observes that the generally accepted analysis of ASL verb distribution cannot predict what a verb will agree with, nor what form of agreement a verb will have in all situations. From this perspective, she considers the case of verbs like COPY or ANALYZE in ASL and suggests that the agreement displayed with animate and inanimate objects correlates with direct and locative case agreement and that it is not necessary to postulate two different lexical

entries for the two agreement options: it simply depends on the case of the argument that functions as controller of verb agreement. Her position is in this respect very much germane to the proposal put forth in this paper.

2.4 Consequences for verb classes and the syntactic/locative agreement divide

The divide between agreement and spatial verbs is kept relevant for syntactic reasons, since these verbs have different features to be checked in Agreement Phrases (cf. discussion by Janis 1995). However, we show in this section that the verb classification proposed by Padden is not always appropriate, at least if understood as defining mutually exclusive classes: in the data we find plain verbs with some kind of locative features, as well as agreement verbs with locative agreement, and spatial verbs with some person feature agreement.

There are different variant of verbs classification in the literature that reflect the fuzzy borders between verbal classes in sign languages such as ASL. An example is an earlier verbal classification proposed by Fischer and Gough (1978), in which three aspects are identified as corresponding to verbal inflection for person: directionality, reversibility and locationality.

The directional verb class as analyzed by Fischer and Gough includes verbs which physically move toward the argument or arguments established in space. In this sense, this class is much more general than the agreement verb class as classified by Padden (1983/1988), since directional verbs include verbs like GIVE, LEAVE, BRING, BITE, HIT, HURT and BLEED that agree with NPs (personal pronouns) as well as with PPs (for example, locatives). These verbs are either agreement or spatial verbs, following Padden's classification. Perhaps Fischer and Gough had already captured the idea that we will develop in our analysis: there are reasons to consider both classes as instantiations of a fuzzy classification, even though there may be other, independent reasons for distinguishing them.

According to Fischer and Gough, reversibility is a process that is partially related to directionality. Verbs like MEET, FLATTER and FREQUENT are clearly reversible, i.e., there is a change in the orientation of the hand in addition to the direction of the sign. These verbs are considered agreement verbs in recent analyses (Padden 1990, Baker and Cokely 1980). However, in this class Fischer and Gough also included verbs such as KICK and BITE, which are not generally analyzed as agreement

verbs. These verbs may be signed toward the location that they refer to, or they can be signed in a neutral position. In the first case, they seem to have inflection and in the second case they seem to be plain. This kind of example reflects again the fuzzy borders of the classification mentioned earlier.

The last characteristic of verbal inflection for Fischer and Gough is locationality. They give WANT as an example of a locational verb, in which the sign can be articulated either near the subject location or near the object location. Padden (1990) analyzes WANT as a plain verb that can bear a locative clitic.

It is interesting to note that Fischer and Gough give examples in which there are possible combinations of the directional, reversible and locative qualities; e.g., FLATTER, FOOL, FREQUENT, HIT, and PAINT. Also, verbs such as HATE, BORROW, LOOK and FEED can be both directional and reversible, while, LOCK, OWE and PITY can combine reversal and locational aspects. These are examples that still lack a clear analysis in sign languages, if one follows a rigid classification.

Concerning plain verbs, Fischer and Gough (1978) described them as exceptions. For instance, verbs such as HEAR, LISTEN, LOVE, EAT, DECIDE, PRAISE, DANCE, ASSOCIATE, JOIN and TEASE are mentioned as exceptions because they do not present agreement inflection. Nowadays, it is generally agreed that these verbs form a class in sign languages different from verbs that have overt agreement.

As we saw in section 2.3 above, Padden (1990) shows evidence for the difference between spatial location affixes to spatial verbs and person and number agreement for agreement verbs.

It is crucial to observe that even though spatial location is clearly different from person agreement, there must be subject person agreement in an ASL example like (1a), since it allows a null subject pronoun (cf. Quadros 1999:105-106 for LSB).[3] In an LSB example like (7) a null subject argument must be posited as well:

(7) $_{<a+1>}$CARRY$_{<b>}$
       'I carry it (from here) (to there).'

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[3] A comparable case was discussed by Padden (1983/88) for spatial verbs (see above): even if sometimes the locus of the source or goal of the movement can coincide with a person locus, this does not mean that the predicate agrees in person with that locus, according to her.

Such an example would not be possible if the spatial location *a* were signed in a location that is not associated with a person, as in the next ungrammatical example from LSB:

(8)   *_{<a>}CARRY _{<b>}
        '(He) carries it from here (a place that does not coincide with the subject) to there.'

Sentence (8) could be grammatical only if the subject were pronounced. (7) is possible because phonologically, the agreement and the locative have the same form expressed at the same point, and as a consequence, the null pronoun for the subject is allowed and the sentence is grammatical. Null pronouns are allowed in languages such as ASL and LSB because they are pro-drop (Lillo-Martin 1986, Quadros 1995). In both languages, there are restrictions that apply to sentences that license null pronouns. The basic restriction concerns the information carried by the verb, i.e., if the verb includes agreement information related to person, it allows null arguments (external and/or internal).

Therefore, as mentioned before, it seems that the combination of locatives associated with spatial verbs can be combined with non-locative agreement, but they must be pronounced at the same location to allow a null argument associated to the non-locative argument. If they are not pronounced at the same point and there is a null non-locative argument, there is a kind of morphological restriction in signs that rules out the sentence.

This proposal differs from Padden (1990), which excludes agreement with the subject with spatial verbs. Padden (1990) follows Supalla (1986) and Liddell (1984) in assuming that agreement morphology cannot cooccur with locative morphology. Padden's conclusion is that the space around the signer has different dimensions at each level of analysis (phonological space for contrastive locations; morphological space for agreement, and syntactic space for indexing and anaphora). Considering the facts in (3) and (4), it seems that there are possible combinations among these different levels when the sentence is produced, contra Padden's analysis.

Kegl (1985:108) discusses one kind of verb that does not fall under the GIVE category (agreement), neither under the CARRY-BY-HAND category (spatial), but falls "truly midway between both verb types": it is the HAND-OVER kind of example. This

verb has one location associated with a location (SOURCE) and the other with a person (GOAL). In this example, the sign can be interpreted with or without the transference notion of possession. Kegl's analysis is very insightful since it shows a different way to approach the verb distribution in ASL that accounts for this fuzzy distribution that we are addressing in this paper. Her analysis establishes that GIVE is an extension of CARRY-BY-HAND to the possession class and that INFORM is an extension of GIVE to the cognitive class. What makes the difference among these verbs are the diverging forms that the handling classifier takes with each instance.

Quadros (1999), like Janis, adopted only one division between verbal classes, the ones with agreement markers and the others without them, non-plain and plain verbs, respectively, in her terminology. Her argument is motivated syntactically, since the syntactic structure has a different form in sentences associated with non-plain and plain verbs. There is no evidence in terms of syntax to maintain the division between agreement and spatial verbs; however, the author recognizes that semantic relations play a role to distinguish verbs that are spatial or person agreement. But, what Quadros also noticed is that is not so clear which class a verb belongs to. A standard agreement verb can behave as standard spatial verb; a plain verb can look like an agreement or spatial verb.

Janis (1992) notices a relation between spatial and agreement verbs which is similar to what Kegl (1985) analyzed as a methaphorical relation between the two groups. Instead of entertaining a synchronic analysis as in Kegl, though, Janis proposed an account in terms of historical relationship: nonlocative (agreement) verbs would be lexicalized forms of classifiers predicates.

Janis (1992) observed that the lexical proposal made by Padden correctly predicts that all agreement markers on a verb will necessarily be of the same type (subject/object or locative). However, as noted above, some of the verbs can appear with more than one agreement type, since they are truly different verb occurrences, that is, the analysis must say, for instance, that there are two verbs TEACH, one a member of the agreement class and the other a member of the spatial class. Consequently, the verb will be listed twice in the lexicon. This is clearly not desirable. Moreover, the verb class analysis cannot predict when a particular agreement form will occur.

3. Problems for the existing alternative views

Next to the empirical problems just mentioned for a static tripartite classification of verbs and a strict separation of syntactic vs. locative agreement established in Padden's widely accepted proposal, we need to address other difficulties with the alternative views discussed above.

The thematic approach, as put forth in Meir's work, essentially reduces sign language agreement to spatial agreement with the locative thematic roles born by the arguments involved in a transfer relationship. This reduction, though, has to face several counterarguments:

(i) The empirical generalization that agreement verbs in SL is the realization of a path morpheme linked to an underlying transfer interpretation is falsified by the fact that such transfer meaning is not always readily available. This becomes especially perspicuous with agreement verbs that are pure transtitives, and not ditransitives, and thus display agreement with direct object, not with the indirect object. The predicates in (9) are examples of this in both LSB and LSC.

(9)   CHOOSE, SUMMON   (LSB, LSC)

(ii) Linked to the previous problem, it must be noted that the thematic role of the second agreeing argument in an agreeing verb is not always GOAL, but it is often a THEME, too. In LSB and LSC we find transitive verbs (both regular and backwards) where the second agreeing argument is a THEME:

(10)   PRESS, INVITE   (LSB, LSC)

(iii)   The strongest counterargument to the thematic approach comes from the fact that in SLs that have an agreement auxiliary (AUX), AUX agrees with grammatical subject and object, not with the thematic SOURCE and GOAL.[4] As noticed independently in Mathur (2000) and Pfau & Steinbach (2005) for DGS, Smith (1990) for TSL and Bos (1994) for SLN, this dissociation of syntactic agreement becomes

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[4] As shown in Pfau & Steinbach (2005) and Steinbach (2005), a significant number of SLs have items that can be labelled as auxiliaries. Different sorts have been identified both cross- and intralinguistically. In most cases, such an auxiliary only marks syntactic subject and object agreement and does not instantiate other grammatical features like aspect. We concentrate here on the most "grammatical" kind discussed, which is realized as an index handshape that moves from the subject to the object locus, glossed as AUX for convenience.

apparent only when an auxiliary co occurs with a backwards verb: the direction of the path of the AUX is the usual subject-object one, which is the opposite of the one realized by the lexical verb:

(11)   a.   IX-1 CHILD 3-TAKE-1 1-AUX-3   (LSC)

        b.   GIRL 2-AUX-3 TAKE-3   (LSB)

These data have not been taken seriously into the discussion about SL agreement, despite its enormous relevance.[5] They constitute rather solid counterevidence not only against a thematic approach to agreement verbs but also against Liddell's account of agreement as deixis (see for instance Liddell 2003). Such agreement AUX never surfaces with clear spatial verbs agreeing with locations or with inanimate arguments. In addition, AUX surfaces with psych predicates in LSC, which are typically statives involving no transfer interpretation at all.

      Next to the objections raised to the thematic approach to SL, we should mention further problems for Rathmann and Mathur's animacy approach. According to them, agreement is limited to animate arguments, but it is a fact that we also find agreement with inanimate objects. In their framework, this would require additional assumptions and maybe the need to postulate a two-entry analysis, which does not seem desirable at all.

(12)   a.   IX-1 BOOK 3-BUY-1   (LSC)

        b.   NOTES IX-1 3-COPY-1   (LSB)

      In addition, the tests offered in Rathmann and Mathur (in press) in order to distinguish between agreement and spatial verbs turn out not to hold in LSB and LSC. First, the SOURCE argument can co-appear with the personal THEME of an agreement verb, against their prediction:

(13)   AIRPORT MARIA IX-2 2-PICK-UP-3

       'You pick up Maria from the airport.'

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[5] This might be partly due to the fact that ASL, like other SLs, does not appear to have such an agreement auxiliary.

Second, both THEME and SOURCE can be questioned exactly with the same verb, as illustrated in the following LSB data:

(14) a.   <WHERE IX-1 1-PICK-UP-3 WOMAN WHERE>wh
      b.   <WHO PERSON IX-1 1-PICK-UP-3 AIRPORT WHO>wh

Third, the modification of the path both in spatial and agreement verbs has aspectual interpretation. The reading obtained is that of unrealized inceptive in the case of the agreement verb, as in (15a); next to the purely locative one, this aspectual reading is also possible with spatial verbs, as in (15b).

(15) a.   BOOK   JOHN-i   MARY-j   i-GIVE-j (halfway)
            'John almost gave the book to Mary.'
      b.   BOOK   JOHN-i   SCHOOL-a   BRING-a (halfway)
            'John almost brought the book to school.'

With all the evidence discussed so far and the discussion of the arguments offered in the literature, it seems clear that we can no longer cling to a mutually exclusive partition of verbs into three morphosyntactic classes, as usually assumed. What we have observed is that verbs sometimes display a hybrid behaviour, at least between the agreement and spatial classes, and that syntactic and locative agreement are not always incompatible in the same verb form. Moreover, we have pointed out some crucial inadequacies of the thematic approach to agreement. Among other countervevidence, we have claimed that AUX elements in LSB and LSC are pure instantiations of syntactic agreement. This becomes clear with backwards verbs. However, the question arises what path is realizing in those verbs, if it is not syntactic agreement. In the next section the relevant issues are recapitulated and a tentative answer is offered.

4. What is agreeing in backwards verbs?

A generalization over backwards verbs that usually remains unmentioned is that, unlike "regular" agreement verbs, most backwards verbs are not ditransitive. This can

easily be observed in the lists of backwards verbs in ASL and ISL provided in Meir (1998):

(16)

    ASL: COPY, EXTRACT, INVITE, MOOCH, STEAL, TAKE, TAKE-ADVANTAGE-OF, TAKE-OUT, GRAB, LIE-TO

    ISL: COPY, TAKE, CHOOSE, INVITE, TAKE-ADVANTAGE-OF, ADOPT, INHERIT, IMITATE, SUMMON, IDENTIFY-WITH

In the inventories for LSB and LSC the majority of backwards verbs is clearly not ditransitive:

(17)

    LSB: TAKE/GET/PICK-UP, CHOOSE, COPY, IMITATE, PERCEIVE, EXPLOIT, INVITE, SUMMON // ASK-FOR, BORROW, STEAL

    LSC: TAKE/BUY, CHOOSE, GET/GUESS, SUMMON, COPY, INVITE, UNDERSTAND // ASK, STEAL, TAX

Surprisingly, these predicates only have one obligatory internal argument, which is assigned a THEME theta-role, and not a SOURCE one. This difference is not a trivial one for the accounts that base the reverse path of backwards verbs on thematic properties. Against the claim in Meir (2002), the only internal argument should receive accusative marking, not dative.

    We argue that the interaction of auxiliaries with backwards reveals crucial properties of this class. As mentioned above, when an auxiliary cooccurs with a backwards verb, the path goes from subject to object and this is the opposite with respect to the one realized by the lexical verb. Unlike in LSB, where AUX only surfaces with backwards verbs, in LSC it can cooccur with both backwards and regular agreement verbs.[6]

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[6] The AUX elements do not display identical properties in LSB and in LSC. In LSB, AUX can be argued to only serve as the spell out of subject and object agreement features. It cannot co occur with agreement verbs when they are inflected, but in ellipsis contexts and structures of verb focus it can surface together

(18)   IX-x IX-y x-AUX-y y-TAKE-x   (LSC)

(19)   a.*GRAMMA-x GRAMPA-y x-AUXY-y x-TAKE-CARE-y (agreement verb)

         b. IX-x IX-y x-AUX-y (y)-PICK-UP (backward verb)   (LSB)

        Interestingly, in LSB these are the only instances where an auxiliary can cooccur
with an inflected verb in an unmarked context. Moreover, the presence of the auxiliary
licenses an alternative form of the backwards verb which has no path, but which can
display orientation/facing towards the locus of the internal argument.

(20)   a.   IX-x IX-y x-AUX-y (y)-PERCEIVE (backward verb)   (LSB)

        b.   IX-x IX-y x-AUX-y TALK (plain verb)   (LSB)

        Our solution to this puzzle is to remove backwards verbs from the class of
agreement verbs and to treat them as handling verbs with path, where the path actually
agrees with locations and not with syntactic arguments. This is supported by the fact
that the object can be sometimes inanimate but the subject must always be animate, as
in handling classifier predicates. From this point of view, the path agreement shown by
backwards verbs with the object (the THEME argument) is not syntactic, but locative.
This seems rather straighforward when we observe backwards predicates whose
meaning involves a handling operation in their core interpretation, such as TAKE:

(21)   BOOK-x x-TAKE-1 (LSC/LSB)

Nevertheless, in some cases a metaphorical transfer must be assumed from a literal
handling operation to an abstract one, as in COPY (22). Another good instance of this is

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with an uninflected agreement verb. Moreover, its syntactic distribution is highly restricted in the clause.
The LSC counterpart of AUX appears to behave more like a main predicate devoid of semantic content,
closer to a light verb than to a pure auxiliary. It displays more freedom of position in the clause. Still, it
marks subject and object agreement, but unlike most instances of AUX described for other SLs, the LSC
AUX can inflect for aspect. In addition, it can co appear with inflected agreement verbs in order to
express emphasis. Nevertheless, these differences are tangential to the argument put forth in the text with
respect to the nature of the agreement displayed by these elements.

the verb UNDERSTAND in LSC (23), which like its English counterpart 'grasp', links the mental operation of understanding to a manual handling movement. In other cases like INVITE the metaphorical transfer can be less obvious, but we claim that it is at the basis of its etymological origin.

(22)   BOOK-x x-COPY-1   (LSC/LSB)

(23)   BOOK-x x-UNDERSTAND-1   (LSC)

Although the details of such a proposal remain to be worked out further, the conclusion is clear: backwards verbs do not actually belong to the class of "pure" (syntactic) agreement verbs, but fall into the class of (highly lexicalized) handling verbs, a subclass of transitive spatial verbs.

This would also explain why certain transfer verbs like PHONE in LSB/LSC? which were originally plain developed into agreement verbs by morphologization of the agreement affix into the lexical verb. Interestingly, no such cases are attested for backwards verbs, as far as we know.

5. Back to agreement and verb classes

Having questioned the classical view on verb classes and agreement in SLs as well as the most prominent alternative in terms of thematic agreement, we must proceed to sketch what the proper characterization of agreement and verb classes should be on the basis of the insights gained in this discussion.

In line with de Quadros's terminology, verbs in SLs should be classified as agreeing or non-agreeing (plain). Agreement is morphologically realized as path[7] and path agreement can either be with locations (spatial features) or R-loci (person and number features). Most of the time the surface realization of these two types of agreement is indistinguishable, but the evidence based on agreement AUX in LSB and LSC allows us to safely conclude that both types of agreement can be (and should be) teased apart. A crucial piece of evidence in this direction can be offered by testing the

[7] As said before, here we gloss over orientation as another morphological means to express agreement overtly, either in combination with path or on its own.

coocurrence possibilities of AUX with backward verbs. As mentioned previously, the path of the AUX elements goes in the opposite direction of this type of verbs, namely from the locus of the object to the locus of the subject. It was also pointed out that AUX only occurs when agreeing with animate subject and object. Since backwards verbs can take both animate and inanimate objects, it is predicted that AUX can appear only with the former and not with the latter. The prediction is borne out:

(24)   *BOOK-x x-TAKE-2 2-AUX-x   (LSC/LSB)
(25)   a.   CHILD-3 3-TAKE-2 2-AUX-3   (LSC)
        b.   CHILD-3 2-AUX-3 3-TAKE   (LSB)

From this solid evidence we can conclude that only R-loci bearing person features enter into personal/syntactic agreement. On the basis of the evidence discussed here it becomes clear that only animate arguments can bear such features in SLs.[8] The question remains as to what kind of agreement locative agreement is. Here we would like to tentatively suggest that it basically reduces to agreement with loci identified by arguments endowed with locative features. In this way, the possibility opens up naturally that one and the same path agrees with a personal argument and a locative argument in the same verbal form. We have seen that such instances are attested.

Another consequence of the approach put forth here is that thematic agreement cannot be maintained as the underlying factor explaining the grammar of path across the traditional classes of agreement verbs (both regular and backwards) and spatial verbs. Maintaining the SOURCE-GOAL analysis proves empirically incorrect, as many instances of agreement verbs are not ditransitives but simple transitives with a THEME/PATIENT object. Moreover, if thematic structure were the underlying motivation for the expression of agreement, we would not expect variation across languages or within the same language. Such counterexamples are found in LSC and in LSB, where the same lexical conceptual structure has been lexicalized with respect to directionality in opposite ways in the two languages:

(26)   a.   ASK (LSB: regular vs. LSC: backwards)

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[8] An interesting exception to this generalization that we cannot address here is AUX agreement with the inanimate CAUSE argument in psychological predications. The crucial factor is that such arguments can never have a locative interpretation.

b.   ASK-FOR (LSB: backwards vs. LSC: regular)

At the same time, the same lexical conceptual structure in the same language can show agreeing and non agreeing lexical forms:

(27)   BORROW (LSC)[9]

With all this evidence at hand, it appears no longer possible to maintain the simple view of agreement and verb classes as proposed in Padden's or Meir's approaches. The impressive results of those works have served us as useful tools to understand the phenomena under study, but we face new challenges in the analysis and it seems time to move on towards a more compound account.

6. Conclusions

After the discussion offered in this paper the picture that emerges about agreement and verbs classes in SLS is significantly modified with respect to current assumptions on these topics. It can be maintained that non-plain verbs ("spatial" + "agreement") in general can agree either with locative arguments (spatial agreement), with personal arguments (person agreement) or with both. Auxiliary predicates can only agree with personal/animate arguments (person agreement) and they point to the fact that backwards are lexical handling verbs whose path is determined by spatial agreement, not by person agreement.

As mentioned above, agreement with person and locative features is often indistinguishable on the surface. Still, the argument structure of each predicate will impose certain requirements on the licensing of arguments, as discussed around (7) and (8), for instance, where the subject argument of a handling predicate must be licensed by a person feature. Still there in an issue of ambiguity of locus as location or R-locus (e.g. TELL with person agreement vs. TELL with locative agreement on the GOAL argument) and further research is needed in order to determine to what extent a locus assigned to an animate referent can be ambiguous between a person locus or a spatial locus.

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[9] This is actually a case of a predicate that seems to have gone from agreement verb to plain verb, although both forms coexist across speakers simultaneously.

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