

# Morphology or syntax: The two types of non-agreeing verb

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Sporadic verb agreement, that is, where some verbs show agreement and others do not, is not a common feature of languages around the world, especially if lexical (Fedden 2019, Windschuttel 2019a). Where it affects objects, there are two types. In the first type, there are other syntactic differences between the verbs and their objects, not just agreement. Dahlstrom (2009) analysed this as a difference in the grammatical functions they subcategorise for, OBJ where indexed and OBJ<sub>0</sub> where unindexed. The other type cannot be reconciled to this analysis, the difference in agreement behaviour having no wider syntactic significance. Instead, morphology is the only difference. These two types, morphological and syntactic, parallel the distinction between morphological and syntactic ergativity both in behaviour and analysis.

## 1 Introduction<sup>1</sup>

Sporadic agreement was coined by Corbett (2006:17) to describe the situation where agreement only appears on a proper subset of the target wordclass.<sup>2</sup> Very little has been written about this wider phenomenon under this name (a search reveals only a number of conference presentations by Fedden 2017, 2017a, 2017b and a chapter, Fedden 2019). Nonetheless, research into agreeing and non-agreeing verbs precedes this term. The object agreeing class in the Trans-New-Guinea (TNG) languages, for example—defined in contrast to their non-agreeing transitive counterparts—were noticed as early as Pilhofer (1933: he called them “Objektverben”, object verbs, see also Suter 2012, Foley 1984, 2000, Windschuttel 2017, 2019a) while the sporadic nature of sign language agreement has long been recognised (Meier 1982, Padden 1988; if it is actually agreement, see discussion in the conclusion).

Common examples of sporadic agreement include uninflected adjectives such as German *lila* and *rosa* which appear bare in attributive position such as *ein rosa Kleid* (Spencer 2009:209; cf: a regular adjective *blau* in the same phrase, *ein blaues Kleid*). These adjectives do not bear the regular

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<sup>2</sup> This is itself a subtype of ‘sporadic inflection’, for example, English *sheep* with respect to number inflection (M. Baerman p. c. in Fedden 2019). Clearly, this concept is also related to uninflectability.

agreement morphology that expresses the gender, case and number of the head noun.

Such examples are quite different from the focus of this paper since they are completely uninflecting, not admitting any inflection, not just agreement. Moreover, it is possibly the final /a/, unusual for German phonology, that explains the missing agreement. Contrastingly, the examples in this paper will be not so simply explained.

Agreement need not be completely absent. It may be that only a certain type of agreement is missing on the sporadic items.<sup>3</sup> This is the common pattern in the TNG object verb languages where prefixal object agreement is sporadic while suffixal subject agreement is not.

Tairora in the TNG subfamily, Kainantu-Goroka, provides an example. Object verbs like *aaru* ‘hit’ are prefixed directly to reference their objects, as is exemplified below in (1). The prefix *h-* on the verb indexes the first singular object. For non-prefixing verbs like *tave* ‘see’, this is impossible: for example, in (2), *tave* has a first singular object but no prefix. Nonetheless, both groups of verbs index the subject with a suffix as both these examples show.<sup>4</sup>

#### TAIRORA

(1) Aaqu ti h-aaru-antora.  
rain 1SG.OBJ 1SG.OBJ-hit-3SG.AVOL  
‘I don’t want the rain to hit me.’ (Vincent 2003:599)

(2) Ti tave-ro.  
1SG.OBJ see-3SG.PST  
‘He saw me.’ (Vincent 2003:584)<sup>5</sup>

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<sup>3</sup> This could be called relative sporadic agreement following Windschuttel (2018) on uninflectedness (this could even be subsumed under uninflectedness but relative to object agreement, etc.).

<sup>4</sup> There exists wide variation how objects are expressed with non-agreeing verbs (Windschuttel 2019a). Typically, full NPs are accepted, at least, where they are singular and inanimate or obviative. In other cases, some languages use free pronouns as Tairora here exemplifies. In other TNG languages, an agreeing verb coocurs acting as an auxiliary carrying the agreement information (Foley 1984, Windschuttel 2019a) while in the Algonquian language, Plains Cree, there is no way of expressing objects of other persons with these verbs (Tollan & Oxford 2018).

<sup>5</sup> Non Leipzig glosses: AUTO=autobenefactive, FACT=factual, IFR=inferential, N.PST=non-past, MED=medial, PART=partitive, AVOL=avolitional

Another example is found in many Algic languages with ‘pseudotransitive’ verbs (also known as VAIO, animate intransitive verbs with object).<sup>6</sup> The object is ignored by agreement while the subject continues to be indexed. This pattern in the Algic language, Meskwaki, has already been given an LFG analysis, Dahlstrom (2009), the difference between the agreeing and non-agreeing verbs being the syntax of the object. Agreeing verbs subcategorise for OBJ and non-agreeing verbs OBJ<sub>0</sub>. The next section will apply this analysis to the Tibeto-Burman language, Japhug, which acts similarly.

However, this analysis does not hold for all examples of non-agreeing verbs. In the Papuan language, Kui, the absence of agreement does not correlate with any syntactic difference in the objects. Instead, the morphology of the verb looks to be the only difference as Section 3 will detail. There are a number of possible analyses for this in LFG depending the morphological theory chosen. Two are given in Section 4. Whatever the details of its analysis, this produces two types of sporadic agreement according to whether the classes are syntactic or only morphological.

## 2 Syntax explains the absence of agreement

Verbal agreement is sensitive to both arguments in normal transitive clauses in Japhug (Rgyalrong in Tibeto-Burman). A notable exception are a small class that do not index their objects, the semi-transitives. There is a relatively simple explanation for the behaviour of this class: they subcategorise for OBJ<sub>0</sub>. Other features of the syntax of these objects and OBJ<sub>0</sub> in this language support this, not only the absence of agreement. This is the analysis Dahlstrom (2009; based largely on the Relational Grammar account of Rhodes 1990) gave to the pseudotransitive verbs in the Algic language, Meskwaki (a typological connection between the two was recognised by Jacques 2016).

Japhug has ergative alignment, the transitive subject marked by the ergative postposition *ku* (Jacques 2016).<sup>7</sup> This can be seen in (3). By contrast, the object is unmarked. This is just like the subject of an intransitive verb as displayed in (4).

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<sup>6</sup> Relative sporadic agreement is also found in those Nakh-Daghestanian languages with person agreement such as Dargwa, where person suffixes appear on all verbs while only some verbs take gender-number prefixes indexing their absolutive argument (Belyaev 2013).

<sup>7</sup> Relativisation which groups A and S together shows that ergativity in Japhug is only a surface phenomenon (Jacques 2016).

JAPHUG

- (3) ...uʒo ku qɔjyi ɣsum lo-βzu.  
 3SG ERG loaf three IFR-make  
 ‘...she made three loaves.’ (Jacques 2004:444)
- (4) Tɣ-teu nu jo-ee.  
 INDEF.POSS-boy DEM IFR-go  
 ‘The boy went (there).’ (Jacques 2016:2)

Agreement in Japhug is aligned hierarchically, sensitive to both arguments according to an inverse system (Jacques 2010). In (5) we see a direct sentence, with a suffix indexing the second person subject. In (6) the situation is reversed, with a third singular acting on a second person object; however, the second person suffix is the same but the role it indexes is changed by the inverse prefix. Japhug makes extensive use of zero anaphora and a single verb can form a complete utterance as in both of these examples (Jacques 2010; the agreement itself may also be pronominal).

JAPHUG

- (5) Puu-tuu-mtó-t.  
 AOR-2-see-PST  
 ‘You saw him/her/it.’ (Jacques 2010:129)
- (6) ...βduɔt ku tú-wy-ndza.  
 demon ERG 2-INV-eat:FACT  
 ‘...the demon will eat you.’ (Jacques 2014a:309)

Alongside the basic transitive pattern exemplified above, there is a class of two-place verbs, the semi-transitives, that do not reference their objects. These verbs are mostly verbs of motion and perception (Jacques 2010).<sup>8</sup> An example is in (7) where the verb, *aro* ‘have’, only indexes the subject. The appearance of *-nu* referencing the plural object is ungrammatical. Additionally, both arguments of semi-transitives can be absolutive; the subjects of these non-agreeing verbs need not be flagged with the ergative postposition.<sup>9</sup> This is clear from (8) where *p<sup>h</sup>ama* ‘parents’ is the absolutive

<sup>8</sup> According to Dahlstrom (2013), the pseudotransitive verbs in Algic are also low in transitivity expressing possession, location, etc.

<sup>9</sup> More rarely, the ergative postposition is used, at least with some semi-transitive verbs (Jacques 2019a).



- (11) Ki nu-ta-mbi.  
 DEM IPFV-1>2-give  
 ‘I give this to you.’ (Jacques 2012)

Moreover, antipassivation of these ditransitives creates a clause that resembles a semi-transitive.<sup>10</sup> Under antipassivation, R is suppressed leaving only the subject and T, OBJ<sub>θ</sub>. The resulting clause is effectively semi-transitive: both arguments bear absolutive case and the verb only indexes the subject (Jacques 2014). This is clear from the examples in (12) and (13) below: both with the verb, *mbi* ‘give’. T is undexed in (12) and, more significantly in (13), the subject lacks ergative marking.

JAPHUG

- (12) Stoκ nu-rx-mbi-a.  
 bean PFV-ANTIPASS-give-1SG  
 ‘I gave beans (to someone).’ (Jacques 2014:23)
- (13) Ulzo nu-rx-mbi.  
 3SG AOR-ANTIPASS-give.  
 ‘S/he gave it away (to people).’ (G. Jacques p. c.)

The undindexed object bears a different syntactic function, OBJ<sub>θ</sub>, and this is why it is unreferenced in Japhug. The case morphology of Japhug makes overt what Dahlstrom (2009) theorised was covert in the syntax of pseudotransitive objects in the Algic languages. However, as the next section will demonstrate, there are other instances of sporadic object agreement to which this analysis cannot be applied. Instead, morphology is the only difference.

Agreeing	Non-agreeing
Transitive < SUBJ, OBJ > ERG ABS exx. (3), (5), (6)	Semi-transitive < SUBJ, OBJ <sub>θ</sub> > ABS ABS exx. (7), (8)

**Table 1:** Transitive and semi-transitive subcategorization frames and examples

<sup>10</sup> However, this is not the whole story since the antipassives of these verbs may also behave as more like transitives with ergatively marked subjects and indexed themes though without full transitive morphology in what is an unusual and unique pattern in Japhug (Jacques 2019a).

### 3 Morphology is only difference

Sporadic agreement with objects is also found in the Papuan family, Timor-Alor-Pantar (TAP).<sup>11</sup> Taking Kui to represent TAP, the OBJ<sub>θ</sub> analysis does not look to be possible. Instead, the unreferenced objects are full objects. This leaves morphology as the only difference. This was previously implied to be the case for sporadic absolutive agreement in the Nakh-Daghestanian language, Archi (Sadler 2016).

For Kui, the OBJ<sub>θ</sub> analysis, at first blush, has every hope of validity. Certain monotransitive verbs do not index their objects; this is also the case for ditransitive themes. This could be because they both hold the grammatical function, OBJ<sub>θ</sub>. However, this is not the case as will be explained below.

In transitive clauses, Kui only has agreement for objects and then only on some verbs (a little over half of the transitive verbs observed. There does not appear to be a semantic or any other basis to the two classes; the two are simply lexical, Windschuttel 2019a). The following examples show this, a non-agreeing verb in (14) and an agreeing verb in (15). In the agreeing class, there are two series of agreement prefixes with each verb root choosing one or the other, the example here coming from the more common patientive series.

- KUI
- (14) Anin    dona                    ool    blēs.  
      person yesterday        child   hit  
      ‘Someone hit the child yesterday.’
- (15) Na                            ool    ga-wel.  
      1SG.SBJ                child   3.PAT-wash  
      ‘I bathe a child.’

These same prefixes also index the subject on a very small number of intransitive verbs; one is below in (16) (see Windschuttel & Shiohara 2017 and Windschuttel 2019). Agreement in Kui does not appear to be pronominal, at least, in intransitive clauses, since it can co-occur with free pronouns as in (17). In any case, zero anaphora is common and NPs, whether indexed on the verb or not, are readily elided.

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<sup>11</sup> This looks to be connected to the similar pattern in TNG, briefly mentioned in the introduction, possibly because it is inherited from a common ancestor (Windschuttel 2019a).



- KUI
- (16) Cucu                ga-rik-i.  
Cucu                3.PAT-sick-PFV  
'Cucu was sick.'
- (17) Aninnok          aban    mi-a,  
people              village IN-IPFV  
na                    gap    n-awar            nanga.  
1SG.SBJ            PART   1SG.PAT-return NEG  
'If there were people in Lerabaing, I wouldn't have come back.'

The attraction of the OBJ<sub>θ</sub> analysis is the same: ditransitive themes are unindexed in Kui as well. Nonetheless, objects of non-agreeing verbs do not bear this grammatical function. While Kui does not have case morphology (apart from on pronouns) or productive diathetic processes, it is a configurational language with a verb phrase (VP) which defines grammatical functions. Ditransitive themes are not in the VP while all monotransitive objects are, representing different functions.

The different phrase structure rules for the c-structure in Kui and how they define grammatical functions are given below in (18) (I is negative *nanga*, and various TAM clitics like *lei* 'PFV'). These will be justified next.

- |      |          |   |                              |                 |          |
|------|----------|---|------------------------------|-----------------|----------|
| (18) | IP       | → | DP<br>(↑SUBJ)=↓              | I'<br>↑=↓       |          |
|      | I'       | → | DP<br>(↑OBJ <sub>θ</sub> )=↓ | VP<br>↑=↓       | I<br>↑=↓ |
|      | VP       | → | DP<br>(↑OBJ)=↓               | V<br>↑=↓        |          |
|      | VP/I'/IP | → | AdvP<br>↓ε(↑ADJ)             | VP/I'/IP<br>↑=↓ |          |

The VP can be defined by the placement of the first part of the negative *gap* and certain other adverbs.<sup>12</sup> They must precede the VP (or, alternatively, some other phrasal category like I' or IP).<sup>13</sup> This is shown for *gap* in (19).

<sup>12</sup> Outside of this function, *gap* has a partitive meaning, 'one of' (see also Windschuttel 2019:§6.2.2.1).

<sup>13</sup> It is possible that this phrasal category may be generalised to XP and semantics prevent its adjoining to DPs, etc. There is also a different class of postposed adverbs. For further details, see Windschuttel (2019:§4.6).

Monotransitive objects are in the VP defined thus. This includes the objects of non-agreeing verbs as in this example.<sup>14</sup>

- KUI  
 (19) (Gap) anin (gap) [ol (\*gap) blēs]<sub>VP</sub> nanga.  
 PART person PART child PART hit NEG  
 ‘Someone didn’t hit the child.’ (elicited)

According to object agreement and the VP, R patterns with indexed monotransitive objects. The object prefix on *-ei* ‘give’ references R as in (20) just like the monotransitive object of the agreeing verb, *-baran* ‘kill’, in (21) (see Windschuttel 2019:§6.2.3). R is part of the VP as in (22) appearing after the adverb, *awoi* ‘again’, just as P does in (19). This points to them holding the same function, OBJ.

- KUI  
 (20) Memang anin doi in-ei...  
 indeed person money 1PL.EXCL.PAT-give  
 ‘Indeed, they gave us money...’ (*doi* entry in Katubi et al. 2013)

- (21) Nyi-baran nanga!  
 1PL.EXCL.PAT-kill NEG  
 ‘Don’t kill us!’

- (22) Gai ga-yool=mo awoi  
 3 3-child=MED again  
 [gala ga-ya=mo ga-gamir-i]<sub>VP</sub> lei.  
*gala*<sup>15</sup> 3-sister.in.law=MED 3.PAT-marry-PFV PFV  
 ‘He gave his child again to the woman in marriage.’ (Shiohara n.d.)

Ditransitive themes, on the other hand, are unreferenced by the verb as in (20). They are not part of the VP since they may be separated from it by adverbs, etc. This is shown by (22) and (23); the adverb, *awoi* ‘again’,

<sup>14</sup> Moreover, this is clearly not due to adjacency. For example, in (i), where the object is elided, *gap* appears felicitously next to the verb

(i) Anin gap [blēs]<sub>VP</sub> nanga.  
 person PART hit NEG  
 ‘The person didn’t hit (anybody).’

<sup>15</sup> *gala* is a difficult to analyse word. There is some reason for treating it as a preposition although this is typologically unusual for an SOV language (Windschuttel 2019:§6.2.3.5). In any case, it clearly does not form a constituent with T as shown by (22) and (24) and thus this should not directly affect its analysis.

intervenes between T and the VP in (22) and likewise for the first part of the negative *gap* in (23). Thus, T has its own GF distinct from R and P, OBJ<sub>θ</sub>. This is not the function held by the objects of non-agreeing verbs. Unlike OBJ<sub>θ</sub>, they fill the VP internal OBJ position as is clear from (24), repeated from (19) above. The unindexed object may not be followed by *gap* unlike OBJ<sub>θ</sub>. This indicates that they are OBJ just like indexed objects.

- KUI
- (23) (Gap) na (gap) bat (gap)  
 PART 1SG.SBJ PART coconut PART  
 [gala (\*gap) ø-ei]<sub>VP</sub> nanga.  
*gala* PART 2SG.PAT-give NEG  
 ‘I didn’t give you the coconut.’ (elicited)
- (24) (Gap) anin (gap) [ol (\*gap) blēs]<sub>VP</sub> nanga.  
 PART that PART child PART hit NEG  
 ‘Someone didn’t hit the child.’ (elicited)

There is one other process that plausibly picks out OBJ<sub>θ</sub> to the exclusion of other objects. NP-fronting is observed with all objects whether referenced or unreferenced, including recipients of ditransitive verbs, except never T, that is, OBJ<sub>θ</sub> (just like OBJ<sub>θ</sub> in English, the recipient in double verb constructions, see Huddleston 1984:195-203).

Monotransitive objects, whether indexed or unindexed, can be fronted as in (25) and (26). In ditransitive clauses, R can also be fronted as in (27) while T has not been seen fronted (the possibility must be considered, however, that this could be a *gap* in the data rather than a hard constraint). If this test is valid, objects of non-agreeing verbs pattern again with indexed P and not T/OBJ<sub>θ</sub>.

- KUI
- (25) [Na-gaj]<sub>OBJ</sub> anin ga-marei .  
 1SG-wage person 3.PAT-go.up  
 sampe rib asaga yesanusa  
 until thousand hundred nine  
 ‘My wage was raised to 900 000 rupiah.’

- (26) Na palak og el-i.  
 1SG.SBJ land PROX buy-PFV  
 [Palak og]<sub>OBJ</sub> na el lei...  
 land PROX 1SG.SBJ buy COMPL  
 ‘I bought this land. Having bought this land I...’
- (27) [Palak=gog]<sub>OBJ</sub> na gala g-ei.  
 earth=TOP 1SG.SBJ gala 3.PAT-give  
 ‘I gave (money) to the earth lord.’ (Katubi et al. nd)

Thus in Kui, indexed and unindexed objects are treated the same syntactically having the OBJ function, both part of the VP.<sup>16</sup> The only difference between the two is the morphology of the verb. Thus morphology driven sporadic agreement does appear to be a necessary category corresponding to a different set of grammars.

#### 4 Morphological solutions

There could be a number of ways to represent the difference in morphology between agreeing and non-agreeing verbs in Kui. There are two main families of morphological theories, incremental and realizational, defined by Toivonen (2002) as follows: “in incremental theories, morphosyntactic information gets added incrementally as morphemes are added to a stem. In a realizational theory, a word's association with certain morphosyntactic properties licenses the appropriate affixes.”

The incremental approach has a long history in the LFG (from as far back as Simpson 1983, for example, and assumed in Bresnan 2001). Individual morphemes are given lexical entries and are combined together by sublexical rules. Following Schwarze's (1999) approach to the inflectional classes in Italian, an f-structure CLASS feature could be created to represent the different verbal agreement classes in Kui. This along with some other features are given below in (28) for an agreement prefix and verb roots from two of the classes. The features of the prefix and root would give rise to the same f-structure according to the sublexical rule in (29). Coherence would forbid the prefix *na-* with the CLASS value PAT from being present in the same structure as the non-agreeing verb, *-tak* ‘feed’, which has a different

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<sup>16</sup> Rachel Nordlinger suggested that relativisation could distinguish OBJ and OBJ<sub>0</sub> (according to the Accessibility Hierarchy, Keenan & Comrie 1977). Unfortunately, the data is not available for Kui, relative clauses being rare and where present typically created with a borrowed relativiser.

value for the feature, namely,  $\neg$ AGR (PAT represents the patientive prefix series).

- (28) na- aff ( $\uparrow$  PERS) = 1, ( $\uparrow$  NUM) = SG, ( $\uparrow$  CLASS) =<sub>c</sub> PAT  
 -as V<sub>root</sub> ( $\uparrow$  PRED) = ‘-as<SUBJ OBJ>’, ( $\uparrow$  CLASS) = PAT  
 -tak V<sub>root</sub> ( $\uparrow$  PRED) = ‘-tak<SUBJ OBJ>’, ( $\uparrow$  CLASS) =  $\neg$ AGR
- (29) V  $\rightarrow$  aff\* V<sub>root</sub> aff  
 $\uparrow=\downarrow$   $\uparrow=\downarrow$   $\uparrow=\downarrow$

More recently, realisational theories have become popular in LFG circles (Sadler & Spencer 2001, Sadler & Nordlinger 2004, Dalrymple 2015, etc. though see Andrews 2019 for an exception). Following the thought of Windschuttel (2012:14), the non-agreeing verbs could be treated as “morphological intransitives”, that is, essentially intransitive deponents. Sadler and Spencer (2001) presented an analysis of Latin passive deponents in Paradigm Function Morphology (Stump 2001, 2016). They proposed a rule of referral generating semantically active meanings from morphologically passive forms (from the s-paradigm to the m-paradigm). In (30) their notation is reformulated to express a referral from transitive to intransitive for the non-agreeing verbs (see Brown 2015 for a prior decomposition of ‘transitivity’ into s-features and m-features for similar purposes).

- (30) (s-Transitivity:TRANS)  $\Rightarrow$  (m-Transitivity:TRANS)  
 $\Downarrow$   
 (m-Transitivity:INTRANS)

This analysis has the added advantage that it could be reversed to account for agreement prefixes on intransitive verbs. They could be regarded as intransitive verbs with transitive morphology (somehow the grammatical function indexed would need to be changed to the only argument, SUBJ; perhaps an OT analysis similar to Alsina & Vigo 2017 could be developed with constraints, AGROBJ, for agreement with objects, and AGRSHARE, for agreement with any argument. These would be ordered AGROBJ >> AGRSHARE so that prefixal agreement would preferentially index an object

but the presence of AGRSHARE would ensure that an argument is indexed where no object is present).<sup>17</sup>

Whatever the details of a morphological analysis, it is clear that one is necessary and an analysis based on grammatical relations like Section 2 is not possible for the non-agreeing verbs in Kui.

## 5 Conclusion

There are thus two types of sporadic object agreement. In one type, the agreeing and non-agreeing verbs subcategorise for two different types of objects, OBJ and OBJ<sub>θ</sub> following Dahlstrom (2009); this difference in syntax affects more than just agreement. In the other type, only morphology distinguishes the verbs that agree and do not agree. In particular, the OBJ vs.. OBJ<sub>θ</sub> analysis is not valid in Kui where both are OBJ and morphology is the difference. These look to represent real typological differences.

The difference between morphological and syntactic sporadic agreement parallels the distinction between syntactic and morphological ergativity and their analyses in LFG. Syntactic ergativity was contrasted with accusativity by how SUBJ and OBJ were linked by Manning (1996) and Arka & Manning (1998). The correspondences between thematic roles and grammatical functions were reversed as in (31). This is distinguished from morphological ergativity which is not based on basic grammatical functions. Instead, it may be directly stipulated with the equations in the f-structure of transitive verbs in (32) (Sadler 2016).<sup>18</sup> Both syntactic ergativity and sporadic agreement are analysed through regular grammatical functions while the morphological analogues require other solutions in both cases.

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<sup>17</sup> Nordlinger (2010) and Windschittel (2012) did provide an analysis of similar impersonal constructions where ‘object’ agreement indexes the subject. They suggested that ‘object’ agreement is actually ambiguous between SUBJ and OBJ, the object reading being forced in transitive clauses by the co-occurring subject agreement. However, their analysis could not be carried over to Kui since there is no subject agreement in transitive clauses.

<sup>18</sup> Falk (2006) treats ergativity quite differently, however, and while he does not spell out the analysis of morphological ergativity in detail, it is also not based directly on grammatical functions unlike his analysis of syntactic ergativity. Sadler (2016) in addition to the analysis of (32) also proposes an alternative analysis of Archi using the PIV function, which, if used in Falk’s (2006) original sense, would imply that the ergativity is syntactic.

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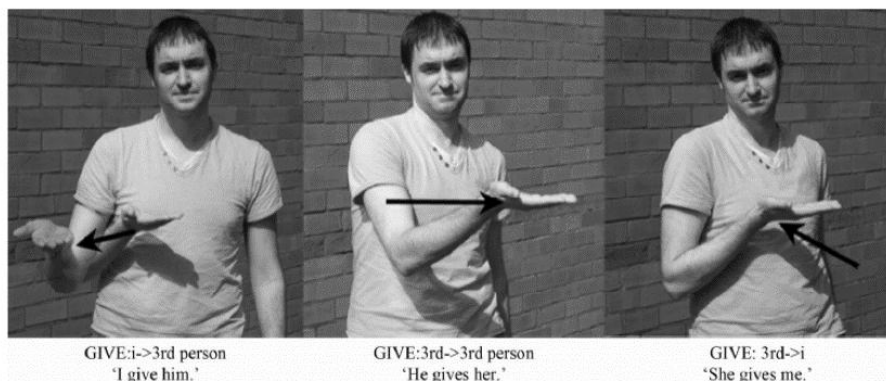
- (31)   ERG:   < OBJ, SUBJ >  
                  ag     pt  
          ACC:   < SUBJ, OBJ >

- (32)   (↑SUBJ CASE) = ERG, (↑OBJ CASE) = ABS

An interesting area for further research on sporadic verb agreement would be sign languages. This is arguably the most notable instance of sporadic verb agreement since it is found in all sign languages with agreement (Mathur & Rathmann 2012, Aronoff et al. 2005, Steinbach 2011). Agreement in sign languages is by physically ‘indexing’ the arguments, that is, pointing at the referent in real space. Figure 1 displays an example of this in BSL (British Sign Language). While this has long been analysed as agreement (from as early as Meier 1983, Padden 1988), this analysis has recently been challenged (from Liddell 2000 to Schembri 2018), its sporadic nature being only one of many unusual features (Aronoff et al. 2005, Lillo-Martin & Meier 2011). However, should the traditional analysis prove correct, it will be interesting to see how the non-agreeing verbs in these languages fit into the typology introduced in this paper.

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<sup>19</sup> Falk (2006) treats ergativity quite differently, however, while the analysis of morphological ergativity is not spelt out in detail but it is also not based directly on grammatical functions in the same way syntactic is. Sadler (2016) also proposes an alternative analysis of Archi using the PIV function, which, if used in Falk’s (2006) original sense, would imply that the ergativity is syntactic.



**Figure 1:** The agreeing verb GIVE in BSL. The direction of the arrow shows the direction of motion, from subject to object in this case (Nick Palfreyman in De Vos 2012:122-3)

Casting the net still wider, these instances of sporadic agreement have been linked to other constructions: transitivity discord constructions (Zúñiga 2019) and differential object marking (Klamer & Kratochvíl 2018). These are, in my view, significantly different since they meaningfully alternate with the same root rather than lexically classifying different verb roots. Despite this difference, it may be possible to develop a similar morphology vs. syntax typology for these phenomena as well, with similar implications for their analyses in LFG (Çetinoğlu & Butt 2008 is already an example of the syntactic analysis).

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