# Complete and Defective Agreement in Kutchi

*Stefan Keine*[*]     *Trupti Nisar*[†]     *Rajesh Bhatt*[*]

[*]University of Massachusetts Amherst
[†]Independent scholar

We describe and analyze the previously undocumented verbal agreement system of Kutchi (Indo-Aryan). We argue that Kutchi instantiates a novel type of split ergativity. First, it exhibits an aspect split in that agreement in non-perfective clauses behaves on a par with agreement in intransitive perfective clauses, in stark contrast to transitive perfective clauses. A striking property of Kutchi is that these asymmetries manifest themselves in the *richness* of agreement. In the former configurations, the verb agrees with the subject for person, number and gender. In the latter, on the other hand, agreement is systematically defective and reliable fails to cross-references certain φ-features. In addition to this aspect split, Kutchi displays a person split: While the verb normally agrees with the subject, it surprisingly fails to do so in transitive perfective clauses with a 1st person subject. Instead, it is the object that triggers agreement in these configurations, likewise in a defective manner. We will argue that these agreement asymmetries are syntactic in nature rather than morphological. Our analysis builds on, and extends, previous work by Laka (2006) and Coon (2010).

**Keywords:** split ergativity · aspect split · person split · feature geometry · AGREE · Indo-Aryan

## 1 Introduction

While many languages exhibit ergative case marking or agreement, it is well-known that these patterns are often confined to certain domains of the grammar. In the vast majority of cases this shift is directional and many languages with an ergative alignment retreat to an accusative pattern in certain aspects and in certain persons (Dixon 1972, 1994).

Changes in alignment patterns can be conditioned by aspect. An ergative case pattern is commonly found in the perfective while an accusative pattern emerges in non-perfective aspects such as

the imperfective or progressive. As an example of such an ASPECT SPLIT, consider the Hindi-Urdu data in (1), based on Pandharipande & Kachru (1977: (2)).

(1) *Hindi-Urdu*

    a. *laṛke=ne    subah    ciṭṭhiyã: likh-ĩ:*
       boy.OBL=ERG morning letters.F write-PFV.F.PL
       'The boy wrote letters in the morning.'

    b. *laṛka: subah    ciṭṭhiyã: likh-ta:    hai*
       boy    morning letters.F write-IPFV.M.SG be.PRES.3SG
       'The boy writes letters in the morning.'

While the difference between perfective and non-perfective aspects has repercussions in both the case as well as the agreement system in Hindi-Urdu, this is by no means necessary. In Nepali, for instance, it is only the case assigned to the subject that is affected (Li 2007). Analogously, there are languages that exhibit split ergativity only in their agreement system. The Chol examples in (2) illustrate this.

(2) *Chol*

    a.  Perfective

        (i)    *tyi  k-mek'-e-yety*
              PFV 1.ERG-TV-hug-2.ABS
              'I hugged you.'

        (ii)   *tyi  wäy-i-yety*
              PFV sleep-ITV-2.ABS
              'You slept.'

b. Imperfective

(i) *choñkol k-mek'-ety*

PROG 1.ERG-hug-2.ABS

'I'm hugging you.'

(ii) *choñkol a-wäy-el*

PROG 2.ERG-sleep-NMLZ

'You're sleeping.' (Coon 2013b: 181–2)

As discussed in great detail by Coon (2010, 2013a), in the perfective intransitive subjects control the same agreement as transitive objects, while intransitive and transitive subjects pattern alike in the imperfective. Like in Hindi-Urdu, then, an ergative system of argument encoding is employed in the perfective and an accusative one in the non-perfective.

A second factor commonly conditioning split ergativity are PERSON SPLITS, which involve the presence or absence of ergative marking depending on the person of the subject. Just as we have seen for aspect splits, person splits may or may not be accompanied by agreement asymmetries. Marathi and Punjabi provide examples of person splits that do not affect verb agreement (see Pandharipande 1997 and Butt 2005, respectively). In these two languages, ergative case marking is limited to perfective aspect, just as in Hindi-Urdu. In addition, it is also confined to 3rd person subjects. 1st and 2nd person subjects, on the other hand, are not overtly case marked. This person-based split does not have repercussions in the agreement system. In the perfective, subjects generally do not control verb agreement, regardless of whether they are case-marked or not. In the non-perfective, by contrast, they do. In other words, all persons behave alike with regard to verbal agreement. A likely example of a person split that does have an impact on agreement is Gowari (Deo & Sharma 2006). Here 1st and 2nd person subjects of ergative clauses do not bear ergative case marking while 3rd person subjects do. Crucially, 1st and 2nd person subjects, but not 3rd person ones, control verb agreement. Finally, there are also languages such as Halkomelem Salish, where the person split manifests itself entirely in the agreement domain (Wiltschko 2006).

(3)  *Halkomelem Salish*

    a.  *may-th-óx-ex*

        help-TRANS-1SG.O-3.S

        'He helps me.'

    b.  *máy-t-tsel*

        help-TRANS-1SG.S

        'I help him.'

    c.  *íkw'-tsel*

        lost-1SG.S

        'I am lost.'

    d.  *íkw'*

        lost

        'He/they is/are lost.'                (Wiltschko 2006: 199,211,212)

Against this background, the present paper pursues two main goals. Empirically, we focus on the previously undocumented language Kutchi (Indo-Aryan).[1] Kutchi exhibits a system of split ergativity conditioned by aspect as well as person that resembles Chol and Halkomelem Salish in that ergative alignment is not seen in the case marking but rather on verbs in the form of verbal agreement. The impact of aspect on verb agreement is, however, quite unlike systems standardly discussed in the literature. In Kutchi, it is the set of $\varphi$-features that are agreed with that is affected by transitivity and aspect. In non-perfective configurations agreement on the verb is COMPLETE, i.e., for person, number and gender. In perfective transitives, on the other hand, $\varphi$-agreement is DEFECTIVE and systematically lacks one or more of these features. Split ergativity, then, manifests

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[1]Kutchi is spoken in the Kutch district of Gujarat in Western India. Kutchi is sometimes also transliterated as Kachchhi. There are three main varieties of Kutchi: (i) Abhdasa Kutchi, spoken in Western and Northern Kutch, (ii) Kanthi Kutchi, spoken in the Central and Southern part of Kutch, and (iii) Waghad Kutchi, spoken in Eastern Kutch. In this paper we will mainly focus on Kanthi Kutchi of Oswals. Unless indicated otherwise we will use the term 'Kutchi' to refer to this variety. Kutchi is distinct from Kutchi Gujarati, discussed in a series of papers by Pritty Patel-Grosz and Patrick Grosz (Grosz & Patel 2006; Patel-Grosz & Grosz 2013, 2014). Both languages share features with the locally dominant language Gujarati. In addition, Kutchi shares features with Sindhi and Kutchi Gujarati with Marwari.

itself in the *richness* of agreement. Defective agreement of this sort is a novel instantiation of the much more general pattern of split ergativity.

The second goal of the paper is to develop an analysis of the patterns and intricacies that Kutchi presents. The guiding intuition behind our proposal is that φ-agreement in Kutchi is defective in precisely those environments where a corresponding subject in Hindi-Urdu would surface in the ergative, viz. transitive perfectives. We will hence refer to these configurations as 'ergative environments', regardless of whether the language overtly realizes ergative case. To derive this parallelism between agreement in Kutchi and the distribution of case in related languages, we will adopt a recent proposal, first explored by Laka (2006) for Basque and considerably extended in scope by Coon (2010, 2013a), which treats the effect of aspect on case and agreement as the consequence of a structural difference between perfective and non-perfective. The structural asymmetries that this line of approach is built on extends rather naturally to the difference between full and defective agreement in Kutchi. In a nutshell, we propose that the asymmetries between perfective and non-perfective structures condition which argument verbal agreement probes can agree with. To the extent that such an account is successful, it provides novel evidence for a structural characterization of split ergativity.

In light of the analytical link between defective agreement in Kutchi and ergative case marking in other languages that this paper argues for, it is natural to assume that Kutchi likewise has abstract ergative case. A slightly different dialect of Kutchi discussed in section 5.1 exhibits an agreement system like the one discussed here but also overtly marks what might be considered ergative case. Crucially, the two coincide, thus further motivating the tight connection between case marking and defective agreement. Likewise, Deo & Sharma (2006) argue for the presence of abstract ergative case in Indo-Aryan.

While this general line of account captures the general bifurcation into complete and defective verb agreement, there are a number of intriguing complications in the precise characterization of the agreement patterns. The most striking example is the following: Verb agreement is generally controlled by the subject and only the subject. In perfective transitive configurations with a 1st

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person subject, however, verb agreement is controlled by the object instead. We will derive fairly intricate agreement restrictions of this type by an interplay of a geometric organization of features and morphological neutralizations of syntactically present distinctions.

The paper is structured as follows: Section 2 lays out the central set of data – verb agreement in the perfective. The patterns and complexity found here are contrasted with the rather straightforward agreement system employed in the non-perfective in section 3. Our analysis of the overall Kutchi agreement system is developed in section 4. Section 5 then relates the Kutchi patterns to systems of differential ergative case marking in related languages, demonstrating that the distribution of defective agreement in Kutchi closely mirrors that of ergative case. It also provides a brief discussion of the agreement system in the related language Kutchi Gujarati and hence demonstrates how variation can be handled within the general account presented here. Section 6 concludes.

## 2   Agreement in the Perfective

Morphologically, tenses in the perfective aspect are based on the *-y-* participle of the verb.[2] The transitivity of the verb affects the richness of the agreement morphology in a way that is strikingly correlated with the distribution of ergative marking in other languages.

Kanthi Kutchi, the variety we focus on here, does not display any nominal reflexes of ergativity, i.e. it does not have any specialized ergative pronouns, as shown in table 1,[3] and lacks corresponding case suffixes for proper nouns.[4] As a consequence, the form of pronouns never alters regardless of grammatical function.

This section and the next will lay out in detail the generalizations underlying the Kutchi agreement system. The central findings are:

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[2]Not all tenses in the perfective aspect have what would be considered a perfective meaning. The class is primarily morphologically defined. Likewise, we will label non-perfective everything that is not based on the *-y-* participle.

[3]It is reported that within living memory, older speakers of Kutchi could use a specialized ergative pronoun for the 1st singular: *mẽ*. Apparently there are still a few speakers who use this form.

[4]As will become relevant in section 5.3, not all dialects of Kutchi lack nominal ergative forms. In Abhdasa Kutchi, 3rd person pronouns appear in a special oblique form in ergative environments.

**Table 1.** Pronominal paradigm of Kutchi

|   | SINGULAR |  | PLURAL |
|---|---|---|---|
| 1 | *a:ũ* | EXCL | *asĩ* |
|  |  | INCL | *pa:ṇ* |
| 2 | *tũ* |  | *aĩ* |
| 3 | *hu* |  | *hu* |

- In the non-perfective and in intransitive perfective, verb agreement is controlled by the subject and for number, person and gender.

- In transitive perfective configurations agreement systematically lacks one or more $\varphi$-features.

- If the subject is 2nd or 3rd person, it controls verb agreement but not for gender. In addition, if the subject is singular, person agreement is also missing.

- If the subject is 1st person singular, it is invariably the object that triggers agreement for number and gender. Finally, if the subject is 1st person plural, optionality arises. Verb agreement can be either for person and number and controlled by the subject or for number and gender and controlled by the object.

## 2.1 *Full Agreement: Perfective Intransitives*

While some tenses in the perfective are formed synthetically, in others the main verb is accompanied by an auxiliary. In intransitive perfective configurations the main verb as well as the auxiliaries exhibit complete $\varphi$-agreement, i.e., they agree for person, number and gender.[5] Example sentences are provided in (4) and (5).[6] The simple past consists of only a main verb whereas the past perfective comprises a main verb and an auxiliary.

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[5]There is no indication that the unergative/unaccusative distinction impacts the agreement system. Although specific diagnostics have not been applied yet, prototypically unergative verbs like *na:* 'bathe' and *kod* 'jump' behave exactly like prototypically unaccusative verbs like *a:v* 'come'.

[6]We indicate long vowels by means of a colon. Nasalized vowels are marked with a tilde superscript. A list of the abbreviations used in the glosses is provided at the end of the paper.

(4)  *Simple Past*

a.  *Mohan    a:v-yo*
    Mohan.M come-PFV.M.SG
    'Mohan came.'

b.  *Rina   a:v-ai*
    Rina.F come-PFV.F.SG
    'Rina came.'

c.  *tṣokra: a:v-ya:*
    boys    come-PFV.M.PL
    'The boys came.'

d.  *aĩ     a:v-iyũ*
    you.PL come-PFV.2.F.PL
    'You (fem) all came.'

e.  *a:ũ a:v-iyã:*
    I    come-PFV.1F.SG
    'I (fem) had come.'

(5)  *Past Perfect*

a.  *Mohan    a:v-yo        vo*
    Mohan.M come-PFV.M be.PST.3M.SG
    'Mohan had come.'

b.  *Rina   a:v-ai        vi:*
    Rina.F come-PFV.F.SG be.PST.3F.SG
    'Rina had come.'

c.  *tṣokra: a:v-ya:      va:*
    boys    come-PFV.M.PL be.PST.M.PL
    'The boys had come.'

d.  *aĩ     a:v-ya:      va:*
    you.PL come-PFV.PL be.PST.PL
    'You all had come.'

e.  *a:ũ a:v-ai        viyã:*
    I    come-PFV.F.SG be.PST.1F.SG
    'I had come.'

In addition to the simple past and past perfective, we also find the present perfective and the future perfective. Syntactically, they differ in the kind of auxiliary employed. Table 2 provides an overview of the forms of the main verb in the simple past. Table 3a gives the morphological forms of the main verb in tenses that contain an auxiliary. Finally, the tables in 3b–3d provide the paradigms of the three auxiliaries. In the interest of space, we will not give example sentences for all tenses.

**Table 2.** Inflection of the -*y*- participle of
intransitive predicates in the simple past

|            | SINGULAR | PLURAL |
|------------|----------|--------|
| 1MASC | -*yo* | -*ya:* |
| 2MASC | -*yẽ* | -*ya:* |
| 3MASC | -*yo* | -*ya:* |
| 1FEM | -*iyã:* | -*ya:* |
| 2FEM | -*iyẽ* | -*iyũ*/-*ya:*HON |
| 3FEM | -*ai* | -*iyũ*/-*ya:*HON |

**Table 3.** Agreement of intransitive predicates and auxiliaries in the perfective tenses containing an auxiliary

|       | SINGULAR | PLURAL |
|-------|----------|--------|
| MASC | -*yo* | -*ya:* |
| FEM | -*ai* | -*yũ*$_{2,3}$/ -*ya:*$_{1,HON}$ |

**(a)** The -*y*- participle

|   | SINGULAR | PLURAL |
|---|----------|--------|
| 1 | *aiyã:* | *aiyũ* |
| 2 | *aiyẽ* | *ayo* |
| 3 | *a:y* | *ayĩ* |

**(b)** The *a*- present auxiliary

|       | SINGULAR | PLURAL |
|-------|----------|--------|
| 1MASC | *vo* | *va:* |
| 2MASC | *vẽ* | *va:* |
| 3MASC | *vo* | *va:* |
| 1FEM | *viyã* | *va:* |
| 2FEM | *viyẽ* | *viyũ*/*va:*HON |
| 3FEM | *vi:* | *viyũ*/*va:*HON |

**(c)** The *v*- past auxiliary

|       | SINGULAR | PLURAL |
|-------|----------|--------|
| 1MASC | *undho* | *ubbo* |
| 2MASC | *undhẽ* | *undha:* |
| 3MASC | *undho* | *undha:* |
| 1FEM | *undhiyã:* | *ubbo* |
| 2FEM | *uniyẽ* | *undhiyũ* |
| 3FEM | *undhi:* | *undhiyũ* |

**(d)** The *undh*- future auxiliary

What is crucial for our purposes is that agreement is established for person, number and gender. The next section will show that this stands in stark contrast to transitive perfective structures, in which agreement is systematically defective.

## 2.2   *Defective Agreement: Perfective Transitive Structures*

Agreement in perfective transitive structures differs from intransitive structures in that it systematically fails to cross-reference certain φ-features. It is, in other words, φ-defective. Furthermore, the element that controls agreement depends on the person of the subject. If the subject is 2nd or 3rd person, agreement is with the subject, lacking gender in all cases and person in some. If, on the other

hand, the subject is 1st person, it ceases to control verb agreement altogether, obligatorily in the case of 1sg and optionally so if the subject is 1pl.. Instead, it is the object that triggers agreement in these cases. This agreement is defective for person. These cases are discussed in greater detail in turn.

### 2.2.1 Reduced Agreement: 2nd or 3rd Person Subjects

Let us first consider defective subject agreement. If the subject of a transitive perfective predicate is 2nd or 3rd person, it controls agreement on the main verb and the various auxiliaries. Importantly, however, gender is absent from this agreement. This absence of gender agreement holds for all agreeing forms. As discussed in greater detail below, person agreement is absent in the singular. The φ-features of the object have no impact on verb agreement. Some examples are given in (6). The full paradigms of the agreeing forms are provided in table 4.

(6) Φ-*Defective Subject Agreement*

a. *Ram / Rina ṭṣopṛi: vã:tṣ-e ve*
   Ram.m / Rina.f book.f.sg read-pfv.sg be.pst.sg
   'Ram/Rina had read the book.'

b. *Ram / Rina ghaṇe ṭṣopṛiyũ vã:tṣ-e ve*
   Ram.m / Rina.f many book.f.pl read-pfv.sg be.pst.sg
   'Ram/Rina had read many books.'

c. *tũ hu ṭṣopṛi: vã:tṣ-e a:y / ve*
   you.sg that book read-pfv.sg be.pres.sg / be.pst.sg
   'You (masc/fem) read that book.'

d. *hu {ṭṣokra: / ṭṣokriyũ} hu ṭṣopṛi: vã:tṣ-ya: ayĩ / va:*
   those {boys / girls} that book read-pfv.pl be.pres.pl / be.pst.pl
   'Those boys/girls read that book.'

e. *aĩ    hu  ṭṣopr̥i: vã:tṣ-ya:    ayo         / va:*

you.PL that book   read-PFV.PL be.PRES.2PL / be.PST.SG

'You (masc/fem) all read that book.'

**Table 4.** Agreement of transitive predicates with 2/3 subjects in the perfective

| SINGULAR | PLURAL |
|:---:|:---:|
| *-e* | *-ya:* |

**(a)**   *-y-* participle

| SINGULAR | | PLURAL |
|:---:|:---:|:---:|
| *a:y* | 2 | *ayo* |
| | 3 | *ayĩ* |

**(b)**   Present tense *a-* auxiliary

| SINGULAR | PLURAL |
|:---:|:---:|
| *ve* | *va:* |

**(c)**   Past tense *v-* auxiliary

| SINGULAR | PLURAL |
|:---:|:---:|
| *undhe* | *undha:* |

**(d)**   Future tense *undh-* auxiliary

The lack of gender agreement is striking, as it affects the participle as well as all auxiliaries. It is important to note that all of these items, with the exception of the present tense auxiliary, display gender agreement if the predicate is intransitive. In addition, the paradigms in table 4 show that agreement is also defective with respect to person, although in a somewhat less pervasive manner. It is clear from the paradigms in table 3 above that person agreement is realized by all the auxiliary verbs if the predicate is intransitive. In contrast, agreement is absent throughout all singular forms in table 4. The only item showing person agreement is the present tense *a-* auxiliary and even for this verb person agreement is confined to the plural. In sum, then, subject agreement in perfective transitive structures lacks gender throughout and person in the singular.

There is reason to believe that this φ-defectiveness is syntactic in nature and not morphological. In other words, we are not dealing with a run-of-the-mill instance of syncretism. A treatment of defectivity as syncretism would attribute the scarcity of agreement distinctions in table 4 to the scarcity of morphological exponents available to these verbs. The *-y-* participle, for instance, would simply have access to only two exponents – one for singular and one for plural. Other syntactically present features would hence simply fail to be realized. Such an analysis is unsatisfactory, however.

The reason is that we know from table 3 that the *-y-* participle as well as the various auxiliaries do have access to a relatively large number of morphological exponents. As a consequence, person, number and gender distinctions are reflected in the forms in table 3. If all of these verbs are morphologically capable of expressing those feature distinctions, the lack of distinctions in table 4 cannot be attributed to morphological paucity. This strongly suggests that in defective agreement the relevant φ-features are not syntactically present to begin with. The φ-defectiveness in transitive structures must hence be "deep" in that it is part of the syntactic structure that is being morphologically realized. This featural defectivity must hence be present at the level of syntax. This conclusion finds independent support in crosslinguistic variation. Gender defectiveness appear more stable than an analysis in terms of accidental morphological syncretism would lead one to expect. This point is elaborated on in section 5.2.

A second observation is that both the participle and the past tense auxiliary in table 4 appear in a singular form not found in the 'regular' paradigm in table 3. Both forms bear a suffix *-e* (cf. *vã:tṣ-e* and *v-e*). Note that this exceptional form appears in the singular cells, which, as we have seen, are defective for person and gender specification. The fact that these cells are filled by a marker that is otherwise absent in the inflectional paradigm suggests that it is not masculine singular default agreement we see in these cells. If it were, we would expect the forms *vã:tṣ-yo* and *v-o*, respectively, contrary to fact. This further corroborates the view that at least the singular cells in table 4 are featurally deficient in a way that the cells in table 3 are not.

### 2.2.2 Object Agreement: 1st Person Singular Subjects

While the paradigms considered so far differ in whether they exhibit φ-complete or φ-defective agreement, they behave alike in that the agreement is solely conditioned by the subject. Transitive perfective structures with 1st person singular subjects are curiously different. Here verb agreement

is controlled by the features of the *object*.[7] The subject has no discernible effect on agreement. Examples can be found in (7), and the full paradigms are provided in table 5.

(7)    *Object Agreement*

a.  *a:ũ hu  tṣa:po     vã:tṣ-yo     a:y       / vo*

    I    that newspaper.M read-PFV.M.SG be.PRES.SG / be.PST.M.SG

    'I (masc/fem) have/had read that newspaper.'

b.  *a:ũ hu  tṣa:pa:     vã:tṣ-ya:    ayĩ      / va:*

    I    that newspapers.M read-PFV.M.PL be.PRES.PL / be.PST.M.PL

    'I (masc/fem) have/had read those newspapers.'

c.  *a:ũ hu  tṣopṛi: vã:tṣ-ai     a:y     / vi:*

    I    that book.F read-PFV.F.SG be.PRES.SG / be.PST.F.sg

    'I (masc/fem) have/had read that book.'

d.  *a:ũ hu  tṣopṛiyũ vã:tṣ-yũ    ayĩ       / viyũ*

    I    that books.F  read-PFV.F.PL be.PRES.F.PL / be.PST.F.PL

    'I (masc/fem) have/had read those books.'

e.  *a:ũ aã     tṣokrẽ-ke   / aã-ke    nɛr-ya:   ayĩ     / va:*

    I    you.PL boys.M.PL-ACC / you.PL-ACC see-PFV.M.PL be.PRES.PL / be.PST.M.PL

    'I have/had seen you boys/you.'

f.  *a:ũ to-ke   nɛr-ai    a:y     / vi:*

    I    you-ACC see-PFV.F.SG be.PRES.SG / be.PST.F.SG

    'I have/had seen you (fem).'

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[7]There is a slight complication: If the object does not bear an overt case marker, it obligatorily controls verbs agreement. If it is overtly case-marked as a result of differential object marking, it controls verb agreement optionally. In this case, the verb may also exhibit 3rd person masculine singular default agreement. For a general discussion of differential object marking see Comrie (1979, 1984), Lazard (1984), Bossong (1985), Croft (1988) and Aissen (2003), among many others.

**Table 5.** Object agreement of transitive predicates with 1st person subjects in the perfective

|  | SINGULAR | PLURAL |
|---|---|---|
| MASC | *-yo* | *-ya:* |
| FEM | *-ai* | *-yũ:* |

**(a)** -*y*- participle

|  | SINGULAR | PLURAL |
|---|---|---|
|  | *a:y* | *ayĩ* |

**(b)** Present tense auxiliary *a-*

|  | SINGULAR | PLURAL |
|---|---|---|
| MASC | *vo* | *va:* |
| FEM | *vi:* | *viyũ* |

**(c)** Past tense auxiliary *v-*

|  | SINGULAR | PLURAL |
|---|---|---|
| MASC | *undho* | *undha:* |
| FEM | *undhi:* | *undhiyũ* |

**(d)** Future tense auxiliary *undh-*

An inspection of the forms in table 5 shows that they too are φ-defective. While the object's gender and number specification affect verbal agreement, person does not: Regardless of whether the object is 2nd or 3rd person, agreement is realized by the forms provided in table 5.[8]

Finally, note that the forms in the paradigms in table 5 are a proper subset of the forms of the 'full' paradigm in table 3, which shows φ-complete agreement. This contrasts with the paradigm in table 4, which, as shown in the previous section, employs forms with the suffix -*e*, which is not found in table 3. Since the object agreement forms in table 5 are defective for person but not for gender, while the forms in table 4 are defective for both (in the singular), we may conclude that it is the absence of a gender specification that leads to the emergence of the *e*-forms. In our analysis below, we will implement this finding by treating them as elsewhere markers, which are normally overridden by more specific markers, but are drawn into service if the syntax delivers a gender-defective configuration.

### 2.2.3 Optionality: 1st Person Plural Subjects

The preceding sections have established that verb agreement is defective if the subject is 2nd or 3rd person and controlled by the object if the subject is 1st person singular. A final complication arises if the subject is 1st person plural. In this case, the verb optionally either shows defective agreement

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[8]If both the subject and the object are 1st person, a reflexive form is used. Due to the ANAPHOR AGREEMENT EFFECT (Rizzi 1990; Woolford 1999) the verb shows default agreement in this case.

with the subject or object agreement. These two options are illustrated in (8). In (8a) agreement is controlled by the subject and limited to person and number, as in configurations containing 2nd or 3rd person subjects. In (8b), by contrast, it is the object that triggers verb agreement, parallel to the state of affairs for 1st singular subjects.

(8)     *Agreement Options with* 1PL *Subjects*

    a.  Defective subject agreement

       (i)    *asĩ*    */ pa:ṇ*   *nibandh / kavita: lakh-ya:*     *va:*      */ aiyũ*

              we.EXCL / we.INCL essay.M  / poem.F write-PFV.PL be.PST.PL / be.PRES.1PL

              'We have/had written an essay/poem.'

       (ii)   *asĩ*     */ pa:ṇ*   *to-ke*   *nɛr-ya:*   *va:*     */ aiyũ*

              we.EXCL / we.INCL 2SG-ACC see-PFV.PL be.PST.PL / be.PRES.1PL

              'We have/had seen you.'

    b.  Object agreement

       (i)    *asĩ*    */ pa:ṇ*   *kavita:*   *lakh-ai*     *vi:*      */ a:y*

              we.EXCL / we.INCL poem.F.SG write-PFV.F.SG be.PST.F.SG / be.PRES.SG

              'We have/had written a poem.'

       (ii)   *asĩ*     */ pa:ṇ*   *to-ke*   *nɛr-ai*   *vi:*     */ a:y*

               we.EXCL / we.INCL 2SG-ACC see-PFV.FSG be.PST.FSG / be.PRES.SG

              'We have/had seen you (fem).'

The respective pairs in (8) are largely synonymous. Native speakers report that in the case of subject agreement it is the subject that is emphasized while in object agreement cases it is the object.

## 2.3   *Interim Summary*

Summarizing the empirical evidence in this section, we have seen that verb agreement in intransitive clauses targets person, number and gender and is thus φ-complete. Transitive structures, by contrast,

show defective φ-agreement. If the subject is 2nd or 3rd person, agreement is with the subject, and systematically lacks gender throughout and person in the singular. 1st person singular subjects do not control agreement at all. Instead, the verb agrees with the object in gender and number. Finally, if the subject is 1st person plural, there exists optionality between defective subject agreement and object agreement. These generalizations are summarized in table 6, where we abbreviate number as '#', person as 'π' and gender as 'γ'.

**Table 6.** Verb agreement in transitive perfective predicates

| *Features of* ↓ *subject* → | SINGULAR | PLURAL |
|---|---|---|
| 1MASC | $\#, \gamma$ *of object* | $\left\{\begin{array}{l} \pi, \# \text{ of subject} \\ \#, \gamma \text{ of object} \end{array}\right\}$ |
| 2MASC | $\#$ *of subject* | $\pi, \#$ *of subject* |
| 3MASC | $\#$ *of subject* | $\pi, \#$ *of subject* |
| 1FEM | $\#, \gamma$ *of object* | $\left\{\begin{array}{l} \pi, \# \text{ of subject} \\ \#, \gamma \text{ of object} \end{array}\right\}$ |
| 2FEM | $\#$ *of subject* | $\pi, \#$ *of subject* |
| 3FEM | $\#$ *of subject* | $\pi, \#$ *of subject* |

## 3 Agreement in the Non-Perfective

The previous section has established that Kutchi retreats to φ-defective agreement in ergative environments, i.e., transitive clauses. This section demonstrates that this pattern is confined to the perfective aspect. Agreement in the non-perfective aspect is φ-complete, just as in intransitive clauses. This pattern is, of course, very similar to split ergativity in the domain of case.

In all non-perfective aspects, verb agreement is φ-complete and controlled by the subject. An illustration of this is given in (9) for three tenses, all of which are non-perfective. Despite the fact that the subject is 1st person singular, it controls complete verb agreement, including gender.

(9)  a.  *a:ũ hi:  ga:yno ga:-indh-i:    viyã:*

   I    this song.M sing-IPFV-F.SG be.PST.1F.SG

   'I used to/was singing this song.'                    (*past imperfective*)

16

b. *a:ũ ka:l     hi: tṣa:po     vã:tṣ-indhiyã:*

    I    tomorrow this newspaper.M read-FUT.1F.SG

    'I will read the newspaper tomorrow.'                                   (*simple future*)

c. *a:ũ hi:  ga:yno ga:-iyã:       ti:*

    I    this song.M sing-CONT.1SG CONT.PRES.F.SG

    'I sing/am singing this song.'                                   (*present continuous*)


For reasons of space, we will not give the complete paradigms for all three tenses as they all behave alike as far as agreement is concerned. More illustrative examples are provided for the past imperfective, which is formed by attaching the suffix *-indh* to the main verb and combining it with the *-v-* auxiliary. Example sentences can be found in (10), and the full paradigm is given in table 7.


(10)   *Past Imperfective*

a. *hu   tṣokro hi:  ga:yno ga:-indh-o      vo*

    that boy     this song.M sing-IPFV-M.SG be.PST.3M.SG

    'The boy used to sing/was singing this song.'

b. *hu   tṣokri: hi:  ga:yno ga:-indh-i:     vi:*

    that girl     this song.M sing-IPFV-F.SG be.PST.3F.SG

    'The girl used to sing/was singing this song.'

c. *hu   tṣokra: hi:  ga:yno ga:-indh-a:     va:*

    that boys     this song.M sing-IPFV-M.PL be.PST.PL

    'Those boys used to sing/were singing this song.'

d. *tũ       hi:  ga:yno ga:-indh-i:     viẽ*

    you.SG this song.M sing-IPFV-F.SG be.PST.2F.SG

    'You used to sing/were singing this song.'

e. *asĩ       / pa:ṇ     hi:  ga:yno ga:-indh-a:  va:*

    we.EXCL / we.INCL this song     sing-IPFV-PL be.PST.PL

    'We used to/were singing this song.'

**Table 7.** Past imperfective paradigm of *ga:* 'singular'

|  | SINGULAR | PLURAL |
|---|---|---|
| MASC | *-indh-o* | *-indh-a:* |
| FEM | *-indh-i:* | *-indh-iyũ*$_{2,3}$/ *-indh-a:*$_{1,2/3\text{HON}}$ |

**(a)** The *-indh-* participle

|  | SINGULAR | PLURAL |
|---|---|---|
| 1MASC | *vo* | *va:* |
| 2MASC | *vẽ* | *va:* |
| 3MASC | *vo* | *va:* |
| 1FEM | *viyã:* | *va:* |
| 2FEM | *viyẽ* | *viyũ*/*va:*$_{\text{HON}}$ |
| 3FEM | *vi:* | *viyũ*/*va:*$_{\text{HON}}$ |

**(b)** The *v-* auxiliary

It is clear from this paradigm that syntactic agreement with the subject is established for all φ-features. While some stems are syncretic for some cells, every φ-feature triggers a morphological reflex. Notice also that the φ-completeness of verb agreement is independent of the presence or absence of an auxiliary. In other words, although the particular features realized on the participle depend on the presence of an auxiliary, verb agreement in non-ergative environments is φ-complete regardless of whether or not an auxiliary is present.

## 4 Analysis

The distribution of φ-defective agreement in Kutchi closely mirrors the distribution of ergative case in other languages. First, defective agreement is limited to transitive structures, just like ergative case. Second, it is confined to perfective aspect, just like ergative case in languages with an aspect split. It is natural, then, to relate defective agreement to ergativity. This section pursues this line of analysis. We will adopt a current treatment of split ergativity, due to Laka (2006) and Coon (2010, 2012, 2013a), and extend it to the data just discussed. Coupled with specific assumptions about feature geometries and morphological wellformedness constraints, a system along these lines is capable of deriving the complex agreement pattern in Kutchi.[9]

The main points of the analysis developed in this section are as follows:

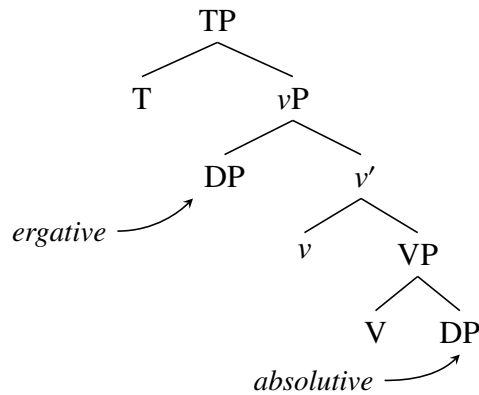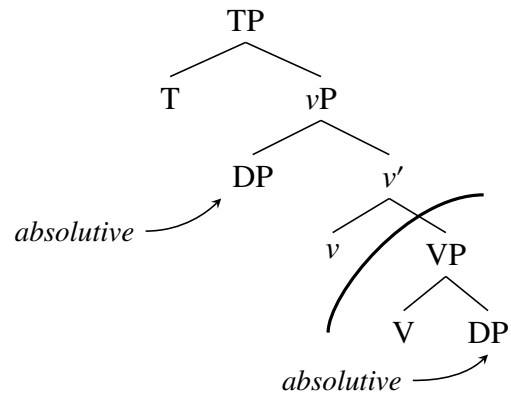- Non-perfectives differ from perfectives in that the former consist of two domains.

---

[9]The analyis developed here grew out of crucial comments by two anonymous reviewers, for which we are grateful.

- There are distinct and separate φ-probes on T and *v*. T contains a person and a number probe, *v* a number and gender probe.

- Complete agreement arises when both T and *v* agree with the same DP. This happens in non-perfectives and intransitive perfectives.

- In transitive perfectives T and *v* agree with distinct elements, and only the features of T are overtly realized. This results in defective agreement as T lacks a gender probe.

- Post-syntactic impoverishment deletes the person feature on T in the singular. In the case of 1st person subjects, person impoverishment may lead to a complete deletion of T's φ-content, resulting in object agreement. That 1st person is special in this regard follows from the general fact that 1st person does not require a number specification. This in turn is analytically related to the fact that Kutchi has an inclusive/exclusive distinction.

## 4.1  *The Structural Origin of Split Ergativity*

Because the overall distribution of defective agreement is closely related to the distribution of ergative case in split-ergative languages, we will start by implementing the aspect split. To do so, we will follow a recent proposal by Coon (2010, 2012, 2013a), who in turns builds on, and extends, an analysis of the Basque progressive by Laka (2006). The underlying observation is that, typologically, if a language exhibits an ergative split, ergative case will be limited to perfective aspect and be absent in the non-perfective. The reverse never holds (Dixon 1979). To derive this crosslinguistic pattern, Coon (2010, 2012, 2013a) suggests that the non-perfective aspect is structurally more complex than the perfective aspect. In a nutshell, clauses in the non-perfective aspect consist of two domains for the purposes of case assignment, while perfective aspect consists of only one. This difference is schematized in (11) and (12), adapted from Coon & Preminger (2012: 314). We indicate the domain boundary by a solid line, setting aside questions as to its precise nature for now.[10]

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[10]Laka (2006) motivates this distinction for Basque based on fairly transparent structural asymmetries. Coon (2010) makes parallel observations for Chol. In Indo-Aryan languages it is not the case that non-perfectives are transparently structurally more complex than non-perfectives or vice versa. Some non-perfective environments (habitual, progressive) require an auxiliary, but not all do (e.g., past habituals, subjunctives). Ergative case licensing does not correlate with the

(11)  *Perfective aspect*

```
              TP
            /    \
           T      vP
                /    \
              DP      v′
      ergative ↗     /  \
                    v    VP
                        /  \
                       V    DP
                  absolutive ↗
```

(12)  *Non-perfective aspect*

```
              TP
            /    \
           T      vP
                /    \
              DP      v′
    absolutive ↗     /  \
                    v    VP
                        /  \
                       V    DP
                  absolutive ↗
```

Assuming case assignment in a Marantzian fashion (Marantz 1991), DPs receive their case configu-rationally. Simplifying somewhat, if they are the sole DP within a given domain, they receive default case, absolutive in ergative languages. If there are two DPs within a domain, one of them receives dependent case and the other default case. In ergative languages, dependent case ('ergative') is assigned to the higher DP. In the perfective in (11) the two DPs reside in the same domain and will hence receive ergative and absolutive, respectively. In the non-perfective, on the other hand, each DP occupies its own domain. Because case assignment applies to individual domains, both DPs will be assigned absolutive case. As a result, ergative marking is absent in the non-perfective.

We will adopt this general line of approach and show how it can be extended to the Kutchi agreement system. What we will derive is that, for transitive clauses, the presence of a boundary in the non-perfective leads to full agreement with the subject while the absence of such a boundary yields defective agreement. For intransitive clauses, full agreement arises regardless of the presence or absence of an aspect-induced boundary. The next section will devise such a system.

### 4.2  *Split Ergativity and Agreement Probes*

To extend Coon (2010, 2012)'s analysis to the agreement asymmetries at hand, we propose the existence of two φ-probes. One is located on *v* and comprises number and gender; the other is

---

optionality/obligatoriness of auxiliaries, it only correlates with the perfective/non-perfective distinction. Our adoption of a Laka/Coon-style system is motivated by crosslinguistic considerations.

situated on T and contains person and number.[11] The existence of a φ-probe on *v* that agrees with the object is independently argued for in the literature on the Person Case Constraint (see, e.g., Anagnostopoulou 2003, 2005; Rezac 2004; Richards 2008) and alignment patterns (Bobaljik 1993; Laka 1993; Rezac 2008). General discussions of probe-splitting can also be found in Sigurðsson (2006) and Preminger (2011). If only one of them is realized morphologically, defective agreement will result. If both are combined, full agreement emerges. Whether or not unification takes place is regulated by the structural asymmetry holding between the two aspects.

We build on Coon's system in that the locality boundary induced by non-perfective aspect does not only define the domain of case assignment. In addition, this boundary is impenetrable for φ-agreement.[12] As a consequence, we obtain the following configurations for each aspect:[13]

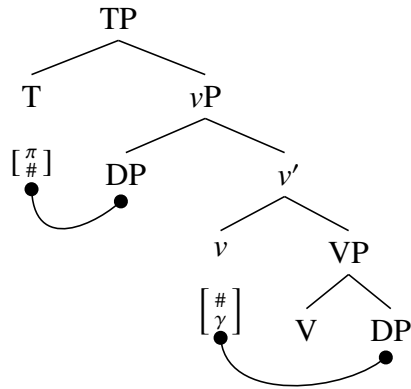(13) *Perfective aspect*
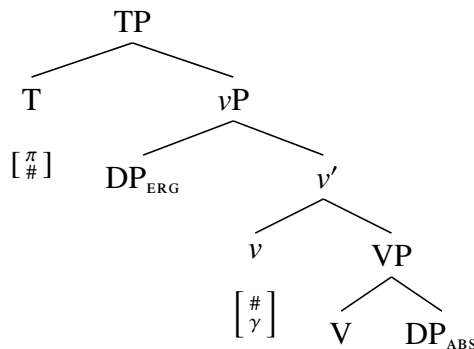
(14) *Non-Perfective aspect*
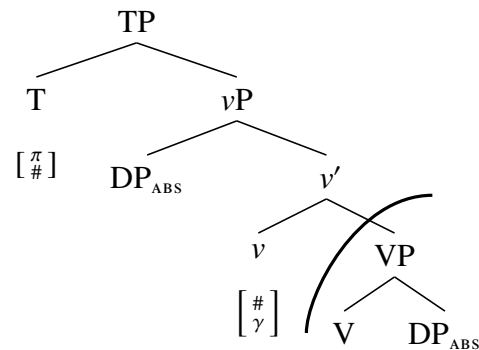


Consider first transitive configurations in the perfective. Because no aspect-induced boundary exists between *v* and the internal argument, *v* agrees with the internal argument. T in turn will agree with the external argument. This is illustrated in (15).

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[11]We thank an anonymous reviewer for suggesting an analysis in terms of multiple probes. Such an account is also proposed by Patel-Grosz & Grosz (2014) for Kutchi Gujarati.

[12]These boundaries are distinct from one other kind of notion of 'boundary' that is extant in the existing literature, that of phase boundaries (Chomsky 2000, 2001). Phase boundaries allow communication at the edges i.e. material at the edge of a phase is visible from outside the phase. That is not the case with these boundaries. Further these boundaries are not boundaries for movement. They seem to exclusively restrict case and agreement.

[13]We will continue to use 'π', '#' and 'γ' as abbreviatory labels for person, number and gender features, respectively.

(15)  *Derivation of φ-agreement in the perfective*

```
                    TP
                  /    \
                T        vP
              [π #]    /    \
                •   DP        v′
                     •      /    \
                          v        VP
                        [ # γ ]   /   \
                           •     V     DP
                                        •
```

It is a general morphological fact of Kutchi that the verb may morphologically agree with only a single argument. This can be translated as a general morphological filter: Only a single agreeing head is morphologically realized. If there are several, as in (15), vocabulary insertion targets the highest one, i.e., T. It follows, then, that verbal agreement in (15) will be with the subject and that it will be for person and number only, as T lacks a gender probe.[14] This derives that subject agreement in the perfective is defective for gender. Note also that *v* is likewise defective for person. If, for reasons to be discussed below, it is *v* that is spelled out, the result will be object agreement for number and gender but not person. This is indeed what we find for object agreement.

Contrast this situation with the non-perfective. Here the boundary prevents *v* from agreeing with the internal argument. Following Béjar (2003), Béjar & Rezac (2009) and Carstens (2013), a probe that has probed unsuccessfully re-probes. For the sake of concreteness, we adopt the agreement system proposed by Béjar & Rezac (2009), according to which *v* first probes into its c-command domain (the VP). If there is no suitable goal within this domain, *v* agrees with its specifier, the external argument. T invariably agrees with the external argument as no locality boundary ever intervenes between the two, as before. Consequently, both T and *v* agree with the external argument in the non-perfective.

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[14]A reviewer wonders whether there could be a language just like Kutchi but spelling out the lower probe, viz. *v*, or whether this mechanism can be independently derived. We do not know of any potential independent source and will hence tentatively conclude that an inverse system should be possible. Whether this is adequate remains to be seen.

(16)   *Derivation of φ-agreement in the non-perfective*
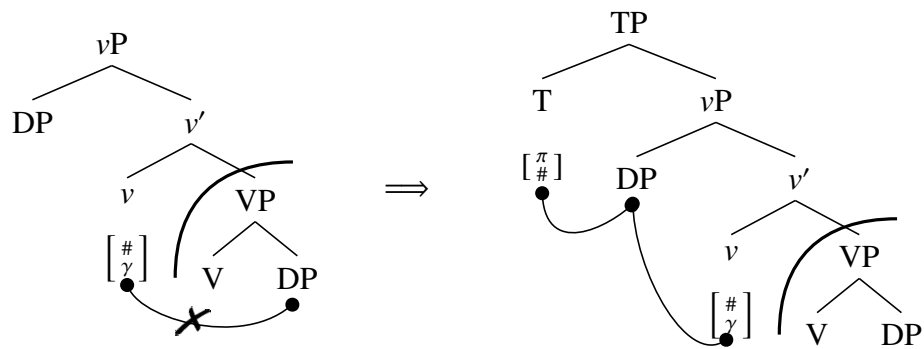


As a consequence, the external argument will control person and number agreement on T and number and gender agreement on *v*. Since the features on both heads are valued by the same argument, we suggest, they can be combined into a unit for the purposes of vocabulary insertion. A post-syntactic movement rule that fuses *v* into T in this case delivers this result (see, e.g., Halle & Marantz 1993, 1994; Embick & Noyer 2001 among many others).[15]

(17)   FUSION

If the φ-probes on T and *v* are valued by the same DP, then

$$\ldots T \ldots v \ldots \Rightarrow \ldots [T * v] \ldots$$

Let us turn now to sentences with intransitive verbs. As detailed above, the sole argument of intransitive verbs controls φ-complete agreement regardless of the aspect of the clause. The current analysis extends without further ado to perfective intransitives. If the verb is unaccusative, both *v* and T will agree with it, leading to full agreement. The same holds for the argument of unergative verbs, which agrees with *v* on the second probing cycle. Because both T and *v* agree with the same argument, we obtain full φ-agreement, as before.

   In the non-perfective, both T and *v* likewise agree with the external argument if the verb is unergative. If the verb is unaccusative, however, the base position of this argument is separated

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[15]One might think that this analysis requires post-syntactic movement operations to have access to derivational syntactic information, viz., which probe was valued by which argument. We should point out that no derivational backtracking is necessary to achieve this result. The most straightforward implementation is one assuming that agreement is feature sharing (Gazdar et al. 1985; Pollard & Sag 1994; Frampton & Gutmann 2000; Pesetsky & Torrego 2007). Under such an analysis two agreeing elements enter into a static sharing relationship. The pairings can hence be directly read off the syntactic structure that forms the input to morphological operations.

from both T and *v* by the boundary. All else equal, this would lead us to expect default agreement, contrary to fact. Just as in the cases above, the verb exhibits full agreement with the sole argument. To achieve this outcome, we stipulate that T in Kutchi has an EPP-feature, which hence attracts the internal argument. Assuming that *v*P is generally a phase for movement (Legate 2005), raising of the internal argument to SpecTP requires its landing in Spec*v*P as an intermediate step. In this position, it is in the search space of *v*. As a result, both T and *v* agree with it and full agreement emerges.

In sum, the system developed so far captures a number of generalizations about verb agreement in Kutchi. First, agreement can be either full or defective. If both probes agree with the same argument, full agreement arises. If only one of the two probes is realized, defective agreement is the result. Whether both probes agree with the same argument or not is regulated by the structural distinction between perfective and non-perfective aspect identified by Laka (2006) and Coon (2010). The bifurcation of the clause structure in the non-perfective yields agreement of both probes with the external argument and hence full agreement. In the absence of this bifurcation, the two probes agree separately, yielding impoverished agreement. As a result, subject agreement lacks gender in the perfective but not in the non-perfective.

This analysis derives that defective agreement appears in precisely those cases in which ergative case is observed in other languages, as ergative is assigned in, e.g., Hindi-Urdu whenever the subject and object are within the same domain, i.e., when no boundary intervenes between the two. In such a configuration, T will agree with the subject and *v* with the object, leading to only T being spelled out. Because T only contains a person and number probe, the resulting agreement will be defective, lacking gender.

### 4.3 *'Special' Agreement*

Apart from regulating the distribution of full and defective agreement and deriving gender defectiveness in perfective transitives, the analysis proposed in the previous section also allows us to account for the emergence of 'special' agreement morphology. Recall from section 2.2.1 that defective

subject agreement employs a morphological exponent not found in the full agreement paradigms. This exponent is *-e* and it appears if the subject is 2nd or 3rd person singular (see table 4d). If subject agreement is φ-complete, *-e* is absent throughout (cf. table 2 for intransitive verbs in the perfective and table 7 for agreement in the non-perfective). For instance, if agreement is defective, both masculine and feminine subjects lead to *-e* on main verbs (e.g., *vãṭṣ-e* in (6b)) while agreement is realized by the gender specific markers *-o* and *-i:* under full agreement (e.g., *ga:-indh-o* and *ga:-indh-i:* in (10a) and (10b)).[16] The emergence of *-e* can be quite naturally related to our claim that defective agreement lacks a gender specification. This section will derive this result in greater detail. To this end, consider the syntactic configuration after agreement in (18). The syntactic configuration giving rise to (18) is (15).[17]

(18)   *Agreement with 3sg subjects*

$$
\text{T–[3,\textsc{sg}]} \quad \text{Subj–[3,\textsc{sg},} \left\{ \begin{array}{c} \textsc{fem} \\ \textsc{masc} \end{array} \right\} \text{]} \quad v\text{–[\textsc{sg},\textsc{fem}]} \quad \text{V} \quad \text{Obj–[3,\textsc{sg},\textsc{fem}]}
$$

vocabulary insertion
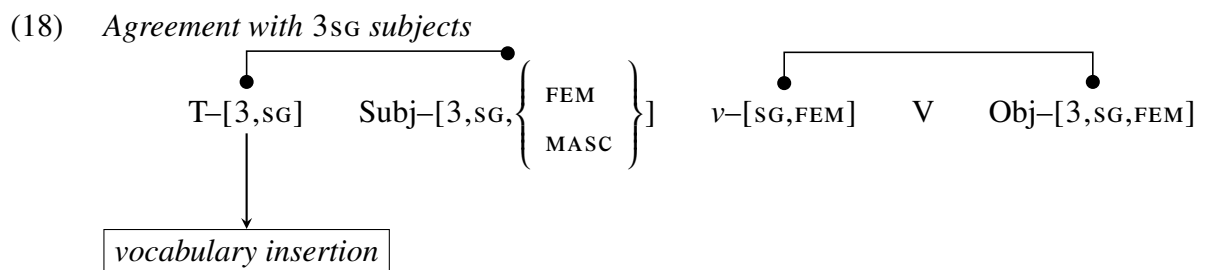
The use of the *-e* form is the result of how morphology deals with the syntactic structure in (18). Suppose that *-e* is an elsewhere marker that is specified for singular but not for gender. The exponents *-o* and *-i:*, by contrast, are specific for both singular and a respective gender, as stated in (19).

(19)   Sɪɴɢᴜʟᴀʀ Vᴏᴄᴀʙᴜʟᴀʀʏ Iᴛᴇᴍs
    a.   /-e/   ↔   [sɢ]
    b.   /-o/   ↔   [sɢ.ᴍᴀsᴄ]
    c.   /-i:/   ↔   [sɢ.ꜰᴇᴍ]

---

[16] A reviewer asks whether *-e* can be related to the nasalized form *-ẽ* found in 2nd person masculine forms found on the participle as well as various auxiliaries under full agreement in tables 2 and 3. Because the two exponents differ in nasality, however, such an analysis is doubtful. Nasality is fully phonemic in Kutchi and nasalized and non-nasalized vowels are not in free variation. This account would hence require a phonological rule that maps one form to the other. In light of the fact that there exist minimal pairs (e.g., *ve* vs. *vẽ* in tables 4c and 3c, respectively) it is altogether unclear what the conditioning environment for such a rule would be.

[17] The φ-features of the object are irrelevant and are included in (18) for expository purposes only.

We presuppose here the concepts of UNDERSPECIFICATION of and COMPETITION between vocabulary items, as is standard in Distributed Morphology (Halle & Marantz 1993, 1994; Harley & Noyer 2003; Embick & Noyer 2007). According to underspecification, vocabulary items may be less specified than the syntactic input configuration fed into the spellout component. All that is required is that a vocabulary item's specification is a subset of the syntactically provided feature set. Given underspecification, more than one vocabulary item may form a subset of the feature structure provided by the syntax. In this case, the most specific marker whose specification forms a subset of the one of the syntactic head targeted by insertion is chosen.[18]

Given these background assumptions, T in (18) is realized by the elsewhere marker *-e* because T does not carry a gender specification and hence neither *-o* nor *-i:* are applicable. This contrasts with φ-complete agreement in intransitive clauses and the non-perfective. Here both *v* and T agree with the subject and the post-syntactically formed *v*–T complex carries a gender specification as a result. In the presence of a gender feature, however, *-e* is never licensed because either *-a* or *-i:* will be more specific. It follows that the use of *-e* is only ever licensed in configurations with defective agreement, as desired.

Before closing this section, we would like to point out that this analysis makes clear predictions regarding the general shape of the agreement paradigms. Crucially, the use of the special *-e* form follows from the fact that the exponents employed in φ-complete agreement all carry a gender specification. Because of the Subset Principle, this entails that each of these markers is limited to a particular gender. This in turn implies that there can be no gender-syncretism in φ-complete agreement if a special form appears in φ-defective agreement. This prediction is stated in (20).

---

[18]The definitions in (i) and (ii) state these restrictions in a more precise way:

(i)       SUBSET PRINCIPLE
         A vocabulary item *V* is inserted into a functional morpheme *M* iff (i) and (ii) hold:

         (i) The morpho-syntactic features of *V* are a subset of the morpho-syntactic features of *M*.
         (ii) *V* is the most specific vocabulary item that satisfies (i).

(ii)     SPECIFICITY (Halle 1997)
         A vocabulary item $V_1$ is more specific than a vocabulary item $V_2$ iff $V_1$ contains more morpho-syntactic features than $V_2$.

(20)   PREDICTION

Elements that do not morphologically distinguish gender in full agreement contexts
should not retreat to a special marker.

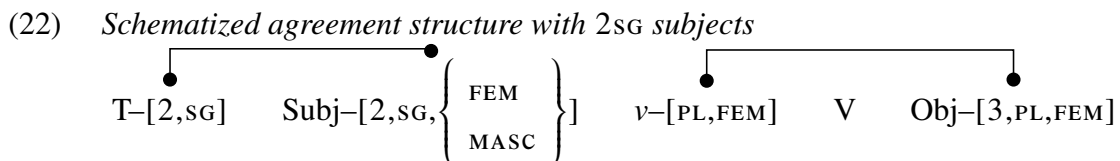This prediction is indeed borne out. The relevant generalizations are given in (21).

(21)   a.   In all the cases above, the *-e* form does indeed appear on items that show a gender
contrast in φ-complete agreement.

b.   Conversely, element that do not differentiate between genders in object agreement
also do not have 'special' forms (the present auxiliary *a:y* and *ayi*).

We take the fact that the analysis proposed here furnishes a straightforward account of the general-
izations in (21) as support for it.

Summarizing the account developed so far, we are in a position now to handle a number of
generalizations regarding the nature and distribution of defective agreement. It derives that the
emergence of defective agreement coincides with the distribution of ergative case in languages
with split ergativity. This is achieved by utilizing Coon (2010, 2013a)'s view that non-perfectives
are generally structurally more complex than perfectives. It also captures the facts that in these
configurations subject agreement lacks gender but is φ-complete in all other cases. Finally, the
system straightforwardly extends to the distribution of special agreement. There are, however, a
number of generalizations that are yet outside the scope of the present system. In addition to lacking
gender agreement, for instance, defective agreement also lacks person in the singular. Furthermore,
we have yet to understand why the presence of a 1st person subject leads to object agreement. In the
next sections, we propose an analysis of these complications in terms of feature geometries and
morphological filters.

**4.4** *Feature Geometry and Morphological Impoverishment*

The first configuration to be discussed contains a 2nd person singular subject. In line with the analysis above, we obtain the following configuration after φ-agreement has been estalished:

(22) *Schematized agreement structure with* 2SG *subjects*

$$\text{T--[2,SG]} \qquad \text{Subj--[2,SG,}\left\{ \begin{array}{c} \text{FEM} \\ \text{MASC} \end{array} \right\}] \qquad v\text{--[PL,FEM]} \qquad \text{V} \qquad \text{Obj--[3,PL,FEM]}$$

The T probe acquires the person and number features of the subject. It does not access the gender features of the subject. How are these [2,SG] features realized? To see what our analysis so far predicts, we have to consider the forms used in the full agreement paradigm in table 3. Of particular interest is the present auxiliary (table 3b). Here 2SG is realized by a designated form: *aiyẽ*. Crucially, this form is used for both masculine and feminine. Given the Subset Principle, this entails that *aiyẽ* is not specified for gender:

(23)   /aiyẽ/ ↔ [2.SG]

The specification in (23) matches the featural content of T in (22) perfectly. We hence expect a present auxiliary to surface as *aiyẽ* in defective agreement if the subject is 2SG. This is not the case, however. What we find instead is that the form *a:y* is employed (cf. table 4b and the example in (6c)). This is the same marker used in 3SG forms in both defective and non-defective agreement. The emergence of this marker is thus unexpected. What is at stake here is a generalization noted above: Person is never distinguished in the singular of defective agreement.[19] The particular example above makes it clear that the account in its present form does not yet capture this generalization.

Within Distributed Morphology, it is common to attribute the general absence of a morphological distinction to IMPOVERISHMENT (Bonet 1991; Noyer 1992, 1997; Halle & Marantz 1993, 1994;

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[19]Notice that we cannot attribute the lack of person distinction to defectiveness of probes similarly to our account of gender. The reason is that person *is* realized in the plural. It can hence not be the case that T simply lacks person in the same way that it lacks gender.

Bobaljik 2002; Frampton 2002). Impoverishment deletes certain syntactically present feature distinctions post-syntactically, prior to vocabulary insertion. Because the features are deleted, they cannot be realized morphologically, regardless of what the actual specification of the vocabulary items is.

The agreement pattern we are faced with presently – absence of person distinction in the singular – is precisely what impoverishment has been introduced to capture. An impoverishment that suggests itself is given in (24).

(24)    IMPOVERISHMENT

[Person] is deleted iff

a.  it is in the presence of a [singular] feature, and

b.  [gender] is missing.

The rule in (24) has the effect that person is retained in full agreement contexts, regardless of the number specification. This is because impoverishment only applies if gender is absent, i.e., if T and *v* are not fused. A second consequence of (24) is that person is never deleted on pronouns, again because pronouns carry a gender specification, which bleeds the application of (24). As a result, person is only deleted under defective agreement in the singular.

Adopting (24) solves the problem noted above. A [2,SG] input will be impoverished to [SG], bleeding the exponent *aiyẽ* in (23). Consequently, only the marker *a:y*, which is underspecified for person, can be inserted. This derives the otherwise surprising fact that 2SG configurations are realized by *a:y*.

(25)    /a:y/ $\leftrightarrow$ [SG]

(26)    T–[2,SG] $\xrightarrow{(24)}$ T–[SG] $\xRightarrow{\textit{realized by}}$ /a:y/
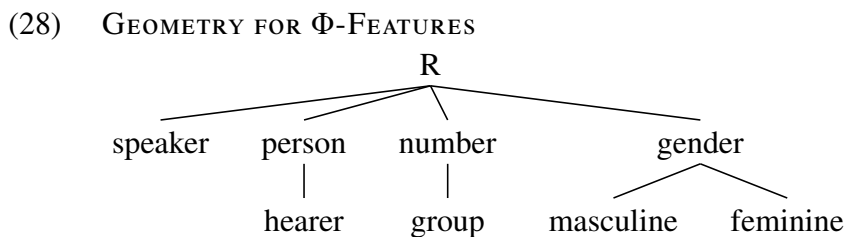
It is worth pointing out that the impoverishment rule in (24) has a rather peculiar property: It refers to the absence of a feature. It is commonly assumed that impoverishment rules cannot be negatively specified. The nature of (24) becomes clearer once we adopt the view of morphological operations put forth and Arregi & Nevins (2012) (also see Keine & Müller 2011 and Keine 2010 for a related proposal). According to this view, morphological operations are repairs to morphological well-formedness constraints. Consider the specific morphotactic constraint in (27).

(27)    MORPHOTACTIC CONSTRAINT ON PERSON FEATURES                    (*to be revised*)
        [Person] requires the presence of a [plural] feature or a [gender] feature.

Whenever (27) is violated, [person] is deleted as a response. This has the same effect as the rule in (24) but avoids a negative specification.

While we have now overcome a negatively specified rule environment, the constraint in (27) is disjunctively specified. Gender and plural appear to behave as a natural class when it comes to person. Again, the question arises as to why that should be the case.

Much recent work in syntax and morphology has argued that features are not simply contained in unstructured sets but, instead, organized in hiearchical structures (see, among many other, Harley 1994; Harley & Ritter 2002a,b). We suggest that it is the placement of [plural] and [gender] within the hierarchy that renders them a natural class. Consider the feature geometry in (28).

(28)    GEOMETRY FOR Φ-FEATURES

```
                                R
          ┌──────────┬──────────┼─────────────┐
       speaker     person     number        gender
                     │           │          ┌──────┴──────┐
                   hearer      group     masculine     feminine
```

Before we discuss the consequences of (28), some remarks regarding its interpretation are in order. Following Harley & Ritter (2002a), we will take daughters to be specificational with respect to their mother and sisters to be additive. 3rd person, for instance, is represented by a [person] feature. 2nd

person is represented by a further specification of [person], i.e., by attaching [hearer] to [person]. 1st person, finally, involves the presence of a [speaker] node. As will become relevant later, a combination of, e.g., [speaker] and [person] entails addition: It denotes a group containing both the speaker as well as some 3rd person.

(28) differs from Harley & Ritter (2002a)'s in that [speaker] is not a daughter of [person] but its sister. This change is justified by Hanson (2000)'s observation that the first pronoun to be acquired by children is either 1st or 3rd person, never 2nd. This follows straightforwardly because both 1st as well as 3rd person are primitive in their representation. 2nd person, by contrast, requires the prior postulation of a [person] node as its mother. This node would be interpreted as 3rd person, however. It follows, then, that a 2nd person pronoun can never be acquired first. Note that this constraint does not straightforwardly follow under Harley & Ritter (2002a)'s geometry. In addition, there is some morphological evidence that 2nd and 3rd person may pattern as a natural class under exclusion of 1st person.[20]

A second difference between (28) and Harley & Ritter (2002a) is that there is no default gender for inanimates. This change is justified because Kutchi simply does not have a designated gender for inanimates. We thus contend that the language-specific instantiation of the geometry in Kutchi therefore simply lacks the specification for this gender.

A third noteworthy property of (28) is that gender is projected separately from number. We will argue in the next section that there are pronouns in Kutchi that contain a gender specification but lack number. The presence of gender can hence not be conditional on the presence of number, leading us to conclude that they are projected separately.[21]

With these background assumptions in place, we are now in a position to re-assess the morphotactic filter in (27). We were faced with the question as why [gender] and [plural] behave as a natural class for person. The feature geometry in (28) offers an answer. A [plural] specification as

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[20]To give just one example, in various semitic languages gender marking is limited to 2nd and 3rd person pronouns but does not extend to 1st person pronouns (Noyer 1992).

[21]Harley & Ritter (2002a)'s rationale for making gender dependent on number is crosslinguistic: If a language lacks number, it also lacks gender. This implication is nearly trivial, however. In their sample, there is only a single language that is claimed to lack number to begin with (Pirahã). In light of this lack of typological support for this generalization, virtually nothing is lost by severing number and gender.

well as one for either gender involve non-terminal sisters to [person]. In other words, they form a natural class in terms of their structural complexity in the hierarchy in (28). The reformulation of (27) that we will adopt henceforth is stated in (29).

(29)  MORPHOTACTIC CONSTRAINT ON PERSON FEATURES                    (*final version*)

Person nodes (i.e., [person] and [speaker]) require a non-terminal sister.

(29) is a constraint on the shape of the geometry that represents a given feature bundle. According to (29), a feature bundle containing person must also contain either a non-terminal specification for number (i.e., [number]—[group], interpreted as plural), or a non-terminal specification for gender (i.e., [gender]—[masc]/[fem], interpreted as either masculine or feminine). This has the same effect as (27) above but does so without invoking a disjunctive statement. As was the case for (24), (29) will never be violated by pronouns or proper names, which we take to always be φ-complete. As a result, person impoverishment will only apply to verb agreement.

While the conceptual underpinning of (29) differs considerably from the impoverishment rule in (24), its effects are the same, given the repair analysis of impoverishment in Arregi & Nevins (2012). Any person specification is deleted if it is not accompanied by either a plural or a gender specification. As before, this derives the observation that person is absent in defective singular agreement.

### 4.5  *The Special Role of 1st Person*

This section approaches the remaining generalizations, pertaining to the surprising emergence of object agreement if the subject is 1st person. The account given there will build on the impoverishment analysis developed for person defectivity and the feature geometry in (28). As laid out in sections 2.2.2 and 2.2.3, subject agreement is impossible if the verb is transitive and perfective and the subject is 1SG. Instead, it is the object that controls number and gender agreement. With 1PL

subjects, subject agreement freely alternates with object agreement. We will discuss both cases in turn.

### 4.5.1 Object Agreement with 1st Singular Subjects

Adopting the analysis developed to this point, consider the case of a 1SG subject in a perfective transitive configurations, like the example in (30) (see (7) above for more examples).
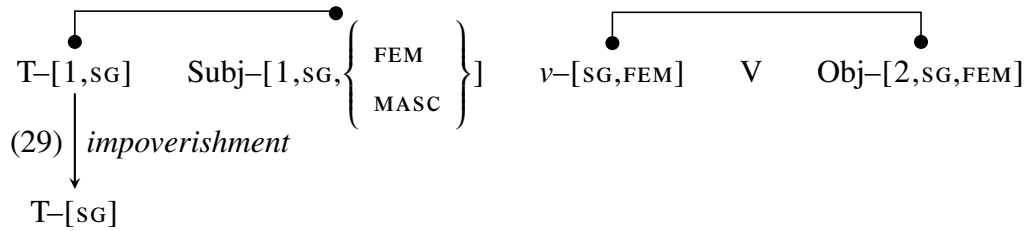
(30)  *a:ũ to-ke    nɛr-ai      vi:*

I    you-ACC see-PFV.F.SG be.PST.F.SG

'I have/had seen you (fem).'

The verb agrees with the object in number and gender. Suppose, first, that 1SG pronouns were entirely regular in having the specification in (31).

(31)  *Hypothetical specification for* 1SG *subjects*                    (*to be revised*)

```
                    R
           _____/|_____
          /         |         \
      speaker    number      gender
                             /      \
                        masculine  feminine
```

If (31) were correct, we would expect singular agreement with the subject, just like in the case of 2SG subjects. Syntactically, T would agree for person and number with the subject, followed by impoverishment triggered by (29). This leads to a bare singular feature on T, which should be morphologically realized.

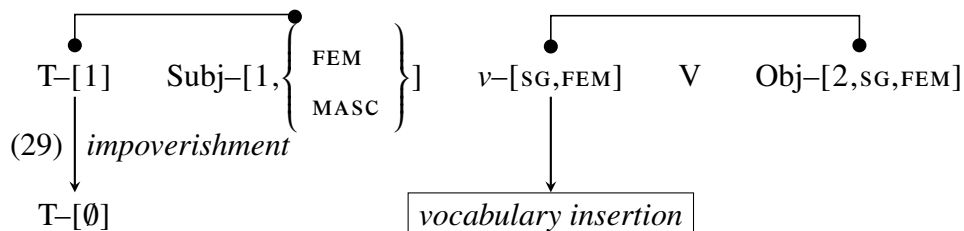(32)  *Agreement with* 1SG *subjects under (31)*                              (*to be revised*)

T–[1,SG]    Subj–[1,SG,$\left\{\begin{array}{c}\text{FEM}\\\text{MASC}\end{array}\right\}$]    $v$–[SG,FEM]    V    Obj–[2,SG,FEM]

(29) | *impoverishment*

T–[SG]

The specification in (31) yields the wrong result. The intuition we would like to pursue is that T ends up without any φ-features whatsoever, hence leading to the realization of *v* as the highest verbal head comprising φ-features. Suppose, then, that 1st singular is special in Kutchi in that it lacks a number specification.[22] That is, 1SG is represented by the feature geometry in (33).

(33)  *Specification of* 1SG *pronouns in Kutchi*

R

speaker        gender

masculine/feminine
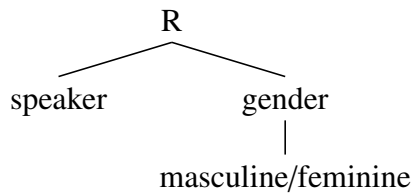
A bare [person] node, obligatorily combined with a gender, is interpreted as the singularity containing the speaker, hence 1st singular. It follows then, that T can only agree with the subject for person.[23] After impoverishment of person T will be devoid of any valued φ-features. T thus being rendered irrelevant for vocabulary insertion, it is *v* that is realized instead.

(34)  *Agreement with* 1SG *subjects*                              (*final version*)

T–[1]    Subj–[1,$\left\{\begin{array}{c}\text{FEM}\\\text{MASC}\end{array}\right\}$]    $v$–[SG,FEM]    V    Obj–[2,SG,FEM]

(29) | *impoverishment*

T–[∅]        | *vocabulary insertion* |

---

[22]We are indebted to an anonymous reviewer for pointing out this analytical possibility to us.

[23]This implies that the failure of T to agree for person does not crash the derivation, as independently argued for by Preminger (2011).

As a result, the verbal agreement that is morphologically realized is for number and gender and with the object. This is precisely what we find empirically. That object agreement lacks person is hence analyzed in a way parallel to the lack of gender agreement with subjects. The relevant probe lacks the featural content required for such agreement.

In sum, then, person impoverishment has different overall effects depending on whether the subject is 1st or 2nd person. If it is 1st person, person impoverishment deletes the only feature that T agrees with, leading to object agreement. If, on the other hand, the subject is 2nd person, impoverishment likewise deletes the person feature on T but does not render T inert for vocabulary insertion because a number feature remains.

### 4.5.2    Optional Object Agreement with 1st Plural Subjects

This section addresses a final pecularity in the Kutchi agreement system. If a subject in a transitive perfective configuration is 1PL, subject agreement (for person and number) is optional. It alternates with object agreement (for number and gender). This special behavior of 1PL subjects can be understood in terms of their featural makeup. A consequence of the feature geometry in (28) is that semantic plurality can arise in the absence of a morpho-syntactic number specification, by means of a combination of person features alone. For general reasons, this is possible only for 1st person, however. 1st person plural is hence special in that it may or may not bear a number feature. If it does, we obtain subject agreement. If it does not, object agreement results.

In their work on the typology of pronouns Harley & Ritter (2002a,b) observe that there are languages which lack number on pronouns except for the 1st person.[24] They propose that this apparent emergence of number in 1st person is not an actual morpho-syntactic number specification but, instead, arises from a combination of person features. A pronoun containing a [speaker] as well as an [hearer] node cannot be semantically singular. It is hence interpreted as a plurality even though it lacks a designated [plural] feature. This behavior is crosslinguistically limited to 1st person pronouns.

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[24]Examples they note are Maxakalí (Macro-Gê; Brazil) and Kwakiutl (Wakashan; British Columbia).

Suppose that, just as in the languages discussed by Harley & Ritter (2002a,b), Kutchi allows the combination of person features that give rise to semantic plurality and, in addition, optionally allows for the specification of plural number on such pronouns. The four possible feature geometries for 1st person plural pronouns are given in (35).

(35)   POSSIBLE GEOMETRIES FOR 1PL PRONOUNS

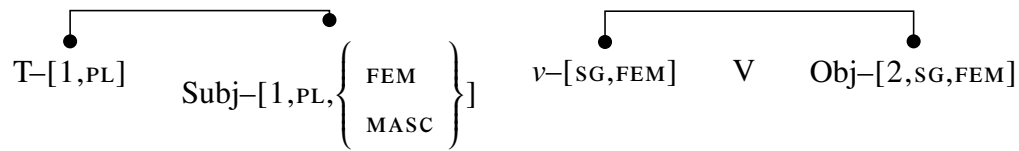a.   *[Speaker] plus 3rd person*
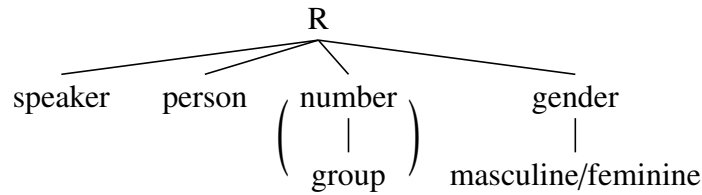


b.   *[Speaker] plus [hearer]*
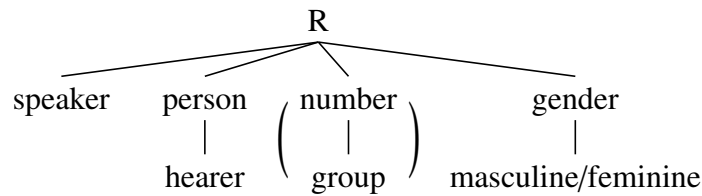


In (35a) a [speaker] node is combined with a [person] node, which, as discussed above, denotes a 3rd person individual. The pronoun will hence refer to a group containing (at least) the speaker and a 3rd person. It will, in other words, refer to a plurality. In (35b), on the other hand, [speaker] is accompanied by [hearer]. The denotation of the pronoun hence contains the speaker and the hearer, again a plurality. In both cases, an additional [plural] specification is possible but not necessary. Given that the constellation of person features alone denotes a plurality, the addition of a [plural] feature is possible but redundant.

(35a) and (35b) correspond to 1st person exclusive and inclusive, respectively. Their coexistence is justified by the fact that Kutchi indeed uses distinct pronouns in these two cases (recall table

1).[25],[26] The optional presence of a number specification is what yields the optional object agreement with these pronouns.

Consider first a case in which the subject pronoun contains a number specification. As in the the cases above, T agrees with the subject for number and person, while $v$ agrees with the object for number and gender. For the sake of concreteness, consider a configuration with a 1PL subject and a 2SG object (see (8a-ii)).

(36)  *Agreement with 1PL subjects containing a [plural] feature*

$$\text{T--}[1,\text{PL}] \quad \text{Subj--}[1,\text{PL}, \left\{ \begin{array}{c} \text{FEM} \\ \text{MASC} \end{array} \right\} ] \quad v\text{--}[\text{SG},\text{FEM}] \quad \text{V} \quad \text{Obj--}[2,\text{SG},\text{FEM}]$$

Because T in (36) contains a person and a plural specification, the morphotactic filter in (29) is satisfied. Person impoverishment hence does not take place. Vocabulary insertion targets T as the highest verbal head containing $\varphi$-features. (36) hence correctly derives subject agreement for person and number with 1PL subjects.
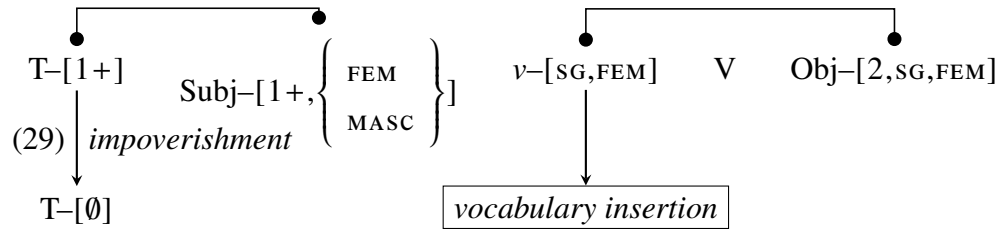
Next, consider a minimally different configuration in which the subject pronoun only comprises a combination of person features and gender, lacking number. In this case, T can only agree for person with the subject. Consequently, the constraint in (29) is violated and person impoverishment takes place. As in the case of 1SG subjects, T is devoid of $\varphi$-features after impoverishment. Vocabulary insertion hence targets $v$ instead. As an example sentence, see (8b-ii).[27]

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[25]Under the current analysis, the inclusive/exclusive distinction is orthogonal to the choice between subject and object agreement. This is correct as (8) attests.

[26]While 1PL inclusive and exclusive are distinguished in the pronouns, they never are in verbal agreement. This is, of course, another instance of a systemwide neutralization of a featural contrast in the domain of verbal agreement, just like person agreement in the singular. This can be straightforwardly modelled as impoverishment of the [hearer] feature in the context of a [speaker] feature on T. We will abstract away from this complication for the sake of exposition but it should be noted that the account is fully compatible with it.

[27]We use the notation [1+] to refer to a combination of a [speaker] feature with some other person feature (either [person] or [hearer]). Nothing hinges on this notational shorthand.

(37)  *Agreement with 1sg subjects lacking a [plural] feature*

$$
\begin{array}{c}
\text{T–[1+]} \qquad\qquad\qquad\qquad\qquad\qquad\qquad v\text{–[SG,FEM]} \qquad \text{V} \qquad \text{Obj–[2,SG,FEM]}\\[2pt]
\text{Subj–[1+,}\left\{\begin{array}{c}\text{FEM}\\ \text{MASC}\end{array}\right\}\text{]}\\[6pt]
(29)\ \Big|\ \textit{impoverishment}\\[8pt]
\text{T–[∅]} \qquad\qquad\qquad\qquad\qquad\qquad \boxed{\textit{vocabulary insertion}}
\end{array}
$$

Verbal agreement in (37) will hence mark the number and gender of the objects, as desired.

In sum, we have suggested that the optionality of agreement with 1PL is due to an optionality in the featural specification of these subjects.[28] Semantic plurality may arise in the absence of a designated [plural] feature, by a mere combination of person features. Given the feature geometry in (28) such combination will, however, always include the speaker and hence be 1st person plural. In other words, 2nd and 3rd person plural pronouns can never arise by a mere combination of person features. As a result, agreement with these subjects is obligatory.[29]

### 4.6  *Section Summary*

The analysis developed in the preceding sections is complex and employs a diverse set of theoretical devices. This is partly due to the complexity of the empirical pattern and moreover motivated by the desire to relate the Kutchi facts to more familiar patterns and theoretical proposals. The analysis consists of the following core pieces:

- split ergativity is due to a structural asymmetry between the perfective and the non-perfective aspect. The latter is more complex as it contains a locality boundary absent in the former. This boundary affects case assignment (albeit not visibly in Kutchi) and constitutes a barrier for φ-probes.

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[28]This analysis predicts that 1PL pronouns in object position should likewise be only optionally specified for number. While intriguing, this prediction cannot be directly tested. Whenever the subject is anything other than 1st person, it controls agreement. If it is 1st person, an anaphor has to be used to refer to a 1st person object. It is hence impossible to have agreement with a 1st person object.

[29]As noted in section 2.2.3 above, the choice between subject and object agreement correlates with emphasis. Subject agreement puts emphasis on the subject, while object agreement emphasizes the object. Under the account offered here, subject agreement arises only if the subject bears a number specification, which is semantically redundant. It seems reasonable to assume that using a pronoun with more features than are strictly necessary will induce an emphasis implicature for general pragmatic reasons.

- There are two φ-probes in the verbal spine: T contains a person and number probe and *v* a number and gender probe. If a locality boundary is present, both probes agree with the subject. If a boundary is present and the verb is transitive, T agrees with the subject and *v* with the object.

- If both probes agree with the same element, φ-complete verb agreement results. If they agree with distinct elements, the highest probe is spelled out, yielding defective agreement. In most cases it is T that is realized.

- A post-syntactic impoverishment rule deletes person in the singular if no gender specification is present. This derives the fact that defective subject agreement in the singular does not only lack gender but also person.

- 1st person singular subjects are special in that they lack a number feature. As a result, the person impoverishment rule deletes all the φ-features on T, leading to the spellout of *v* and hence object agreement. Finally, 1st person plurals can optionally lack a number feature as its plurality can be conveyed by a mere combination of person (sub)features. This has the consequence that object agreement is optional with these subjects.

## 5   Extensions

The preceding sections have developed in some detail our analysis of the Kutchi agreement system. In this section we will address some general consequences of the current account. In particular, we will relate the Kutchi system to asymmetries in the domain of case, the agreement system of the related language Kutchi Gujarati and we will investigate the effects of light verbs on agreement in Kutchi.

### 5.1   *The Link Between Case and Agreement*

A crucial ingredient of the analysis above is the view, due to Laka (2006) and Coon (2010, 2013a), that perfective and non-perfective structures differ in terms of their structural complexity. While this

claim has been primarily motivated for case patterns, we have utilized it to separate constructions with full agreement from those with defective agreement. Because our account of defective agreement is couched in the same terms that previous analyses of split ergativity adopt, we expect a tight empirical link between defective agreement and split ergativity. This link is indeed attested and can be observed in micro-dialectal variation.

The Abhdasa dialect of Kutchi has an agreement system like the one of Kanthi Kutchi described and analyzed above but crucially uses oblique forms of 3rd person subject pronouns if these are the subjects of perfective transitive clauses. In transitive perfective clauses the subjects pronouns are *an* '3sg' and *auni* '3pl'. In intransitive and non-perfective clauses, the regular pronoun *hu* is used (see table 1). An example is provided in (38).[30]

(38)  *an        ghaṇe tṣokriyũ nɛr-e*
      3sg.obl many  girls     see-pfv.sg
      'He saw many girls.'                                                    (Abhdasa Kutchi)

The distribution of oblique subject forms hence precisely coincides with that of defective agreement. The analysis presented here derives this fact without further ado because the structural grounding is the same as the one responsible for split ergativity. The presence of a locality boundary in the non-perfective leads to full agreement as well as absolutive case on the subject, while its absence yields defective agreement and ergative case. Arguably, the only difference between Abhdasa Kutchi and Kanthi Kutchi is that syntactic cases are not morphologically realized in the latter.

### 5.2  *Split-Agreement in Kutchi Gujarati*

Patel-Grosz & Grosz (2014) present and analyze the agreement system of a language related to Kutchi, which they refer to as Kutchi Gujarati. Despite the names, which are mainly due to the geographical overlap between the two languages, there are a number of differences between the two.

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[30]That the special case is restricted to 3rd person subjects is a standard instance of a person split, mirroring, e.g., the pattern in Marathi (Pandharipande 1997) and Punjabi (Butt 2005), discussed in section 1.

The auxiliaries used, for instance, are remarkably distinct. Moreover, the agreement systems are at least superficially quite different. In this section we will briefly illustrate the relevant generalizations in Kutchi Gujarati and show how they can be derived in the system presented here. Our claim is that the underlying syntax is identical and the two languages differ only in their morphological realization. Importantly, Kutchi Gujarati provides direct empirical evidence for the existence of two separate probes: While only one of them is ever spelled out in Kutchi in any given clause, both can be simultaneously realized in Kutchi Gujarati. Finally, our implementation demonstrates that the Kutchi Gujarati facts are fully compatible with an analysis that treats the non-perfective as structurally more complex, in contrast to claims made in Patel-Grosz & Grosz (2013).

Kutchi Gujarati, like Kutchi, does not overtly mark ergative case. Ergativity is overtly manifested only in its agreement system. Just as in Kutchi, the subject controls person, number and gender agreement on the participle and the auxiliary in non-ergative configurations, viz., non-perfectives and intransitive perfectives. In transitive perfective configurations the two system diverge. Here the auxiliary agrees in person and number with the subject while the participle agrees in number and gender with the object. These two cases are illustrated in (39). Parallel effects hold in the related language Marwari (Magier 1983).

(39)   a.  *Future imperfective*                                                       (Kutchi Gujarati)

*hu   chokra-ne jo-th-i        ha-is*

I    boys-ACC  see-IPFV-F.SG AUX-FUT.1SG
'I will see the boys.' (*speaker is female*)
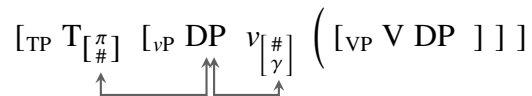
b.  *Future perfective*

*hu   chokra-ne  jo-y-a     ha-is*

I    boys-ACC   see-PFV-PL AUX-FUT.1SG
'I will have seen the boys.'         (Patel-Grosz & Grosz 2014)(9),(10)

Patel-Grosz & Grosz (2014)'s analysis of this pattern is similar to the one developed here in that they assume two verbal φ-probes: T contains a person and a number probe and *v* a number and gender probe. They also adopt an analysis of split ergativity that is based on structural asymmetries. Diverging from Laka (2006), Coon (2010) and our account, however, they treat the perfective as containing more structure than the non-perfective. Abstracting away from some details of their analysis, the additional projection present in the perfective has the result that *v* agrees with the object and T with the subject. The former is then morphologically realized on the participle, the latter on the auxiliary. In the non-perfective, on the other hand, both probes agree with the subject.

The system proposed here can be directly extended to the Kutchi Gujarati facts. We propose that the underlying syntactic structures in Kutchi Gujarati are just as in Kutchi and that the two systems differ only in how these structures are morphologically realized. Because agreement in the non-perfective is identical to Kutchi, our analysis carries over to Kutchi Gujarati without further ado: Both T and *v* agree with the subject, as illustrated in (40), which is identical to (16). The auxiliary spells out the features on T and the φ-content of *v* is realized on the participle.

(40)   *Agreement in the non-perfective*

$$[_{TP} \ T_{\left[\begin{smallmatrix} \pi \\ \# \end{smallmatrix}\right]} \ [_{vP} \ DP \ \ v_{\left[\begin{smallmatrix} \# \\ \gamma \end{smallmatrix}\right]} \ \left( \ [_{VP} \ V \ DP \ ] \ ] \ ]$$

Because of the absence of the agreement boundary in the perfective, T agrees with the subject and *v* with the object, again just as in Kutchi. This is schematized in (41), again identical to its Kutchi counterpart in (15).

(41)   *Agreement in the perfective*

$$[_{TP} \ T_{\left[\begin{smallmatrix} \pi \\ \# \end{smallmatrix}\right]} \ [_{vP} \ DP \ \ v_{\left[\begin{smallmatrix} \# \\ \gamma \end{smallmatrix}\right]} \ [_{VP} \ V \ DP \ ] \ ] \ ]$$
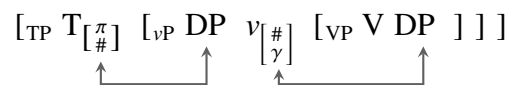
We have suggested above that in Kutchi the structure in (41) is morphologically realized by spelling out the highest verbal head containing φ-features, i.e., T in most and *v* in some cases. Kutchi

Gujarati differs from Kutchi in that both heads are spelled out. The auxiliary realizes T and the participle *v*.

Taking into consideration dialectal variation along these lines corroborates a number of assumptions we have made in the analysis of Kutchi. First, it provides overt evidence for the simultaneous presence of two distinct φ-probes. This point was not directly visible in Kutchi as only one of them ever received an overt realization in the case of a mismatch. Second, Kutchi Gujarati shares with Kutchi the property that the auxiliary lacks gender agreement throughout. It differs from Kutchi in that person agreement is not restricted to plural contexts. This contrast supports distinct analytical treatments of the two. While we have taken the absence of person in the singular in Kutchi to be the result of an impoverishment rule, gender deficiency was treated as an underspecification of the relevant T probe. That the latter, but not the former, seems dialectally stable corroborates this theoretical distinction.

Apart from motivating choices in the analysis of Kutchi, the analysis of Kutchi Gujarati along these lines also demonstrates that a 'heavy' non-perfective account – i.e., one that treats the non-perfective as containing more structure than the perfective – is fully compatible with the Kutchi Gujarati facts. We hence reject Patel-Grosz & Grosz (2013)'s claim that Kutchi Gujarati provides a counter-argument against a Laka/Coon-style treatment of split ergativity. Note furthermore that it is not altogether clear how the distribution of ergative case can be implemented in a heavy perfective analysis. Because a Marantzian treatment is unavailable to these accounts, they must relate ergative case assignment to the Perf head (and the valency of the predicate). But this means that these accounts have to appeal to both structural asymmetries and the Perf head itself, an analytical complication not shared by the heavy non-perfective analysis. Moreover, a heavy perfective analysis hence has to treat case and agreement instantiations of split ergativity as unrelated. For these reasons, a heavy non-perfective analysis is conceptually superior.

An empirical puzzle for both accounts comes from Marwari. Here the agreement pattern in the present and future perfect is as described above. In the past perfect, by contrast, both the auxiliary and the main verb agree with the object (Magier 1983: 319–321). At present we do not know how

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this surprising patterns is best implemented in the system devised here. For the present discussion it suffices to note that the problem is virtually identical for both Patel-Grosz & Grosz (2014)'s and our analysis and hence does not provide an argument for or against either one.

### 5.3 *The Impact of Light Verbs*

A second striking correlation between the distribution of defective agreement and that of ergative case can be found in the domain of light verbs. As in many other Indo-Aryan languages, main verbs in Hindi-Urdu can combine with light verbs like *ja:* 'go' to express subtle distinction pertaining to aktionsart and telicity (Hook 1978). For our purposes it is worth noting that these light verbs affect the case assigned to the subject. If the light verb is an unaccusative verb like *ja:* 'go', the subject cannot bear ergative case even in the perfective. (42a) gives an example from Hindi-Urdu. In the absence of a light verb, ergative case marking is obligatory, as (42b) attests.

(42) a. *tum(\*=ne)  pu:ra:   kek     kha: gaye*
    you(\*=ERG) full.M.SG cake.M.SG eat   go.PFV.M.PL
    'You ate the entire cake.'

  b. *tum\*(=ne)  pu:ra:   kek     kha:-ya:*
    you\*(=ERG) full.M.SG cake.M.SG eat-PFV.M.PL
    'You ate the entire cake.'                                                  (Hindi-Urdu)

The distribution of agreement in Kutchi perfectly matches this case pattern. If a transitive perfective verb is combined with *van* 'go', we find full agreement with the subject. Moreover there is no person-based split.

(43) a. *a:ũ tṣopdiyũ vã:tṣ-e  vaiyã:      / vyo*
    I    books     read-CP go.PFV.1F.SG / go.PFV.1M.SG
    'I read the books.'

b. *tũ     tṣopdiyũ vã:tṣ-e  vaiyẽ        / vẽ*

you.SG books     read-CP go.PFV.2F.SG / go.PFV.2M.SG

'You read the books.'

c. *hu  tṣopdiyũ vã:tṣ-e  vai           / vyo*

s/he books     read-CP go.PFV.3F.SG / go.PFV.3M.SG

'S/he read the books.'

In the absence of the unaccusative light verb, we get the pattern discussed in section 2 – with 1SG

subjects we get object agreement and with 2/3 subjects we get defective agreement. In other words,

just as in Hindi-Urdu, the presence of an unaccusative light verb blocks the manifestation of the

ergativity.

This correlation provides another reason to treat defective agreement in Kutchi and split ergativity

in other, related and unrelated, languages on a par.[31]


# 6  Conclusion

In this paper we have presented novel evidence from the Indo-Aryan language Kutchi that exhibits a

previously undocumented type of split ergativity. While subjects of intransitive clauses trigger verb

agreement for person, number and gender, agreement in perfective transitive clauses is defective

in lacking one or more of these features. Subjects of non-perfective clauses, on the other hand,

control full agreement. This distribution of complete versus defective agreement correlates with the

distribution of ergative case in languages with an aspect split. This conclusion is bolstered by the

observation that in related dialects with ergative case, the appearance of this case clearly coincides

with defective agreement. Moreover, certain light verbs that obviate ergative case in languages like

Hindi-Urdu have a parallel effect on agreement in Kutchi. Our most general conclusion, then, is that

defective agreement is a previously unnoted manifestation of the broader pattern of split ergativity.

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[31]Mahajan (2012) provides an analysis of the Hindi-Urdu facts in (42a). We believe that his analysis can be combined
with our proposal to handle the Kutchi facts but in the interest of space, we will not develop this line further here.

In analyzing these restrictions, we have first argued that φ-defectiveness is syntactic rather than morphological. Because the same lexical items are used to realize defective and complete agreement, we can infer that these items are morphologically capable of expressing the relevant feature distinctions. Nonetheless, they fail to do so in cases of defective agreement. This entails that it must be the syntactic agreement that is defective rather than the morphological realization of such agreement.

To capture the distribution of defective agreement, we adopt a recent proposal originating with Laka (2006) and extended by Coon (2010, 2013a), according to which the perfective and non-perfective differ in their structural complexity. In the non-perfective the object is separated from the subject by a locality boundary that contrains case assignment and agreement. We have argued that the emergence of defective agreement is due to the interactions of syntactic agreement probes with this boundary. The second goal of this paper, then, was to demonstrate that a structural account of split ergativity accomodates defective agreement.

While the general distribution of defective agreement can be thus modelled, the particular agreement forms used require a more elaborate system. First, we find an instance of conditional neutralization. Person is neutralized in the singular if agreement lacks gender. To capture more fine-grained generalizations of this type, we invokes impoverishment rules, which we treat as a repairs to morphotactic well-formedness constraints, following the lead of Arregi & Nevins (2012). A more perplexing complication is that verb agreement is controlled by the object in perfective transitive clauses if the subject is 1st person. This is obligatory in the singular and optional in the plural. Our account of this agreement shift relies on particular (possibly language-specific) specifications of these subject pronouns, in combination with morphological impoverishment. The gist of the analysis is that in these configurations, there are no valued features on the T head so that the a lower agreement head, $v$, is spelled out as a consequence.

It is worth considering the Kutchi system in the context of an important generalization concerning person splits in ergativity. It is well-known that ergative marking is often dependent on the

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specification of the subject. These tendencies are commonly cast into the form of a scale like the one in (44) (Hale 1972; Silverstein 1976; Dixon 1994).

(44)    PERSON HIERARCHY

1 > 2 > 3

The scale-based view asserts that higher-ranked elements in (44) are less likely to receive ergative case marking than lower-ranked ones. In Marathi and Punjabi, for instance, only 3rd person subjects are ever marked with ergative case (Pandharipande 1997; Butt 2005). Similarly in Halkomelem Salish, clauses with 3rd person subjects display an ergative agreement pattern while clauses with 1st/2nd person subjects display an accusative agreement pattern.

Against this background, the Kutchi pattern is quite surprising. After all, it is 1st person subjects that display object agreement while other subjects display subject agreement. This would make Kutchi an exception to the aforementioned generalization on person splits along the line of Aranda (Arandic; Australia) where only 1st person singular subjects receive ergative marking (Wilkins 1989). However, the Kutchi case is actually more nuanced. While 1st person subjects behave differently from 2nd/3rd person subjects, it is not the case that 2nd/3rd person subjects pattern show an accusative pattern of agreement. As we have discussed at length in this paper, agreement with such subjects is defective. So unlike the marked (=ergative)/unmarked (=accusative) opposition found in most cases of person splits, we have a person split where both parts of the split are marked, but in different ways. It is not obvious that the object agreement pattern found with 1st person subjects is more marked than the defective agreement found with 2nd/3rd person subjects. Despite initial appearances, then, the Kutchi data is silent about the descriptive adequacy of such hierarchies.

The more recent theoretical literature has come to contest whether scales like (44) should be taken as formal primitives. Much theoretical literature has argued that such scales are an epiphenomenon, the result of differences in the featural endowment of lexical items and their interactions with principles of the syntactic computations (Brown et al. 2004; Richards 2004, 2008; Adger & Harbour

2007; Wiltschko 2008; Heck & Richards 2010; Coon & Preminger 2012).[32] This is the line pursued here. The special behavior of 1st person subjects is a result of their featural specifications rather than a relational scale.

## Abbreviations

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| ACC | accusative | F | feminine | OBL | oblique | SG | singular |
| CONT | continuous | FUT | future | PFV | perfective | | |
| CP | conjunctive participle | M | masculine | PL | plural | | |
| ERG | ergative | INCL | inclusive | PRES | present | | |
| EXCL | exclusive | IPFV | imperfective | PST | past | | |

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## References

Adger, David & Daniel Harbour. 2007. Syntax and syncretisms of the Person Case Constraint. *Syntax* 10. 2–37.

Aissen, Judith. 1999. Markedness and subject choice in Optimality Theory. *Natural Language and Linguistic Theory* 17. 673–711.

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[32]A notable exception is Aissen (1999, 2003).

Aissen, Judith. 2003. Differential object marking: Iconicity vs. economy. *Natural Language and Linguistic Theory* 21. 435–483.

Anagnostopoulou, Elena. 2003. *The syntax of ditransitives: Evidence from clitics*. Berlin: Mouton de Gruyter.

Anagnostopoulou, Elena. 2005. Strong and weak person restrictions: A feature checking analysis. In Lorie Heggie & Francisco Ordóñez (eds.), *Clitic and affix combinations: Theoretical perspectives*, 199–235. Amsterdam: John Benjamins.

Arregi, Karlos & Andrew Nevins. 2012. *Morphotactics: Basque auxiliaries and the structure of spellout*. Dordrecht: Springer.

Béjar, Susana. 2003. *Phi-syntax: A theory of agreement*: University of Toronto dissertation.

Béjar, Susana & Milan Rezac. 2009. Cyclic agree. *Linguistic Inquiry* 40. 35–73.

Bobaljik, Jonathan. 1993. Ergativity and ergative unergatives. In Colin Phillips (ed.), *Papers on case and agreement ii*, vol. 19 MIT Working Papers in Linguistics, 45–88. MIT: Cambridge, MA: MITWPL.

Bobaljik, Jonathan. 2002. Syncretism without paradigms: Remarks on Williams 1981, 1994. In Geert Booij & Jaap van Marle (eds.), *Yearbook of morphology 2001*, 53–85. Dordrecht: Kluwer.

Bonet, Eulàlia. 1991. *Morphology after syntax*. Cambridge, MA: MIT dissertation.

Bossong, Georg. 1985. *Differenzielle Objektmarkierung in den neuiranischen Sprachen*. Tübingen: Narr.

Brown, Jason, Karsten Koch & Martina Wiltschko. 2004. The person hierarchy: Primitive or epiphenomenal? Evidence from Halkomelem Salish. In Keir Moulton & Matthew Wolf (eds.), *Proceedings of the 34th meeting of the North East Linguistic Society (NELS 34)*, 147–162. Amherst, MA: GLSA.

Butt, Miriam. 2005. *Theories of case*. Cambridge: Cambridge University Press.

Carstens, Vicki. 2013. Delayed valuation: A reanalysis of "upward" complementizer agreement and the mechanics of Case. Ms., University of Missouri, to appear in *Syntax*.

Chomsky, Noam. 2000. Minimalist inquiries: The framework. In Roger Martin, David Michaels & Juan Uriagereka (eds.), *Step by step: Essays in syntax in honor of Howard Lasnik*, 89–155. Cambridge, MA: MIT Press.

Chomsky, Noam. 2001. Derivation by phase. In Michael Kenstowicz (ed.), *Ken Hale: A life in language*, 1–52. Cambridge, MA: MIT Press.

Comrie, Bernard. 1979. Definite and animate direct objects: A natural class. *Linguistica silesiana* 3. 13–21.

Comrie, Bernard. 1984. Reflections on verb agreement in Hindi and related languages. *Linguistics* 22. 857–864.

Coon, Jessica. 2010. *Complementation in Chol (Mayan): A theory of split ergativity*. Cambridge, MA: MIT dissertation.

Coon, Jessica. 2012. Split ergativity and transitivity in Chol. *Lingua* 122. 241–256.

Coon, Jessica. 2013a. *Aspects of split ergativity*. Oxford: Oxford University Press.

Coon, Jessica. 2013b. TAM split ergativity: Part 1. *Language and Linguistics Compass* 7. 171–190.

Coon, Jessica & Omer Preminger. 2012. Towards a unified account of person splits. In Jaehoon Choi, E. Alan Hogue, Jeffrey Punske, Deniz Tat, Jessamyn Schertz & Alex Trueman (eds.), *Proceedings of the 29th West Coast Conference on Formal Linguistics (WCCFL 29)*, 310–318. Somerville, MA: Cascadilla Press.

Croft, William. 1988. Agreement vs. case marking and direct objects. In Michael Barlow & Charles Ferguson (eds.), *Agreement in natural language: Approaches, theories, descriptions*, 159–179. Stanford, CA: CSLI.

Deo, Ashwini & Devyani Sharma. 2006. Typological variation in the ergative morphology of Indo-Aryan languages. *Linguistic Typology* 10. 369–418.

Dixon, Robert M. W. 1972. *The Dyirbal language of North Queensland*. Cambridge: Cambridge University Press.

Dixon, Robert M. W. 1979. Ergativity. *Language* 55. 59–138.

Dixon, Robert M. W. 1994. *Ergativity*. Cambridge: Cambridge University Press.

Embick, David & Rolf Noyer. 2001. Movement operations after syntax. *Linguistic Inquiry* 32. 555–595.

Embick, David & Rolf Noyer. 2007. Distributed Morphology and the syntax/morphology interface. In Gillian Ramchand & Charles Reiss (eds.), *The Oxford handbook of linguistic interfaces*, 289–324. Oxford: Oxford University Press.

Frampton, John. 2002. Syncretism, impoverishment, and the structure of person features. In Mary Andronis, Erin Debenport, Anne Pycha & Keiko Yoshimura (eds.), *Proceedings of the 38th meeting of the Chicago Linguistic Society (CLS 38)*, 207–222. Chicago: Chicago Linguistic Society.

Frampton, John & Sam Gutmann. 2000. Agreement is feature sharing. Ms., Northeastern University.

Gazdar, Gerald, Ewan Klein, Geoffrey Pullum & Ivan Sag. 1985. *Generalized phrase structure grammar*. Oxford: Blackwell.

Grosz, Patrick & Pritty Patel. 2006. Long distance agreement and restructuring predicates in Kutchi Gujarati. Ms., MIT, Cambridge, MA.

Hale, Ken. 1972. A new perspective on American Indian linguistics. In Alfonso Ortiz (ed.), *New perspectives on the Pueblos*, 87–103. Albuquerque: University of New Mexico Press.

Halle, Morris. 1997. Distributed Morphology: Impoverishment and fission. In Benjamin Bruening, Yoonjung Kang & Martha McGinnis (eds.), *Papers at the interface*, vol. 30 MIT Working Papers in Linguistics, 425–449. Cambridge, MA: MITWPL. Republished 2000 in: *Research in Afroasiatic grammar: Papers from the third Conference on Afroasiatic Languages*, eds. Jacqueline Lecarme, Jean Lowenstein & Ur Shlonsky, Amsterdam: John Benjamins, 125-151.

Halle, Morris & Alec Marantz. 1993. Distributed Morphology and the pieces of inflection. In Ken Hale & Samuel Jay Keyser (eds.), *The view from building 20: Essays in linguistics in honor of Sylvain Bromberger*, 111–176. Cambridge, MA: MIT Press.

Halle, Morris & Alec Marantz. 1994. Some key features of Distributed Morphology. In Andrew Carnie, Heidi Harley & Tony Bures (eds.), *Papers on phonology and morphology*, vol. 21 MIT Working Papers in Linguistics, 275–288. Cambridge, MA: MITWPL.

Hanson, Rebecca. 2000. Pronoun acquisition and the morphological feature geometry. In Ilana Mezhevich & Michael Dobrovolsky (eds.), *Calgary working papers in linguistics*, 1–14. Calgary: Department of Linguistics.

Harley, Heidi. 1994. Hug a tree: Deriving the morphosyntactic feature hierarchy. In Andrew Carnie & Heidi Harley (eds.), *Papers on phonology and morphology*, vol. 22 MIT Working Papers in Linguistics, 275–288. Cambridge, MA: MITWPL.

Harley, Heidi & Rolf Noyer. 2003. Distributed Morphology. In Lisa Cheng & Rint Sybesma (eds.), *The second GLOT international state-of-the-article book*, 463–496. Berlin: Mouton de Gruyter.

Harley, Heidi & Elisabeth Ritter. 2002a. Person and number in pronouns: A feature-geometric analysis. *Language* 78. 482–526.

Harley, Heidi & Elizabeth Ritter. 2002b. Structuring the bundle: A universal morpho-syntactic feature geometry. In Horst Simon & Heike Wiese (eds.), *Pronouns: Features and representations*, 23–39. Amsterdam: John Benjamins.

Heck, Fabian & Marc Richards. 2010. A probe-goal approach to agreement and non-incorporation restrictions in Southern Tiwa. *Natural Language and Linguistic Theory* 28. 681–721.

Hook, Peter. 1978. The Hindi compound verb: What it is and what it does. In Kripa Shanker Singh (ed.), *Readings in Hindi-Urdu linguistics*, 129–154. New Delhi: National Publishing House.

Keine, Stefan. 2010. *Case and agreement from fringe to core: A minimalist approach*. Berlin: de Gruyter.

Keine, Stefan & Gereon Müller. 2011. Non-zero/non-zero alternations in differential object marking. In Suzi Lima, Kevin Mullin & Brian Smith (eds.), *Proceedings of the 39th North East Linguistic Society (nels 39)*, 441–454. Amherst: GLSA.

Laka, Itziar. 1993. Unergatives that assign ergative, unaccusatives that assign accusative. In Jonathan Bobaljik & Colin Phillips (eds.), *Papers on case and agreement i*, vol. 18 MIT Working Papers in Linguistics, 149–172. MIT: Cambridge, MA: MITWPL.

Laka, Itziar. 2006. Deriving split-ergativity in the progressive. In Alana Jones, Diane Massam & Juvenal Ndayiradije (eds.), *Ergativity: Emerging issues*, 173–196. Dordrecht: Springer.

Lazard, Gilbert. 1984. Actance variations and categories of the object. In Frans Plank (ed.), *Objects: Towards a theory of grammatical relations*, 269–292. London: Academic Press.

Legate, Julie Anne. 2005. Phases and cyclic agreement. In Martha McGinnis & Norvin Richards (eds.), *Perspectives on phases*, vol. 49 MIT Working Papers in Linguistics, 147–156. Cambridge, MA: MITWPL.

Li, Chao. 2007. Split ergativity and split intransitivity in Nepali. *Lingua* 117. 1462–1482.

Magier, David. 1983. *Topics in the grammar of Marwari*: University of California, Berkeley dissertation.

Mahajan, Anoop. 2012. Ergatives, antipassives and the overt light v in Hindi. *Lingua* 122. 204–214.

Marantz, Alec. 1991. Case and licensing. In German Westphal, Benjamin Ao & Hee-Rahk Chae (eds.), *Proceedings of the 8th Eastern States Conference on Linguistics (ESCOL 8)*, 234–253. University of Maryland. Reprinted 2000 in: *Arguments and Case: Explaining Burzio's Generalization*, ed. by Eric Reuland, Amsterdam: John Benjamins, pp. 11-30.

Noyer, Rolf. 1992. *Features, positions, and affixes in autonomous morphological structure*: MIT, Cambridge, MA dissertation.

Noyer, Rolf. 1997. *Features, positions and affixes in autonomous morphological structure*. New York: Garland Publishing.

Pandharipande, Rajeshwari. 1997. *Marathi*. London: Routledge.

Pandharipande, Rajeshwari & Yamuna Kachru. 1977. Relational grammar, ergativity, and Hindi-Urdu. *Lingua* 41. 217–238.

Patel-Grosz, Pritty & Patrick Grosz. 2013. Structural asymmetries: The view from Kutchi Gujarati and Marwari. Ms., Universität Tübingen.

Patel-Grosz, Pritty & Patrick Grosz. 2014. Agreement and verb types in Kutchi Gujarati. In Pritha Chandra & Richa Srishti (eds.), *The lexicon–syntax interface: Perspectives from South Asian languages*, 217–244. Amsterdam: John Benjamins.

Pesetsky, David & Esther Torrego. 2007. The syntax of valuation and the interpretability of features. In Simin Karimi, Vida Samilan, Wendy Wilkins & Joseph Emonds (eds.), *Phrasal and clausal architecture: Syntactic derivation and interpretation*, 262–294. Amsterdam: John Benjamins.

Pollard, Carl J. & Ivan A. Sag. 1994. *Head-driven phrase structure grammar*. Chicago: University of Chicago Press.

Preminger, Omer. 2011. *Agreement as a fallible operation*. Cambridge, MA: MIT dissertation.

Rezac, Milan. 2004. *Elements of cyclic syntax: Agree and Merge*: University of Toronto dissertation.

Rezac, Milan. 2008. The syntax of eccentric agreement: The Person Case Constraint and absolutive displacement in Basque. *Natural Language and Linguistic Theory* 26. 61–106.

Richards, Marc. 2004. *Object shift and scrambling in North and West Germanic: A case study in symmetrical syntax*. Cambridge, UK: University of Cambridge dissertation.

Richards, Marc. 2008. Quirky expletives. In Roberta d'Alessandro, Susann Fischer & Gunnar H. Hrafnbjargarson (eds.), *Agreement restrictions*, 181–213. Berlin: Mouton de Gruyter.

Rizzi, Luigi. 1990. On the anaphor agreement effect. *Rivista di Linguistica* 2. 27–42.

Sigurðsson, Halldór Ármann. 2006. Agree in syntax, agreement in signs. In Cedric Boeckx (ed.), *Agreement systems*, 201–237. Amsterdam: John Benjamins.

Silverstein, Michael. 1976. Hierarchy of features and ergativity. In Robert M. W. Dixon (ed.), *Grammatical categories in Australian languages*, 112–171. Canberra: Australian Institute of Aboriginal Studies.

Wilkins, David. 1989. *Mparntwe Arrernte (Aranda): Studies in the structure and semantics of grammar*. Canberra.: Australian National University dissertation.

Wiltschko, Martina. 2006. On 'ergativity' in Halkomelem Salish. In Alana Johns, Diane Massam & Juvenal Ndayiragije (eds.), *Ergativity: Emerging issues*, 197–227. Dordrecht: Springer.

Wiltschko, Martina. 2008. Person hierarchy effects without a person hierarchy. In Roberta d'Alessandro, Susann Fischer & Gunnar H. Hrafnbjargarson (eds.), *Agreement restrictions*, 281–314. Berlin: Mouton de Gruyter.

Woolford, Ellen. 1999. More on the anaphor agreement effect. *Linguistic Inquiry* 30. 257–287.

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