BANTU OBJECT CLITICS AS DEFECTIVE GOALS

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Abstract. There is a long-standing debate regarding the syntactic status of object markers in Bantu languages. A major part of this debate involves the status of object markers as incorporated pronouns or spell-out of an Agree relation. The current paper examines a range of comparative Bantu object marking data in the light of a hybrid analysis of object clitics as proposed by Roberts (2010). The challenges of object doubling and differential object marking are addressed in a proposal that only DP objects that have a separate [Person] layer can double, i.e. involving spell out of the object marker as well as the DP itself, and precisely these objects are interpreted as high on the scales of animacy, definiteness and/or givenness. This results in a featural typology of Bantu object marking, where languages differ in whether or not little v has φ features and whether [Person] can form a separate layer.

Keywords: object clitics, differential object agreement, phi features, Bantu.

1. INTRODUCTION

The Bantu languages are around 500 in number, spread over most of sub-Saharan Africa. General linguistic properties of the language family include noun classes, agglutinative morphology and SVO basic word order. Finite verbs typically include derivational suffixes and inflectional prefixes. One of these prefixes is the object marker, as shown in (1b).

Bembe (D54, Iorio 2014)[2]

(1) a. Baana b-a-kola bitabo.
2.children 2SM-T-buy 8.books
'The children bought books.'

b. Baana b-a-**bi**-kola.
2.children 2SM-T-8OM-buy
'The children have bought them.' [class 8, the books]

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[2] Bantu languages are geographically classified with a Guthrie number (Guthrie 1948), and indicated here as in Maho's (2009) updated classification.

There is a long-standing debate regarding the syntactic status of these object markers in specific Bantu languages (especially since Bresnan and Mchombo 1987), as well as in a comparative Bantu perspective (Morimoto 2002, Baudoin-Lietz *et al.* 2004, Thwala 2006, Creissels 2006, Baker 2008a, Riedel 2009, Marten and Kula 2012, Marlo 2013, Zeller 2014, among others). A major part of this debate involves the question of whether object markers are incorporated pronouns or spell-out of an Agree relation, with arguments having been brought forward for both analyses, for different languages or even for the same language. The current paper examines a range of comparative Bantu object marking data in the light of a hybrid analysis of object clitics as proposed by Roberts (2010). Section 2 introduces Roberts' (2010) analysis of clitics, which Iorio (2014) applies to analyse subject and object marking in the Bantu language Bembe (section 3). However, in the application to a wider variety of Bantu languages, the approach faces many challenges, two of which are discussed here: clitic doubling (section 4) and differential object marking (section 5). Although the approach seems to come a long way in accounting for the attested patterns of object marking across Bantu, there are problematic further challenges, as discussed in section 7.

2. AGREEMENT AS DEFECTIVE GOALS

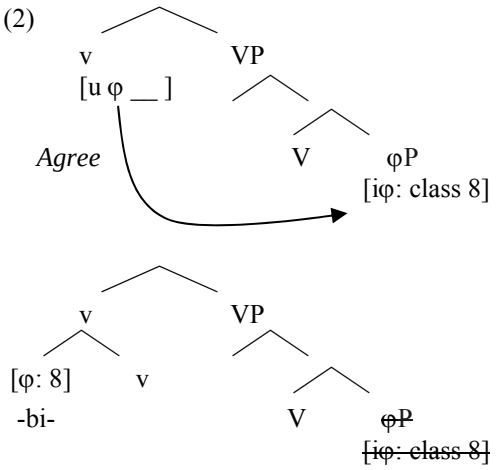
For the agreement approach, we assume an Agree relationship between a Probe and a Goal (Chomsky 2000, 2001). In Probe-Goal agreement, a head with an uninterpretable feature (uF), called the Probe, searches its c-command domain for valuation by the closest constituent with a matching interpretable feature (iF), the Goal. In Bantu languages, this Agree relation may be spelled out by morphology, for example as a subject or object marking prefix.

Roberts (2010) proposes that Goals can be defective, in the sense of having a subset of the features that are present on the Probe. In an Agree relation with a defective Goal, the Probe will end up with the features of the Goal, as well as additional features that the Probe does not share with the Goal. This makes the relation indistinguishable from a copy/movement chain, where normally only the highest copy is spelled out. The lower copy is not spelled out, due to chain-reduction (Nunes 2004). This gives rise to incorporation of the Goal, being spelled out on the Probe.

Concretely for object marking, this can be seen as follows. Little v has uninterpretable φ features (uφ), which probe down to find an internal argument (object) with interpretable φ features (iφ). If the object Goal is a defective pronoun (a φP, following Déchaine and Wiltschko 2002), the Goal's nominal features are a subset of the Probe's (2).[3] When Agree is established, the φ features are spelled out on v in the form of an object marker.

[3] In (2) it is not made explicit that v has more features; at the very least it has a verbal [V] feature.

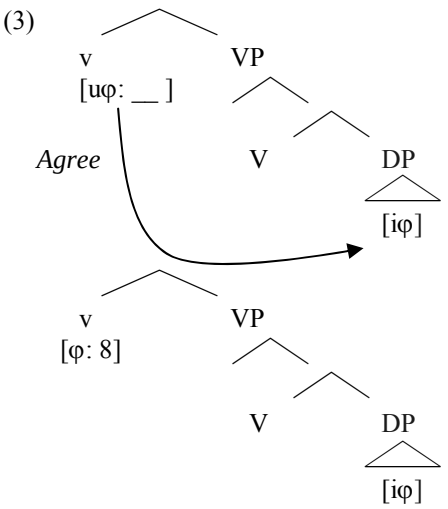
(2)



→*spell-out of φ on v: object marker*

Assuming with Roberts (2010) that this Agree relation only spells out on the Probe if the Goal has a subset of the features on the Probe, this also implies that if the Goal's features are NOT a subset, the features will not be spelled out on the Probe.[4] If the Goal is a DP, the Probe simply Agrees with it, valuing uφ, but only the DP spells out. This is illustrated in (3).

(3)



→*no spell-out of φ on v, but spell-out of DP*

The advantage is that this approach provides a hybrid solution to the longstanding 'pronoun vs. agreement' debate (cf. Riedel 2009 for Bantu, Preminger 2009, Kramer 2014 among many others), because it combines an Agree relation with incorporation effects. It

[4] This is the strongest hypothesis. A weaker version would claim that if the Goal is defective, the Probe has to be spelled out, and if the Goal is not defective, the features can, but do not need to be spelled out on the Probe. This might be an avenue of analysis for subject agreement (see section 7).

also makes some clear predictions: the object marker should only be present when the object is null (i.e. a φP, not a DP). That is, the object marker fulfils an argument role whenever it is present, and any potentially occurring coreferential DPs are adjuncts – a complementary distribution.

3. DEFECTIVE GOALS AND AGREEMENT IN BEMBE

Iorio (2014) applies Roberts' (2010) proposal and shows that it makes all the right predictions for the Bantu language Bembe. The object marker and the full DP object are indeed in complementary distribution: whenever both are present in the same sentence, the DP can be shown to be dislocated. The φP is thus the true argument and the DP a dislocated adjunct (which is not in the c-command domain and will therefore not be a Goal). I refer to the DP object that is coreferent with the object marked on the verb as the 'coreferent DP'.

Iorio (2014: 210) advances a number of arguments to show that the coreferent object DP is in a dislocated position. We repeat three of these here. First, there is an obligatory phonological-phrase boundary before the DP when it is object-marked on the verb, as shown in (4).

Bembe (D54, Iorio 2014: 203)

(4) a. Mwana a-a-(***ya**)-yak-a ngyoʔa.
1.child 1SM-T-9OM-kill-FS 9.snake
'The child has killed a/*the snake.'

b. Mwana a-a-*(**ya**)-yak-a.
1.child 1SM-T-9OM-kill-FS
'The child has killed it.'

c. Mwana a-a-**ya**-yak-a *(,) ngyoʔa.
1.child 1SM-T-9OM-kill-FS 9.snake
'The child has killed it, the/*a snake (that is).'

Second, the coreferent DP cannot be indefinite or focused, nor can it be a negative polarity item (5). These are typical properties that in-situ arguments can have, but that are banned for topical dislocated DPs. This would thus be expected under a dislocation analysis.

Bembe (D54, Iorio 2014: 205)

(5) Shi-na-a-(*m)-mon-a mtu.
NEG-1SG.SM-T-1OM-see-FS 1.man
'I have not seen anybody.'

Third, the coreferent DP cannot precede non-object-marked objects and adverbs (6), suggesting that it is not in its base position but adjoined to vP.

Bembe (D54, Iorio 2014: 209)

(6) a. Ba-(***bi**)-koch-ile bilewa elya ekolo.
2SM-8OM-buy-PAST 8.food 9.DEM.DIST 9.night
'They bought food yesterday.'

b. Ba-*(**bi**)-koch-ile elya ekolo *(,) bilewa.
2SM-8OM-buy-PAST 9.DEM.DIST 9.night 8.food
'They bought it yesterday, the food (that is).'

This shows that object DPs are never locally 'doubled' by an object marker on the verb. As predicted in the defective Goal analysis, whenever there is an object marker, the object argument is a φP pronoun that is spelled out on v, and possible co-occurring DPs are adjuncts.

Taking Roberts' (2010) proposal of Agree with defective Goals as a point of departure, and considering the convincing analysis of Bembe object marking, the question is whether the defective goal approach can account for Bantu object marking across the board. There is a large amount of variation (see the overview in Marlo 2013), two aspects of which are discussed in this paper. These are the challenges of local clitic doubling and differential object marking, which are addressed in the next two sections, respectively.

4. DERIVING DOUBLING OBJECT MARKING

Not in all Bantu languages are object marking and full DPs in such a neat complementary distribution as in Bembe. That is, in many languages object DPs can be locally 'doubled' on the verb. Sambaa is one of the languages that have been argued to have local doubling of the object DP by an object marker (Riedel 2009). In order to show that this is truly local doubling, it must be the case that the DP is in the same domain as the verb+OM, i.e. is not dislocated as in Bembe. Riedel (2009) advances five diagnostics, showing that the doubled DP in Sambaa is not dislocated but in situ. First, doubling can be obligatory (7), which would be unexpected if the presence of the object marker were determined by being a φP.

Sambaa (G23, Riedel 2009:44)
(7) a. N-za-**mw**-ona Stella.
1SG.SM-PERF.DJ-1OM-see 1.Stella
'I saw Stella.'
b. * N-za-ona Stella.
1SG.SM-PERF.DJ-see 1.Stella
int: 'I saw Stella.'

Second, wh words, which are arguably in situ, must be doubled in Sambaa, as shown in (8).

Sambaa (G23, Riedel 2009: 155)
(8) a. U-**mw**-ene ndayi?
2SG.SM-1OM-see.PERF.CJ who
'Who did you see?'
b. * U-ene ndayi?
2SG.SM-see.PERF.CJ who
int: 'Who did you see?'

Third, doubled DPs can follow a so-called conjoint verb form, which indicates the presence of a following (focused/non-topical) element in the same domain. This diagnostic is not further discussed or illustrated here, but see Buell and Riedel (2008) on the conjoint/disjoint alternation in Sambaa, and Van der Wal and Hyman (to appear) for a general overview of the alternation in Bantu.

Fourth, there is no pause before the doubled DPs (9a). This crucially contrasts with dislocated DPs, which are preceded by a pause (9b). In addition, High Tone Spread applies between the verb and the object whether the object marker is present or not, which suggests that there is no phonological phrase boundary.

Sambaa (G23, Riedel 2009: 66)

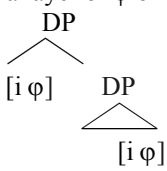
(9) a. N-zà-**í**-óná ng'ómbè.
1SG.SM-PERF.DJ-9OM-see 9.cow
'I saw the cow.'

b. N-zà-**í**-óná, ng'òmbè.
1SG.SM-PERF.DJ-9OM-see 9.cow
'I saw it, the cow.'

Sambaa thus clearly has doubling object marking, where the DP is the argument while the object marker is present too. This is unexpected under the defective Goal-analysis of object marking: the object marker can only be spelled out if the Goal is defective (a φ P not a DP), predicting non-doubling (complementarity) as in Bembe, rather than doubling as in Sambaa. How can we account for the cooccurrence of the object marker and the DP object in the same domain?

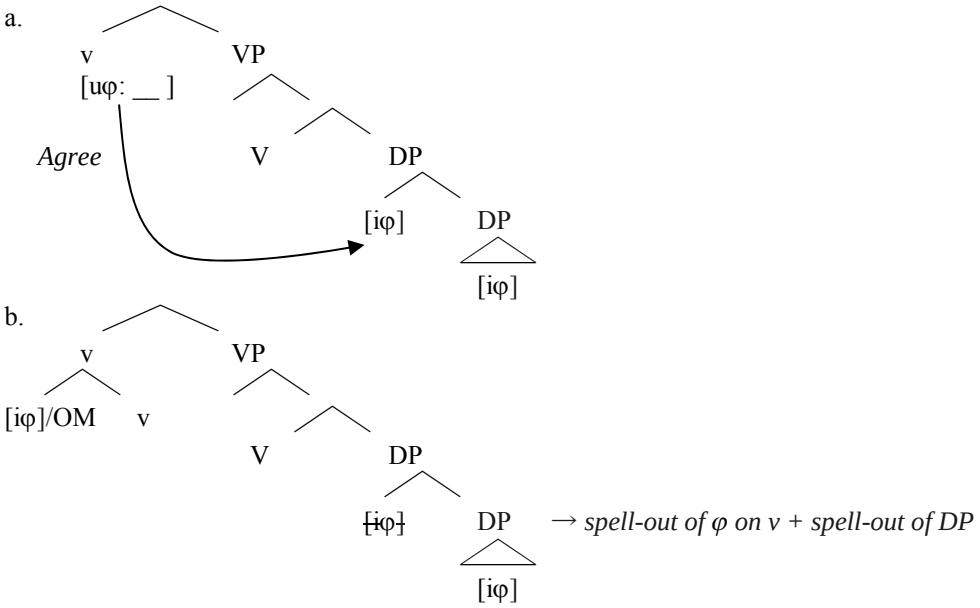
The proposal is that the variation between non-doubling and doubling object marking is in the structure of the Goal. In the case of doubling object marking we postulate that what the Probe agrees with is not the whole DP. Instead, it agrees with an extra layer of φ features on the Goal (10). This extra layer has been proposed as part of a 'big DP' by Uriagereka (1995) and used by Cechetto (1999), Nevins (2011), Roberts (2010) and others, notably for Manyika object marking by Bax and Diercks (2012). In these approaches the extra layer is itself the object (or subject) marker. The precise nature of the extra layer will be further refined as related to [Person] in section 5.

(10) Extra layer of φ on DP



The Goal for v's Probe is now the extra layer of φ features, not the whole DP. As these φ features are a subset of the features on the probe, they will be spelled out as an object marker, while still leaving the DP to be spelled out as well, resulting in doubling, as represented in (11).

(11) Agree in doubling: v agrees with φ layer, which is a subset and thus incorporates



To summarise so far, not only do we have a hybrid approach to clitics as the result of an Agree relation, we can also account for both doubling and non-doubling object marking in Bantu languages, as Bax and Diercks (2012) also show for object marking in Manyika.

We can thus see two parameters of variation: one is whether v has φ features or not. If it does not, the language never shows object marking, as is the case for Basaa, Nen, Nyokon, Eton and quite possibly other languages of Bantu zone A. If it does, v agrees with the object. Whether the object marker is spelled out depends on the second parameter: does the language allow a big DP structure? If it does not, object marking is non-doubling, i.e. the object marker and the coreferent DP are in complementary distribution (as in Bembe). If it does, object marking can double a DP in the same domain (as in Sambaa).

However, in no Bantu language is it the case that *all* objects are doubled. A second challenge is thus how to account for differential object marking.

5. DERIVING DIFFERENTIAL OBJECT MARKING

Languages with doubling object marking display diversity as to which objects are marked. In these differential object marking systems, it is usually the animate, definite and/or given objects that are doubled by an object marker. For example, in Nyaturu, definite animate nouns must be doubled by an object marker (12).

Nyaturu (F32, Hualde 1989: 182)

(12) a. N-a-**m**ʊ-onaa Maria.
1SG.SM-PAST1-1OM-see 1.Maria
'I saw Maria.'

b. *N-a-onaa Maria.
1SG.SM-PAST1-see 1.Maria
Int: 'I saw Maria.'
c. N-a-**mʊ**-onaa mwalimu.
1SG.SM-PAST1-1OM-see 1.teacher
'I saw the teacher.'
d. N-a-onaa mwalimu.
1SG.SM-PAST1-see 1.teacher
'I saw a teacher.'

The properties that trigger object marking are all high on the various hierarchies associated with 'prominence' or 'topicality' (see Silverstein 1976, Duranti 1979):

Aissen (2003: 437)
(13) a. Animacy Scale
Human > Animate > Inanimate
b. Definiteness Hierarchy
Proper name > Pronoun > Definite NP >Indefinite specific NP > Non-specific NP

For our analysis this implies that in doubling systems, an object-marked DP needs to have both a bigDP structure, and one or more properties on the high end of these hierarchies. How can we combine these two requirements?

5.1. Prominence of [Person]

Richards (2008) proposes that animacy and definiteness can be unified and accounted for by a [Person] feature. First and second person are always animate and definite, as represented in (14) and (15), and therefore, according to Richards (2008: 140), "only [+animate/+definite] nominals have an indeterminacy for Person, i.e. may be first- or second- or third-person. Only animates and definites, then, require a person specification."

(14) Person-animacy

	Animate	Inanimate
1	!!	┤
2	!!	┤
3	!!	!!

(15) Person-definiteness

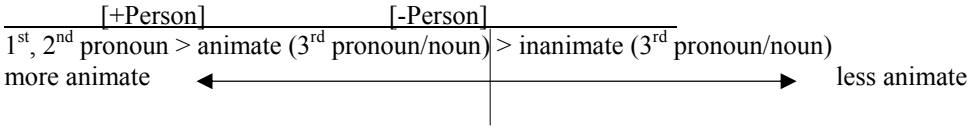
	Definite	Indefinite
1	!!	┤
2	!!	┤
3	!!	!!

This means that 3rd person indefinites and inanimates are characterised by the absence of [Person] in the syntax, but 3rd person animates and definites have a (otherwise unspecified) [Person] feature. Thus, if a nominal has [Person], it can be either a 1st/2nd

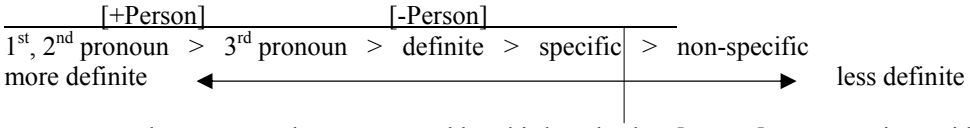
person, or it is an animate/definite 3rd person. Richards proposes that languages can vary in the association of [Person] with the hierarchies of animacy (16), definiteness

(17), or both. Languages also vary in where on the scale they locate the cut-off point (indicated as the vertical line on the hierarchies): for some languages, both definites and specifics have [+Person] (such as Nyaturu), whereas for others definites count but specifics do not (like Ruwund, Riedel 2009).

(16) Person/animacy scale (Richards 2008: 141)



(17) Person/definiteness scale (Richards 2008: 141)



To these two scales, we can add a third scale that [Person] can associate with: givenness. By definition, 1st and 2nd person as speech participants are present in the discourse situation and therefore count as 'given'. This does not hold for 3rd persons, which can be either given or new. Following the same reasoning as Richards for animacy and definiteness, a [Person] specification is thus only necessary for given referents.

(18) Person-givenness

	Given	New
1	!!	┤
2	!!	┤
3	!!	!!

Thus, languages may choose to associate [Person] not only with animacy and/or definiteness, but also with givenness. The associated scale is taken to be (similar to) Gundel et al.'s (1993: 275) Givenness Hierarchy, or Lambrecht's (1994: 165) Topic Acceptability Scale, which rank elements on the basis of their mental activation or accessibility:[5]

(19) Gundel, Hedberg and Zacharski's (1993) Givenness Hierarchy
in conscience > activated > familiar > uniquely identifiable > referential > type identifiable

(20) Lambrecht's (1994) Topic Acceptability Scale
active > accessible > unused > brand-new anchored > brand-new unanchored

An empirical argument for including givenness here is that sensitivity to givenness is in fact encountered in Bantu object marking. Bax and Diercks (2012) show that object

[5] I do not claim that [Person] relates to a topic hierarchy: first and second person can be topical or not, and all three hierarchies contribute to topicality, i.e. topics are typically high on all three.

marking in Manyika is determined by old, topical elements. I take this to refer to objects high in givenness or accessibility. They show that object marking is felicitous only for a non-focused object DP: (21a) without the object marker is felicitous when the verb, the object, or the VP is in focus (as diagnosed by a contextualising question), whereas (21b) with the object marker is only felicitous when the object is not included in the focus.[6]

Manyika (S10, Bax and Diercks 2012)

(21) a. Tendai w-aka-werenga bhuku nekukasika. *non-doubled*
1.Tendai 1F.SM-PAST-read 5.book quickly
'Tendai read the/a book quickly.'

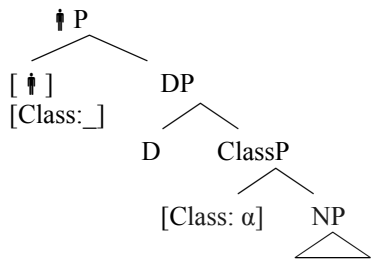
b. Tendai w-aka-**ri**-werenga bhuku nekukasika. *doubled*
1.Tendai 1F.SM-PAST-5OM-read 5.book quickly
'Tendai read the (particular) book quickly.'
!! answer to 'what did Tendai do with the book?' (V foc)
* answer to 'what did Tendai do?' (VP foc)
* answer to 'what did Tendai read?' (O foc)

In summary, the presence of a [Person] feature on a 3rd person noun means that it is high on one or more of the scales of animacy, definiteness and givenness.

With Richards' (2008) extra ingredient of a [Person] feature, we come back to our earlier question and rephrase it: in doubling systems, an object-marked DP needs to have both a bigDP structure, and a [Person] feature. How can we combine these requirements?

Following Höhn (to appear), who proposes that [Person] can form a separate layer allowing unagreement, I propose that in the doubling languages the φ features are split in the DP, and the extra layer in the big DP structure *is* itself the Person feature.[7] In doubling object marking, then, 1st/2nd person and 3rd person animate/definite/given nouns have a [Person] feature and hence the structure in (22), whereas 3rd person inanimate/indefinite/non-given nouns do not; they have the structure in (23).

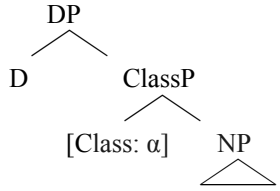
(22)



[6] See Bax and Diercks (2012: 192) for arguments that doubling in Manyika cannot be captured in an analysis referring to specificity.

[7] Noun classes in Bantu can be thought of as a combination of Gender and Number, or of Gender alone. They can be split or separated in the structure without consequences for the analysis.

(23)



The Probe on v either agrees with the outer [Person] layer (as in (22)) and spells out both the object marker and the DP, or it agrees with the DP (as in (23)) and does not spell out the object marker but just the DP. Since the probe spells out complete φ features, not only [Person] but also Gender and Number (i.e. Class) must be available on the Goal. This is why there is an unvalued [Class: _] feature on the Person head as well, which is valued by the Class specification in the DP.

The variation in Bantu object marking can now be captured by 1) the presence/absence of φ features on v; 2) whether [Person] forms its own projection; 3) which hierarchy or hierarchies of animacy, definiteness and/or givenness [Person] is associated with. A fourth point of crosslinguistic variation briefly mentioned above is the cut-off point on the animacy/definiteness/givenness hierarchies, which I turn to now.

5.2. Cut-off points on the hierarchies

As mentioned, Nyaturu and Ruwund both associate [Person] with definiteness, but to a different degree: Nyaturu marks only definite objects, whereas Ruwund marks not only definite but also specific objects.

Furthermore, if the Person hierarchy (1/2 > 3) is incorporated into either or both of the animacy and definiteness hierarchies, then Lubukusu (Diercks and Sikuku 2015) and Kivunjo-Chaga (Moshi 1998) can be accounted for as well. These languages generally do not allow doubling (24), but do have doubled strong pronouns (25). These can then be seen as the most restricted association with this hierarchy.

[+Person]				[-Person]
1st, 2nd pronoun >	3rd pronoun >	definite >	specific >	non-specific
Bukusu, Chaga	Nyaturu	Ruwund	--	

Chaga (E62, Moshi 1998: 142)

(24) * Mangí n-á-lé-m-zríká máná nyáma.
1.chief FOC-1SM-PAST-1OM-send 1.child 9.meat
'The chief send the child meat.'

Chaga (E62, Bresnan & Moshi 1990, glosses adapted)

(25) a. N-á-í-**m**-lyì-í-à k-èlyá ò.
PROG-1SM-PRES-1OM-eat-APPL-FS 7-food 1.PRO
'He/she is eating food for him/her.'

b. N-á-í-**kì**-lyí-í-à m-kà kyô.
PROG-1SM-PRES-7OM-eat-APPL-FS 1-wife 7.PRO
'He/she is eating it for/on the wife.'
c. N-á-í-**kì-m**-lyì-í-à òó kyò.
PROG-1SM-PRES-7OM-1OM-eat-APPL-FS 1.PRO 7.pro
'He/she is eating food for him/her.'

5.3. Extending [Person]

There are a number of languages which restrict object marking to nouns in classes 1 and 2 only. Animacy, definiteness and/or givenness do not play any role whatsoever in these languages. An example is Makhuwa, where all and only nouns in classes 1/2 (and 1st, 2nd persons) must be object-marked; no object marker exists for the other classes.

Makhuwa (P31, Van der Wal 2009: 84)
(26) a. Ki-ni-**ḿ**-wéha Hamísi / namarokoló / nancoólo.
1SG.SM-PRES.CJ-1OM-look 1.Hamisi / 1.hare / 1.fish.hook
'I see Hamisi / the hare / the fish hook.'
b. * Ki-m-wéhá Hamísi / namarokoló / nancoólo.
1SG.SM-PRES.CJ-look 1.Hamisi / 1.hare / 1.fish.hook
c. Ki-m-wéhá nveló / mikhorá / kalapinteéro / etthepó.
1SG.SM-PRES.CJ-look 3.broom / 4.doors / 5.carpenter / 9.elephant
'I see the broom / doors / carpenter / elephant'
d. * Ki-ni-**ḿ**-wéha nveló / mikhorá / kalapinteéro / etthepó.
1SG.SM-PRES.CJ-1OM-look 3.broom / 4.doors / 5.carpenter / 9.elephant

The Bantu noun class system can be seen as involving Gender (Carstens 1993), with several Bantu noun classes forming singular-plural pairs.This is indicated in
Table *1*, where the Genders are labelled A-D.

Table 1

Bantu noun classes as genders

	singular	plural
A	class 1	class 2
B	class 3	class 4
C	class 5	class 6
D	class 7	class 8

I propose that in Makhuwa gender A is reanalysed as representing [Person]. That is, 1st and 2nd person always fall under gender A, and a [Person] feature is only needed to distinguish within gender A. The result is that a 3rd person noun with a [Person] feature will belong to gender A. Only when [Person] is not specified/absent does [Gender] become relevant to distinguish other 3rd persons (27).

(27) Person-gender

	A	B	C	D
1	!!	ɬ	ɬ	ɬ
2	!!	ɬ	ɬ	ɬ
3	!!	!!	!!	!!

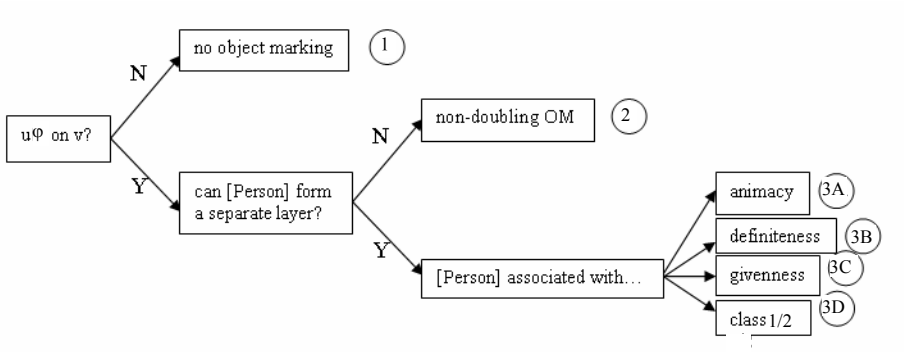
From a diachronic perspective such a reanalysis is plausible, since the reconstructed Bantu gender A typically contained humans, i.e. high on the animacy hierarchy (Denny and Creider 1976, Claudi 1997). Furthermore, it would explain why we only find systems with restrictions to class 1/2 (Marlo 2013) and not other classes as well, i.e. there are no languages where only class 5 and 6, or 9 and 11 can be object-marked, for example.

6. A FEATURAL TYPOLOGY OF BANTU OBJECT MARKING

Summarising the discussion so far, we can account for (at least some of) the crosslinguistic variation in object marking by keeping the agreement mechanism the same (Roberts 2010) and varying the features of the Goal. This unites approaches to object marking as agreement and as pronoun incorporation (a debate since at least Bresnan and Mchombo 1987), while also accounting for the differential object marking properties. Furthermore, using Richards' (2008) insights on the prominence of [Person] and extending this to include givenness relates differential object marking to just one syntactic feature.

This allows us to create a preliminary typology of Bantu object marking in featural terms, whereby the three parameters are in a dependency relation to each other, as depicted in (28). The approach is thus in line with the Borer-Chomsky Conjecture (Borer 1984; Chomsky 1995; as phrased in Baker 2008b), which states that all parameters of variation are attributable to differences in the features of heads in the lexicon.[8]

(28)



[8] This also illustrates the various 'sizes' of parameters (Biberauer and Roberts 2012), where the first parameter (phi on v) is on a meso-level, applying to a class of heads, and subsequent parameters are micro-parameters. We can even imagine nano-parameters, for example in Luguru where some predicates require object marking and others do not (Marten and Ramadhani 2001).

The resulting types of object marking can be summarised and illustrated by various languages as follows:

Type 1: no object marker
Languages: Basaa (Hyman 2003), Nen (Mous 2003), Nyokon (Mous 2014), Eton (Van de Velde 2008), etc.
Analysis: no uφ on v

Type 2: non-doubling object marker
Languages: Bembe (Iorio 2014), Herero (Marten and Kula 2012), Haya (Duranti and Byaruschengo 1977), Kinyarwanda (Zeller and Ngoboka 2014), Luganda (Ssekiryango 2006), Zulu (Zeller 2012), Northern Sotho (Zerbian 2006), Tswana (Creissels 2006), Swati (Marten and Kula 2012) etc.
Analysis: v has uφ, OM spelled out iff goal is □P, no local doubling

Type 3: doubling object marker
Analysis: uφ on v, Goals can be PersP or DP

Type 3A only animacy (?)
Type 3B only definiteness: Makonde (Kraal 2005), Chimwiini (Kisseberth and Abasheikh 1977)
Type 3C only givenness: Manyika (Bax and Diercks 2012)
Type 3AB animacy & definiteness: Sambaa (Riedel 2009), Nyaturu (Hualde 1989), Ruwund (Nash 1992, Woolford 2001, Riedel 2009), Matengo (Yoneda 2000), Chaga (Moshi 1998, Bresnan and Moshi 1990), Lubukusu (Sikuku 2012, Diercks and Sikuku 2015)
Type 3AC animacy & givenness: Swahili (Seidl and Dimitriadis 1997), Chichewa (Henderson 2006, Downing 2014)
Type 3BC definiteness & givenness (indistinguishable?)
Type 3ABC all three?
Type 3D class 1/2: Makhuwa (Van der Wal 2009), Ekoti (Schadeberg and Mucanheia 2000), Kimatuumbi (Odden 1996), Cuwabo (Guerois 2015), also Kiyaka (Kidima 1987).

7. CHALLENGES

The defective Goal approach can account for a large part of the attested variation found in Bantu object marking. Nevertheless, there are a number of phenomena that do not receive a straightforward analysis under a unified approach to object agreement/cliticisation with variation in the structure of Goal. I mention three here, that all need further investigation.

First, under an account that takes an Agree relation to be at the basis of the phenomenon, and if Agree is subject to a locality constraint, we would predict to find locality effects if there is more than one possible Goal. Concretely, in double object constructions, the higher object should always be agreed with first, and so-called

'symmetric' double objects, where either object of a double object construction displays typical primary object properties, are unexpected under this approach. Nevertheless, this symmetry is what we find in surprisingly many Bantu languages. In Zulu, for example, either object can be object-marked on the verb (22).

Zulu (S42, Adams 2010: 11)

(29) a. U-mama u-ba-nik-e in-cwadi (aba-ntwana).
1a-mama 1SM-2OM-give-PFV 9-book 2-children
'Mama gave them a book (the children).'

b. U-mama u-yi-nik-e aba-ntwana (in-cwadi).
1a-mama 1SM-9OM-give-PFV 2-children 9-book
'Mama gave it to the children (a book).'

Assuming that the recipient object is base-generated higher than the theme object, the challenge for the defective Goal approach is how v can "reach" the theme across the recipient. One possibility is that v agrees with both objects but spells out only one (Adams 2010). Another option is that the theme has moved and is higher than the recipient when v probes (McGinnis 2001, Anagnostopoulou 2003, Pylkkänen 2008, among others). Partly independent of the syntax of symmetric double objects, the fact that most "symmetric" Bantu languages show some asymmetry (see, e.g., Baker et al. 2012, Adams 2010, Zeller 2015 for some recent examples) shows that the structural hierarchy does play a role. It remains to be seen in which way, though.

Second, if the availability of a separate [Person] layer holds across a language, the prediction is that subject marking should behave like object marking.[9] That is, we predict that if a language has doubling object marking, it has doubling subject marking, and if a language only has non-doubling object marking, it should have non-doubling subject marking. This prediction works out well for Bembe, where Iorio (2014) shows that the subject is a φP (thus spelling out on T, i.e. triggering subject marking on the verb), and a possible coreferring full subject DP is indeed not in specTP but in a higher position. This suggests that Bembe does not have DPs with a separate [Person] layer at all. On the other end of the spectrum are languages like Matengo and Makhuwa that clearly have doubling object marking and clearly also subject marking with the full subject DP in specTP. This is consistent with the idea that Makhuwa and Matengo DPs can have a separate [Person] layer.

Across Bantu, however, we see that subject marking is virtually obligatory. Not predicted are the languages that show non-doubling object marking (evidence for the lack of a separate Person layer) but doubling subject marking (evidence for the presence of a separate Person layer). A potential language showing this pattern is Zulu. Although Sabel and Zeller (2006) and Zeller (2008) argue that the subject marker in Zulu is a clitic rather than spell-out of agreement, Halpert (2012) provides other evidence that the full DP subject in Zulu is not necessarily dislocated, and that hence the subject marker involves doubling agreement. This can be accounted for if the subject (but not the object) always has a separate Person layer (cf. Zeller 2008), perhaps because this represents nominative Case or

[9] Assuming, also, that the phi probe on T and v are similar, which may not be the case. The strongest and most elegant hypothesis, however, is that the Agree relation is kept constant for all probes.

topicality. An alternative account is that the features on the Probe are spelled out not just when the features on the Goal are a subset, but also when the Goal moves, that is, when the Probe has a movement trigger. This spell-out would be independent of the structure of the Goal, and it accounts for the observed tendency of Bantu languages to agree 'upwards' (Collins 2004, Carstens 2005, Baker 2008a). The variation would thus be due to T having a movement trigger, which is absent on v.

Third, if the difference between doubling and non-doubling object marking is due to the possible structure of the DP Goal, i.e. separate [Person] or not, we predict that languages show either doubling or non-doubling object marking, but not two different types for different objects in a double object construction. This is, however, what is described for Ruwund (Woolford 2001) and Kuria (Ranero *et al.* 2013). Ruwund allows doubling object marking of single objects, as shown in (30), but it does not allow two objects to be doubled: the outer object marker must be non-doubling, as seen in the difference in grammaticality between (31a) and (31b).

Ruwund (L53, Nash 1992: 565, via Woolford 2001)

(30) a. ku-land malong
15-buy 6.plates
'to buy some/the plates'

b. ku-ma-land malong
15-6OM-buy 6.plates
'to buy the plates'

Ruwund (L53, Nash 1992: 569-570, via Woolford 2001)

(31) a. ku-ma-mu-tum-in mwâan
INF-6OM-1OM-send-APPL 1.child
'to send the child them'

b. * ku-ma-mu-tum-in mwâan malong
INF-6OM-1OM-send-APPL 1.child 6.plates
'to send the child the plates'

For Kuria, Ranero *et al.* (2013) argue that two separate mechanisms (incorporation and Agree) are responsible for the non-doubling and doubling object marking. It is unclear to me at this point how the co-occurrence of the two types of object marking in one and the same language can be accounted for in a unified approach to object marking.

8. CONCLUSION

We can account for (at least some of) the crosslinguistic variation in object marking by keeping the agreement mechanism the same (Roberts' 2010 defective Goal approach) and varying the features of the Goal. This unites approaches to object marking as agreement and as cliticisation, while also accounting for the differential object marking properties. Furthermore, using Richards' (2008) insights on the prominence of [Person] and extending this to include givenness relates differential object marking to just one syntactic feature. The approach is thus in line with the Borer-Chomsky Conjecture, where all

parameters of variation are attributable to differences in the features of heads in the lexicon, and the proposed hierarchical organisation of these parameters (Roberts 2012) makes further predictions for typology.

It remains to be seen whether this approach can be upheld in the face of discussed challenges relating to subject marking, combined doubling and non-doubling object marking and symmetry in double object constructions. Further challenges are PCC effects, multiple object markers (both prefixal, or combined prefixal and suffixal object marking, Baudoin-Lietz *et al.* 2004, Marlo 2013), and pragmatic effects of object doubling (Seidl and Dimitriadis 1997, Diercks and Sikuku 2015), which are all left for further research.

ABBREVIATIONS AND SYMBOLS

Numbers refer to noun classes, or to persons when followed by SG or PL.

APPL	applicative	OM	object marker
CJ	conjoint verb form	OPT	optative
CRC	coerce/cause	PASS	passive
DEM	demonstrative	PROG	progressive
DIST	distal	SM	subject marker
DJ	disjoint verb form	T	tense
FS/FV	final suffix/final vowel		

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