

# Person-Marked Quantifiers in Kinyarwanda\*

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**Abstract:** Person agreement is usually restricted to verbal categories. However, Bantu languages permit person agreement on certain adnominal quantifiers. We propose an account of the evolution of person agreement that constrains the cliticization of pronominals to specifier-head relationships. This diachronic view captures the presence of person agreement in Bantu on adnominal quantifiers as well as verbs.

## 1 Introduction

Cross-linguistically, syntactic domains of agreement differ with respect to the kinds of agreement features they can show. Nominal-internal agreement rarely involves person, but often involves number, gender, and case features (Greenberg 1978, Lehmann 1988). Agreement on predicates, on the other hand, can involve number, gender, and—crucially distinct from nominal-internal agreement—person.

French is illustrative of this point; it exhibits only gender and number features on adjectives, but the person feature is reserved for verbs, as illustrated in (1), where the verb *sommes* ‘are.1PL’ agrees in person (first) and number (plural) features with the trigger *nous* ‘we.’ The adjective *pauvres* ‘poor’ agrees in number (plural).<sup>1</sup>

- (1) *Nous sommes pauvre-s.*  
we are.1PL poor-PL  
‘We are poor.’

French also shows number and gender features inside the nominal, as in (2). Here, similar to what was seen in (1), the adjective agrees in number (plural) with *nous*.

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<sup>1</sup>Adjectives can also agree in gender, though this is unrealized on this adjective.

- (2) *Pauvre-s nous.*  
 poor-PL us  
 ‘Poor us.’

French does not, however, allow person to appear on adjectives, be they inside a predicate (3) or inside an NP (4).

- (3) \**Nous sommes pauvr-ons.*  
 we are.1PL poor-1PL  
 ‘We are poor.’

- (4) \**Pauvr-ons nous.*  
 poor-1PL us.  
 ‘Poor us.’

Examples (3)–(4) show that the adjective *pauvre* ‘poor’ cannot take the first-person plural marker *-ons*, which is reserved for verbal agreement in the language. The appearance of person features within a noun phrase (e.g. on NP-internal adjectives), though logically possible, is the typological rarity under discussion here; cross-linguistically, the person feature is more frequently found on verbal predicates.

An interesting counterexample to this generalization, however, is found in some Bantu languages, where certain post-nominal quantifiers agree in person with their quantified nouns. An example from Kinyarwanda (Bantu; Rwanda) in (5) shows the quantifier *-ese* ‘all’ agreeing in person with the subject pronoun *mwe* ‘you (plural).’<sup>2</sup>

- (5) (*Mwe*) *mw-ese mw-agi-ye ku i-duka*  
 2PL 2PL-all 2PL-PST.GO-PERF to CL5-store  
 ‘All of you went to the store.’

This contrasts with adjectives, which show agreement in class 2, the noun class normally used for plurals denoting humans.<sup>3</sup> For example, the adjective *-gufi* ‘short/small’ shows the same agreement with *mwe* ‘you (plural)’ in (6) as it does with *abana* ‘children’ in (7).

<sup>2</sup>The native speaker judgments for Kinyarwanda in this paper come from Yohani Kayinamura, Oscar Kabera, and Hodari Muvunyi.

<sup>3</sup>In the Bantuist tradition, a noun class numeral indicates both class (gender) and number: odd-numbered noun classes are for singular and even-numbered for plural. Classes 1 and 2 are used for human-denoting nouns (and pronouns), class 1 for singular and class 2 for plural. Thus, class 2 is the only class that can appear with plural personal pronouns.

- (6) (*Mwe*) *ba-gufi mw-agi-ye ku i-duka.*  
 2PL CL2-short 2PL-PST.go-PERF to CL5-store  
 ‘You (plural) short ones went to the store.’
- (7) *Aba-na ba-gufi mw-agi-ye ku i-duka.*  
 CL2-children CL2-short 2PL-PST.go-PERF to CL5-store  
 ‘The short children went to the store.’

Note that noun class 2, glossed as CL2, is a gender and not a person feature. When modifying a pronoun, the quantifier *-ese* ‘all’ cannot agree in class as adjectives do, as shown in (8); the quantifier must show person agreement.<sup>4</sup>

- (8) \**Mwe b-ose mw-agi-ye ku i-duka*  
 2PL CL2-all 2PL-PST.go-PERF to CL5-store  
 Intended: ‘You all went to the store.’

The quantifier *-ese* ‘all’ should agree in person with the second person plural pronoun *mwe* ‘you (plural)’.<sup>5</sup> Given typological tendencies, one would expect that *-ese* ‘all’ would show gender agreement, as in (8), paralleling to the adjectival agreement in (6). Instead, this quantifier must show person agreement when there is a person feature present.

Previous discussions of quantifier agreement have approached the phenomenon from two perspectives: synchronically and diachronically. Baker (2008:184-186) mentions person agreement on quantifiers in Zulu and Swahili, invoking synchronic syntactic structure to explain the distribution of the person feature. The central insight from his approach is that *-ese* ‘all’ is the head of a DP constituent, which entails a specifier-head structural relationship that permits person agreement, as explained below.

Jerro (2013) incorporates the specifier-head condition into a diachronic analysis. The relationship between specifiers and heads permits cliticization of pronominal material over time. In this paper we build on that analysis, showing that the historical approach can account for the fact that these quantifiers in Kinyarwanda can no longer form a constituent, which is expected given the perspective on how pronominal material is incorporated onto

<sup>4</sup>Note that there is a phonological change in (8), where *-ese* surfaces as *-ose*.

<sup>5</sup>The quantifier *-ese* ‘all’ can also agree with the first person plural pronoun *twe* ‘we.’ It cannot agree with first- or second-person singular forms *njyewe* and *wowe*, respectively. This is presumably due to semantic constraints of plurality; namely, the quantifier can only reference a group of two or more, restricting its use to plural elements.

heads (Givón (1976); Bresnan and Mchombo (1987)).

It should be noted that quantifiers showing NP internal person agreement are found outside the Bantu family. Faller and Hastings (2008) discuss this pattern in Cuzco Quechua, of which an example is given in (9).<sup>6</sup> Another example comes from Turkish, given in (10).<sup>7</sup>

- (9) *Wakin-ni-nchis ri-su-nchis.*  
some-EUPH-1INCL go-FUT-1INCL  
'Some of us will go.' Cuzco Quechua (Faller and Hastings 2008:298,(37b))

- (10) *(biz) hep-im-iz // (siz) hep-in-iz*  
we all-1POSS-PL // you all-2POSS-PL  
'all of us // all of you' Turkish

The paper proceeds as follows: Section 2 summarizes Baker's (2008) analysis of person-agreeing quantifiers. Section 3 proposes a diachronic account of the distribution of person in Kinyarwanda, building on the work of Jerro (2013). Section 4 compares Kinyarwanda with Turkish and English. Section 5 concludes the discussion.

## 2 Baker's (2008) Analysis

Baker (2008) proposes a synchronic Minimalist theory of agreement, based on structural properties of verbal and adjectival phrases. He uses this theory to explain the existence of person morphology on quantifiers in Zulu and Swahili, comparable to the examples given above from Kinyarwanda.

Baker's theory of the distribution of person agreement is based on the syntactic condition given in (11), which defines when a particular lexical category may show person agreement.

- (11) *The Structural Condition on Person Agreement (SCOPA)*

A category F can bear the features +1 or +2 if and only if a projection of F merges with a phrase that has that feature and F is taken as the label of the resulting phrase.

Baker (2008:52)

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<sup>6</sup>The morpheme *ni-* in Quechua is euphonic, i.e. inserted for ease of articulation.

<sup>7</sup>Thanks to Vijay John for suggesting the Quechua and Turkish data and to Derya Kadipasaoglu for native speaker judgments on Turkish.

The intuition behind this configuration is that for a target to agree in person with a nominal, that nominal must appear in the target's specifier or complement position. Baker's theory prohibits attributive adjectives from agreeing in person with a noun because adjective phrases are assumed to lack a specifier position which the noun may occupy. Verbs, on the other hand, can agree in person with nouns because they project a specifier position which the controller noun may occupy.

In addition to the SCOPA in (11), Baker assumes the parameter setting for Bantu languages in (12):

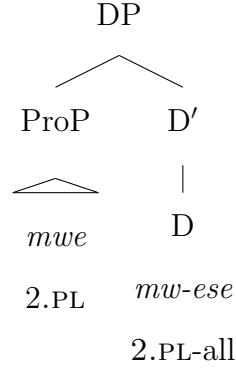
(12) *The Direction of Agreement Parameter (Set for Bantu)*

F agrees with DP/NP iff DP/NP asymmetrically c-commands F.

This parameter setting predicts that, in Bantu languages, all targets will follow their controller of agreement. DPs are assumed to be head-initial in Bantu language (i.e. nouns will always precede their modifiers, such as *umwana* (child) *mwiza* (good) 'good child' in Kinyarwanda), meaning that specifiers will always precede the complement. With the parameter setting in (12), to be asymmetrically c-commanded, all targets must appear after the controller. Given the SCOPA and the parameter in (12), Baker's theory predicts that determiners should be able to agree in person with a complement because the determiner directly merges with its complement. Crucially, Baker assumes that quantifiers showing person agreement are determiner heads, with the personal pronoun in specifier position.

For the phrase *mwe mwese* 'all of us' (cf. (5) above), the pronoun *mwe* 'we' will occupy the specifier position of the DP, headed by the determiner *mwese* 'all of us.' This is schematized in (13), adapted from Baker (2008:186, ex. (48a)).

(13)



In (13), the pronoun *mwe* ‘you (plural)’ is in the specifier position of the quantifier *-ese* ‘all.’ The SCOPA is satisfied; person agreement may appear on the quantifier because *mwese* merges with a projection *mwe* that contains the +2 feature. The Direction of Agreement Parameter in (12) is satisfied because the controller asymmetrically c-commands the target for agreement.

Turning now to Kinyarwanda, data collected by the first author of this paper suggest that what Baker treated as a DP constituent may not be one. The only syntactic position where *mwe* ‘2PL’ can occur juxtaposed with *mw-ese* ‘2PL-all’ is sentence initially, shown in (5). *Mwe* and *mwese* are in complementary distribution in object and oblique positions.

- (14) a. *Aba-na ba-bwi-ye mwe in-kuru.*  
CL2-children CL2-tell-PERF you.PL CL9-story  
‘The children told you (plural) the story.’
- b. *Aba-na ba-bwi-ye mw-ese in-kuru.*  
CL2-children CL2-tell-PERF 2PL-all CL9-story  
‘The children told you all the story.’
- c. \**Aba-na ba-bwi-ye [mwe mw-ese] in-kuru.*  
CL2-children CL2-tell-PERF you.PL 2PL-all CL9-story  
‘The children told you all the story.’
- (15) a. *In-kuru ya-vuz-w-e na mwe.*  
CL9-story CL9-tell-PASS-PERF by you.PL  
‘The story was told by you (plural).’
- b. *In-kuru ya-vuz-w-e na mw-ese.*  
CL9-story CL9-tell-PASS-PERF by 2PL-all  
‘The story was told by you all.’

- c. \**In-kuru ya-vuz-w-e na [mwe mw-ese]*.  
 CL9-story CL9-tell-PASS-PERF by you.PL 2PL-all  
 ‘The story was told by you all.’

The data in (14a)–(14b) show that either *mwe* or *mwese* can appear in object position. But they cannot appear together in object position (14c). Likewise, the two cannot appear together in oblique position in (15c), but either one can appear there alone, as in (15a)–(15b).

The data in (14)–(15) indicate that *mwe mwese* is not a constituent. Instead perhaps the sentence-initial pronoun is a left-dislocated topic that determines anaphoric agreement on the subject pronoun that it binds. The pronoun is adjoined to the clause:

- (16) *Mwe [mw-ese mw-agi-ye ku i-duka]*.  
 2PL 2PL-all 2PL-PST.GO-PERF to CL5-store  
 ‘(As for you,) all of you went to the store.’

These data are problematic for a synchronic analysis like Baker’s. His analysis relies on the notion that the pronoun in specifier position triggers agreement in the +2 feature on the determiner. However, if the position where this pronoun appears were the specifier position then the combination would be a constituent, and apparently it is not one. That theory of the synchronic assignment of person features does not account for the data in Kinyarwanda.

As noted by Jerro (2013), another empirical issue for Baker’s analysis comes from distal and proximal markers in Kinyarwanda and Shona. Recall that the parameter setting for Bantu in (12) predicts that because the controller must asymmetrically c-command the target, no pre-nominal material should contain agreement features. This is not empirically borne out. Data from Kinyarwanda and Shona (Bantu, Zimbabwe) show that pre-nominal agreement indeed exists in these languages. The distal and proximal markers *aba*, *ibyo*, *iyi* and *ava* in (17)–(18) illustrate that pre-nominal material may show noun class (i.e. gender and number) agreement in Kinyarwanda.

- (17) a. *aba ba-ntu b-ose*  
 these.CL2 CL2-people CL2-all  
 ‘all these people’

b. *ibyo bi-ntu by-ose*  
 these.CL8 CL8-things CL8-all  
 ‘all these things’

c. *iyo my-aka y-ose*  
 these.CL4 CL4-years CL4-all  
 ‘all these years’

Kinyarwanda

(18) *ava va-na v-ose*  
 CL2.these CL2-children CL2-all  
 ‘All these children...’

Shona, from Myers (1987:75)

These pre-nominal distals and proximals show clear examples of pre-nominal agreement, which counters Baker’s claim that targets must follow controllers in Bantu languages.

### 3 A Historical Approach to Person-Agreeing Quantifiers

The distribution of person agreement in Kinyarwanda can be explained from the perspective of historical incorporation, whereby pronouns incorporate onto other elements over time. Historical work has shown that agreement morphology arises from a gradual cline wherein content items are reanalyzed as grammatical items and, via cliticization, attach onto another element (cf. Hopper and Traugott 1993). Looking specifically at person morphology, it has been argued that person agreement markers derive historically from the incorporation of personal pronouns (Givón 1976). Bresnan and Mchombo (1987) discuss this historical development within the framework of Lexical Functional Grammar, arguing that some verbal person affixes are ambiguous between agreement markers that redundantly mark agreement features and incorporated pronominal elements. The intuition behind these works is that over time, stand-alone pronouns become clitics, then they become fully incorporated onto the host, and then, finally, they lose their referentiality as pronouns. At this last stage, they become grammatical agreement markers.

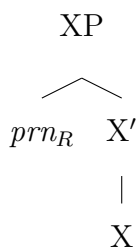
Jerro (2013) proposes that the historical cliticization of pronominal material is restricted to a specifier-head relationship. Pronouns do not indiscriminately cliticize onto any adjacent element, but may only cliticize onto the head of the phrase. This idea is parallel



to the synchronic theory espoused by Baker (2008), who adopts a version of Chomsky’s (1986) specifier-head agreement and applies it only to person agreement. Through the lens of diachronic change, the specifier-head relationship can be seen to constrain where person agreement may arise. Crucially, the current analysis, as well as Jerro (2013), constrains where the personal pronoun may cliticize over time. Only elements in positions with determinate grammatical functions can cliticize to the head that selects the function. Crucial to our analysis is the assumption that one argument XP may have no more or less than one referential element—cf. the Function-Argument Biuniqueness Condition in LFG (Bresnan 2001) or Principle C in GB/Minimalist theories (Chomsky 1981).

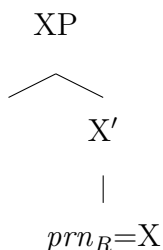
This can be thought of as a four-stage development over time. At stage 1, the pronoun is in specifier position of a particular XP, and it is a standalone mono-morphemic word.

(19) Stage 1



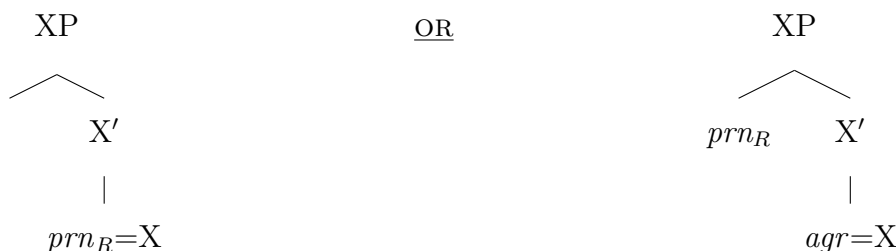
At stage 2, the pronoun cliticizes onto the head. Crucially at this stage, the pronoun is still referential. If it distinguishes phi-features then any agreement it shows is called anaphoric agreement by Bresnan and Mchombo (1987).

(20) Stage 2



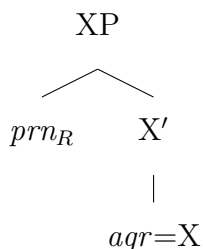
At stage 3, the morpheme is referential only in the absence of a standalone pronoun. The morpheme may serve as the referential element, as shown in the tree on the left in (21), or, when a pronoun is present, it behaves as a grammatical agreement marker as shown on the right.

(21) Stage 3



As stage 4, the pronoun loses its referentiality, becoming what is called a “grammatical agreement marker” by Bresnan and Mchombo (1987). At this stage, it is predicted that a pronoun must appear in specifier position to ensure that the XP contains a referential element.

(22) Stage 4



(19) shows a referential pronoun ( $\text{prn}_R$ ) in the specifier position of an XP. (20) shows the incorporation of the referential pronoun onto the head ( $\text{prn}_R = \text{X}$ ). (22) shows the final stage in which the affixal pronoun loses its referentiality but retains its phi features, thus becoming an agreement affix.

The crucial distinction between the first and second stages is that in the first stage, the pronominal element is a standalone morpheme. One test to show this is whether intervening material can appear between the pronoun and the verbal head. For example, in the English sentence *we ate the cookies*, adjectival and nominal modifiers can be placed between the pronoun and the verb, such as *we hungry graduate students ate the cookies*. This kind of

modification is crucially not available at stage 2, where the pronoun has cliticized onto the head.

The distinction between stages two and three is that the morpheme loses its referentiality in situations where a standalone pronoun is present. However, this form still retains its referentiality in the absence of a standalone pronoun. Empirically, it is predicted that a language at this stage will permit (1) standalone pronouns only, (2) standalone pronouns with a person-marked quantifier, and (3) a single person-marked quantifier.

The historical path from pronoun to agreement is gradual rather than characterized by sudden jumps between discrete stages. For example, between stages two and three are finer transition stages, where the referential property has been lost (perhaps optionally) but other semantic properties of pronouns are retained (Bresnan 2001:146; Coppock and Wechsler 2012). Those intermediate stages are often studied under the rubric of *clitic doubling*, especially in the literature on European languages. The appearance of a verbal agreement marker (the ‘clitic double’) doubling a DP associate can be conditioned on various pronoun-like semantic properties of the associate, including specific reference (Porteño Spanish; Suñer 1988) and topicality (Albanian and Greek; Kallulli 2000). Object agreement is sensitive to specificity or animacy in some Bantu languages (Givón 1976; Wald 1979). Quantifiers like *every*, *each*, *most*, and *no* tend to resist doubling by clitics (Rizzi 1986), but phrases like ‘all of us’ can be referential, hence not true quantifiers, in some languages (Baker 1996). In this paper we are concerned primarily with 1st and 2nd person pronouns in phrases headed by certain quantifiers. The possible role of semantic factors like specificity and topicality will be left for future research.

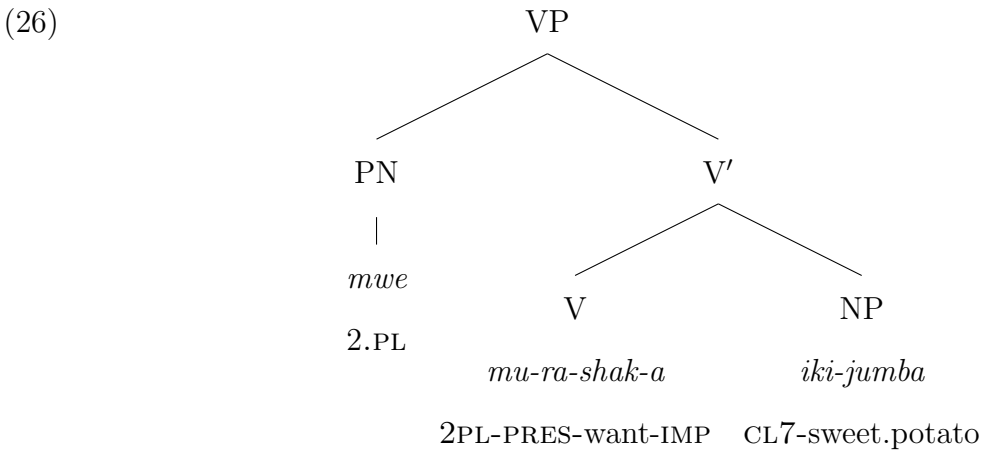
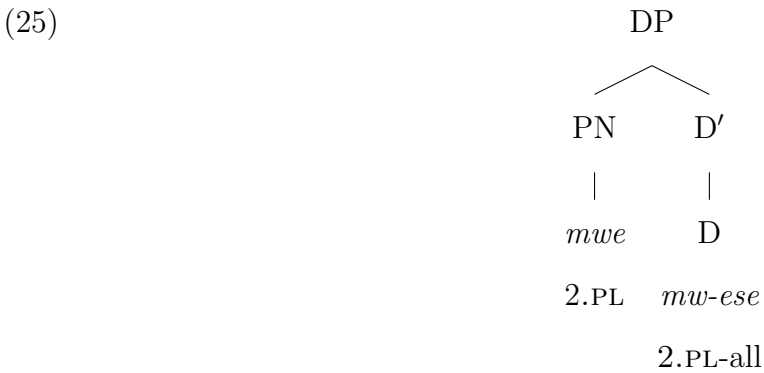
In the final stage, the morpheme has lost all possibility of being referential, and it cannot appear without the presence of a referential pronoun.

This proposal was used by Jerro (2013) to capture the synchronic distribution of person morphology in Kinyarwanda, which appears on verbs and the determiner *-ese* ‘all,’ as shown in (23) and (24):

(23) *mwe mw-ese...*  
 2PL 2PL-all  
 ‘you all...’

(24) *mwe mu-ra-shak-a iki-jumba.*  
 2PL 2PL-PRES-want-IMP CL7-sweet.potato  
 ‘You (plural) want a sweet potato.’

In (23), the determiner *-ese* ‘all’ agrees in person and number with the second-person plural pronoun *mwe*; in (24), the verb *-shaka* ‘want’ agrees in person with *mwe*. Following Baker (2008), the two phrases are proposed to be those in (25) and (26):



The proposal here is that the DP pronouns *mwe* ‘you (plural)’ or *twe* ‘we’ were in specifier position. Over time, that morpheme cliticized onto the head of the phrase, be that head the quantifier head of the DP or the verbal head of the VP.

Evidence for the claim that pronouns only cliticize onto the head of a phrase—and not simply any adjacent material—comes from the fact that adjectives can never show person

agreement. Adjectives are similar to the quantifier *-ese* ‘all’ in that they appear immediately after the noun in Kinyarwanda, as shown in (27)–(28).

(27) *umw-ana mu-to*  
CL1-child CL1-small  
‘the small child’

(28) *aba-na ba-to*  
CL2-child CL2-small  
‘the small children’

However, unlike the quantifier *-ese* ‘all’ adjectives do not project a specifier position (Baker 2005). Recall that the crucial configuration for a category to show person agreement is to bear the specifier-head relationship. On our analysis, this means that it is not possible for adjectives to show person agreement because they cannot bear a pronominal element in a specifier position since this is a position they crucially lack. This prediction is borne out empirically; adjectives cannot carry person agreement in Kinyarwanda.

(29) \**twe tu-to*  
we 1PL-small  
‘we small ones’

(30) *twe ba-to*  
we CL2-small  
‘we small ones’

The data in (29) shows that person agreement cannot appear on the adjective *-to* ‘small.’ The adjective can agree in gender and number, in this case class 2, the class in Bantu designated for human plurals, as shown in (30). Despite the similarity between adjectives and the quantifier *-ese* ‘all’ in their linear position, the two differ in their syntactic relationship to the pronominal head. The restriction of cliticization of person morphology onto heads captures the two locations in which person agreement is found: post-nominal determiners and verbs.

Although not explicitly discussed in Jerro (2013), this analysis also permits a way of explaining the constituency facts noted above in critique of Baker (2008). The crucial aspect

of the historical explanation of person agreement is that pronouns cliticize over time, and that in Stage 3 they lose their referentiality as pronouns. At this stage, the pronouns are grammatical agreement morphemes that show person and number. The assumption made in Jerro (2013) is that the person morphemes in Kinyarwanda have reached Stage 3.

However, the data in (14)–(15), repeated here as (31)–(32), show that pronouns and the person-marked determiners cannot appear in the same constituent. They are in complementary distribution in two positions: as the object of a verb, as in (31),<sup>8</sup> and as the object of a prepositional oblique, as in (32).

- (31) a. *Aba-na ba-bwi-ye mwe in-kuru.*  
 CL2-children CL2-tell-PERF you.PL CL9-story  
 ‘The children told you (plural) the story.’
- b. *Aba-na ba-bwi-ye mw-ese in-kuru.*  
 CL2-children CL2-tell-PERF 2PL-all CL9-story  
 ‘The children told you all the story.’
- c. \**Aba-na ba-bwi-ye [mwe mw-ese] in-kuru.*  
 CL2-children CL2-tell-PERF you.PL 2PL-all CL9-story  
 ‘The children told you all the story.’
- (32) a. *In-kuru ya-vuz-w-e na mwe.*  
 CL9-story CL9-tell-PASS-PERF by you.PL  
 ‘The story was told by you (plural).’
- b. *In-kuru ya-vuz-w-e na mw-ese.*  
 CL9-story CL9-tell-PASS-PERF by 2PL-all  
 ‘The story was told by you all.’
- c. \**In-kuru ya-vuz-w-e na [mwe mw-ese].*  
 CL9-story CL9-tell-PASS-PERF by you.PL 2PL-all  
 ‘The story was told by you all.’

The sentences in (31c) and (32c) show that the pronoun *mwe* ‘you (plural)’ and the person-marked quantifier *-ese* ‘all’ cannot appear in the same constituent.

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<sup>8</sup>Research on double-objects in Kinyarwanda shows that both objects in sentences like those in (31) are symmetrical. Namely, they are both treated syntactically as objects in various tests, such as passivization, object incorporation, relativization, etc. See Gary and Keenan (1977), Kimenyi (1980), Dryer (1983), Perlmutter and Postal (1983), and McGinnis and Gerdtts (2003) for discussion on object symmetry in Kinyarwanda.

Given the historical incorporation story outlined here, these data indicate that Kinyarwanda is at Stage 2 of the cliticization process (the structure in (20)). At this stage, the morpheme *mw-* attached to *-ese* is still referential; therefore, the two cannot appear within the same DP.

Lubukusu, a Bantu language spoken in Western Kenya, provides an example of a language that has moved to stage 3.<sup>9</sup> Like Kinyarwanda, it can show both the pronoun and the person-agreeing quantifier in subject position:<sup>10</sup>

- (33) a. *Enywe mw-eesi mw-a-ch-a khu=soko.*  
 you.2PL 2PL-all 2PL-PST-go-FV LOC=market  
 ‘You all went to the market.’
- b. *Mw-eesi mw-a-ch-a khu=soko.*  
 2PL-all 2PL-PST-go-FV LOC=market  
 ‘You (plural) went to the market.’
- c. *Enywe mw-a-ch-a khu=soko.*  
 you.2PL 2PL-PST-go-FV LOC=market  
 ‘You all went to the market.’ Lubukusu

Unlike Kinyarwanda, however, Lubukusu permits the pronoun and person-marked quantifier to appear together in object position, as well as in isolation. The sentence in (34a) shows both the quantifier and the pronoun together in object position, (34b) shows just the person-agreeing quantifier in object position, and (34c) shows just the personal pronoun in object position.

- (34) a. *Lioneli a-a-bol-el-a [enywe mw-eesi] embakha.*  
 Lionel CL1-PST-tell-APPL-FV you.2PL 2PL-all story  
 ‘Lionel told you all the story.’
- b. *Lioneli a-a-bol-el-a [mw-eesi] embakha.*  
 Lionel CL1-PST-tell-APPL-FV 2PL-all story  
 ‘Lionel told you all the story.’
- c. *Lioneli a-a-bol-el-a [enywe] embakha.*  
 Lionel CL1-PST-tell-APPL-FV you.2PL story

<sup>9</sup>Thanks to Justine Sikuku for the Lubukusu data.

<sup>10</sup>The abbreviation FV in the glosses in (33) and (34) stands for ‘final vowel,’ a Bantuist term for the aspect-marking morphology that appear at the end of the verb.

‘Lionel told you (plural) the story.’

Lubukusu

The relevant data here is the sentence in (34a), which crucially contrasts with Kinyarwanda. Recall that in Kinyarwanda, doubling of the pronoun and person-marked quantifier is not possible. Lubukusu has moved beyond Kinyarwanda in its grammaticalization of the personal pronoun. In (34a), the morpheme *mw-* has no referentiality. The quantifier *mw-eesi* ‘all’ can appear alone in (34b), suggesting that the pronoun is still referential in the absence of a full pronoun.<sup>11</sup>

## 4 Cross-linguistic Comparison

The three-stage historical analysis outlined in the previous section makes cross-linguistic predictions regarding the incorporation of personal pronouns onto quantifiers. We now turn to discussing Turkish and English, which exhibit two different stages of the historical incorporation story.

Standard English represents the most preliminary stage in the three-stage incorporation analysis. In Standard English, no incorporation of personal pronouns has taken place. The first- and second-person plural pronouns are in no way incorporated when used with the quantifier *all*, as in *you all* and *we all*. This exemplifies Stage 1 in the present theory; no incorporation has begun.

Some varieties of English, however, also have the option of using *y’all* instead of *you all*. This parallels the situation outlined above for Kinyarwanda, in which the pronoun is completely incorporated onto the quantifier. However, the situation is slightly different for English, since the form *y’all* has been recruited to fill a gap in the English pronominal system, which otherwise does not distinguish number in second person (non-reflexive) pronouns.

In (10), it was noted that Turkish, like Kinyarwanda, allows person morphology on the quantifier for “all.” The data from above are repeated in (35):

- (35) a. *(biz) hep-im-iz*  
we all-1POSS-PL

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<sup>11</sup>It was not possible to find Bantu languages that appear at stages 1 or 4, but these stages will be discussed in Section 4.



‘all of us’

- b. (*siz*) *hep-in-iz*  
you all-2POSS-PL

‘all of you’

Turkish

Here, the quantifier *hep* ‘all’ shows agreement in first- and second- person (the suffixes *-im* and *-in*, respectively) with the pronouns *biz* “you (plural)” and *siz* “we.”

Turkish is at a different stage in its incorporation of these elements than Kinyarwanda. Turkish allows for both the pronoun and the quantifier to appear in the same constituent, which is crucially different from the Kinyarwanda data discussed above. For example, both may occur together in object position:

- (36) *Cocuk-lar [siz hep-in-iz-e] hikayeyi anlattilar.*  
kids-PL 2pl all-2-PL-DAT story.ACC tell.PAST.PL  
‘The children told all of you the story.’

- (37) *Hikaye [siz hep-in-iz] tarafından anlatildi.*  
story 2pl all-2P-PL by tell.PASS.PST  
‘The story was told by all of you.’

Turkish

The sentence in (36) contains the object *siz hepinize* ‘all of you,’ where both the pronoun and the quantifier for “all” are in the same constituent. A similar situation is in (37), in which the same constituent is found in oblique position.

The fact that both the pronoun and quantifier may appear in the same constituent indicates that the incorporated second-person plural marker *-in* in Turkish has lost its referentiality, situating it into Stage 3 of our analysis, whereby incorporated pronouns have become markers of grammatical agreement.<sup>12</sup>

Standard English, Kinyarwanda, and Turkish illustrate the three stages of pronominal incorporation onto quantifiers. Standard English exemplifies Stage 1, with no incorporation, apart from dialects with the incorporated form *y’all* that has been reanalyzed as second-person plural. In Kinyarwanda, the pronoun is incorporated onto the quantifier, but it is still referential—placing Kinyarwanda in Stage 2. In Turkish, the pronoun has lost its referential

<sup>12</sup>We were unable to consult a native Quechua speaker to clarify at which stage Quechua’s person agreement has achieved.

ability, which permits it to appear in the same constituent as the standalone pronoun *siz*. Turkish is at Stage 4, where the pronoun has become a grammatical agreement marker.<sup>13</sup>

## 5 Conclusion

In this paper, we have discussed the distribution of person agreement in the Bantu language Kinyarwanda. We explained the distribution of person morphology on post-nominal quantifiers and verbs through a historical analysis of pronoun incorporation. Our analysis draws upon Baker’s (2008) proposal that the spec-head agreement condition applies specifically to person agreement, but we move this idea into a diachronic setting. We have argued that this diachronic version of the theory makes better empirical predictions in Kinyarwanda and cross-linguistically than the analysis of Baker (2008), which fails to capture the agreement found on pre-nominal determiners as well as the inability for pronouns to appear with person agreement morphology in object and oblique positions.

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<sup>13</sup>Possessive pronouns can sometimes be marked on both the head noun and an adjectival modifier, as in Tundra Nenets (Nikolaeva 2005, cited in Corbett 2006:141-142).

- (38) a. *serako-myi te-myi*  
white-1SG reindeer-1SG  
‘my white reindeer’  
b. *serako-r<sup>o</sup> te-r<sup>o</sup>*  
white-2SG reindeer-2SG  
‘your white reindeer’

This could be a case in which the referential possessive pronoun appears twice, hence not grammatical agreement in our sense.

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