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Non-existential bound pronouns and restricted reflexive: the emergence of reflexive pronoun in Manding and Mokole languages

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1. Introduction

Reflexives, locally bound anaphors, are commonly defined in the literature as deficient elements. They are underspecified for φ-features when they appear in the derivations, and they receive them later in the course of derivation. This accounts for the fact that anaphors are bound variables whose identification depends on some other element in the structure: since they do not have their inherent feature specification, their identification depends on some other element in the structure that they are related to.

The sources of grammaticalization of reflexive that are usually cited in the literature, namely, the nouns 'head', 'body' and the intensifier (Heine & Kuteva 2007), do not appear to be in direct relation to the underspecification property of reflexive. In this paper, however, I provide evidence for a source of grammaticalization for a reflexive pronoun that has not been discussed in the literature so far and that represents a perfect match to its definition, therefore providing a support, on the diachronic side, to the deficiency view of anaphors. This source is the generic pronoun, that is underspecified for person, as has been argued in a number of works. The novel grammaticalization path that I propose here is the development of the reflexive pronoun from 2SG pronoun via the generic use. This pattern emerges on the comparative analysis of the distribution of the pronominal form *í/ì*, that will be referring to as PR-i throughout the paper, the Manding and Mokole languages in the Mande family.

As I will try to show, this grammaticalization analysis, whereby a reflexive emerges from a 2SG pronoun via person underspecification, provides unified account for a range of phenomena that, taken separately, may look rather exotic, but make perfect sense as part of the whole picture. These phenomena are the following.

First, the pronoun *i* in Maning and Mokole shows specific use of bound variable that can be characterized as a bound non-existential (BNE) pronoun, illustrated in (1) from Kakabe. This type of pronoun, very little discussed in the literature so far, is

characterized by two properties. First, it is a locally-bound form, second, it requires a non-existentially bound antecedent.

Pronoun *ì* in Northern and Central Kakabe

(1a) *Kala$_i$ si* ***ì$_i$*** *kò yàn nɛtɔ.*
UNIV POT **PR.I** wash here in
'Anyone can wash himself here.'

(1b) *Dóodo$_i$ tée* ***ì$_i$*** *kò yàn nɛtɔ.*
person.NEG POT.NEG **PR.I** wash here in
'Nobody can wash himself here.'

Second, the reflexive use of PR-i has restrictions in some of the languages of the group that are unexpected for a reflexive pronoun. For example, in Kakabe, the reflexive *ì* requires its antecedent to be non-specific or non-finite. It can be used with PRO or relative pronoun as antecedent but not with a specific DP.

Northern Kakabe

(2a) *Músà nà-ta kɔ̀ɛ̂ tɔ PRO$_i$ k' **ì$_i$** kò.*
Musa come-PFV.I river to INF **PR.I** wash
'Musa came to the river to wash himself.'

(2b) *Músa bát' à **(*ì)** kò.*
Musa PFV.OF **3SG** (PR.I) wash
'Musa has washed himself.'

Finally, the Manding and Mokole languages regularly show syncretism between 2SG pronoun and the reflexive pronoun.

A crucial argument of the paper is that the generic 2SG becomes BNE through the loss of person specification. I argue, following (Sigurðsson 2010; Adams & Conners 2020), that nominal expressions can have specified or underspecified person.

2. Bound non-existential pronoun

2.1. What is BNE and where it is found

Bound non-existential pronoun is a form that has to be bound by some other NP. Second, it imposes a restriction on its antecedent: the NP that binds it has to be non-existential itself. Third, its antecedent has to be either the subject or it can be left-dislocated.

Let us start by looking closer at the phenomenon of bound-non-existential pronoun. As already said, I define BNE (1) as bound pronoun form that requires a non-existentially bound antecedent, such as generic, negative and distributive quantifier phrases. As I argue in what follows, BNE is a type of use that has developed from the generic-personal use of the 2SG pronoun through the loss of person feature.

This type of pronoun has never been discussed in the literature, with the exception of two works, namely, (Creissels 2013; Creissels et al. 2015). It is therefore not possible, so far, to provide any assessment of how widespread BNE pronouns can be cross-linguistically, but from these two works it follows that it is found in, at least, two language families.

Creissels (2013) draws attention to the existence of the pattern of syncretism where the same form that is used as a 2SG personal pronoun can also be used to express co-variation with a non-specific NP on the data from Mandinka, a Manding language spoken in Senegal. In example (3) the 2SG pronoun is *í* used generically, whereas in (4) *í* co-varies with an NP that has a universal quantification reading.

Mandinka: pronoun *í* used as a generic-personal (Creissels 2013: 59)

(3) *Níŋ* ***í*** *máŋ* *féŋ* *sene,* *í* *búka* *féŋ* *káti.*
if **2SG** PFV.NEG thing cultivate **2SG** HAB.NEG thing reap
'If one does not cultivate anything, one does not reap anything.'

Mandinka: pronoun *í* co-varying with a universally quantified NP (Creissels 2013: 60)

(4) *Mansadiŋ* *wó* *mansadiŋ,* *níŋ* ***í*** *ñán-ta* *mansayáa-lá* *Mandiŋ,*
prince INDEF prince if **2SG** must-PFV.I reign-INF Mande
Suusûu *Súmáŋkúrú* *be* ***í*** *faa-la* *dóróŋ.*
Suusuu Sumankuru COP **2SG** kill-INF only
'Suusuu Sumankuru would kill any prince who was doomed to reign over Mande.'
Litt.: '[Any prince]$_i$, if you$_i$ were doomed to reign over Mande, Suusuu Sumankuru would just kill you$_i$.'

Creissels (2013: 2) assumes that this type of syncretism may be present in a number of other languages in area as well.

To the best of my knowledge, the situation I describe has never been analyzed before, either in Mandinka or in other languages, and none of the descriptive grammars of West African languages I have been able to consult mentions it, although it undoubtedly occurs in texts, not only in other Manding varieties (Bambara, Maninka, Dyula, etc.), but also in languages whose genetic relationship with Mandinka is, at most, very remote, for example, Wolof.

Indeed, in a later study that he co-authored with other specialists on Atlantic and Mande languages (Creissels et al. 2015), this assumption proves to be true for other languages apart from Mandinka. Creissels et al. (2015) analyze the expression of impersonality and genericity in sixteen languages (three Mande and thirteen Atlantic languages) all spoken in the Senegambian area.

Apart from Mandinka illustrated in (4), they demonstrated the use of the second person pronominal forms in three Atlantic languages: Sereer (5), Nyun Gubëeher (6) and Wolof (7).

Sereer (Creissels et al. 2015: 48 < Faye 1979: 295)

(5) *Oxu warna o-kiin, o-damel ɓisel*
whoever kill.SBD CL-person **2SG**-stop.PASS bring.PASS
ɓisel o Jaxaaw.
bring.PASS to Jaxaaw

'Whoever kills a person is arrested and taken to Jaxaaw.' Litt.: 'Whoever$_i$ kills a person, you$_i$ are arrested and taken to Jaxaaw.'

Nyun Gubëeher (Creissels et al. 2015: 48)

(6) *Jamaaŋ g-**u**-ficay-ɛŋ hɔnj-ɔŋ...*
People COND-**2**-share-PL.PFV chose-PL
'When one shares things ...' Litt.: 'People$_i$ if you$_i$ share things…'

Wolof (Diouf 2003: 87)

(7) *Ku yar sa kuuy, yow la-y jëkka daan.*
whoever rear your ram **you** FOC-IPFV do.first strike
'The one who rears one's ram is the first to be attacked by his horns'. Litt.: 'Whoever rears your ram, it is you who it strikes first.'

The study is, in general, dedicated to forms and constructions that can be used with impersonal meaning. Accordingly, the sections concerning the syncretism between a generic/2SG and a pronoun co-varying with a non-specific NP is not very detailed. The authors do not mention either whether other languages, apart from Sereer, Nyun Gubëeher, Wolof and Mandinka have this type of pronoun. There is no information as to whether the NPs that the pronoun in question can co-vary with can also be of the non-specific type bound by the negative or an interrogative operator, as it is the case for the form *ì* in Kakabe that we will discuss further. Nevertheless, it shows the existence of a recurrent pattern whereby a 2SG pronoun is used not only as a personal-generic pronoun, but can also refer back to an overt NP, therefore, serving as a bound form.

(Creissels 2009) discusses this pattern of use for Kita Maninka, asking whether the pronoun *í* is, in fact, a reflexive or a 2SG pronoun. The same type of interrogation is found with respect to some uses of the Bamana pronoun *í*. As he shows, it can be used also as a reflexive pronoun anteceded by the universal determinant *bé* 'all, everyone'.

(8) *Bé y' í dín hè.*
All be GNR child with
'Everyone loves his children'.

In what follows, I will examine in detail the bound non-existential pronouns on the data of Kakabe.

3. The quantifier types and the BNE use of ì in Kakabe

In this section, we will examine more closely the distinctions between the types of quantifier phrases and their scopal properties, on the one hand, and their ability to license *ì* and bear features, on the other hand. This investigation will be based on the theory of quantifier scope developed in Beghelli and Stowell (1997), B&S henceforth.

B&S's theory relies on the general assumptions about phrases containing nominals as they are represented in the generalized quantifier theory (Barwise and Cooper 1981) as well as in Discourse Representation Theory (Kamp 1981) and (Heim 1982). There is a uniform structural representation for all types of expressions containing common nouns, that is, definite and indefinite DPs as well as expressions with determiners that traditionally considered as quantificational, such as *every, no, any,* etc. Within this uniform representation, the type of quantifying force is specified by the determiner which it defines the relationship holding between the relevant sets. The contribution of the noun, on the other hand, consists in introducing a variable and specifying the property that delimits one of these sets. In other words, all these expressions introduce a variable and a descriptive content, and the variable is then bound by an operator.

As compared to the preceding state of research on quantifiers, the crucial import of B&S's approach that relies on (Liu 1990) and (Szabolcsi 1997) consists in the proposal of a differentiated account for quantifier phrase types. They represent quantifiers as falling into a number of types each manifesting distinct scopal behavior resulting from their specific position in the syntactic structure. They therefore challenge the standard assumption going back to (May 1977) that scope properties are equal for all quantifiers. In B&S's theory, the syntactic structure above VP contains a number of projections that hosts quantifying operator (universal, existential closer, negation). These operators are matched by the features such as [∀], [Q], [¬] on the QP, with each type having its own feature. Next, the operator-feature of the QP defines the position that this QP ends up in and where it takes its scope. In other words, each type of QP has a designated landing site (or in some cases, set of candidate landing sites) in the syntactic structure.

The quantifier topology proposed by Beghelli and Stowell (1997) is represented in (9), in the form as it is adapted in Dayal (2013: 839).

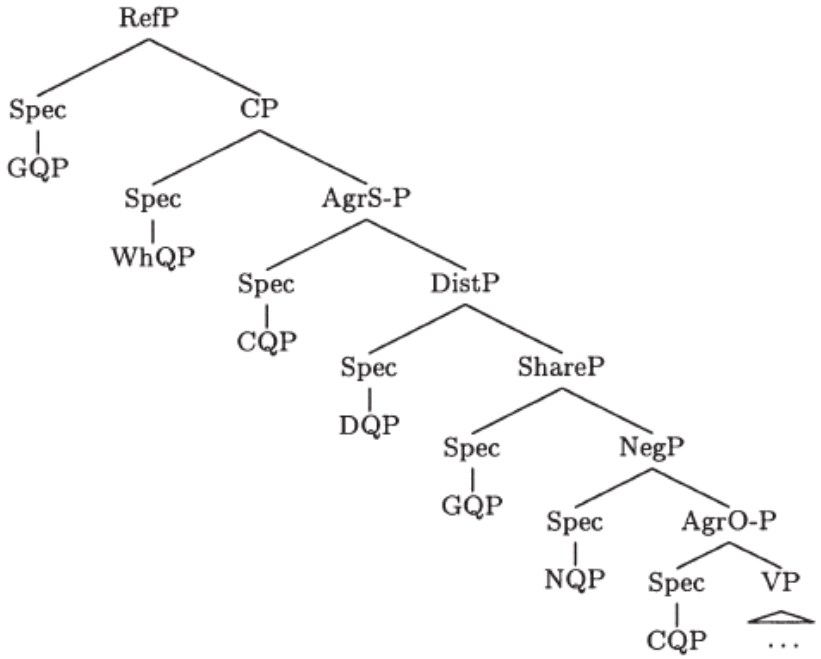
(9a) [$_{RefP}$ GQP [$_{CP}$ WhQP [$_{AgrSP}$ CQP [$_{DistP}$ DQP [$_{ShareP}$ GQP [$_{NegP}$ NQP [$_{AgrOP}$ CQP VP]]]]]]]

(9b) QP-Types:

Interrogative QPs (WhQPs): *which* N, *what*, etc.

Negative QPs (NQPs): *nobody*, *no* N, etc.

Distributive Universal QPs (DQPs): *each*, to some extent, *every*
Counting QPs (CQPs): *few*, *fewer than five*, *between six and eight*, etc.
Group-Denoting QPs (GQPs): *a* N, *two* N, *the* N, etc.



As can be noticed, the association between a particular type of QP and a projection is not always a one-to-one relation, with GQPs and CQP having the capacity to appear in two different projections each. The basic idea is that a QP is born in its case position and moves to a projection due to the demand of feature checking. A projection that is relatively new in their model is ShareP, it is motivated by the reading of indefinite phrases that appear to be existentially closed but, at the same time, to have the reading of the distributed share with respect to the distributive operator ∀ present in $Distr^0$. The QP that appears in the Specifier of ShareP is interpreted as distributed share under ∀ (the term distributed share was introduced by Choe 1987; see also the discussion in Szabolcsi 2010: 111).

One of the basic semantic assumptions concerning the structure in (9) is that part of the heads of the respective projections contain quantifying operators: ∃ in Ref^0 and $Share^0$, ∀ in $Distr^0$, Q operator in Wh^0 and ¬ in Neg^0 (Beghelli and Stowell 1997: 111). With the exception of CQP, each type of QP has a feature that triggers feature checking and with the head having the matching operator and is followed by the movement the specifier of the head from the θ-position where they are born. CQPs that do not have any quantificational operator feature either remain in their θ-position or move to AgrO-P or AgrS-P (object or subject agreement phrases, respectively) that have no such operator.

B&S's account for phrases containing common nouns can be extended to pronominal expressions based on account of indeterminate pronouns formulated by

Kratzer and Shimoyama (2002) and Kratzer (2005). They represent indeterminate pronouns like *any, some, nobody*, as expressions that, first, introduce variables and, second, bear a feature that requires them to agree with a quantificational operator. Therefore, just like in the case of quantifier phrases containing nominal roots, quantification in indeterminate pronominal expressions is due to an operator with which the pronoun agrees. The distinct forms that indeterminate pronouns manifest in languages like English are due to the fact that they spell out concord with the operators they agree with. Thus, *nobody* agrees with the negative operator (¬), the pronoun *some* with the existential (∃) operator, the pronoun *who* agrees with the interrogative operator (Q). To summarize, we are now equipped to address the question of pronominal and nominal quantifier phrases as licensers of the anaphoric *ì* in Kakabe.

To sum up, the assumption that we should retain for our further discussion are the following. Pronominal and nominal expressions (i) introduce variables and (ii) can be of different types depending on operator features that they bear and that make them appear in the specifier of the projection that hosts this operator. As will be shown, the advantage of applying B&S's theory to the case of Kakabe is that it will allow us to delimit a type of expressions that do not license *ì* as bound variable, and to account for the scopal properties of this type of expression that are observed in this language.

3.2 QPs that do not license *ì*

The application of B&S' model to the Kakabe data reveals a distinct separation line between QP types with respect to their relation to the anaphoric *ì*. Their GQP is the category that does not allow any bound variables in its domain to be spelled out as *ì*, whereas the remaining QPs do license *ì*. And, as will be demonstrated, the scopal properties that they ascribe to GQP appear to hold for the relevant class of nominal phrases in Kakabe. Their model also accounts for the existing asymmetry between phrases with collective and universal-distributive phrases.

Let us look more closely at the class that B&S refer to as Group Quantifier Phrases (GQPs). It includes a rather wide range of QPs: indefinite QPs headed by *a*, *some*, *several*, bare-numeral QPs like *one student, three students*, and also definite QPs like *the students* (Beghelli and Stowell 1997: 74). This class, therefore, includes expressions referring to groups but also to single individuals. The distinguishing property of GQPs is that they are capable of having maximal referential scope in an utterance and their specificity, i.e. referential independence as in (Fodor & Sag 1982).

All the types of Kakabe expressions corresponding to those included in the category of GQPs manifest the inability to license *ì* as bound variable.

(10a) *Dɛ́ŋɛ̀ kɛ̀ k' à/*ì sìgi yàn.*
child.ART that PFV.TR 3SG sit here
'That child sat down there.'

Some N

(10b) *Dén dó-è / Dénnè dó-(è) k' à/*ì sìgi yàn.*
child some-ART child.ART INDEF-ART PFV.TR 3SG sit here
'Some child sat here.'

Numeral N

(10c) *Dén sàba k' ànu/*ì sìgi yàn.*
child three PFV.TR 3PL sit here
'Three children sat down there.'

Importantly, with the exception of the numeral phrase (13c), all other expressions of type GQP include the referential article. As has already been discussed in the previous section, this article marks specificity and is neutral to definiteness, so that QPs with the article can stand both for newly introduced and familiar referents but always has a specific reference. As can be seen in (10b), the article is present either on both words of a complex phrase or only on one of them. As for QPs with numerals (10c), one can assume that the numeral is the element that expresses specificity in the phrase. Significantly, in the contexts of numeral QPs, a pronoun marked as plural (*ànu*) is required to spell out the bound variable.

In B&S's topology, GQPs can appear in two projections, namely, in RefP and ShareP. The RefP is the highest projection in the structure, accordingly, GQPs are the expressions that scope higher than any other quantificational expressions of the utterance. But they can also appear in ShareP which is just under the DistrP. So, GQPs are grammatical type of QPs that can show some extent of flexibility in their scopal properties. Importantly, they can never be interpreted lower than Negation, we will return to this shortly.

A point that is of crucial importance for our discussion is that RefP and ShareP are the two projections in the structure that have an existential operator head (∃). It is this existential operator with which GQPs checks their group reference feature [+group ref]. As has been demonstrated, GQPs in Kakabe have a specific morphological property: they bear the referential article and can be morphologically marked for number. Crucially, person features are, first, in a complementary relation to the referential article, and second, the pronominal expressions that bear them should also be included in the category of GQPs.

Their belonging to GQP follows from the scopal properties of the personal and deictic pronouns as well as by their obligatory referentiality reading. To begin with the

latter, deictic and personal pronouns, by definition, have a specific referential reading since they make reference to a specific individual or object that is present in the discourse situation. This means that they are always immediately bound by the existential operator. As for their scopal properties, they cannot have low scopal reading, e.g. lower than negation. In fact, they can have only the maximal scope reading. It should be admitted, that in that respect they are somewhat special as compared to the other GQPs, namely they can be interpreted only in RefP, whereas other GQPs can also take their scope in ShareP, a projection that also contains the existential operator but that is located lower. Let us take an example. The sentence in (11) with the GQPs *mùséè* 'woman' is ambiguous between two readings. In the first reading, *mùséè* is interpreted in RefP and therefore scopes higher than the interrogative operator [Q] of the QP, i.e. it can be paraphrased as 'there is a woman/the woman, who greeted her?'. In the second reading, *mùséè* is interpreted in ShareP and the reading is 'who greeted a woman?', whereby for each possible candidate there exists a different woman.

(11) *Yɔ́n* *ka* *mùséè* *kɔ̀ntɔn?*
who PFV.TR woman.**ART** greet
Who greeted the woman/a woman$_{specific}$? WhQP > ∃; ∃ > Q

As compared to this, deictic pronouns and locutor expressions are different in that they can appear only in RefP and not in ShareP. Thus, (12) cannot have the reading where for each possible candidate of greeting there exists a different locutor, 1SG referent is always interpreted in the highest scopal position.

(12) *Yɔ́n* *báti* *ǹ* *kɔ̀ntɔn?*
who PFV.OF 1SG greet
Who greeted me? *WhQP > 1SG

To summarize, personal and deictic pronouns can be considered as a subcategory of GQPs whose essential property is that they appear in a projection where they are immediately bound by the existential operator. The feature that imposes the agreement with the existential operator as well as the immediate binding by it, is correlated in Kakabe with the presence of φ-features: the person features that are manifest on personal pronouns and the referential article that appears on nominal GQPs.

To return to the issue of the anaphoric *ì*, the projections with the existential closure where personal pronouns and DPs appear entail the presence of φ-features in Kakabe. And since *ì* is a default form, it does not appear in contexts where such antecedents appear since their φ-features have to be spelled out on the bound variable expression in their domain.

Before passing to QPs that do license anaphoric *ì*, let us look at further examples illustrating the scopal properties of GQPs. Both RefP and ShareP (the projections that, as has been said, host GQPs) are above negation. It is therefore expected that GQPs should never scope under negation. This is what is found, as is illustrated by (13) where *mùséè* 'a/the woman' can be interpreted only higher than negation.

(13) *À* *máa* *mùséè* *yén* *ɲɔ́là.*
3SG PFV.NEG woman.ART see there
'He did not see a woman/the woman there.'
#He did not see any woman. *Neg > GQP

On the other hand, when a GQP appears in ShareP, a reading where it scopes under DistrP or under an interrogative WhP is expected to be available. Again, this is indeed the case for the Kakabe GQPs. In (14), *sáakòe* 'bag' can be read as distributed by the QP 'each woman'.

(14) *Mùsu* *kála* *ka* *sáakò-e* *tà.*
woman each PFV.TR bag-**ART** take
'Each woman took a bag/the bag.'
OK: 'For each woman there is a bag that she took'. DistrQP > GQP

The same holds for the WhQP, namely GQP can have a lower scope than WhP, which is, again, expected, since GQP can appear in ShareP, a project which is lower that then WhP. In terms of Hamblin's (1973) alternative semantics, an interrogative sentence denotes a set of propositions that correspond to the possible answers. A wh-word in an argument position plays the role of introducing the set of possible individuals that, composed with the rest of the utterance, expand to the set of propositions construed as possible alternatives. In (15), the identity of *sáakòe* 'the/a bag' can be fixed, which corresponds to its possible position in RefP, in the highest projection of the struture. But a reading is also available where the bag co-varies with individual introduced by the wh-word, which means that the WhP scope ranges over the GQP in the object position as presented in (15).

(15) *Yɔ̂n* *ka* *sáakò-e* *tà?*
who PFV.TR bag-ART take
'Who took a bag/the bag?' WhQP > GQP Set of possible answers: {Aysa took the bag *a*, *Musa* took the bag *b*, Fanta took the bag *c*, …}

B&S describe GQPs as 'usually' occupying either the specifier of the highest projection, RefP, or, when they are distributed over by universal-distributive QPs, they appear in the specifier of the projection that they call ShareP. However, B&S note that certain GQPs, namely bare numeral phrases and indefinite NPs, can in certain cases be

interpreted in a lower position. In this case, they remain in their Case position where their θ-role is assigned to them. In such configurations, they actually 'behave like CQPs' (Beghelli and Stowell 1997: 75). This can be illustrated by the behavior of the indefinite NP *student* in (116). Crucially, a reading is available, where QP is interpreted with a scope lower than negation: 'there does exist a student who wrote this book'. Under this reading the GQP has to be lower than RefP nor in ShareP these projections are higher than negation.

(16) *A student didn't write this book.* (Beghelli and Stowell 1997: 83)

In Kakabe, however, the repartition of the existing morphological types with respect to the positions that they can occupy is slightly different. In fact, it shows a more straightforward correspondence between morphological types and the types of QPs. Kakabe does not have a class of indefinite QPs that would be able to have both a local, VP-internal scope and a higher scope as RefP and ShareP. Only QPs without the referential article can have a reading lower than negation, hence the contrast between (17a) and (17b).

(17a) *Músà máa sáaku tà.*
Musa PFV.NEG bag take
Musa didn't take any bag. ¬∃x [bag(x) ∧ took(Musa,x)]

(17b) *Músà máa sáako-è tà.*
Musa PFV.NEG bag-**ART** take
Musa didn't take a bag/the bag ∃x [bag(x) ∧ ¬ took(Musa,x)]

In the following section, it is argued that English-type indefinites with local scope correspond in Kakabe to bare nouns that are the true CQPs in this language.

As for the bare numerals, the other type of GQPs that are supposed to manifest flexibility with respect to the positions that they can occupy, these do seem to behave in the same way in Kakabe. Namely, a bare numeral can be interpreted as scoping under negation. This means whereas NPs with the referential article cannot remain in their lower Case positions, this option is available for bare numerals.

(18) *À máa mùsu sàba yén ɲólà.*
3SG PFV.NEG woman three see there
'He did not see three women there.'

To sum up, QPs that do not license *ì* as a bound variable all belong to the type characterized as Group Quantifier phrase, a type of phrase that gets its scope in projections that have existential closure in their heads, namely, the maximally-high Referential projection and the ShareP projection located just below the distributive

projection. Morphologically, for Kakabe, this is correlated with the presence of the referential article that marks specificity.

3.3. QPs that license *ì*

Let us now turn to types of QPs that license *ì* as bound variable in Kakabe. Utterances in (19) illustrate distributive, negative and interrogative QPs in this role.

(19a) *Kála bát' ì kò yàn.* DistrQP
each PFV.F PR.I wash here
'Each one has washed himself here.'

(19b) *Dóodo máa ì kò yàn.* NegQP
nobody PFV.NEG PR.I wash here
'Nobody washed himself here.'

(19c) *Yɔ̂n ka ì kò yàn?* WhQP
who? PFV.TR PR.I wash here
'Who has washed himself here?'

The pronoun *ì* often occurs as a resumptive pronoun for a relativized non-specific QP. (20) illustrates *ì* that resumes a relativized universal-distributive QP terminating with the distributive-universal determiner *wőo* 'any', which in this position usually bear an extra-high tone.

(20) *[Mín máni wótè sɔ̀tɔ wőo]$_i$,*
REL COND money.ART get DISTR
ì$_i$ n' à sàara ì$_i$ ni dòn swáarè là.
PR.I SBJV 3SG pay **PR.I** SBVJ enter nightclub.ART to
'Each one who has money, he should pay and go to the nightclub.' (kkec_av_conv_131207_talk03_243)

In (21), *ì* plays the same role with respect to a non-specific relativized QP bound by the generic operator.

(21) *[Mín máa kàran]$_i$ ì$_i$ ni mɛ́tiyɛ̀ kɛ́.*
REL PFV.NEG study **PR.I** SBJV job.ART do
'Those who don't study [at school] should take up a job.' Litt: '[Who does not study]$_i$, he$_i$ should take up a job.' (kkec_av_conv_131207_talk01_084)

Utterances in (22) illustrate the same for QPs with nominal stems. As expected from the previous discussion, all these phrases lack the referential article and number marking.

(22a) *Dén kála/wó ka ì kò yàn.* DistrQP
each each/every PFV.TR PR.I wash here
'Each/every child has washed himself here.'

(22b) *Dén dóodo máa ì kò yàn.* NegQP
child NEG.H PFV.NEG PR.I wash here
'No child washed himself here.'

(22c) *Dén yɔ̂n ka ì kò yàn?* WhQP
child who? PFV.TR PR.I wash here
'What child has washed himself here?'

It is important to distinguish distributive-universal QPs from QPs with collective reading. Collectives do not have any distributive force (Beghelli and Stowell 1997: 87ff; Szabolcsi 2010: 109ff). Thus, a QP with the determiner *fóo* 'all' in Kakabe cannot distribute over the QP in the object position. In (23), with the collective subject, the total amount of money can be equal only to 'four thousand francs'. In contrast to that, in (24), it is four thousand francs that are multiplied by the number of young men.

(23) *Kámarɛŋè-nu fóo báti fàran wáa náani nàati.*
young.man.ART-PL all PFV.F franc thousand four bring
'All the young men brought four thousand francs (together).'

(24) *Kámarɛn kála/wó báti fàran wáa náani nàati.*
young.man.ART-PL each/every PFV.F franc thousand four bring
'Each/every young men brought four thousand francs.'

Within B&S's model, a QP with a collective determiner belongs to the GQP category. As expected, we find for it the same properties as for other GQPs in Kakabe. Thus, phrases with *fóo* 'all' combine with the DP referential article and the number marking and does not license *ì* as bound variable as illustrated in (25).

(25) *Dénnè-nu fó ka ànu/*ì kò yàn.* collective
child.ART-PL all PFV.TR 3PL wash here
'All the children have washed themselves here.'

A QP type from B&S that is missing so far is the Counting QP (CQP). B&S include in this category such expressions as *few*, *fewer than five*, *between six and eight*, and expressions build by modified numerals. However, none of these quantificational meanings can be expressed within a QP in Kakabe. For example, 'few' is expressed through a separate clause with the negation of the verb *sìya* 'be numerous'.

(26) *À ka mɔ̀gɛ́ɛ̀-nu nàati à fɛ, ànu máa*
3SG PFV.TR person.ART-PL bring 3SG with 3PL NEG.COP

sìya.
be.numerous
'He brought few people with him.'

Nevertheless, there is a type of phrase that may correspond to B&S's CQPs, namely the Kakabe bare noun phrases. Their defining property is that they remain in situ and, consequently, always have local scope. Besides, as already mentioned earlier, bare nouns bear no article scope under negation, e.g. (27).

(27) *À máa mùsu yén ɲɔ́là.*
3SG PFV.NEG woman see there
'He did not see any woman there.'

Therefore, we assume that they can be considered as belonging to the category of CQPs within B&S's model. As is expected from CQP, they do license *ì* as bound variable.

Next, in contrast to nouns with the referential article, bare nouns can have a generic interpretation. This, again, falls out from the low scope of CQPs. Being a modality operator, the generic operator GEN (Krifka et al. 1995) is located in T (e.g. Gagnon and Wellwood 2011). Importantly, this is a projection which is just above NegP. GEN binds a world variable but also the variables contributed by the bare nominal. Thus, in (28), the variable introduced by the bare noun *dén* 'child' is bound by the generic operator.

(28) *Dén si ì kò kɛ̀ kòéè tɔ̀.*
child POT PR.I wash this river.ART in
'A child would (usually) wash himself in this river.'
GEN[*x,w*](*x* is a child ∧ *x* washes *x* in the world w in this river)

This contrasts with a QP with the referential article in a generic statement. *Déɲè* 'child' (29), being a GQP, has to take scope either in RefP or in ShareP, and since either of two are higher than the TP where the GEN operator is located, the existential scope of GQP is higher than that of the generic operator.

(29) *Déɲɛ̀ s' à kò kɛ̀ kòéè tɔ̀.*
child.ART POT 3SG wash this river.ART in
'A child (specific)/the child would (usually) wash himself in this river.'
∃*x*(*x* is a child) ∧ GEN*w*(*x* washes *x* in the world *w* in this river)

The difference between GQPs and CQPs can be summarized as follows. First, GQPs appear in a projection that provides it with existential closure. Second, the projections they appear in are located relatively high in the structure, and only DistP and WhP are higher than ShareP, the lower phrase where it can appear. From this

follows that, on the top of their existential closure, only ∀ and Q operators can scope over them. As opposed to this, CQP appear, first, low in the structure so that any operator can range over the variables introduced by them. Second, they do not get existential closure in the projection that they appear in.

Table 1 summarizes the types of QPs and their properties in Kakabe.

B&S's QP type	**Quantificational Operator that the QP agrees with**	**operator able to scope over it (apart from the operator of its own projection)**	**corresponding QP expressions in Kakabe**	**licenses anaphoric *ì***
WhQP	Wh (Q)	--	*yə̂n* 'who', *fə̂n* 'what'	+
NegP	Neg (¬)	Q, ∀,	*dóodò* 'nobody', *fə́nfə̂n* 'nothing', *fə́s* 'nothing' etc.	+
DistrP	Distr (∀)	Q	N+*wó*+N, N *wó*, *kála* 'each'	+
GQP	Existential (∃)	Q, ∀,	N-ART, N-ART *dó*-ART 'some N', N-ART-PL *fóo* 'all N', N Num	–
CQP	none	Q, ∀, ¬, GEN	bare N	+

Table 1. QPs and licensing of *ì* in Kakabe

As can be seen, *ì* is licensed by QPs that vary by their forms, their scopal properties and by the quantifying operator they agree with. On the other hand, the category that does **not** license anaphoric *ì* can be easily identified: these are expressions that are existentially bound, and morphologically, they manifest DP morphology. This generalization goes well with the analysis of *ì* that we have been proposing so far. If *ì* is a form that appears in a default agreement situation, i.e. when the features required for agreement are absent, then the varying identity of its licensers is not surprising, considering that their only common point is the absence of a feature.

3.4 Generic conditionals as licensers of *ì*

Apart from being licensed in the contexts of non-specific QPs, *ì* can also appear within a matrix clause that is preceded by a generic conditional if-clause (30) or a generic temporal clause (31).

(30) *[Sì mɔ̀gɔ$_i$ yèlɛ-ta ɲɔ́ɔlà]* ***ì$_i$*** *si bòyi.*
if man go.up-PFV.I there PR.I POT fall
'If a person climbs up there, he can fall down.' (KKEC_AV_NARR_131207_talk06_21)

(31) *Mànsa$_i$ máni fàga, ì$_i$ si bìri ì$_i$ la sòofáà-nu bólo.*
chief COND die PR.I POT bury PR.I POSS warrior.ART-PL by
'When a chief$_i$ dies, he$_i$ has to be buried by his warriors.'

Again, if the adverbial clause is non-generic and contains a specific QPs, the latter fails to license the anaphoric *ì*, and only *à* is allowed:

(32) *[Sì ǹ dínŋɔgè$_i$ yèlɛ-ta ɲɔ́ɔlà]* ***a$_i$***/**ì si bòyi.*
if 1SG friend.ART go.up-PFV.I there PR.I POT fall
'My friend climbs up the tree, he will fall down.' (KKEC_AV_NARR_131207_talk06_21)

If we assume, as we have been doing so far, that a free variable is bound by a λ-binder, then what is the head that bears this λ-binder? It should be noted that this question is relevant both for the binding of *ì* by the non-specific QP in (20) and for the binding of *à* in by a specific QP in (32).

The answer to this question may lie in the domain of the external syntax of the conditional clause. We may suppose that merging of a conditional in a particular projection within the main clause involves the presence a λ-binder on the head of the projection. This would be similar to how λ-binder is hosted on the Top head when a topicalized phrase has moved to its Specifier[1]. Endo and Haegeman (2019: 3) argue that adverbial clauses (of the non-peripheral type to which those involved in the present discussed belong) are merged within the TP layer. They refer to the projection where an adverbial clause as Mod ("Modifier" projection). The adverbial clause is therefore merger as a specifier of this functional head Mod of the main clause. At any case, the presence of an adverbial clause is accompanied by establishing a binding relation on the matrix clause, and whatever this head may be, it (i) dominates the *ì* pronoun and (ii) hosts a λ-binder.

Schlenker (2004) argues that conditionals display the properties of definite descriptions in terms of binding; see also the discussion in Bhatt and Pancheva (2006: 31ff) and Iatridou (2014) for an analogous analysis of *since* clauses. He proposes that if-clauses are plural definite world descriptions. Essentially, they share the binding properties with the referential elements that can be seen with respect to the pronoun *then* which resumes the if-clause within the matrix clause. (33) shows that if-clause is subject to Condition C.

[1] Haiman (1978) claims that if-clauses are, in fact, topics, so we can suppose that a similar type of binder is involved here. As is discussed in what follow, if-clauses are located considerably lower than the Topic projection.

(33a) [If it were sunny right now]$_i$ I would see people who would then$_i$ be getting sunburned.
(33b) *I would then$_i$ see people who would be getting sunburned [if it were sunny right now]$_i$
(33c) Because I would then$_i$ hear lots of people playing on the beach, I would be unhappy [if it were sunny right now]$_i$ (Schlenker 2004, example 56)

Translating it into Kratzer's (2009) terms, (33a) receives the representation as in (33'). The *if*-clause is in the specifier of the ModP that carries the λ-binder licensing the bound variable spelled out by *then*.

(33') [$_{TP}$[$_{ModP}$ [$_{CP}$ *If it were sunny right now*]$_i$ Mod $_{λ[n]}$ *would see people who would then$_i$ be getting sunburned*].

In cases like (31) and (32), both the adverbial and the matrix clause have a generic interpretation. This means that the projection in which the GEN operator is located above the ModP within which the adverbial clause is merged. It must, therefore, be some higher projection within the TP layer, since as is argued e.g. in (Krifka et al. 1995; Beghelli and Stowell 1997), the GEN operator is within TP too. In the light of the above said, (32) can be represented as in (32'). Some higher projection within TP hosts the GEN operator, and the if-clause if merged as the specifier of Mod, that, due to the presence of this specifier hosts the λ-binder.

(32')	[$_{TP}$ T GEN [$_{ModP}$[$_{CP}$ *Sì*	*mɔ̀gɔ$_i$*	*yɛ̀lɛ-ta*	*ɲɔ́ɔlà*]	*Mod$_{λ[n]}$*	***ì$_i$***	*si*	*bòyi.*]
		if	man	go.up-PFV.I	there	PR.I	POT	fall

'If a person climbs up there, he can fall down.'

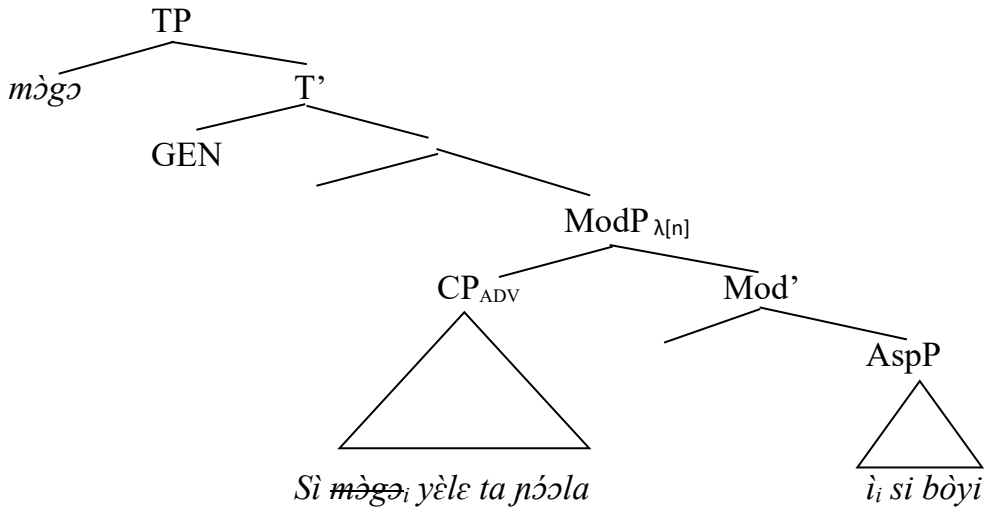
So far, we have answered the question as to what makes possible the presence of a bound variable in the matrix clause: when the specifier of ModP is filled by an adverbial CP, the head of the phrase Mod^0 hosts a λ-binder. This representation however does not yet explain what enables the co-construal between the generically interpreted bare noun in the adverbial clause and the anaphoric *ì* in the matrix clause. The problem of a co-variation between a phrase inside a subordinate clause and a pronominal expression in the matrix clause is known in the literature as the problem of 'donkey anaphora', called so after the example (34); see (Brasoveanu & Dotlačil 2020) for an overview.

(34) When a man$_i$ buys a donkey$_{ii}$, he$_i$ beats it$_{ii}$.
When a person$_i$ is in Rhodez, he$_i$ is not in Athens.

Barker and Shan (2008) propose that indefinites are interpreted in a higher position, the one that dominates both the adverbial and the matrix clause. As a consequence, the indefinite binds the anaphor in the matrix clause similarly to how a quantifier expression takes scope over its trace. Therefore, we can assume that the bare noun *mɔ̀gɔ* appears in the specifier of the TP that hosts the GEN operator.

(32”) [$_{TP}$*mɔ̀gɔ* T GEN [$_{ModP}$[$_{CP}$ *sì* ~~*mɔ̀gɔ*$_i$~~ *yèlɛ-ta* *ɲɔ́ɔlà*] Mod$_{λ[n]}$ ***ì$_i$*** *si* *bòyi*]
If man go.up-PFV.I there POT fall

‘If a person climbs up there, he can fall down.’



As discussed earlier, specific QPs, referred to as GQPs in B&S’s theory, appear either in ShareP or in RefP. In either case, since such a referential phrase manifests scope over the whole sentence, including the adverbial and the matrix clause binding a pronoun in the latter, the QP in question appears in a ShareP or RefP higher than the TP of the main clause.

(32”’) [$_{RefP}$ *ǹ* *dínɲɔgɛ̀*$_i$ [$_{ModP}$[$_{CP}$ *sì* ~~*ǹ*~~ ~~*dínɲɔgɛ̀*$_i$~~ *yèlɛ-ta* *ɲɔ́ɔlà*]Mod$_{λ[n]}$
1SG friend if 1SG friend go.up-PFV.I there

à$_i$ *si* *bòyi.*]
3SG POT fall

‘If my friend climbs up there, he can fall down.’

Next, since *ǹ dínɲɔgɛ̀* ‘my friend’ is specific and, consequently, has φ-features, only *à* is allowed as anaphor in the main clause. In (32), on the other hand, *mɔ̀gɔ* is a bare noun belonging to the CQP type that, as argued above, bears no φ-features in Kakabe, and therefore, *ì* can be used as the default agreement anaphor.

4. Generic-personal pronouns and default agreement anaphor (DAA)

4.1. DAA vs. generic pronoun

Apart from *ì* that spells out a bound variable in the conditions described above, Kakabe has a generic pronoun *ì* as in (35):

(35) *Ì nì pírikì tà ì n' à kìtì ì n' à layàagɛ.*
PR.I SBJV trap.ART take PR.I SBJV 3SG tie PR.I SBJV 3SG spread
[How does one install a trap?]: 'One takes a trap and attaches it with a rope and lays it out.' (TALK05_094)

In what follows, I will try to show that this pronoun is semantically distinct from DAA, but, at the same time, it is related to it in a specific way that will be described in what follows. As has been shown in the previous section, the lack of φ-features that is one of the two conditions for the use of the default agreement strategy, follows from the absence of existential closure and from the lack of specificity issuing from the latter. At the same time, non-specificity is semantically close to genericity. Therefore, one can easily see how a pronoun with generic semantics could have evolved into a pronoun with that co-varies with non-specific nominal expressions.

The pronoun *ì* in its generic use (35) corresponds to the generic pronoun *one* as in (36) or the generic use of *you* (37).

(36) ***One** can see the picture from the entry.*
(37) ***You** shouldn't drink and drive.*

The same way as in English, there is a polysemy between a generic and a deictic 2SG pronoun; see *ì* used as 2SG in (38). Such polysemy is cross-linguistically common (Siewierska 2004; Creissels 2013; Gast et al. 2015; Ackema and Neeleman 2018: 123ff)

(38) *Bìlálè Kɔ́ndɛ, ì bìla-ta lɛ̀kkɔ́l là sàŋɛ́ɛ̀ ɲùman nà?*
Bilale Konde 2SG/GNR start-PFV.I school to year.ART which to
'Bilale Konde, when did you start going to school?' KKEC_AV_CONV_131207_TALK01_006

Importantly, generic pronouns cannot co-vary with indefinite DPs, even when the latter have a generic interpretation. Thus, in (39) only an ordinary 3SG pronoun and not the pronoun *one* is allowed to be co-indexed with the generic expressed by the indefinite DP. This fact (which, to our knowledge has not yet been discussed in the literature on generic pronouns) appears surprising at first glance.

(39a) *A director$_i$ has to know his$_i$ employees.*
(39b) *??A director has to know one's employees.*

As has already been discussed, genericity is introduced in the utterance through a modal operator GEN (Krifka et al. 1995). The indefinite QP 'a director' introduces a free variable, and in (39) it is bound by the sentential operator GEN, hence the generic reading of the respective phrases.

In Kakabe, the pronoun *ì*, as opposed to the generic *one* and *you,* does appear in contexts of this types; see its use in (40) where it co-varies with a bare NP bound by a generic operator. However, this use is that of DAA type, a semantically different type that, as we will argue, developed from the generic use through the loss of a particular feature.

(40)	*Sɛ̀nɛkɛlaa*	*n'*	*ì*	*la*	*sɛ̀nɛ́ɛ̀*	*báara*	*ì*	*la*	*mɔ̀gɛ́ɛ̀-nu*	*fɛ.*
	farmer	POT	PR.I	POSS	field.ART	work	PR.I	POSS	man.ART-PL	with

'A farmer should labor his field together with his family.'

It should be noted that there are contexts where a bound variable reading is available for *one*, it is possible for any personal pronoun (Kratzer 1998; Kratzer 2009). Moltmann (2006) emphasizes that, in cases like (41), the second occurrence of *one* spells out a bound variable.

(41) *It is good to know that it is not only one oneself that can lose one's keys.*

Extending Kratzer's (2009) theory to this data, it is expected that a minimal pronoun should receive the form *one* in the spell out, when the same person feature as that carried by the referential *one* is transmitted to it in the syntactic derivation. This is apparently what happens in (41), where *one oneself* is the specifier of the head binding the non-referential occurrence of *one.*

4.2. Person-orientation of generic pronouns

The impossibility of co-variation between a variable introduced by an indefinite NP and the generic pronouns like *one* is related to the fact that, apart from being related to genericity, *one* also bears a person feature. Depending on the approach, it can be the first-person feature (Moltmann 2006; Charnavel 2018; 2020) or an underspecified person feature (Ackema and Neeleman 2018; Fenger 2018). In either case, it is expected that *one* can be co-indexed only with an expression that has the same person feature, hence the infelicity of (39b).

Moltmann (2006) elaborates a semantic analysis of genericity expressed by *one* around the idea that this type of genericity is tied to the speaker experience in a specific way. She postulates three semantic strategies that license generic *one.* The first strategy consists in establishing a generalization based on the speaker's experience. It is illustrated by the example reproduced earlier in (36) whose natural reading is that of a

generalization based on speaker's own experience of having seen the picture from that spot that he assumes generalizable. The second strategy, dubbed "the Inference to the first person" is, in fact, rather an inference to the second person, it can be illustrated by (42). Here the generalization, rather than being based on the speaker's experience, is established independently, but "is presented with the intention to be at least potentially applied in a first-person way by the speaker or, more likely, the addressee, or both" (Moltmann 2006: 273). The generalization statement has a specific illocutionary force, is intended to infer, on the part of the addressee, a *self-ascription* of a property or a certain behavior. What is noteworthy here for our discussion is that the orientation center is rather the second person than the first person. Therefore, one should rather speak of locutor-orientation that first-person orientation with respect to the meaning of the generic pronoun.

(42) *One is not allowed to enter the room.* (Moltmann 2006: 273).

The third strategy is the one where a generalization is inferred from an experience that is *simulated* on behalf of an intentional agent that, again, it can be identified as either the speaker or the addressee.

(43) *If one is young, one has lots of energy.* (Moltmann 2006: 277)

Crucially, the experience must be relativized in a specific way in this type of generic statements. Having this experience that is described by the main clause is accessible only from the perspective of an agent who possesses the property expressed in the antecedent. This perspective, in a way, is localized through the antecedent property, e.g. 'being young' in (43). According to Moltmann's analysis, therefore, the link to the first person consists in the fact that the speaker simulates the experience of occupying this perspective, as well as the experience of having another property that follows from it. The speaker, therefore, is not meant to possess this property (though this is not excluded). This explains the possibility of having in the antecedent properties like 'being a Martian' (44) that, from the start, cannot hold of the speaker in the actual world.

(44) *If one is a Martian, one is not susceptible to human disease*. Moltmann 2006: 277 < (Safir 2000)

This sheds new light on the impossibility of co-variation between a generically interpreted indefinite and a generic pronoun, as it was discussed earlier (39). Thus, if the property 'x is a director' is expressed not in a DP form but through a predication in the antecedent of a conditional, *one* becomes acceptable:

(39'a) ??*A director has to know one's employees*.
(39'b) *If one is a director, one has to know one's employees*.

In other words, the genericity of *one* can be restricted through ascribing a property to an agent only if the ascription of this property takes the form of a hypothetical conditional. In syntactic terms, this limitation boils down to feature incompatibility: a DP imposes the agreement requirement on the pronoun that co-varies with it. And since *one* has a locutor-person feature (or underspecified for person when an alternative theory is applied), whereas DP is third person, this leads to a feature clash.

Going back to Kakabe, we can now state more precisely the distinction between the two uses. The generic *ì*$_{GNR}$ is characterized by the presence of a person feature, whereas *ì*$_{DAA}$ lacks this feature. The other conclusion from the above said is that the generic *ì* has the same form as the 2SG pronoun in Kakabe. Apart from being cross-linguistically common, the syncretism between 2SG and generic is due to the fact the genericity meaning has a locutor orientation.

4.3 Generic pronoun vs. sentential operator concord

The generic-personal pronoun that, as has been discussed above, bears a person feature, is distinct from the category of semantic entities that are referred to indeterminate pronouns in (Kratzer & Shimoyama 2002; Kratzer 2005), an approach that has already been mentioned in our discussion. The semantic contribution of indeterminate pronouns like *somebody, something, nobody, nothing*, etc. consists uniquely in introducing a free variable. An indeterminate pronoun does not have any quantificational force of its own, which instead is carried by a sentential operator that it agrees with. The distinct form that indeterminate pronouns show depending on the type of the operator is the expression of concord with the corresponding operator. Thus, *somebody, something* signal concord with [∃], *nobody, nothing* show concord with propositional [¬], *who* and what with the question operator [Q]. An important consequence of such an analysis is that, since nothing prevents a quantificational operator to bind more than one variable, one sentence can contain more than one indeterminate pronoun that express concord with the same operator. Under this analysis, 'multiple questions' as in (45) is, in fact interrogative concord: there are two variables in two different θ-role position bound by the same. The same way, (46) illustrates existential concord between propositional [∃] and two variables.

(45) ***Who*** *gave what to* ***whom****?*
(46) ***Somebody*** *broke* ***something.***

Returning to the generic pronouns, *one* is not capable of spelling out variables in more than one θ-role positions; cf. (47a) and (47b).

(47a) *??One gave one a present.*
(47b) *Somebody*$_i$ *gave somebody*$_j$ *a present.*

Analogously, Kakabe indeterminate pronoun can also appear in multiple positions within clause. Thus, in (48), *yɔ̂n* 'who' spells out a variable in subject and object position showing concord with the interrogative operator.

(48) *Yɔ̂n$_i$ ka yɔ̂n$_j$ fàga?*
who PFV.TR who kill
'Who killed who?'

See also (49) where *mɔ̀gɔ* 'man' appears as a variable bound by generic operator in the subject and in the object positions:

(49) *Mɔ̀gɔ$_i$ si mɔ̀gɔ$_j$ fàga.*
man POT man kill
'It is possible that people kill people.'

As opposed to this, for a sentence with *ì* in two distinct θ-positions, the only possible reading is that of identity of the two arguments. As for the semantic type of *ì* that appears in the object position (50), it is not a DAA, but a minimal pronoun that inherits the specific person feature from the generic pronoun from the referential generic pronoun in the subject position; it is therefore of the same type as the second occurrence of *one* in (11) discussed earlier. To recapitulate on what has been said earlier, DAA form is the one that is present in a configuration where features are not transmitted neither from the binding head, nor from the Specifier of the binding head; here this is not the case since the generic *ì* transmits features. As has already been discussed, such a capacity of a pronominal form to have both a referential and an anaphoric use is typical of personal pronouns.

(50) *Ì s' ì fàga.*
PR.I POT PR.I kill
'You would kill yourself.' #'It is possible that people kill people'.

The inability of a personal pronoun to designate different individuals falls out from the fact that semantically personal pronouns uniquely define individuals. The evidence presented above, therefore, shows once again that pronouns like *one* in English and *ì$_{GNR}$* in Kakabe behave rather like personal pronouns.

Finally, it should be noted that apart from a generic pronoun, certain languages also have an impersonal pronoun that bears no person feature. Ackema and Neeleman (2018) distinguish between two types of dedicated impersonal pronouns (this distinction investigated in detail for Germanic languages in Fenger 2018). The first type, impersonal-1, is characterized by the fact that it includes a person-feature layer in its structure and it can be exemplified by *one*. The second type, impersonal-2 that lacks person feature and is exemplified by German *man.*

The form *mɔ̀gɔ* as in (49) is a plausible candidate for impersonal-2: it can have a generic reading and it does not bear any person features. There are, however, several objections to considering it a generic pronoun. First, the authors argue that impersonal-2, as opposed to impersonal-1 pronouns, can yield an arbitrary reading.

Dutch: the arbitrary reading of the impersonal-2 pronoun *men* (Ackema and Neeleman 2018: 107)

(51) *Men heeft voor je gebeld, maar het was niet*
IMP has for you called but it was not
duidelijk waarover.
clear where.about
'Someone has called for you, but it was not clear what it was about.'

In Kakabe, it is rather the 3PL that is used as a pronoun with arbitrary interpretation:

(52) *Ànu ka ì kéle, ǹ máa à lɔ́n yɔ̂n dè.*
3PL PFV.TR 2SG call 1SG PFV.NEG 3SG know who FOC
'They called you, I do not know who.'

Finally, *mɔ̀gɔ* can appear not only under generic operators, but also under the propositional negation.

(53) *Mɔ̀gɔ tée súusɛ dòn-na à la bɔ́nɛ̀ là.*
man POT.NEG dare enter-GER 3SG POSS house.ART to
'Nobody dared to enter into her house.' (KKEC_AV_NARR_131227_AK2_145)

The next objection to considering *mɔ̀gɔ* as impersonal-2 is that other bare nominal roots can be used in a similar way, namely as introducing free variables bound by a sentential operator.

(54) *Súumayɛ̀ mán mádòn,* ***dénden, kìna, mùsu,***
Ramandan COND approach child old.man woman
à fóo sún-na lè.
3SG all fast-GER FOC
'When Ramadan starts, child, old men, woman, everybody fast.' (KKEC_AV_CONV_131207_TALK03_014)

As already discussed in Section 3.3, bare noun in Kakabe are expressions that introduce a variable that does not bear any feature that would link it to a specific sentential operator, or, in terms of Beghelli and Stowell (1997), to a specific projection in the syntactic tree.

5. The restricted reflexive

5.1. Restricted reflexive in Northern Kakabe: infinitives

To begin the investigation of the distribution of *ì*, let us first look at the conditions under which it appears in infinitive CPs and at the properties of the reflexive constructions in Kakabe. Examples (55a) and (55b) illustrate, once again, the contrast that exists between a reflexive within the infinitive CP that licences the bound-variable *ì* (55a) and a reflexive in a finite clause that does not license it (55b).

(55a)	*Músa$_i$*	*báti*	*nà*	*Kɔ́nakir$_i$*	*[PRO$_I$*	*kà*	*ì$_i$*	*la*	*dénkayè*	*tafɛ́lɛ]*.
	Musa	PFV.OF	com e	Conakry		IN F	PR. I	POS S	child.ART	visit

‘Musa$_i$ came to Conakry to visit his$_i$ son’.

(55b)	*Músa$_i$*	*bát’*	*à$_i$*	*/#*	*ì$_i$*	*la*	*dénkayè*	*tafɛ́lɛ.*
	Musa	PFV.OF	3SG	/	#PR.I	POSS	child.ART	visit

‘Musa$_i$ has visited his$_i$ son.’

In general, co-variation with the subject in the reflexive construction is expressed by personal pronouns. Kakabe uses the same morphological forms of pronouns in different syntactic positions. Next, the same forms are used as indexicals and as variables in a reflexive construction. Thus, a co-indexation with the first or the second person subject is expressed through the same pronominal form in a corresponding non-subject position:

(56)	***Ń***	*báti*	***ǹ***	*kò.*		***Mɔ́***	*báti*	***mɔ̀***	*kò.*
	1SG	PFV.F	1SG	wash		1PL	PFV.F	1PL	wash
	‘I have washed.’					‘We have washed.’			
	Í	*bát’*	***ì***	*kò.*		***Ɔ́***	*bát’*	***ɔ̀***	*kò.*
	2SG	PFV.F	2SG	wash		2PL	PFV.F	2PL	wash
	‘You have washed.’					‘You(pl.) have washed.’			

The same holds for the third person pronoun, with the addition that the third person pronoun appearing in a non-subject position is ambiguous between a co-covariant and a disjoint reading (or, equally, between a bound-variable and a referential reading).

(57a)	***À$_i$***	*bát’*	***à$_{i/j}$***	*kò.*
	3SG	PFV.F	3SG	wash

‘(S)he has washed (hersef/himself)/(S)he$_i$ has washed her$_j$/him$_j$.’

(57b)	***À-nu***	*bát’*	***à-nu***	*kò.*
	3-PL	PFV.F	3-PL	wash

‘They have washed (themselves)/ They$_i$ have washed them$_j$.’

The same holds for the pronouns with bound-variable readings appearing in any other non-subject position co-varying with the subject.

(58) ***À*** *bát'* ***à*** *kʉ̀ɲéɛ̀* *kò.*
3SG PFV.OF 3SG head.ART wash
'He$_i$ has washed his$_{i/*j}$ head.' (Possessor co-varying with the subject.)

(59) ***À*** *báti* *tága* ***à*** *báta.*
3SG PFV.OF go 3SG at
'He$_i$ went to his$_{i/j}$ place.' (Indirect object co-varying with the subject.)

Returning to *ì* in infinitive CPs, the fact that *ì* is indeed bound by PRO rather than by the subject of the matrix clause, can be evidenced through examples with object and split control. In environments with object control as in (60), i.e., when it is the object of the matrix clause that controls the reference of PRO, *ì* shows the same indexation as PRO and, hence different from the matrix subject.

(60) *Sɛ́kù$_i$* *bátí* *Músà$_j$* *máɲìninka* [PRO$_j$ *k'* ***ì$_{j/*i}$*** *sìgi*].
Sekou PFV.OF Musa ask PRO INF PR.I sit
'Sekou$_i$ asked Musa$_j$ to sit down.'

The same predicate *máɲìɲinka* 'to ask' also allows PRO to receive its reading under a split control (see, for example, Landau 2013 for the discussion of split control), i.e. it allows PRO to be coindexed with more than one argument of the matrix clause, in this particular case, with both the subject and the object. Again, the indexation of *ì* is identical to that of PRO.

(61) *Sɛ́kù$_i$* *bátí* *Músà$_j$* *máɲìninka* *[PRO$_{i+j}$* *k'* ***ì$_{i+j/*i}$*** *bòrì].*
Sekou PFV.OF Musa ask PRO INF PR.I run
'Sekou$_i$ asked Musa$_j$ to run (together$_{1+2}$).'

There are types of predicates that are distinguished in Kakabe by the binding patterns available to them: reflexive-only predicates and transitive predicates. Reflexive-only predicates, such as *sìgi* 'sit' and *bòri* 'run' in (60) and (61), are defined by the fact that their object pronouns are necessarily coindexed with their subjects. In contrast to that, verbs like *kò* 'wash' allow both a co-varying and disjoint interpretation of the 3sg pronoun *à* in a non-subject position, hence the asymmetry in the obligatoriness of co-indexation between (62a) with the reflexive only predicate as opposed to (62b) and (62c) with a transitive predicate.

(62a) *Músà$_i$* *k'* *à$_{i/*j}$* *sìgi.*
Musa PFV.TR 3SG sit
'Musa sat down.'

(62b) *Músà$_i$ k' à$_{i/j}$ kò.*
Musa PFV.TR 3SG wash
'Musa$_i$ washed himself$_i$/him$_j$.'

(62c) *Músà$_i$ k' à$_{i/j}$ bólè-nu kò.*
Musa PFV.TR 3SG hand.ART-PL wash
'Musa$_i$ washed his$_{i/j}$ hands.'

Therefore, an even more straightforward evidence for the impossibility of a direct co-indexation between *ì* and the matrix subject without the mediation of PRO can be found in environments like (63): whereas in (60) and (61), there is a co-indexation constraint imposed on *ì* by the predicate, no such constraint is present in (63). Nevertheless, again, *ì* can only be interpreted in a way that it co-varies with PRO.

(63) *Sékù$_i$ bátí Músà$_j$ mánìninka [PRO$_{j/i+j}$ k' **ì$_{j/i+j/*k}$** bólè-nu kò].*
Sekou PFV.OF Musa ask INF PR.I hand.ART-PL wash
'Sekou$_i$ asked Musa$_j$ to wash his$_j$ hands.'

As has been already said, when *ì* can be used as a bound variable in a particular context, it is always interchangeable with *à*. However, there are contexts where the set of reading available to *à* differs from those availabe to *ì*, and (62c) is one of such cases where *à* and *ì* are not totally equivalent. When *à* is used in such a configuration, it can be co-indexed with PRO, the same way as *ì* is, but it can also have a disjoint reading with PRO ('Sekou asks Mousa to wash the hands of some third party'). Therefore, the set of intepretations available to *à* in this context is larger as compared to that of *ì*.

(64) *Sékù$_i$ báti Músà$_j$ mánìninka [**PRO$_{j/i+j}$** k' **à$_{j/i+j/k}$** bólè-nu kò].*
Sekou PFV.OF Musa ask PRO INF 3SG hand.ART-PL wash
'Sekou$_i$ asked Musa$_j$ to wash his$_j$ hands.'

To summarize what has been said above, the interpretational constraints on *ì* in infinitive CPs show that *ì* is bound by PRO.

5.2. Pronoun *ì* in correlatives

The next context where *ì* is allowed, it is under a reflexive v inside a correlative clause (65). In general, the correlative constructions in Kakabe have the following properties. In line with the definition of the correlative strategy (for a recent discussion, see Belyaev and Haug 2020: 877), the DP$_{rel}$ in the relative clause contains a relativizer *mín* (of demonstrative origin), and this DP$_{rel}$ is anaphorically related to another full DP$_{mat}$ in the matrix clause. DP$_{mat}$ is typically expressed by a demonstrative *wò* or the third-person pronoun *à*, whereas the lexical head most often appears as part of DP$_{rel}$ in

the correlative clause, as in (65a). However, the lexical head can also appear inside the DP_{mat} as well accompanied by the determiner *wò* (65b).

(65a) *[Mùséè mín$_i$ kà à$_i$/ ì$_i$ la sáakò-e ɲìnan yàn]*
woman.ART **REL** PFV.TR 3SG/**PR.I** POSS bag-ART forget here
à báti ta-nà.
3SG PFV.OF REF-come
'The woman who forgot her bag has come back.'

(65b) *[Mín$_i$ kà à$_i$/ì$_i$ la sáakò-e ɲìnan yàn,]*
REL PFV.TR 3SG/**PR.I** POSS bag-ART forget here
mùséè wò báti ta-nà.
woman.ART 3SG PFV.OF REF-come
'The woman who forgot her bag has come back.'

Examples in (65) can be contrasted with (66) where the relativizer is absent and *ì* is, therefore, not allowed.

(66) *[Mùséè$_i$ k' à$_i$ / # ì$_i$ la sáakò-e ɲìnan yàn,]*
woman.ART PFV.TR 3SG/ #PR.I POSS bag-ART forget here
à báti ta-nà.
3SG PFV.OF REF-come
'The woman forgot her bag here, and she has come back.'

In the case of infinitives, PRO, the viable antecedent for *ì* in this context, appears only in the subject position by definition and, therefore, is always c-commanded by it. In the case of the correlative clause a different configuration can be imagined, since, as has been said just above, DP_{rel} with the relativizer *mín* is always in situ. Therefore, it is meaningful to ask whether a bound-variable *ì* can appear in a position that is not c-commanded by the relativizer. As is shown in (67), the answer is no: the relativized antecedent has to c-command *ì*. Thus, a bound-variable *ì* as a part of subject DP cannot be coindexed with a relativized DP in the object position.

(67) *[À$_i$/#Ì$_i$ la kàyéè ka [$_{DP}$mùséè mín] dèɛman,]*
3SG/#PR.I POSS man.ART PFV.TR woman.ART REL help
wò bi tádiyan-den.
that be be.happy-RES
'The woman whose husband helped her$_i$, is happy.' (Litt.: 'Her$_i$ husband helped which woman$_i$ she is happy.')

As is expected, the bound-variable *ì* is not allowed either in configurations like (68) where the relativized phrase is embedded in the subject DP.

(68) *[Mùséè$_i$ mín na kàyéè kà*
woman.ART REL POSS man.ART PFV.TR
à/# *ì$_i$ la káydènu sáma,] à$_i$ báti nà sàndarmɛri la.*
3SG/#PR.I POSS documents loose 3SG PFV.OF come police.station to
'The woman$_i$ whose husband lost her$_i$ documents has come to the police station.'

5.3. Statistical restrictions on the use of reflexive in Bamana

Among Manding languages that have the same form *i* that is used as 2SG and as a reflexive, are Bamana, Maninka, Kita Maninka and Dyula. For all these languages, three conditions hold with respect to the use of *i* as a reflexive. First, the specialized reflexive pronoun is always limited to the third person. Second, the use of *i* as a specialized reflexive is optional, this form being always replaceable by a simple pronoun with the same person and number features as the subject. Third, the specialized reflexive coincides by form with the 2SG pronoun. This is illustrated for Bamana in (69) on the example of the verb *dàraka* 'to have breakfast' that is reflexive in this language, meaning that it requires in the position of the object a co-varying pronoun.

(69) Reflexive construction in Bamana (Vydrin 1994: 20)

Ń	*yé*	*ń*	*dàraka.*	'I have had breakfast.'
1SG	PFV.TR	1SG	have.breakfast	
Í	*y'*	*í*	*dàraka.*	'You (sg.) have had breakfast.'
2SG	PFV.TR	2SG	have.breakfast	
À	*y'*	***í/à***	*dàraka.*	'He has had breakfast.'
3SG	PFV.TR	**PR.I/3SG**	have.breakfast	
Án	*y'*	*án*	*dàraka.*	'We have had breakfast.'
1SG	PFV.TR	1SG	have.breakfast	
Á	*y'*	*á*	*dàraka.*	'You (pl.) have had breakfast.'
2PL	PFV.TR	2PL	have.breakfast	
Ù	*y'*	***ù(í)***	*dàraka.*	'They have had breakfast.'
3PL	PFV.TR	**3PL(PR.I)**	have.breakfast	

The conditions of the choice between the specialized reflexive pronoun and the third person pronoun are not totally clear for Bamana. Nevertheless, one can discern from Vydrin's (1994) description specific parameters that favor the use of the specialized reflexive *í*. Strikingly, all of these parameters coincide with those defined the syntactic configurations triggering the default agreement and the DAA as proposed in this paper.

The first element mentioned by Vydrin that can favor the use of the reflexive *í* is distributivity. In general, the specialized reflexive appears more often in the case of singular antecedent, whereas if the subject plural, it is very rare and can be even considered ungrammatical (Vydrin 1994). A remark considering the possibility of the use of *í* as reflexive with a plural antecedent is particularly interesting for our present discussion. It appears that distributivity makes the use of *í* as a reflexive more acceptable. The author states that, whereas some verbs disallow *í* in the plural context altogether, other verbs do allow it, but, "a distributive meaning" appears in the case when *í* and not *ù* (3PL) is used (Vydrin 1994: 23). Thus, a reflexive construction with *ù* yield a collective reading (70a), whereas the same construction with the specialized reflexive *í* induces a distributive reading (70b). According to the author's interpretation, the statement in (70b) is "very close in meaning" to a statement like (70c), where the distributive character of the subject is made explicit:

Reflexive with 3PL antecedent in Bamana (Vydrin 1994: 23)

(70a) *Ù y' ù pán jùru^{L} kùnná.*
3PL PFV.TR 3PL jump rope.ART over
'Ils sautèrent par-dessus la corde' (apparemment, simultaneusement)

(70b) *Ù y' í pán jùrú^{L} kùnná.*
3PL PFV.TR **PR.I** jump rope.ART over
'Ils sautèrent par-dessus la corde' (l'un après l'autre).

(70c) *Ù kélen-kélen-na bέε y' í pán jùru^{L} kùnná.*
3PL one-one-by all PFV.TR **PR.I** jump rope.ART over
'Chacun d'eux sauta par-dessus la corde'.

Second, the reflexive *í* is more frequent in infinitives (71) as compared to it used in matrix clauses.

Reflexive an infinitive clause in Bamana (Vydrin 1994: 22)

(71) *Ù tága-ra fòro^{L} lá k' í sìgi jíri^{L} kɔ́rɔ.*
3PL go-PFV.I field.ART to **INF** **PR.I** sit tree.ART under
They went to the field and sat down under a tree.

Third, *í* is more frequent when the antecedent is the non-specific *mɔ̀gɔ*, with the variant *màa* as in (72):

Reflexive in Bamana (Vydrin 1994: 26)

(72) *Ní màa^{L} má sà^{L}, kó^{L} bέε jùru^{L} b' í lá.*
if **person.ART** PFV.NEG die thing.ART all debt.ART be **PR.I** on
'Si l'on n'est pas encore mort, on est endetté de toutes les choses'. Litt. : "If a man$_i$ is not dead, all debts are on him$_i$".

Next, Bamana also has what we call DAA-2 uses and where it is not part of a reflexive construction, like in (73) in the second clause.

Bamana (Vydrin 1994: 29)

(73)	*Mɔ̀gɔ*	*mínᴸ*	*ká*	*wùluᴸ*	*má*	*sànᴸ,*	*dɔ́gɔᴸ*	
	person	who-ART	POSS	dog-ART	PFV.NEG	buy	markete	
góya-ra	*í*	*lá,*	*ò*	*tùn*	*bɛ́*	*kɛ́*	*fàamaᴸ*	*ká*
go.wrong-PFV	**PR.I**	to	this	only	IPFV	become	king-ART	POSS
sɔ̀gɔma-daraka-naᴸ			*yé.*					
morning-breakfast-sauce.ART			as					

'Celui qui n'avait pas vendu ses chiens, avait fait de mauvaises affaires, sa viande devenait celle du petit déjeuner du roi'. Litt.: "The one$_i$ who has not sold his dog, bad business is on him$_i$, …"

To sum up, the pattern of use found for *í* in Bamana reveals to be very close to that of *ì* in Kakabe. As has already been suggested, Northern Kakabe displays an evolution towards specialization of the reflexive binder. Whereas in Central Kakabe the antecedent of *ì* has to be non-specific, and therefore PRO and relative pronouns are excluded, Northern Kakabe widens the category of possible antecedent provided that the reflexive λ-binder is present. This involves an extension of the possible licensers of *ì* from those that lack φ-features and are semantically non-specific to those that lack φ-features but are not necessarily non-specific (since PRO and relativized phrases can be specific).

Following the same trajectory, the pronoun *í* in Bamana can be seen having made a step further towards widening the class of possible antecedents. Here, the antecedent is not required to lack φ-features any more, the only remaining restriction is that it must be a non-locutor. However, the restrictions on the type of antecedent are preserved in statistical form, since as has been shown, even though, in principle, *í* is allowed with specific antecedents, it is more widely used in contexts with non-specific antecedents and in infinitive clauses. Mandinka may be an example of a language where *í* may have advanced even further toward being a reflexive, i.e. in terms of Kratzer (2009) spelling out the 'signature feature' of the v λ-binder, rather than a default bound variable. Vydrin (1994) mentions that the reflexive pronoun *í* in Mandinka is used more frequently and with less restriction as compared to Bamana, however, no systematic study of this question exists so far.

6. The rise of restricted reflexive

Table 2 summarizes the possible patterns of use of the 2SG pronoun across the languages that have been mentioned so far. From left to right, it proceeds from languages with the minimal polysemy pattern, where deictic pronoun form is extended

to the personal-generic use. It is followed by languages like those Mande and Atlantic languages discussed in (Creissels et al. 2015) and also Central Kakabe. Here, the 2SG form can also appear as a pronoun co-varying with a non-specific phrase. Next, in Northern Kakabe the pronominal form in question can appear with antecedents that lack φ-features, which, as has just been said, is a larger class compared to non-specific phrases. At this stage, due to the fact that it appears mostly in reflexive contexts, it moves towards specializing as a form that spells out the reflexive feature. Finally, in languages like Maninka and Bamana, the form becomes available in all reflexive contexts. However, for languages like Bamana, a preference for non-specific antecedents and antecedents lacking φ-feature is manifest in the use of the pronoun.

	English, Russian, etc.	Wolof, Sereer, Jallonke, Central Kakabe	Northern Kakabe, (Koranko)	Guinean Maninka, Bamana, Jula, Mandinka, Maninka Kita
2SG	+	+	+	+
Generic-personal	+	+	+	+
Bound non-existential	–	+	+	+
Restricted reflexive	–	–	+	+
Reflexive pronoun	–	–	–	+

Table 2. 2SG, generic, DAA and reflexive polysemy patterns

Abbreviations

BNE	bound non-existential pronoun
CQP	counting quantifier phrase
DAA	default agreement anaphor
DistrQP	distributive quantifier phrase
DP	determinative phrase
GEN	generic operator
GQP	group quantifier phrase
NegP	negative phrase
NegQP	negative quantifier phrase
NP	noun phrase

PRO	pro-drop
QP	quantifier phrase
RefP	referent phrase
VP	verbal phrase
WhQP	who-question quantifier phrase

Glosses

ART	article
COND	conditional
COP	copula
DISTR	distributive marker
FOC	focalization
GER	gerund
GNR	generic meaning
HAB	habitual
IMP	impersonal
INDEF	indefinite
INF	infinitive
IPFV	imperfective
NEG	negative
PASS	passive
PFV	perfective
PFV.OF	perfective with operator focus
PFV.I	intransitive perfective
PFV.TR	transitive perfective
PL	plural
POSS	possessive marker
POT	potential
PR.I	pronoun *ì*
REF	refactive
REL	relativization marker
RES	resultative
SBD	subordinative
SBJV	subjunctive
SG	singular
UNIV	universal quantifier

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Alexandra Vydrina

Non-existential bound pronouns and restricted reflexive: the emergence of reflexive pronoun in Manding and Mokole languages

The paper deals with the emergence of reflexive pronouns in Manding and Mokole languages. Special attention is paid to the sources of grammaticalization. It is claimed that besides well-known sources for the reflexive pronouns, like nouns for 'head' or 'body', a reflexive pronoun can go back to the 2 person singular pronouns in its generic use. More precisely, a path is suggested where the reflexive pronoun originates from the second person singular pronoun which passes through the step of generic usage. It is postulated that the generic second person singular pronoun transforms into a bound non-existential pronoun by losing person specification. This analysis is based on the distribution of the pronoun *i* in Manding and Mokole languages, but also on the generic

and impersonal uses of the 2 personal singular pronouns in the neighbouring languages belonging to the Atlantic family.

Key words: reflexive pronoun, bound pronouns, quantors, grammaticalization, Mande languages, langue kakabé

Alexandra Vydrina

Les pronoms « lié non-existentiel » et « réfléchi restreint » : l'émergence des pronoms réfléchis dans les langues Mandingues et Mokolé

L'article traite de l'émergence des pronoms réfléchis dans les langues Mandingue et Mokolé. L'attention particulière est accordée aux sources de grammaticalisation. Il est proposé qu'à part des sources bien connues (comme 'tête' ou 'corps'), le pronom réfléchi peut provenir d'un pronom singulier de la 2^{e} personne *i* via l'étape de son emploi générique. Il est proposé que le pronom singulier de la 2^{e} personne, dans son emploi générique, évolue en un pronom lié non-existentiel en perdant sa spécification personnelle. Cette analyse s'appuie sur la distribution des pronoms *i* dans les langues Mandingue et Mokolé, mais aussi sur l'emploi générique et impersonnel des pronoms singuliers de la 2^{e} personne dans les langues voisines appartenant à la famille Atlantique.

Mots-clés : pronom réfléchi, quantificateurs, grammaticalisation, langues mandé, langue kakabé

Александра Валентиновна Выдрина

Связанное не-экзистенциальное местоимение и ограниченное рефлексивное местоимение: возникновение рефлексивных местоимений в языках манден и моколе

В статье рассматривается возникновение рефлексивных местоимений в языках групп манден и моколе. Особое внимание уделяется источникам грамматикализации. В дополнение к хорошо известным источникам рефлексивных местоимений, таким как слова со значением «голова» или «тело», в этих языках источником может служить местоимение 2 лица единственного числа *i*, которое в своей эволюции проходит промежуточный этап генерического значения. Сингулярное местоимение 2 лица употребляется обобщённо и превращается в связанное неэкзистенциальное местоимение, утрачивая свою личную спецификацию. Этот анализ опирается на дистрибуцию употреблений местоимения *i* в манден и моколе, а также принимает во внимание генерическое и безличное использование сингулярных местоимений 2 лица в соседних языках атлантической семьи.

Ключевые слова: рефлексивное местоимение, связанные местомения, грамматикализация, языки манде, язык какабе