

Kinyarwanda locative applicatives and the Minimal Link Condition

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1. Introduction

In this paper, we discuss locative applicative constructions in Kinyarwanda, a Bantu language spoken in Rwanda and its neighbouring countries (Kimenyi 1980, Ngoboka 2005). Specifically, we are concerned with contrasts such as the one between (1b) and (1c):¹

- (1) a. Umujuura y-a-tee-ye-ho inzu amabuye.
 thief SP-PST-ASP-APPL house stones
 'The thief threw the stones on the house.'
- b. *Amabuye y-a-tee-w-e-ho inzu n'umujuura.
 stones SP-PST-throw-PASS-ASP-APPL house by-thief
 'The stones were thrown on the house by the thief.'
- c. Amabuye y-a-yi-tee-w-e-ho n'umujuura.
 stones SP-PST-OM-throw-PASS-ASP-APPL by thief
 'The stones were thrown on it by the thief.'

(1a) depicts a locative applicative formed by means of the suffix *-ho*, which takes two DP-objects, the theme argument *amabuye*, 'stones', and the locative/goal argument *inzu*, 'house' (henceforth the "applied object"). As is illustrated by (1b), locative applicatives do not allow passivisation of the

¹ Morphemes are glossed as follows: APPL = applicative; ASP = aspect; FOC = focus marker; FV = final vowel; OC = object clitic; OM = object marker; PASS = passive; PRES = present tense, PST = past tense; RC = relative concord; REL = relative marker; RS = relative suffix; SP = subject prefix. Where possible, we have adjusted the glosses of examples that we adopted from the literature to our system. The examples have not been marked for tone, since pronunciation is irrelevant for our analysis.

theme if the applied object is a full DP adjacent to the verb. However, (1c) shows that the theme DP can be passivised once the applied object is realised as an object marker (in italics) on the verb.

In section 2 of this paper, we present more data from locative applicatives which show that not only passivisation, but also extraction and object marking of the theme, are excluded in Kinyarwanda, unless the applied object has itself either been passivised, extracted or object-marked. We suggest that this situation follows from the *Minimal Link Condition* (MLC), which is the main locality constraint for syntactic movement operations in the Minimalist Program (Chomsky 1995, 1999, 2000, 2001). The MLC blocks movement of an element if there is another element with a similar feature specification which is closer to the potential landing site. We claim that the theme cannot move to the subject position in examples such as (1b) because the applied object is closer to this position than the theme. However, in contexts in which the applied object has been moved "out of the way" (which is the case, we argue, in examples such as (1c), where the applied object is an object marker), the MLC no longer blocks movement of the theme.

We outline the details of this proposal in sections 3 and 4. Our analysis is based on various aspects of the studies of Kinyarwanda locatives presented in Baker (1988, 1992), Nakamura (1997) and McGinnis (2001, 2004), but also incorporates some of the core ideas presented in Anagnostopoulou's (2003) theory of ditransitives. In section 3, we suggest that in ditransitive locative applicatives, both objects of the verb move to a specifier of a functional category Asp. Crucially, we claim that the applied object always moves to the higher specifier position from where it c-commands the theme in the lower specifier. In this configuration, the applied object is therefore closer to any potential landing site, and consequently, the MLC blocks movement of the theme across the applied object. Section 4 offers a detailed discussion of examples such as (1c), in which movement of the applied object obviates the effects of the MLC and makes movement of the theme possible. Finally, section 5 compares locative applicatives to those types of applicatives in Kinyarwanda in which contrasts like the one exhibited by (1) are absent.

2. Object properties in Kinyarwanda locatives

The two DP-objects of ditransitive locative applicatives in Kinyarwanda display well-studied asymmetrical behaviour with respect to passivisation, object marking and extractability. Generally, only the applied object of a locative applicative can be subject to these operations and thus shows

what Bresnan & Moshi (1990) call "primary object properties".² As is shown in (3), whereas the applied object of the locative in (2) can be passivised, (3a), passivisation of the theme is excluded, (3b) (see also (1b) above):

- (2) Umubooyi y-a-menn-ye-ho umwaana amaazi.
 cook SP-PST-pour-ASP-APPL child water
 'The cook poured water on the child.'
- (3) a. Umwaana y-a-menn-w-e-ho amaazi n'umubooyi.
 child SP-PST-pour-PASS-ASP-APPL water by cook
 Lit.: 'The child was poured on the water by the cook.'
- b. *Amaazi y-a-menn-w-e-ho umwaana n'umubooyi.
 water SP-PST-pour-PASS-ASP-APPL child by cook
 'The water was poured on the child by the cook.'

Similar contrasts emerge with respect to object marking. Although the applied object can be realised as an object marker, (4a), object marking of the theme is not possible in locatives, (4b):

- (4) a. Umubooyi y-a-*mu*-menn-ye-ho amaazi.
 cook SP-PST-OM-pour-ASP-APPL water
 'The cook poured water on him/her.'

² Bresnan & Moshi (1990) and Moshi (1998) distinguish between *symmetrical* languages, in which both objects of a ditransitive applicative show primary object properties, and *asymmetrical* languages, in which only one object has these properties. Most applicatives in Kinyarwanda fall into the former category (see e.g. section 5 for a discussion of instrumental applicatives; for a detailed description, see Kimenyi (1980) and Ngoboka (2005)), but locative applicatives in Kinyarwanda are clearly asymmetrical. This shows that the symmetrical/asymmetrical distinction can also be drawn between different types of applicatives within the same language.

- b. *Umubooyi y-a-ya-menn-ye-ho umwaana.
 cook SP-PST-OM-pour-ASP-APPL child
 'The cook poured it on the child.'

Finally, whereas the applied object in Kinyarwanda locatives can be extracted in relative clause constructions like (5a), theme extraction is blocked in (5b):

- (5) a. umwaana umubooyi y-a-menn-ye-ho amaazi
 child cook SP-PST-pour-ASP-APPL water
 'the child on whom the cook poured water'
- b. *amaazi umubooyi y-a-menn-ye-ho umwaana
 water cook SP-PST-pour-ASP-APPL child
 'the water which the cook poured on the child'

The contrast between the properties of the applied object and the theme in Kinyarwanda locatives has been the topic of various studies (e.g. Baker 1988, 1992; Marantz 1993, Nakamura 1997; McGinnis 2001). However, a fact about Kinyarwanda which to the best of our knowledge has so far been overlooked is that the theme *can* adopt primary object properties *in certain contexts*. Note that in all the ungrammatical (b)-examples in (3-5), the applied object is realised as a full DP-object and appears adjacent to the verb. However, it is an interesting fact about Kinyarwanda applicatives that in those contexts where the applied object has itself been extracted, passivised or object marked, these operations are also available for the theme. (6a) illustrates that, in contrast to (3b), passivisation of the theme is possible once the applied object is an object marker (see also (1c) in section 1). Moreover, the theme can also be passivised once the applied object has been extracted in a relative clause construction, (6b):

- (6) a. Amaazi y-a-mu-menn-w-e-ho n'umubooyi.
 water SP-PST-OM-pour-PASS-ASP-APPL by cook
 'The water was poured on him/her by the cook.'
- b. umwaana amaazi y-a-menn-w-e-ho n'umubooyi
 child water SP-PST-pour-PASS-ASP-APPL by cook
 'the child on whom the water was poured by the cook'

Similarly, (7) shows that, in contrast to (4b), object marking of the theme is possible if the applied object is also an object marker (7a), or if it has been extracted (7b) or passivised (7c):

- (7) a. Umubooyi y-a-ya-mu-menn-ye-ho.
 cook SP-PST-OM-OM-pour-ASP-APPL
 'The cook poured it on him/her.'
- b. umwaana umubooyi y-a-ya-menn-ye-ho
 child cook SP-PST-OM-pour-ASP-APPL
 'the child on whom the cook poured it'
- c. Umwaana y-a-ya-menn-w-e-ho n'umubooyi.
 child SP-PST-OM-pour-PASS-ASP-APPL by cook
 Lit.: 'the child was it poured on by the cook.'

Finally, although theme extraction is ruled out in examples such as (5b), the theme can be extracted once the applied object is realised as an object marker or when it has undergone A-movement in a passive:

- (8) a. amaazi umubooyi y-a-mu-menn-ye-ho
 water cook SP-PST-OM-pour-ASP-APPL
 'the water that the cook poured on him/her'
- b. amaazi umwaana y-a-menn-w-e-ho n'umubooyi.
 water child SP-PST-pour-PASS-ASP-APPL by cook
 Lit.: 'the water which the child was poured on by the cook'

Most existing analyses of which we are aware are merely concerned with the lack of the theme's primary object properties in constructions such as (3b-5b), and hence do not offer an analysis of those constructions in which the theme does have these properties. For example, Baker (1988, 1992) and Nakamura (1997) assume that the contrasts exhibited in (3-4) are case-related. They argue that the applied object in a locative applicative has structural case, but that the theme has inherent case. Given the standard assumption that only structural case is absorbed in passives and that only objects with structural case can be realised as object markers, it follows that passivisation

and object marking are not possible with the theme. However, what Baker's and Nakamura's analyses do not explain is why passivisation and object marking of the theme become possible when the applied object is an object marker, a relative operator or the subject of a passive.

McGinnis' (2001) analysis of Kinyarwanda applicatives assumes that object marking of the theme is contingent on an EPP-feature associated with a functional applicative head. Crucially, McGinnis suggests that in Kinyarwanda locatives, the applicative head does not have an EPP-feature. Although this assumption accounts for why the theme in examples such as (4b) cannot be realised as an object marker, it does not explain why object marking becomes possible when the applied object is passivised, extracted or also object-marked.

Another shortcoming of these existing analyses is that the contrasts in (3-5), although clearly of a similar nature, are often explained by different mechanisms. For example, whereas Nakamura (1997) excludes *passivisation* and *object marking* of the theme through principles of case theory, the impossibility of theme *extraction* cannot be explained through case, since extractability is not connected to the case properties of a phrase. Therefore, the explanation that Nakamura provides for the contrast in (5) differs from his explanation for the contrasts in (3) and (4).³ We consider this an unwelcome result, not only because the data in (3-5) exhibit a similar pattern, but also in the light of the data in (6-8), which show that theme extraction, object marking and passivisation become possible under exactly the same conditions (viz. when the applied object has been "moved away").

In view of these comments, we will attempt to provide a uniform analysis of the contrasts in (3-5) which also explains the data in (6-8). In contrast to Baker (1988, 1992), Marantz (1993) and Nakamura (1997), we argue that the theme's lack of primary object properties is not due to its failure to get structural case.⁴ Rather, we follow Ura (1996), McGinnis (1998, 2001, 2004),

³ Nakamura (1997) explains examples such as (5b) on the basis of a transderivational formulation of the Minimal Link Condition, according to which a derivation is excluded if an alternative derivation based on the same numeration, but with shorter movement steps, also exists. Applicatives such as (2) are contrasted with non-applied constructions such as (i), which allow theme extraction.

(i) Umubooyi y-a-menn-ye amaazi ku mwaana.
cook SP-PST-pour-ASP water on child
'The cook poured water on the child.'

According to Nakamura's analysis, the theme in (i) is closer to SpecC than in (2); movement of the theme to SpecC is hence shorter in (i), and (5b) is therefore ruled out.

⁴ One might argue that the contrasts in (6-8) can be explained by case theory if it is assumed that structural case assignment in Kinyarwanda requires *linear adjacency* of the verb and the object (cf. Stowell 1981). Notice that in Kinyarwanda locatives, the applied object obligatorily precedes the theme; therefore, the theme would not be adjacent to the verb and hence could not get structural case unless the applied object has been subject to an operation which creates adjacency of the theme and the verb. However, there are a number of problems with this approach. First, structural case assignment is possible in Kinyarwanda even if an adverb intervenes between the verb and the object:

Anagnostopoulou (2003) and others in assuming that the relevant asymmetries observed in double object constructions are generally the result of the violation of locality constraints. More specifically, we suggest that theme passivisation, pronominalisation and extraction in Kinyarwanda applicatives are blocked by the *Minimal Link Condition* (Chomsky 1995, 1999, 2000, 2001):

(9) *The Minimal Link Condition* (MLC) (Chomsky 1995: 311)

K attracts α only if there is no β , β closer to K than α , such that K attracts β .

(10) *Closeness* (Chomsky 1995: 358; Sabel 2002: 273)

β is closer to the target K than α if β c-commands α .

In the Minimalist Program (henceforth MP), movement of constituents is assumed to be *feature-driven*. Formal features associated with functional heads in the syntactic representation need to be matched with the corresponding formal features of lexical items. The relevant target features of a category K locate the matching features associated with an element α . K then attracts α , which moves and enters a checking configuration in which the features of K and α can be matched. As a result of feature matching, the features of the target are deleted.⁵ Importantly, the MLC prevents α from moving if there is a closer β such that K attracts β . To illustrate how the MLC works, consider the familiar example of a wh-island effect in (11) (see Chomsky 2000; Sabel 2002):

(11) a. [C you wonder [_{CP} *which car* John could fix t *how*]?

b. *How do you wonder [_{CP} *which car* John could fix t t]?

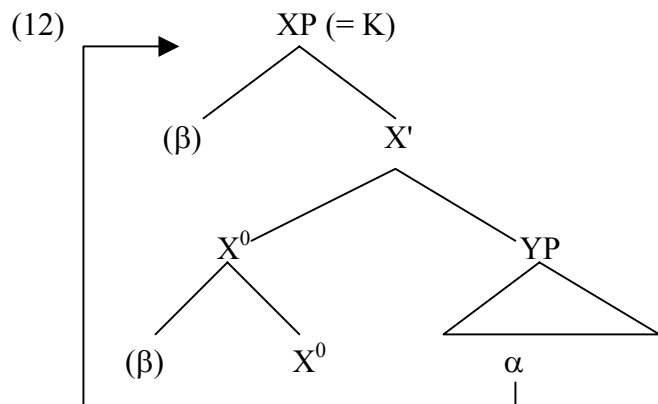
(i) ?John a-som-a kenshi Mariya
 John SP-kiss-FV often Mary
 'John often (many times) kisses Mary.'

(ii) Mariya a-som-w-a kenshi na John
 Mary SP-kiss-PASS-FV often by John
 'Mary is often kissed by John.'

Second, the case-adjacency approach cannot explain the impossibility of theme extraction in (5b), since extraction is not contingent on structural case. Third, it is not clear how the grammatical example in (7a) would be derived, where both objects are marked on the verb and hence must both have structural case (but only one object can be adjacent to the verb). Fourth, there are applicatives in Kinyarwanda which, in contrast to locatives, do allow passivisation of the theme with a full applied object DP adjacent to the verb (see section 5). And fifth, any account which explains syntactic phenomena on purely syntactic grounds should be preferable from a conceptual point of view to an explanation which needs to refer to phonological properties like adjacency.

Both C-heads in (11) have a [Q]-feature which needs to be matched with the [Q]-feature of a wh-phrase. In (11a), the wh-phrase *which car* has moved to the embedded SpecC position to check the [Q]-feature of the embedded C. The [Q]-feature of the matrix C still needs to be checked. In (11b), it is matched with the [Q]-feature of the wh-phrase *how*, which has moved to matrix SpecC. However, since the wh-phrase *which car* c-commands *how* and is therefore closer to the matrix C, (11b) violates the MLC and is therefore ungrammatical.

We adopt the definitions in (9) and (10) with one important addendum. We assume that if a feature is associated with a head X^0 , then XP only attracts β if β is outside X^0 's *minimal domain* (= the complement and specifier of X^0 , plus all nodes dominated by X^0 if X^0 is complex; see Chomsky 1995: 178). This strikes us as a natural assumption; if attraction is motivated by feature checking in a local environment, then elements which are already in a local environment of a head cannot be attracted.⁶ It then follows from (9) that an element β which is in X^0 's minimal domain does not prevent XP from attracting α , even if β c-commands α :



⁵ In Chomsky (2000), the features of the target which trigger movement are called the *Probe*, the matching features are called the *Goal*, and feature-deletion under match is called *Agree*.

⁶ The idea expressed by this addendum also appears as part of an alternative definition of "Closeness" in Chomsky (1995: 356):

(i) If β c-commands α and τ is the target of raising, β is closer to K than α unless β is in the same minimal domain as (a) τ or (b) α .

Whereas our proposal essentially captures the spirit of part (a) of (i), we reject part (b), which strikes us as contradicting the very idea of the MLC. For example, according to (b), a category in a specifier of a head X^0 does not count as closer to an attracting category K than the complement of X^0 , since the specifier of X^0 and its complement form part of the same minimal domain. We find this consequence counterintuitive. Our proposal is an attempt to implement the MLC in such a way that intervention effects can be captured strictly in terms of c-command. We therefore do not adopt (i) for our analysis.

(12) illustrates that an element α can target XP and move across a c-commanding element β if β is part of X^0 or in SpecX (in the latter case, α would form a second specifier above β ; see section 3).

Our analysis, which we discuss in detail in the next sections, presumes that the ungrammatical examples in (3-5) are ruled out as violations of the MLC. We argue that (1.) extraction, passivisation and object marking involve formal features of functional heads that attract corresponding features associated with the theme and the applied object, and that (2.) the applied object c-commands the theme at the relevant stage of the derivation and is therefore always closer to the attracting category. Movement of the theme in e.g. passives is therefore blocked by the presence of the applied object in the same way as movement of the wh-phrase *how* in (11b) is blocked by the presence of the c-commanding wh-phrase *which car*.

However, notice that the blocking effect of a phrase intervening between an attractor and its target disappears once the phrase is moved "out of the way". According to Chomsky (1999: 22), the trace (or copy) of an XP never blocks attraction of a phrase it c-commands in terms of the MLC, because the trace/copy of XP is not phonologically realised. This assumption explains, among other things, the contrast in (13) (from McGinnis 2001):

- (13) a. *Elle_i semble au garçon [t_i avoir du talent]
she seems to.the boy have talent
'She seems to the boy to have talent.'
- b. Á qui_j semble-t-elle_i t_j [t_i avoir du talent]?
to who seems-she have talent
'To whom does she seem to have talent?'

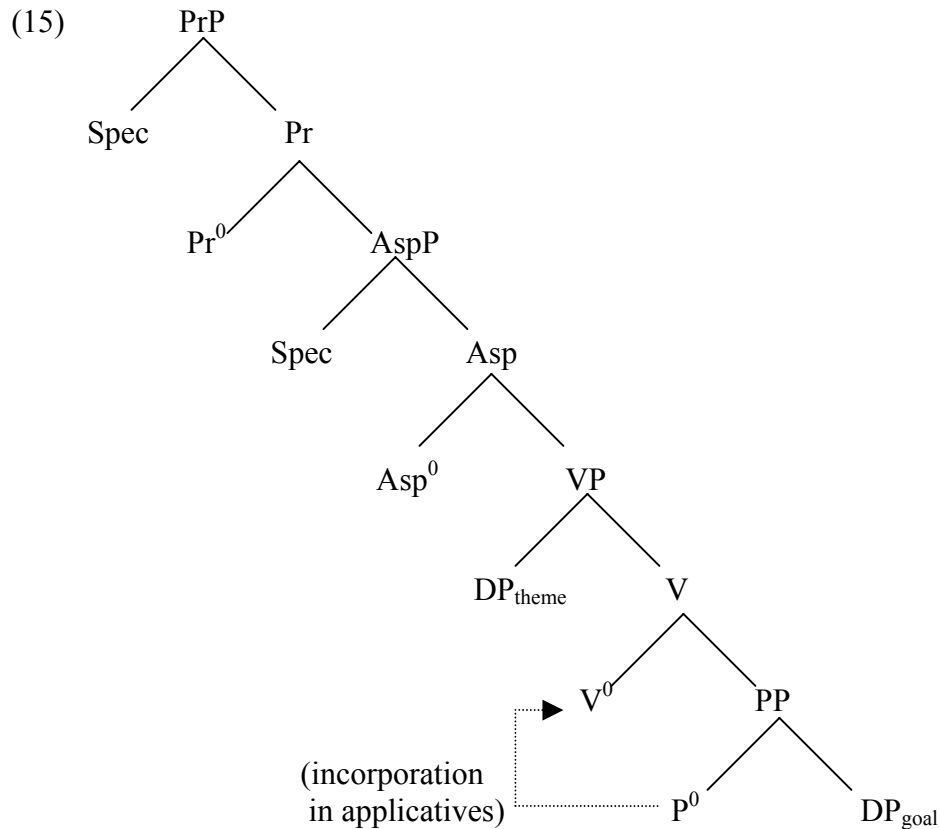
In (13a), the experiencer *au garçon* c-commands the SpecT-position of the infinitive. Therefore, raising of the embedded subject to matrix SpecT violates the MLC. In contrast, the experiencer has been moved to SpecC in (13b), and its invisible trace does not block DP-movement of the embedded subject. Therefore, (13b) is grammatical.

On the basis of Chomsky's claim, the data in (6-8) can be explained as follows: when the applied object has itself been passivised, incorporated or extracted, only its phonologically unrealised copy intervenes between the theme and an attracting feature. In these contexts, the applied object no longer induces a blocking effect in terms of the MLC, and the theme can therefore be moved.

3. Structural case and multiple specifiers

As our starting point, we assume that non-applied constructions such as (14a) and the corresponding locative applicative in (2) (repeated here as (14b)) are based on a structure like (15):

- (14) a. Umubooyi y-a-menn-ye amaazi ku mwaana.
 cook SP-PST-pour-ASP water on child
 'The cook poured water on the child.'
- b. Umubooyi y-a-menn-ye-ho umwaana amaazi.
 cook SP-PST-pour-ASP-APPL child water
 'The cook poured water on the child.'



(15) is adopted from Nakamura (1997), whose analysis of applicatives is based on Baker's (1988, 1992) influential incorporation analysis. Baker argues that the thematic relations between the verb, the theme and the goal argument in a locative applicative such as (14b) are identical to the thematic relations in a non-applied construction such as (14a) and therefore have to be represented

through identical syntactic relations (the *Uniformity of Theta Assignment Hypothesis*, see Baker 1988). Therefore, the goal object in both (14a) and (14b) is merged into the structure inside a PP-complement of the verb, while the theme is located in SpecV (see also Larson 1988 for arguments). However, whereas the preposition in (14a) is the free morpheme *ku*, the head of the PP in the locative applicative in (14b) is the applicative morpheme *-ho*, which, according to Baker (1988), is an affixal preposition. As an affix, *-ho* needs a host and therefore incorporates into the verb in locative applicatives.

The VP in (15) is selected by Asp; structural case is checked in SpecAsp (see also Marantz 1993; Baker 1997). AspP is selected by Pr, the head of a predicate phrase (Bowers 1993) which introduces the external argument in SpecPrP. PrP merges with T, the head of TP; TP merges with C (this part of the structure has been omitted in (15)).

As argued in Jaeggli (1986) and Baker (1988), Kinyarwanda verbs have the ability to assign structural case to two objects. Translated into the case checking theory of the MP, this means that Asp in Kinyarwanda can optionally attract two object DPs with structural case features. Consequently, Asp in Kinyarwanda can project *multiple specifiers*. We also assume that Asp in Kinyarwanda can host an EPP-feature, which is checked by a DP in the highest specifier (cf. Chomsky 2000).⁷ In these respects, Asp in our analysis is comparable to the functional category ApplH ("high applicative") in McGinnis' (2001, 2004) theory, which also projects multiple specifiers. However, McGinnis assumes explicitly that locative applicatives are not associated with ApplH, but rather with the category ApplL ("low applicatives"), which does *not* project multiple specifiers in her theory.⁸ In contrast to McGinnis, we argue that the availability of two specifier positions in which structural case can be checked is a crucial aspect of the structure of locative applicatives in Kinyarwanda, and that the data discussed in section 2 follow from this important fact.

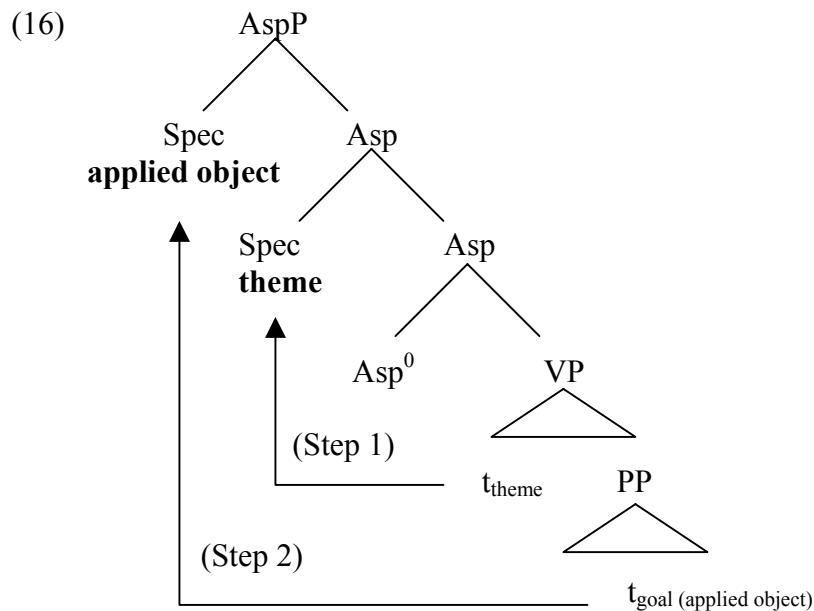
Since the applicative affix incorporates into the verb in locative applicatives, and given that traces cannot assign case to their complements (see Baker 1988, 1992), the applied object in a locative applicative cannot get case in the complement position of P. We follow Nakamura and assume that therefore, the applied object (the goal) must move to SpecAsp to check its structural

⁷ The fact that the EPP feature of Asp is always checked in the higher specifier may be because features of functional categories are hierarchically ordered and therefore determine the order in which checking takes place (Sabel 2002).

⁸ McGinnis' proposal is based on Pylkkänen (2000), who argues that semantically different types of applicatives are represented structurally in different ways in the syntax. Pylkkänen distinguishes between "high" applicatives, which denote a relation between an individual and an event, and "low" applicatives, which relate two individuals to each other.

case feature against the corresponding ϕ -features of Asp. However, we depart from Nakamura's analysis with respect to the case properties of the theme. Whereas Nakamura assumes that a theme-DP in SpecVP can be marked with inherent case, we maintain instead that inherent case can never be assigned to SpecVP. Instead, we suggest that the theme is also equipped with a structural case feature which needs to be checked in SpecAsp. This means that both object DPs in locative applicatives are marked for structural case, and Asp always projects both specifiers to which the two objects move in order to check their respective case features.

Importantly, the order in which the two objects move to SpecAsp is determined by the MLC. Since the theme c-commands the applied object in (15), movement of the applied object across the theme is ruled out. Therefore, the theme always has to move first, projecting the first (lower) specifier of Asp and checking its structural case feature against the relevant ϕ -features of Asp. However, once the theme has moved to SpecAsp, the MLC no longer blocks attraction and feature-driven movement of the applied object, because the copy of the theme in SpecV is not phonologically realised and the theme DP itself cannot be attracted, since it is now in the same minimal domain as the attracting head Asp (compare (12) in section 2). Therefore, the applied object also moves and merges with AspP above the theme, projecting a second (higher) specifier:



Notice that in our analysis, the applied object *must* project the higher SpecAsp; it cannot merge into the tree below the theme. This follows from the extension condition (Chomsky 1995, 2000,

2001), which implements strict cyclicity into the MP by requiring that substitution operations⁹ always extend the phrase structure (see Kitahara 1995, Bobaljik & Brown 1998). Chomsky (1995) states the extension condition as in (17), where "GT" stands for "Generalised Transformation" (= Merge) which targets a phrase marker K:

(17) *Extension Condition* (Chomsky 1995: 190)

GT and Move α extend K to K*, which includes K as a proper part

We explicitly assume that the extension condition also holds for movement operations that target two specifiers of the same head (the "strong extension condition"; see Chomsky 2001: 6); this assumption rules out "tucking in" processes in the sense of Richards (1997). Clearly, if the applied object targeted AspP but moved into a specifier below the theme, then the derived phrase marker K* (the "new" AspP) would not include K (the "old" AspP) as a proper part. Therefore, (17) forces the applied object to move to the higher specifier of Asp.

The extension condition and the MLC explain that locative applicatives have a rigid word order. (18) shows that, in contrast to other types of applicatives in Kinyarwanda (see section 5), the applied object obligatorily precedes the theme in locative applicatives:

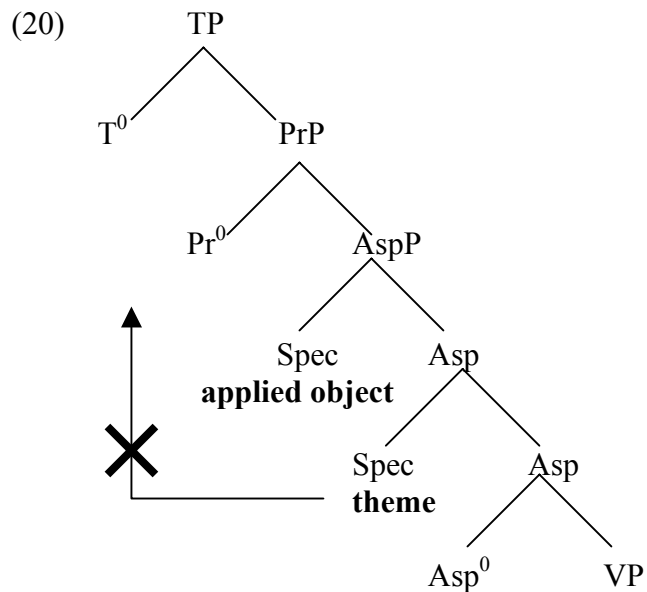
- (18) a. Umubooyi y-a-menn-ye-ho umwaana amaazi.
 cook SP-PST-pour-ASP-APPL child water
 'The cook poured the water on the child.'
- b. *Umubooyi y-a-menn-ye-ho amaazi umwaana.
 cook SP-PST-pour-ASP-APPL water child
 'The cook poured the water on the child.'

Since the theme has to move first because of the MLC, and since the applied object has to move to the higher SpecAsp because of (17), the word order in (18b) cannot be derived.

Crucially, the applied object (asymmetrically) c-commands the theme in (16). As is emphasised in Anagnostopoulou (2003), it is this configuration that makes it possible to account for the asymmetrical behaviour of the theme and the applied object in double object constructions in

⁹ The implications of the extension condition for head adjunction are discussed in section 4.2.

If the theme's structural case feature is deleted, then the applied object remains active and can move to SpecT in a passive construction. However, suppose the structural case feature of the applied object in the higher SpecAsp is deleted, but the theme's case feature is not. Then the theme would remain active and could be attracted by T. However, since the applied object occupies the higher SpecAsp, movement of the theme-DP would violate the MLC. Notice that according to Chomsky (1999: 22), inactive DPs still induce intervention effects; therefore, the applied object, although inactive, is still a potential target for T's EPP-feature and thus blocks movement of the theme. Therefore, constructions such as (19a) are ungrammatical.



Now let us turn to the question of why the theme can move to SpecT when the applied object is an object marker or has been extracted. In most generative analyses, object marking in Bantu languages is analysed as object agreement (see e.g. Baker 1988, 1992; Marantz 1993; Nakamura 1997; Woolford 2000, McGinnis 2001). However, notice that in Kinyarwanda, an object marker on the verb and the corresponding full object DP cannot co-occur, which renders an agreement analysis implausible:

- (21) a. Umuhiinzi a-ra-saaruur-a ibishyiimbo.
 farmer SP-PRES-harvest-FV beans
 'The farmer is harvesting the beans.'

- b. Umuhiinzi a-ra-*bi*-saaruur-a.
 farmer SP-PRES-OM-harvest-FV
 'The farmer is harvesting them.'
- c. *Umuhiinzi a-ra-*bi*-saaruur-a ibishyiimbo.
 farmer SP-PRES-OM-harvest-FV beans
 'The farmer is harvesting the beans.'

Therefore, we adopt the alternative view and follow Kimenyi (1995) in assuming that object markers in Kinyarwanda, as in many other Bantu languages, are *incorporated pronouns* (see also Bresnan & Mchombo 1987 for Chichewa; Bresnan & Moshi 1990, Moshi 1998 for KiChaga; Zeller 2004a for Zulu). We analyse object markers as pronominal clitics of category D which undergo head movement and adjoin to Pr in order to check a gender feature associated with this functional head (Anagnostopoulou 2003). The object clitic incorporates into the verb in Pr and moves with Pr (which includes the verb complex) to T. Furthermore, we assume that pronominal DPs have structural case features which must be checked and deleted in SpecAsp before incorporation takes place, since they otherwise would remain unchecked. This proposal implements the common assumption that object marking is only possible if the pronominal clitic has been located in a structural case-checking (or –assigning) specifier position at some stage of the derivation (see Marantz 1993; Baker 1997; Nakamura 1997); it also takes into account the observation that pronominal objects in many languages tend to undergo object shift. Notice that according to the Bare Phrase Structure theory of the MP, pronominal clitics of category D are heads and phrases at the same time (see the discussion in Chomsky 1995: 249). This means that an object marker like *-bi-* in (21b) first undergoes A-movement to SpecAsp as a DP and then incorporates into Pr as a D^0 from this position.¹¹

In the light of these remarks, consider now the following examples from Greek (Anagnostopoulou 2003: 194):

¹¹ Notice that our proposal requires a slight qualification of the idea that phrases with a checked (and hence deleted) structural case feature are frozen in place. Although this assumption continues to hold for phrasal movement, our proposal implies that head movement of a category with a deleted structural case feature is still possible. Therefore,

- (22) a. ?*To vivlio charistike tis Marias apo ton Petro.
 the book award-PASS the Mary from the Petros
 'The book was awarded to Mary by Peter.'
- b. To vivlio tis charistike.
 the book OC award-PASS
 'The book was awarded to her.'

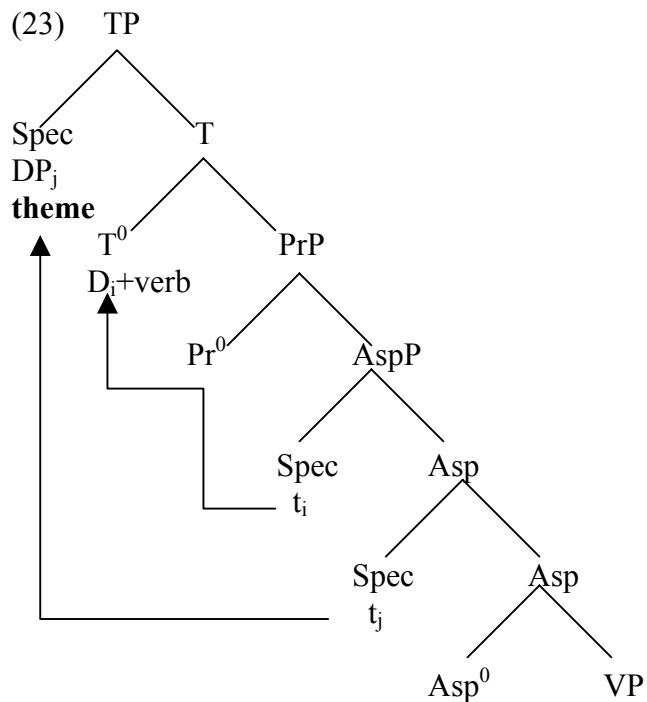
The contrast between (22a) and (22b) is reminiscent of the contrast between (19a) and (19b). Theme passivisation is excluded in the Greek double object construction in (22a) in the presence of the full goal DP *tis Marias*, but becomes possible if the goal is realised as the pronominal clitic *tis* in (22b).

Anagnostopoulou (2003) explains the contrast in (22) as follows. She assumes that the goal in Greek double-object constructions is base-generated in a position from where it c-commands the theme. The goal in (22a) is therefore closer to SpecT than the theme, and movement of the theme to SpecT thus violates the MLC. (This part of her analysis is similar to the account we have provided for the ungrammaticality of (19a); the main difference is that we assume that the goal (= applied object) in applicatives is not base-generated in a higher position, but c-commands the theme as a result of movement.) Furthermore, Anagnostopoulou argues that clitics in Greek raise to T where they attach to the verb. Importantly, the goal in the grammatical example in (22b) is a clitic, which means that it has moved from its base position to T. As a result, theme movement to SpecT no longer violates the MLC in (22b): the clitic and the feature which attracts the theme are now in the minimal domain of the same head (i.e. T), and the traces/copies of moved elements generally do not induce MLC-violations. Therefore, neither the clitic in T nor its trace block movement of the theme to SpecT.

This idea can now be applied to the Kinyarwanda example in (19b). Since the applied object-DP needs to check and delete its case feature before incorporation, the case feature of the theme is not deleted after checking (Burzio's generalisation) and remains active. Once the applied object has undergone head movement to Pr and moved with the verb to T, neither the clitic itself nor its trace/copy block movement of the theme-DP from the lower specifier to SpecT. Therefore, the

although a pronominal object is inactive for XP-movement once its structural case feature has been checked, it can still undergo head movement and incorporate into the verb.

theme DP can move and check its case feature and T's ϕ - and EPP-features. Example (19b) is therefore well-formed.



We now turn to (19c), where extraction of the applied object licences passivisation of the theme. Again, the basic structure looks as in (20), where the MLC would only allow for the applied object to move to SpecT. However, if the applied object is extracted, the theme can be passivised.

At first sight, it seems as if passivisation of the theme in (19c) follows from the fact that relative operators in Kinyarwanda are phonologically unrealised. If phrases without phonological content are generally invisible for the MLC, then the theme can be moved to SpecT across the applied object in (19c) simply because the latter is an empty operator. At a later stage, this operator is raised to SpecC, leaving behind a phonologically unrealised copy, but the possibility of moving the theme to SpecT does not rely on this movement step, since the empty operator was already phonologically null before movement.

However, notice that there are dialects of Kinyarwanda (spoken on the border with Uganda) which employ an overtly realised relative operator:

proceeds in cycles, or "phases". During each phase, only a subset of the lexical array is available for the computation. No element of the lexical array which is not part of this subset can be accessed by the computational system until the respective phase is completed. Once the phase is completed, it is sent off to the interface components and the computation proceeds; the computational system now has access to the lexical subarray which determines the next phase. Crucially, according to Chomsky, TP is not a phase, but CP is.

In order to solve the problem with cyclicity that arises when movement to SpecC obviates MLC violations, McGinnis (2001) adopts a proposal articulated in Chomsky (1999, 2000), according to which the MLC is only evaluated at the level of a phase (see also McGinnis 2004). According to this idea, the derivation of (19c) would proceed in a strictly cyclic fashion. The theme would move to SpecT before the applied object moves to SpecC. Crucially, the legitimacy of this operation with respect to the MLC is not checked immediately once the movement step actually occurs, but only once the next phase (i.e. CP) has been completed. At that stage, however, the applied object has been moved as well, and the computational system recognises that the only DP intervening between the trace of the theme in the lower SpecAsp and SpecT is the copy of the applied object, which is now in SpecC. Since this copy has no phonological material in either (19c) or (24b), the derivation converges.

An alternative is proposed in Anagnostopoulou (2003). In contrast to McGinnis, Anagnostopoulou assumes that every movement step is strictly constrained by the MLC, which cannot be circumvented by moving intervening material out of the way at some later stage. Instead, Anagnostopoulou assumes that the cyclicity requirement is relaxed as far as derivations within a phase are concerned. She argues that movement to SpecT can in fact take place *after* CP has already been projected, since T and C are part of the same phase. With respect to (19c), this would mean that the applied object moves to SpecC first. The theme can then target TP and move to SpecT, an operation which violates the extension condition, but which obeys the MLC.

A third solution is proposed in Legate (2002), who argues that operator phrases move to an unspecified A-bar position between TP and VP before they move to SpecC. Furthermore, she suggests that when T attracts a phrase to check its ϕ - and EPP-features, it ignores elements in A-bar positions. Applying this idea to (19c), we would have to assume that the relative operator (= applied object) in the higher SpecAsp first moves to an A-bar position between T and Asp. When T attracts the theme, the operator in this A-bar position is invisible for the MLC, and the theme can

move to SpecT without violating the MLC or the extension condition. In a third step, the applied object moves to SpecC.

In principle, all these analyses explain the grammaticality of the example in (19c). However, each analysis comes at a cost. We have to assume a semi-representational interpretation of the MLC (= McGinnis proposal) or give up the idea that substitution operations are always strictly cyclic (= Anagnostopoulou's approach). Legate's theory avoids these shortcomings, but introduces an otherwise unmotivated additional movement operation associated with operators and furthermore stipulates that A-movement across a phrase in an A-bar position does not violate the MLC.¹²

Interestingly, there is yet another configuration in which an applied object would not block passivisation of the theme. According to the definition of Closeness in (10) in section 2, an element β only blocks movement of an element α if β c-commands α . This means that the absence of intervention effects in (19c) could also be explained if it could be shown that an applied object corresponding to a relative operator *does not c-command* the theme. This is exactly the solution we suggest to explain the obviation effects of relativisation in Kinyarwanda observed in examples such as (19c) and (24b). In section 4.3, we argue on independent grounds that in Kinyarwanda, a relative operator is represented as the specifier of a complex DP, and that it is this complex DP which moves to SpecAsp in a relative construction. As a consequence, the relative operator in examples such as (19c) and (24b) does not c-command the theme and therefore does not block movement of the theme to SpecT. This of course raises the question of why the complex DP in SpecAsp which contains the relative operator does not create an MLC effect. Postponing the answer to this question and the discussion of the details of this analysis to section 4.3, we only note here that this proposal offers an alternative way to explain the example in (19c) without having to rely on a semi-representational version of the MLC, acyclic derivations or otherwise unmotivated operator movement to an intermediate A-bar-position.

4.2 Object marking of the theme

As was shown in (4b) and (7), repeated here as (25), the theme can only undergo pronoun incorporation in Kinyarwanda locatives once the applied object has been extracted, passivised or incorporated into the verb:

¹² This latter aspect of Legate's proposal is motivated by the original Relativised Minimality approach (Rizzi 1990) that underlies the MLC.

- (25) a. *Umubooyi y-a-ya-menn-ye-ho umwaana.
 cook SP-PST-OM-pour-ASP-APPL child
 'The cook poured it on the child.'
- b. Umubooyi y-a-ya-mu-menn-ye-ho.
 cook SP-PST-OM-OM-pour-ASP-APPL
 'The cook poured it on him/her.'
- c. Umwaana y-a-ya-menn-w-e-ho n'umubooyi.
 child SP-PST-OM-pour-PASS-ASP-APPL by cook
 Lit.: 'The child was it poured on by the cook.'
- d. umwaana umubooyi y-a-ya-menn-ye-ho
 child cook SP-PST-OM-pour-ASP-APPL
 'the child on whom the cook poured it'

In order to explain the ungrammatical (25a), we can rely on the structure in (20) again. Pr attracts the closest possible gender feature of a DP in SpecAsp. Obviously, both the applied object and the theme carry such a feature, and both DPs have checked their structural case feature in SpecAsp. Therefore, both D-heads in principle could be attracted by Pr. However, since the applied object c-commands the theme, the MLC explains that incorporation of the theme is impossible.¹³

Theme incorporation is possible, however, when the applied object is also an incorporated pronoun, (25b). In this case, Pr carries two gender features. First, the applied object undergoes head movement and adjoins to Pr. As a result, it is now part of Pr's minimal domain, while its copy is no longer phonologically visible. Therefore, the theme can now incorporate into Pr in a second step, since this movement step is no longer blocked by the MLC:

¹³ Notice that the *head* of the applied object in (25a) (= an empty D that combines with the NP *umwaana*) does not c-command the theme and is therefore *not* closer to the verb than the theme. However, incorporation of the theme is still banned, since a feature α attracted by K is always realised both on the head of a phrase and on the phrase itself. Therefore, the D-feature of the applied object is "visible" at the level of the phrase and blocks incorporation in (25a). The assumption that features of a head percolate to the phrase level is necessary to explain other instances of the MLC as well, such as the wh-island effect discussed in (11) in section 2:

(i) *How do you wonder [_{CP} which car John could fix t t]?

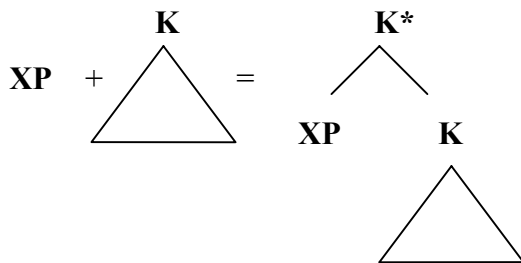
The [Q]-feature of the wh-phrase *which car* which is located in the intermediate SpecC position is associated with the D-head of this phrase and therefore does not c-command the [Q]-feature of *how*. In order to explain that *which car* is closer to the matrix C than *how*, one has to assume that its [Q]-features are realised at the DP-level, such that the [Q]-feature of *which car* c-commands the [Q]-feature of *how*.

(26) $[_{PrP} \text{ subj } [_{OM_i+OM_j+verb} [_{AspP} t_j [t_i [_{Asp} VP]]]]]$

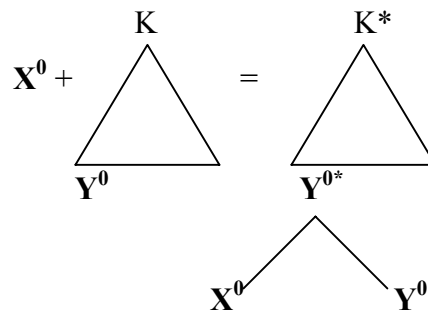
Movement of the applied object to SpecT in a passive construction, (25c), has the same effect on incorporation of the theme. We assume that the applied object moves first and creates SpecT. Since this move leaves a phonologically unrealised copy in the higher SpecAsp, the theme is now allowed to move as well without violating the MLC; it adjoins to Pr and incorporates into the verb.

One might object that the proposed derivation raises a problem with cyclicity again. Recall from section 3 that in the MP, the effects of cyclicity are derived from the extension condition in (17), and this condition is clearly violated if the theme adjoins to Pr only after SpecT has already been created. However, it is important to note that head adjunction *never* obeys the extension condition, which generally only holds for (overt) substitution (see Chomsky 1995: 327). This follows from the very nature of head movement. When substitution merges a phrase XP with an existing phrase marker K, the extension condition requires that α be added to the *root* of the phrase marker, such that K^* can include K as a proper part, (27a). But head movement can never target the root of a phrase marker, because a head X^0 can only adjoin to another head Y^0 , and the root of a phrase marker K is always non-minimal (at least in movement constructions), (27b):

(27) a. *Substitution*



b. *Head adjunction*



The exceptional behaviour of head adjunction (and adjunction in general) has been addressed in a number of studies (see Kitahara 1995; Bobaljik & Brown 1997; Chomsky 2000). We are not going to discuss these proposals here. It is sufficient for our purposes to emphasise the fact that the extension condition does not hold for head adjunction, and that therefore, movement of the theme to Pr after the applied object has moved to SpecT does not pose a problem for our approach.

Finally, the same considerations explain the possibility of theme incorporation in (25d), where the applied object is a relative operator. Since the extension condition does not apply to head movement, theme incorporation may take place after the applied object has moved to SpecC. Alternatively, the analysis of the structure of relativisation that we present in the next section makes it possible to assume that the theme adjoins to Pr before the applied object moves to SpecC, since in our proposal, the applied object does not c-command the theme when it is a relative operator. In neither scenario does the applied object create an MLC effect when the theme undergoes head movement from its lower specifier position.

4.3 Extraction of the theme

Finally, let us investigate extraction of the theme in relative clause constructions such as (5b) and (8), repeated here in (28):

- (28) a. *amaazi umubooyi y-a-menn-ye-ho umwaana
 water cook SP-PST-pour-ASP-APPL child
 'the water the cook poured on the child'
- b. amaazi umubooyi y-a-*mu*-menn-ye-ho
 water cook SP-PST-OM-pour-ASP-APPL
 'the water that the cook poured on him'
- c. amaazi umwaana y-a-menn-w-e-ho n'umubooyi
 water child SP-PST-pour-PASS-ASP-APPL by cook
 Lit.: 'the water that the child was poured on by the cook'

Again, movement of the theme is only possible once the applied object has also undergone a movement process (either incorporation or A-movement to SpecT). We assume that (28) can be explained by the same mechanisms that were used to account for the examples discussed in sections 4.1 and 4.2: the contrast in (28) follows from the MLC, which is violated in (28a), but not in (28b-c).

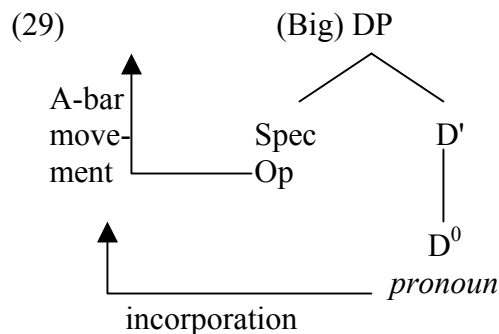
However, there is an obvious problem with this idea. For an intervening phrase β to block movement of a lower phrase α in terms of the MLC, both α and β must be able to check the attracting feature of K. In our analysis, both object marking and passivisation involve the attraction

of a D-feature; therefore, the theme in the lower SpecAsp cannot be attracted as long as the applied object is located in the higher SpecAsp.

But now we are dealing with A-bar-movement to SpecC, an operation which is usually triggered by an operator feature of C (a [Q]-feature in wh-questions; a [topic]-feature in relative clauses etc.). Importantly, this feature is not automatically associated with every DP in the clause, but only with operator phrases. For example, wh-movement is triggered by the [Q]-feature of C, which attracts the [Q]-feature of a wh-phrase α . This means that a phrase β intervening between α and C can only block movement of α if it is also a wh-phrase (see example (11) above). An "ordinary" (= non-wh-) subject-DP in SpecT, for example, does not prevent an object wh-phrase from moving to SpecC. It is therefore not clear why the presence of the applied object blocks movement of the theme to SpecC in (28a), given that only the theme, but not the applied object, is marked with the relevant operator feature which is attracted by C.

However, notice that this problem arises only if one assumes that it is in fact movement of the relative operator which causes the ungrammaticality of (28a). If one argues instead that the illicit operation in (28a) is not the movement of the theme to SpecC, but rather a different movement process that is directly linked to relativisation, then it might be possible to explain (28a) in terms of the MLC as well.

This is in fact the approach that we take in this paper. Our analysis of (28a) is based on a proposal about the syntax of clitic left dislocation (CLLD-) constructions put forward by Cecchetto (1999) for Italian and adopted for Zulu in Zeller (2004a). The idea is that the left-dislocated phrase in a CLLD-construction is a topic operator which is introduced into the derivation as the specifier of a complex "Big DP" (Cecchetto 1999) from where it undergoes topic movement. Importantly, the D-head of the Big DP is a pronominal clitic which incorporates into the verb:



Given that the relative operator in a relative clause also counts as a topic (see Bresnan & Mchombo 1987), we suggest that relative clauses in Bantu also involve a Big DP like (29). In object relative clauses, the relevant internal θ -role is assigned to the Big DP; Big DP is then moved to SpecAsp, its head adjoins to Pr and incorporates into the verb, and the relative operator moves from SpecD to SpecC.

Evidence for the assumption that relativisation in Bantu involves incorporation of a pronominal D-head is provided by Southern Bantu languages such as Zulu (Nguni):

- (30) a. incwadi isitshudeni esi-*yi*-fund-a-yo
 letter student RC-OM-read-FV-RS
 'the letter that the student is reading'
- b. ukudla ugogo a-*ku*-phek-a-yo
 food granny RC-OM-cook-FV-RS
 'the food that granny cooks' (Zulu)

Like (standard) Kinyarwanda, Zulu does not employ overt relative pronouns in relative clauses (instead, the verb is marked with a special subject prefix called the "relative concord", see Poulos 1982; Zeller 2004b for details). Importantly, (30) shows that object relative clauses in Zulu, as in many other Southern Bantu languages, require the presence of an incorporated object pronoun that agrees with the head noun. The object clitic is obligatory; without it, the constructions in (30) are ungrammatical. This fact follows from the Big DP-analysis outlined above.

We now suggest that incorporation of the head of an object-DP is generally required in object relatives in Bantu languages and always goes hand in hand with the extraction of the relative operator. Whereas in languages such as Zulu, the head of the Big DP is realised as an overt pronoun, this head is empty in Kinyarwanda, but nevertheless needs to move and adjoin to Pr.¹⁴ What we are suggesting, therefore, is that the type of movement that violates the MLC in examples such as (28a) is not A-bar movement, but head movement. The gender feature of Pr attracts the closest D-head of an object in SpecAsp. Since the applied object in (28a) is located in the higher specifier position, it is closer to the target Pr than the head of the Big DP corresponding to the

¹⁴ Incorporation of the head of Big DP in SpecAsp may be independently required in order to allow for the extraction of its specifier. As argued in Baker (1988), a phrase in specifier position is a barrier for extraction of a phrase contained in it, unless its head incorporates into the next higher head (see also Grewendorf & Sabel 1994). This means

theme. The MLC therefore blocks incorporation of the head of the Big DP, and since the extraction of the relative operator is contingent on this movement step, relative clause constructions such as (28a) are ruled out.

Consequently, the grammaticality of the examples in (28b) and (28c) follows from the explanation that was provided for the data in (25b) and (25c) in section 4.2: if the applied object has moved to SpecT or adjoined to Pr, then the head of the theme Big DP can incorporate into the verb, and theme relativisation is possible.

A further advantage of our proposal is that it solves the problem with cyclicity that was discussed in section 4.1. If a relative operator is represented as the specifier of a Big DP whose head must move and adjoin to Pr, then it follows that the theme can undergo A-movement from the lower SpecAsp when the applied object is relativised, since the relative operator is now the specifier of a Big DP in the higher SpecAsp. As such, it does not c-command the theme and therefore does not count as closer to the target node TP. The only head, which could potentially create an MLC-configuration, is the head of the Big DP, but this head adjoins to Pr and moves to T before the theme moves to SpecT. According to this view, example (19c) from section 4.1 above is grammatical for the same reason as (19b) is. Therefore, we do not have to relax the extension condition or rely on a semi-representational version of the MLC in order to explain the grammaticality of theme passivisation in locative applicative constructions in which the applied object is a relative operator. The relevant data follow directly from the Big DP proposal, which gains independent support from our analysis of the data in (28).

5. Other types of applicatives in Kinyarwanda

In this section we address applicative constructions in Kinyarwanda in which the theme and the applied object do not show the asymmetrical behaviour attested with objects in locative applicatives. The following examples are from instrumental applicatives, but similar examples can be constructed for other types of applicatives as well:¹⁵

that the relative operator can only escape the Big DP in SpecAsp and move to SpecC once Pr attracts the head of the Big DP and triggers D-movement.

¹⁵ For a detailed description of the properties of objects in these and other types of Kinyarwanda applicatives, see Kimenyi (1980, 1995) and Ngoboka (2005). Studies of applicative constructions in other Bantu languages include, among others, Bresnan & Moshi (1990) (for KiChaga and Chichewa); Harford (1993) (for Shona); Machobane (1993, 1997) (for Sotho); Ngonyani (1998) (for Swahili and Kindendeule); Moshi (1998) (for KiChaga); Alsina & Mchombo (1993) (for Chichewa), and references cited in the text.

(i) *Word order*: In contrast to locative applicatives (see (18)), the word order in Kinyarwanda instrumental applicatives is flexible. The theme can precede the applied object and vice versa:

- (31) a. Umugabo y-a-tem-eesh-eje igiti umuhoro.
man SP-PST-cut-APPL-ASP tree machete
'The man cut the tree with the machete.'
- b. Umugabo y-a-tem-eesh-eje umuhoro igiti.
man SP-PST-cut-APPL-ASP machete tree
'The man cut the tree with the machete.'

(ii) *Object marking*: With instrumental applicatives, it is possible to realise either of the two objects as an incorporated pronoun:

- (32) a. Abanyarwaanda ba-nyw-eesh-a inzoga umuheha.
Rwandans SP-drink-APPL-FV beer straw
'Rwandans drink beer with a straw.'
- b. Abanyarwaanda ba-wu-nyw-eesh-a inzoga.
Rwandans SP-OM-drink-APPL-FV beer
'Rwandans drink beer with it.'
- c. Abanyarwaanda ba-yi-nyw-eesh-a umuheha.
Rwandans SP-OM-drink-APPL-FV straw
'Rwandans drink it with a straw.'

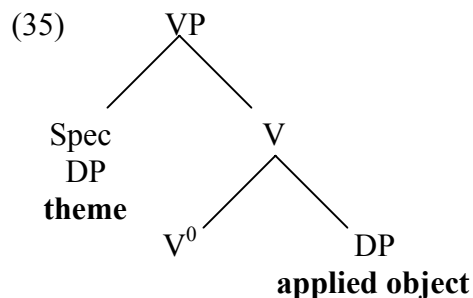
(iii) *Passivisation*: An instrumental applicative allows for passivisation of both the instrument/applied object and the theme argument:

- (33) a. Umuhoro w-a-tem-eesh-ej-w-e igiti.
machete SP-PST-cut-APPL-ASP-PASS-ASP tree.
Lit.: 'The machete was cut the tree with.'
- b. Igitu cy-aa-tem-eesh-ej-w-e umuhoro.
tree SP-PST-cut-APPL-ASP-PASS-ASP machete
'The tree was cut with the machete.'

(iv) *Relativisation*: Instrumental applicatives allow for each of the two objects to be extracted in a relative clause:

- (34) a. umuhoro umugabo y-a-tem-eesh-eje igiti
 machete man SP-PST-cut-APPL-ASP tree
 'the machete with which the man cut the tree'
- b. igiti umugabo y-a-tem-eesh-eje umuhoro
 tree man SP-PST-cut-APPL-ASP machete
 'the tree the man cut with the machete'

In order to explain the difference between locative and instrumental applicatives, we follow Baker (1988, 1992) and Nakamura (1997) and assume that the latter type of applicative is not derived syntactically by incorporation, but that the instrumental applicative morpheme combines with the verb in the lexicon and adds a new argument to the argument structure of the verb. Both the theme and applied object in instrumentals are therefore directly theta-marked by the verb. This means that, in contrast to locatives, the applied object of an instrumental applicative is not merged into the tree as the complement of an affixal preposition, but as the complement of the verb. The theme argument is located in SpecVP:



Evidence for the claim that locative and instrumental-type applicatives in Kinyarwanda are derived by different processes is provided by the different morphological realisations of the applicative morphemes. Whereas the instrumental applicative morpheme *-eesh-* and its allomorphs are verbal affixes which precede morphemes such as the aspect marker *-(y)e-* and the passive morpheme *-w-*, the locative applicative suffix *-ho* and its allomorphs are suffixes which always follow the last morpheme of the verb.

Importantly, the syntactic representation of the applied object has implications for its case properties. As argued in Baker (1988, 1992) and Nakamura (1997), whereas the applied object of a locative cannot receive inherent case (since it is the complement of an incorporated preposition, see section 3), this option is available in other types of applicatives, where the applied object is the sister of the verb. This means that in instrumental applicatives, the applied object may remain inside the VP and receive inherent case, while only the theme moves to SpecAsp in order to check its structural case feature. As a consequence, we derive the word order theme > applied object exhibited in (31a). This word order is not attested in locatives, since here, the applied object cannot get inherent case. Both object DPs have to move to SpecAsp in locatives; the MLC determines that the theme always occupies the lower specifier, and the word order applied object > theme is hence the only one attested.

However, although the applied object can remain in the VP in instrumental applicatives, a derivation involving multiple specifiers is also possible with this type of applicative. Since Asp in Kinyarwanda can optionally attract two DPs with structural case features, there is no reason why this option should only be available in locatives. We assume that the applied object in instrumentals and similar types of applicatives may also be equipped with a structural case feature, in which event both the theme and the applied object have to move to SpecAsp. The derivation then proceeds exactly like the derivation of locative applicatives. Due to the MLC, the theme has to move to SpecAsp first, and the applied object moves to a higher specifier, deriving the word order applied object > theme in (31b).

Our claim that both objects of an instrumental applicative may be marked with structural case predicts that both objects may exhibit primary object properties simultaneously. This prediction is indeed borne out:

- (36) a. Abanyarwaanda ba-ra-wu-yi-nyw-eesh-a.
 Rwandans SP-FOC-OM-OM-drink-APPL-FV
 'Rwandans drink it with it.'
- b. Inzoga y-a-wu-nyw-eesh-ej-w-e n'abanyarwaanda
 beer SP-PST-OM-drink-APPL-ASP-PASS-ASP by Rwandans
 'Beer was drunk with it by the Rwandans'

- c. Umuheha w-a-yi-nyw-eesh-ej-w-e n'abanyarwaanda.
straw SP-PST-OM-drink-APPL-ASP-PASS-ASP by Rwandans.
Lit.: 'The straw was it drunk with by the Rwandans.'

(36a) shows that the theme and the applied object can incorporate into the verb together; (36b) and (36c) illustrate that passivisation of one object is compatible with incorporation of the other. As was argued in section 4, both incorporation and passivisation require the relevant DP to move to SpecAsp before A- or head movement takes place. (36) therefore provides evidence that Asp in instrumental applicatives can also project multiple specifiers.

Our proposal also explains why theme extraction, passivisation and incorporation are possible with instrumental applicatives even if the applied object is a full DP adjacent to the verb. If the applied object remains inside the VP and receives inherent case, the theme is the only DP in SpecAsp. Therefore, a feature which needs to be checked by the D-feature of a DP will always attract the theme first, since the theme is closer to the attractor than the applied object. This means that in the grammatical examples in (32c), (33b) and (34b), the applied object is inside the VP, and therefore does not block movement of the theme. In contrast, in the corresponding ungrammatical examples from locative applicatives, the applied object is in SpecAsp and hence intervenes between (the trace of) the theme and its landing site.

The absence of MLC-effects induced by the applied object in instrumental applicatives is therefore a consequence of the fact that the applied object can receive inherent case inside the VP. Our proposal thus correlates the symmetrical behaviour of objects in certain types of applicatives in Kinyarwanda with the more liberal word order of these constructions. The differences between symmetrical and asymmetrical (locative) applicatives in Kinyarwanda basically follow from one single syntactic difference: only the applied object of a locative is the argument of a preposition that incorporates into the verb.

6. Conclusion

According to the analysis we presented in this paper, the major syntactic properties of locative applicatives concerning word order and object asymmetries, and the respective differences between locatives and other types of applicatives, are the result of feature-driven movement operations constrained by the MLC. In the light of this analysis, the empirical properties of Kinyarwanda applicatives can be regarded as strong evidence for some of the core mechanisms

and principles postulated in the MP, such as the system of feature attraction and feature checking, the MLC, the extension condition on substitution, and Bare Phrase Structure Theory.

The crosslinguistic analyses of applicatives provided by e.g. Bresnan & Moshi (1990) or Nakamura (1997) suggest that there is a great degree of variation among Bantu languages with respect to the properties of objects in applicative constructions. This variation may provide an interesting test case for our analysis, in which we have focussed exclusively on the properties of applicatives in Kinyarwanda. Consider, for example, benefactive applicatives in Chimwiini, which are discussed in Nakamura (1997). Nakamura notes that Chimwiini benefactives pattern with Kinyarwanda locatives in that the theme can be neither passivised nor realised as an object marker:

- (37) a. *Cha:kuja sh-pik-il-ila wa:na na Hamadi.
 food SP-cook-APPL-PASS children by Hamadi
 'Food was cooked for the children by Hamadi.'
- b. *Hamadi Ø-sh-pik-il-ile wa:na cha:kuja.
 Hamadi SP-OM-cook-APPL-PAST children food
 'Hamadi cooked it for the children, the food.' (Nakamura 1997: 269)

However, Chimwiini benefactives seem to differ from Kinyarwanda locatives in that the theme can be extracted in a relative clause such as (38):

- (38) nama ya Nu:ru Ø-m-tilang-il-ilo: mwa:na
 meat REL Nuru SP-OM-cut-APPL-PAST child
 'the meat that Nuru cut for him, the child' (Nakamura 1997: 270)

At first sight, Chimwiini seems to pose a problem for the analysis we presented in the preceding sections. Since theme passivisation and incorporation are banned in (37), our theory predicts that theme extraction across an applied object is ungrammatical as well.

However, at closer inspection, the example in (38) confirms rather than contradicts our analysis. Notice that the verb in (38) bears an object marker which agrees with the applied object. (38) is therefore an instance of clitic right-dislocation, a construction in which the DP agreeing with the pronominal clitic is extraposed (see Bresnan & Mchombo 1987 for Chichewa; Zeller 2004a for Zulu). Importantly, since right-dislocated phrases are topics, the relation between the

object clitic *-m-* and the object *mwa:na* in (38) can be analysed on the basis of the Big DP-structure that we proposed in section 4.3. This means that there are actually two Big DPs in (38), one for the applied object in the higher SpecAsp (with the object *mwa:na* in SpecD) and one for the theme in the lower SpecAsp (with the relative pronoun *ya* in SpecD). Crucially, since the head of the higher Big DP, the object clitic *-m-*, has adjoined to Pr and incorporated into the verb in (38), the head of the lower Big DP is also free to undergo head movement. According to our analysis, this in turn means that the relative pronoun *ya* can now be extracted from the Big DP in the lower SpecAsp. (38) is therefore grammatical for the same reason as example (28b) in section 4.3 is.

As far as we can tell from the data provided by Nakamura, Chimwiini benefactive applicatives are thus not that different from locative applicatives in Kinyarwanda. The examination of further data from Chimwiini as well as from related languages will help establish whether the analysis developed in this paper can explain applicative constructions in Bantu more generally.

7. References

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