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Kinyarwanda Multiple Applicatives and the 2-AEX*

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1. The 2-AEX

Research in Relational Grammar has led to the claim that several types of advancements to 2 (direct object) exist in languages of the world, including 3 (indirect object)-2, BEN(efactive)-2, LOC(ative)-2, DIR(ectional)-2, INSTR(umental)-2, and CAUS(al)-2. Furthermore, several languages have been attested to have more than one type of advancement to object. For example, Halkomelem, a Salish language of British Columbia (Gerdts 1988), has 3-2, BEN-2, DIR-2, and CAUS-2, as illustrated by the data in (1):

- (1) a. ni ʔám-əs-t-əs k^wθə sq^wəméyʔ ʔə k^wθə sθ'ámʔ
 aux give-advA-tr-3erg det dog obl det bone
 'He gave the dog the bone.'
- b. ni q^wəl-əl-ə-t-əs ɬə sténiʔ ʔə k^wθə səplil
 aux bake-advB-tr-3erg det woman obl det bread
 'He baked the bread for the woman.'
- c. ni θ'eyʔk^w-méʔ-t-əs k^wθə sq^wəméyʔ
 aux startle-advC-tr-3erg det dog
 'He was startled at the dog.'
- d. ʔi yə-ʔéʔwəʔ-n-əs-əs ɬə sténiʔ
 aux ser-come-advD-tr-3erg det woman
 'He's coming toward the woman.'

The Philippine language Ilokano (Gerdts 1986, 1987) has 3-2, BEN-2, LOC-2, and INSTR-2, as (2) illustrates.

- (2) a. In-ted-an ko ni Juan i-ti libro.
 pst-give-adv 1gen det J. obl-det book
 'I gave John the book.'
- b. In-sapul-an ni Juan ni Maria i-ti trabaho.
 pst-find-adv det J. det M. obl-det job
 'John found Mary a job'
- c. P-in-akbu-an ni Juan ti ubing i-ti danum.
 pst-pour-adv det J. det child obl-det water
 'John poured water on the child.'
- d. P-in-ang-puted ni Juan ti buneng i-ti kawayan.
 pst-instr-cut det J. det knife obl-det bamboo
 'John cut down the bamboo with a knife.'

benefactive and locative applicatives; (11) involves both locative and instrumental applicatives.

- (10) Úmwáana y-iicar-i-yé-ho íntebe umugabo.
child he-sit-ben-asp-on chair man
'The child is sitting on the chair for the man.'
- (11) Úmwáálfmu y-a-andik-iish-ijé-ho ikfbáho imibáre íngwa.
teacher he-pst-write-instr-asp-on board math chalk
'The teacher wrote math on the blackboard with chalk.'

The combination of benefactive and instrumental applicatives is impossible, a fact for which Kimenyi offers no explanation. If examples (7–9) are thought to involve advancements to 2, then examples like (10) and (11) would counterexemplify the 2-AEX.

However, our research on Kinyarwanda, which we briefly summarize in section 2, has yielded a very different picture of the applicative constructions. We claim that they should not be treated uniformly as OBL–2 constructions. First, dative and benefactive applicatives involve no advancement at all. Second, locative applicatives do involve advancement (of the type OBL–3–2). Third, instrumental applicatives in Kinyarwanda are not advancements, but rather multipredicate clauses (Davies and Rosen 1988) paralleling causatives. The instrumental is revalued to the next available argument position (i.e., 2, 3, or 4 depending on the valence of the inner predicate). Finally, we show how the above analyses lead us to correct predictions with respect to allowable multiple applicatives in Kinyarwanda and the final relations to be assigned in such structures. In benefactive/locative applicatives (see (10)), both benefactive and locative will be final arguments exhibiting “object” properties (a 4 and a 2 respectively). In locative/instrumental applicatives (see (11)), instrumental revaluation (to 3) will necessarily precede locative advancement (due to inner clause freeze effects, which are independently motivated by causative data); thus, only the locative will exhibit “object” properties. Benefactive/instrumental applicatives will be prohibited, since no argument position (lower than 4) is available for revaluing the instrumental.

We briefly contrast our analysis with other recent proposals concerning Kinyarwanda applicatives in section 3. Most notably, Perlmutter (1984, 1989), invoking a retreat strategy and a new universal (the Non-Initial (Successor) Demotion Ban), successfully allows benefactive/locative and blocks benefactive/instrumental combinations but makes the wrong prediction with respect to the final relations of the nominals in allowed instrumental/locative multiple applicatives.

In sum, we claim that only one of the putative OBL–2 constructions in Kinyarwanda—the locative applicative—involves advancement to object. Thus, Kinyarwanda is simply irrelevant as a test for the 2-AEX and does not counterexemplify it. We discuss the implication of this claim in section 4.

2. Kinyarwanda Applicatives

2.1 Dative and Benefactives

As Kimenyi (pp. 64–68) notes, both the direct object and the indirect object of ditransitive clauses like (6) exhibit object properties. As (12) and (13) show, both the direct object and the indirect object can passivize, appear as incorporated pronouns, and relativize.

- (12) a. Igitabo cy-a-haa-w-e umugóre n'ûmugabo.
 book it-pst-give-pass-asp woman by man
 'The book was given to the woman by the man.'
- b. Umugabo y-a-ki-haa-ye umugóre.
 man he-pst-it-give-asp woman
 'The man gave it to the woman.'
- c. igitabo umuhuûngu y-a-haa-ye umukoóbwa
 book boy he-pst-give-asp girl
 'the book which the boy gave the girl'
- (13) a. Umugóre y-a-haa-w-e igitabo n'ûmugabo.
 woman she-pst-give-pass-asp book by man
 'The woman was given the book by the man.'
- b. Umugóre y-a-mu-haa-ye igitabo.
 woman she-pst-him-give-asp book
 'The woman gave him a book.'
- c. umukoóbwa umuhuûngu y-a-haa-ye igitabo
 girl boy he-pst-give-asp book
 'the girl to whom the boy gave the book'

The direct object and indirect object do differ in several respects, however. For example, as Kimenyi (p. 182) points out, when both the direct object and indirect object are incorporated pronouns, the direct object precedes the indirect object, as (14) shows. The alternative order—that is, the incorporated indirect object preceding the direct object—is impossible.

- (14) Umugabo y-a-yá-b-éerets-e.
 man he-pst-them-**them**-show-asp
 'The man showed them [pictures] to **them** [people].'

Following Dryer (1983), we represent (14) by the following stratal chart:

- (15) 1 P 2 3
 boy give book girl

Turning to benefactive applicatives like (16), Kimenyi (1980, 65–6) has shown that 2s, 3s, and benefactives can simultaneously act like terms. For example, he shows that each can passivize (see (17)) and incorporate as pronouns (see (18)):

- (16) Umgöre a-ra-he-er-a umgabo imbwa ibtyo. 'The woman is giving food to the dog for the man.'
 woman she-pres-give-appl-asp man dog food
 (17) a. Ibtyo bi-ra-he-er-w-a umgabo imbwa n'umgöre.
 food it-pres-give-appl-pass-asp man dog by woman
 'The food is given to the dog for the man by the woman.'
 b. Imbwa i-ra-he-er-w-a umgabo ibtyo n'umgöre.
 dog it-pres-give-ben-pass-asp man food by woman
 'The dog is given food for the man by the woman.'
 c. Umgabo a-ra-he-er-w-a imbwa ibtyo n'umgöre.
 man he-pres-give-appl-pass-asp dog food by woman
 'The man is given food for the dog by the woman.'
 Umgöre a-ra-bi-yi-mu-he-er-a
 woman she-pres-it-it-him-give-appl-asp
 'The woman is giving it to it for him.'

Such data leads us to the conclusion that, unlike most languages of the world (see Gerdts 1992), Kinyarwanda makes use of three "object" term positions—direct object, indirect object, and benefactive object, i.e. 2, 3, and 4 respectively. Each of these term positions shows "object" effects, that is, they are accessible to passive, pronoun incorporation, and relativization. Under this approach, (16) is given the following representation.

- (19) 1 P 2 3 4
 woman give food dog man

No advancement needs to be posited for the benefactive. It is an object term (a 4) in initial structure.⁶ Although 2s, 3s, and 4s are all "objects" and share many properties, they differ in other respects, as Dryer (1983) notes. For example, nominals corresponding to these relations typically appear in the 4 3 2 word order. Incorporated pronouns corresponding to these relations appear in the 2-3-4 order. Other differences between these nominals are discussed in the next section.

2.2 Locatives and Instrumentals

Kimenyi (pp. 81-82; 94-96) shows that the locative and instrumental nominals in applicatives like (8) and (9) are "objects" by a variety of tests, including passivization, pronoun incorporation, and relativization, as shown in (20) for locatives and (21) for instrumentals.

- (20) a. Iposita y-oohere-j-w-é-ho ibaruwa n'umgabo.
 post office it-send-asp-pass-asp-to letter by man
 'The post office was sent a letter to by the man.'

- b. Úmwáalímu y-a-ry-oohere-jé-ho igitabo.
 teacher he-pst-it-send-asp-to book
 'The teacher sent the book to it.'
- c. íshuûri úmwáalímu y-oohere-jé-ho igitabo
 school teacher he-rel-send-asp-to book
 'the school that the teacher sent the book to'
- (21) a. Íkárámu i-ra-andik-iish-w-a íbárúwa n'úmugabo.
 pen it-pres-write-instr-pass-asp letter by man
 'The pen is used to write a letter by the man.'
- b. Úmwáalímu a-ra-y-aandik-iish-a íbárúwa.
 teacher he-pres-it-write-instr-asp letter
 'The teacher is writing a letter with it.'
- c. Dore íkárámu umugabo y-aandik-iish-a íbárúwa.
 look pen man he-rel-write-instr-asp letter
 'This is the pen that the man uses to write the letter.'

Kimenyi posits that both involve advancement to 2. However, locative applicatives and instrumental applicatives are different in several respects. These differences remain unexplained under his account.

First, the initial 2 is a final *chômeur* (and hence does not exhibit "object" effects) in the case of locative applicatives (22) but not in the case of instrumental applicatives (23).

- (22) a. *Igitabo cy-oohere-j-w-é-ho íshuûri n'úmwáalímu.
 book it-send-asp-pass-asp-to school by teacher
 'The book was sent to school by the teacher.'
- b. *Úmwáalímu y-a-cy-oohere-jé-ho íshuûri.
 teacher he-pst-it-send-asp-to school
 'The teacher sent it to school.'
- c. *igitabo úmwáalímu y-oohere-jé-ho íshuûri
 book teacher he-send-asp-to school
 'the book that the teacher sent to school'
- (23) a. Íbárúwa i-ra-andik-iish-w-a íkárámu.
 letter it-pres-write-instr-pass-asp pen
 'The letter is being written with a pen.'
- b. Umugabo a-ra-y-aandik-iish-a íkárámu.
 man he-pres-it-write-instr-asp pen
 'The man is writing it with a pen.'
- c. íbárúwa umugabo y-aandik-iish-a íkárámu
 letter man he-write-instr-asp pen
 'the letter that the man is writing with a pen'

Second, the initial 3 is placed en *chômage* in locative applicatives like (24), but not in

instrumental applicatives like (26), as (*25) and (27) show.⁷

- (24) Umugóre a-ra-he-er-a-mo ishuûri umuhuûngu ibitabo.
 woman she-pres-give-appl-asp-loc school boy books
 'The woman gave the boy books in school.'
- (25) a. *Umuhuungu a-rá-hé-er-w-á-mo ishuûri ibitabo n'ûmugóre.
 boy he-pres-give-appl-pass-asp-in school books by woman
 'The boy is given the books in the school by the woman.'
- b. *Umugóre a-rá-mu-hé-er-á-mo ishuûri ibitabo.
 woman she-pres-him-give-appl-asp-loc school books
 'The woman is giving him the books in the school.'
- (26) Umugóre a-r-éerek-eesh-a ímashiîni ábáana amashusho.⁸
 woman she-pres-show-instr-asp machine children pictures
 'The woman is showing pictures to the children with a machine.' (K 1988)
- (27) a. Abáana ba-r-éerek-eesh-w-a ímashiîni amashusho n'ûmugóre.
 children they-pres-show-instr-pass-asp machine pictures by woman
 'The children are shown pictures with a machine by the woman.' (K 1988)
- b. Umugóre a-r-b-éerek-eesh-a ímashiîni amashusho.
 woman she-pres-them-show-instr-asp machine pictures
 'The woman is showing pictures to them with a machine.' (PM)

Third, locative applicatives can co-occur with a benefactive, as in (10) above. In this case both the locative (28) and the benefactive (29) show "object" effects.

- (28) a. Íntebe y-iicar-i-w-é-ho umugabo n'úúmwáana.
 chair it-sit-appl-pass-asp-on man by child
 'The chair is sat on for the man by the child.'
- b. Úmwána a-mw-iicar-i-yé-ho íntebe.
 child he-him-sit-appl-asp-on chair
 'The child is sitting on the chair for him.'
- c. N-dá-bon-a íntebe úmwána y-iícar-i-yé-ho umugabo.
 I-pres-see-asp chair child he-rel-sit-appl-asp-on man
 'I see the chair that the child is sitting on for the man.'
- (29) a. Umugabo y-iicar-i-w-é-ho íntebe n'úúmwáana.
 man he-sit-appl-pass-asp-on chair by child
 'It is the child who sat on the chair for the man.'
- b. Úmwána a-y-iicar-i-yé-ho umugabo.
 child he-it-sit-appl-asp-on man
 'The child is sitting on it for the man.'
- c. N-dá-bon-a umugabo úmwána y-iícar-i-yé-ho íntebe.
 I-pres-see-asp man child he-rel-sit-appl-asp-on chair
 'I see the man for whom the child is sitting on the chair.'

However, benefactive and instrumental multiple applicatives are not possible, as (30) shows.

- (30) *Umugóre a-ra-kor-eesh-er-a umugabo isúka.
 woman she-pres-work-instr-appl-asp man hoe
 'The woman is working for the man with a hoe.' (PM)

The results of this discussion so far are summarized in the table in (31). The columns show the effect of locative and instrumental applicatives on 2s, 3s, and benefactive respectively.

(31)		2	3	BEN
	locative	chômeur	chômeur	term
	instrumental	term	term	*

Finally, Kimenyi points out that some applicative constructions, including both locative and instrumental applicatives, have corresponding data where the oblique is introduced by a preposition. (32) corresponds to the locative applicative in (8), and (33) to the instrumental applicative in (9).

- (32) Umugóre y-oohere-je umubooyi kw'iisóko.
 woman she-send-asp cook to market
 'The woman sent the cook to market.'
- (33) Umugabo a-ra-andik-a fbáruwa n'ífikáramu.
 man he-pres-write-asp letter with pen
 'The man is writing a letter with the pen.'

However, as Gerdtz and Whaley (1991, 1992) discuss, prepositional locatives and prepositional instrumentals are very different in their behaviour. Locatives have a more privileged status than instrumentals in that they can appear as incorporated pronouns, subjects in passives, preposed nominals in subject reversal constructions, direct topics, and possessor ascension hosts, and in derivational causatives. In other words, locatives do many of things that direct and indirect objects do, though they often require special morphology to do so. This sets up a three way distinction in argument structure: there are **direct arguments** (like direct, indirect objects, and obliques in applicative constructions), and **oblique arguments** (like prepositional locatives), and non-argument **adjuncts** (like prepositional instrumentals).

Next we turn to the problem of assigning relational structures to locatives and instrumentals and showing how these structures relate to applicative constructions. Unadvanced locatives, like those in (32) above, are oblique arguments of the predicate, and thus are appropriately represented by the structure in (34).

- (34) 1 P 2 LOC
 woman send cook market

Given that locatives are initially oblique, we account for locative applicatives like (8) by positing advancement. Specifically, we posit that locative advancement in Kinyarwanda

involves first an advancement to 3 and then an advancement to 2. Evidence for this claim comes from examples like (24), where locative advancement takes place in a clause that contains both an initial indirect object (see (25) above) and direct object (see (35)).

- (35) a. *Ibitabo bi-rá-hé-er-w-á-mo ishuûri umuhuûngu n'ûmugóre.
 books they-pres-give-appl-pass-asp-in school boy by woman
 'The books are given to the boy in the school by the woman.'
- b. *Umugóre a-bi-he-er-eyé-mo ishuûri umuhuûngu.
 woman she-pres-them-give-appl-asp-in school boy
 'The woman is giving them to the boy in the school.'

Both of these nominals are *chômeurs* in final structure. Thus, we posit LOC-3-2 advancement for examples like (24), as represented in (36).

(36)	1	P	2	3	LOC
	1	P	2	CHO	3
	1	P	CHO	CHO	2
	woman	give	books	boy	school

This also accounts for data involving benefactives and locatives, such as (7). Since the locative advances directly to 3, the benefactive (a 4 under our analysis) is not placed en *chômage* and thus exhibits "object" effects, as the structure in (37) shows.

(37)	1	P	2	4	LOC
	1	P	2	4	3
	1	P	CHO	4	2

Instrumental applicatives are very different in this respect. Instrumentals are not arguments of the main predicate in initial structure but rather are adjuncts constituting a predicate domain of their own that is linked to the main clause to form a sentence, as represented by the bracketed structure for (33) given in (38).

(38) [[Umugabo arandika fbáruwa][n'fikáramu.]]

The adjunct domain is island-like with respect to constructions affecting argument structure. Thus, instrumentals cannot appear as incorporated pronouns, subjects in passives, preposed nominals in object/subject reversal constructions, direct topics, or possessor ascension hosts. Also, clauses with prepositional instrumentals are predicted not to be able to form causatives, since derivational causatives in Kinyarwanda are not formed on complex clauses.

Furthermore, instrumentals are also ineligible for advancement to object. Thus an advancement analysis of instrumental applicatives is inappropriate. However, a construction is available in RG that allows structure sharing between two predicate domains: the multipredicate clause, as posited by Davies and Rosen (1988).⁹

First, we illustrate the notion of multipredicate clause by discussing derivational causatives in Kinyarwanda. For a causative such as (39), we propose the structure in (40).

- (39) Umugabo á-r-úubak-iish-a abákozi inzu.
 man he-pres-build-cause-asp workers house
 'The man is making the workers build the house.'

- (40) P 1 2
 1 \hat{P} P 3 2
 man build -iish workers house

The analysis in (40) claims that (39) is a single clause with two predicate domains. The first predicate *-ubak* 'build' has two arguments: a subject and a direct object. The causative morpheme is the second predicate. Besides having a subject of its own (the "causer"), the second predicate also inherits the direct object from the inner clause. Furthermore, the subject of the first predicate is **revalued** as the indirect object of the second predicate. Thus, the causative morpheme has the effect of increasing the valence of *-ubak* 'build' from a two-place predicate to a three-place one.¹⁰ Positing this type of causative for Kinyarwanda is consistent with the fact that both the causee (cf. 41) and the initial direct object (cf. 42) have object properties (Kimenyi, pp. 170–171); for example, they can passivize and can appear as incorporated pronouns:

- (41) a. Inzu í-r-úubak-iish-w-a abákozi n'úmugabo.
 house it-pres-build-caus-pass-asp workers by man
 'The house is being made to be built by the workers by the man.'
 b. Umugabo a-rá-y-úubak-iish-a abákozi.
 man he-pres-it-build-caus-asp workers
 'The man is making the workers build it.'
- (42) a. Abákozi bá-r-úubak-iish-w-a inzu n'úmugabo.
 workers they-pres-build-caus-pass-asp house by man
 'The workers are made to build the house by the man.'
 b. Umugabo a-rá-b-úubak-iish-a inzu.
 man he-pres-them-build-caus-asp house
 'The man is making them build the house.'

Gerdtz and Whaley (1991, 1992) claim that instrumental applicatives likewise involve a multipredicate clause.¹¹ In fact, this is a multipredicate clause with the same structure, and also the same morphology, as a causative.¹² Thus, we would also represent (9) as in (43); the instrumental is the subject of a first predicate that is revalued to 3, while the direct object of the first predicate inherits its role.

- (43) P 1 2
 1 \hat{P} P 3 2
 man write -iish pen letter

The structure in (43), since it posits that both the instrumental and the direct object are final objects, explains why both nominals have object properties (cf. (41) and (42) above).

There are several ways in which the causee in derivational causatives and the instrumental in applicatives behave like indirect objects rather than direct objects, thereby supporting this analysis. For example, recall that, when both direct objects and indirect objects appear as incorporated pronouns, the indirect object follows the direct object, as in (44):

- (44) Umugabo y-a-yá-b-érets-e.
 man he-pst-them-them-show-asp
 ‘The man showed them [pictures] to **them** [people].’

The incorporated pronoun referring to the causee in (45) and the instrumental in (46) appears after the pronoun referring to the direct object, as predicted by (40) and (43), respectively.

- (45) Umugabo a-rá-yi-b-uubak-iish-a.
 man he-pres-it-them-build-caus-asp
 ‘The man is making **them** build it.’
 (46) Umugabo a-ra-yi-y-aandik-iish-a.
 man he-pres-it-it-write-instr-asp
 ‘The man is writing it with **it**.’ (PM)

This viewpoint—that instrumental applicatives are multipredicate clauses having the same structure as derivational causatives in Kinyarwanda—accommodates data like (9) where the base for the applicative is a transitive stratum. Something further must be said, however, to accommodate examples involving clauses with indirect or benefactive objects. As seen in the chart in (31), not only do 2s retain termhood in the case of instrumental applicatives, but 3s do so as well. This is incompatible with the view that instrumentals are always final 3s in applicatives. This analysis would incorrectly predict that the initial 3 in (26) is a final *chômeur*, as seen in the following representation:

- | | | | | | | |
|------|-------|------|-------|---------|----------|------------|
| (47) | | P | | 1 | 2 | 3 |
| | 1 | P̂ | P | 3 | 2 | CHO |
| | woman | show | -iish | machine | pictures | children |

Instead, we posit that revaluation of instrumentals in Kinyarwanda proceeds in the following fashion:¹³

- (48) Instrumentals are revalued to the term relation that is the relation immediately below the relation of the lowest ranked nominal on the hierarchy 1>2>3>4.

Thus, the representation in (43) is appropriate for an instrumental based on a transitive stratum. In the case of instrumental applicatives based on a ditransitive stratum, however, the instrumental nominal is revalued as a 4, since a nominal occupies the 3 position on the

hierarchy. Thus, an instrumental applicative like (26) would be represented as follows:

(49)		P		1	2	3
	1	\hat{P}	P	4	2	3
	woman	show	-iish	machine	pictures	children

Furthermore, (48) explains the ungrammaticality of multiple applicatives involving benefactives and instrumentals. Since the benefactive occupies the 4 position, as discussed above, and there is no term position lower on the hierarchy for the instrument to be revalued to, our analysis predicts that instrumental applicatives are impossible if the clause contains a benefactive.

2.3 Multiple Applicatives

The above discussion has provided a treatment of two types of multiple applicatives. First, in locative/benefactive applicatives, both nominals show “object” effects (the locative is a final 2 and the benefactive is a final 4). Second, instrumental/benefactive applicatives are ruled out, as discussed above. We turn now to instrumental/locative applicatives like those in (50).

(50)	Úmwáálímu	y-a-andik-iish-ijé-ho	ikíbáho	imibáre	íngwa.
	teacher	he-pst-write-instr-asp-on	board	math	chalk
	‘The teacher wrote math on the blackboard with chalk.’				

Kimenyi (1988) demonstrates that only the locative shows “object” effects in such clauses. So, for example, the locative but not the instrumental and the direct object can be passivized (51), incorporated as a pronoun (52), and relativized (53).

(51) a.	Ikíbáho	cy-a-andik-iish-ij-w-é-ho	imibáre	íngwa	n’úúmwáálímu.
	board	it-pst-write-instr-asp-pass-asp-on	math	chalk	by teacher
	‘The blackboard was written math on with chalk by the teacher.’				
b.	*Íngwa	y-a-andik-iish-ij-w-é-ho	ikíbáho	imibáre	n’úúmwáálímu.
	chalk	it-pst-write-instr-asp-pass-asp-on	board	math	by teacher
	‘The chalk was used to write math on the board by the teacher.’				
c.	*Imibáre	y-a-andik-iish-ij-w-é-ho	ikíbáho	íngwa	n’úúmwáálímu.
	math	it-pst-write-instr-asp-pass-asp-on	board	chalk	by teacher
	‘Math was written on the board with the chalk by the teacher.’				
(52) a.	Úmwáálímu	y-a-cy-andik-iish-ijé-ho	imibáre	íngwa.	
	teacher	he-pst-it-write-instr-asp-on	math	chalk	
	‘The teacher wrote math on it with chalk.’				
b.	*Úmwáálímu	y-a-y-aandik-iish-ijé-ho	ikíbáho	imibáre.	
	teacher	he-pst-it-write-instr-asp-on	blackboard	math	
	‘The teacher wrote math with it on the blackboard.’				

- c. *Úmwáalímu y-a-y-aandik-iish-ijé-ho ikífbáho íngwa.
 teacher he-pst-it-write-instr-asp-on blackboard chalk
 'The teacher wrote it on the blackboard with chalk.'
- (53) a. Dore ikífbááho úmwáalímu y-aándik-iish-ijé-ho imibáre íngwa.
 look board teacher he-rel-write-instr-asp-on math chalk
 'This is the blackboard that the teacher wrote math on with chalk.'
- b. *Dore íngwa úmwáalímu y-aándik-iish-ijé-ho ikífbááho imibáre.
 look chalk teacher he-write-instr-asp-on board math
 'This is the chalk that the teacher wrote math with on the blackboard.'
- c. *Dore imibáre úmwáalímu y-aándik-iish-ijé-ho ikífbááho íngwa.
 look math teacher he-rel-write-instr-asp-on board chalk
 'This is the math that the teacher wrote on the board with chalk.'

The analysis in (54), involving first revaluation in the multipredicate clause and then locative advancement, predicts the correct array of data: only locatives show final object properties.

(54)		P		1	2	LOC
	1	\hat{P}	P	3	2	LOC
	1	\hat{P}	P	CHO	2	3
	1	\hat{P}	P	CHO	CHO	2
	teacher	write	iish	chalk	math	board

Furthermore, an alternative analysis with locative advancement in the inner stratum and revaluation in a latter stratum is independently ruled out for Kinyarwanda. In Kinyarwanda there is a general prohibition on argument-restructuring rules in the inner predicate domain of any multipredicate construction. For example, passives, reflexives, and object/subject reversals are all ruled out in the inner domain of causatives and instrumental applicatives in Kinyarwanda.¹⁴ Given this general inner freeze for Kinyarwanda, nothing further needs to be said about multiple applicatives like (50).

3. An Alternative Analysis: Retreat vs. Chômage

Much attention has been given to Bantu applicatives in the recent literature; see especially Bresnan and Moshi (1990) and Alsina and Mchombo (1990). However, these works do not discuss multiple applicatives, presumably because other Bantu languages do not exhibit this phenomenon in so robust a fashion as Kinyarwanda. Earlier discussions of Kinyarwanda, including Kimenyi (1980, 1988) and Baker (1988) take the viewpoint that Kinyarwanda allows multiple objects (or multiple accusative case assignment). This view incorrectly predicts that all multiple applicatives should be possible. Polinsky and Kozinsky (to appear) discuss some cases of multiple applicatives and largely come to the conclusions expressed earlier in Gerds and Whaley (1991, 1992) regarding benefactive and instrumental applicatives. However, they exclude locative applicatives from their discussion and thus do not account for the data crucial to this paper.¹⁵

To our knowledge, the only other syntactic treatment of Kinyarwanda multiple

applicatives is Perlmutter (1984, 1989), which we will briefly summarize here. Perlmutter and Postal (1983) and Perlmutter (1984, 1989) have made use of the fact that both direct and indirect objects exhibit “object” properties to support the claim that so-called double object constructions actually have one of each type of object. Perlmutter and Postal (1983) propose that ditransitives like (6) involve the advancement of the initial 3 to 2 and the concomitant retreat of the initial 2 to 3, as represented in (55); benefactive applicatives like (7) and instrumental applicatives like (9) are given a similar analysis, as in (56) and (57).¹⁶

(55) 1 P 2 3 (56) 1 P 2 BEN (57) 1 P 2 INSTR
 1 P 3 2 1 P 3 2 1 P 3 2

In contrast, LOC-2 advancement results in the chômage of the initial 2:

(58) 1 P 2 LOC
 1 P CHO 2

In addition, Perlmutter (1984, 1989) posits the Non-initial (Successor) Demotion Ban (59), which (among other things) blocks the retreat—though not the chômage—of any advancee to 2.¹⁷

(59) If an RN contains an arc A of the form [Term_x (a,b) <c_z c_i>] and an arc B of the form [Term_y (a,b) <c_{i+1} c_w>], where Term_x outranks Term_y on the hierarchy of grammatical relations, arc A has the coordinate c_i.

Perlmutter’s analysis is able to explain several aspects of the multiple applicative puzzle. First, benefactive and instrumental applicatives are mutually exclusive. Whether the benefactive (60) or the instrumental (61) advances in an earlier stratum, an advanced nominal is induced to retreat and thus the construction is predicted to be ungrammatical.

(60) 1 BEN INSTR (61) 1 BEN INSTR
 1 2 INSTR 1 BEN 2
 1 3 2 1 2 3

Second, in multiple applicatives involving instrumentals and locatives, Perlmutter’s analysis correctly predicts that the final locative, but not the final instrumental, will show “object” effects. The structure in (62) is predicted because the advancee to 2 (the instrumental) is placed en chômage rather than retreating to 3; the structure in (63) is predicted to be ungrammatical, however, since the advancee to 2 (the locative) is induced to retreat.

(62) 1 2 INSTR LOC (63) 1 2 INSTR LOC
 1 3 2 LOC 1 CHO INSTR 2
 1 3 CHO 2 1 CHO 2 3

As seen in the data in (51)–(53), the locative but not the instrumental shows “object” effects in such constructions.

However, Perlmutter’s analysis makes several wrong predictions concerning multiple applicatives. First, as the structure in (62) shows, Perlmutter predicts the initial object in examples like (50) to be a final 3 and thus it should show “object” effects. This is not the case as the data in (51)–(53) shows. Second, since instrumental and benefactive applicatives are treated as parallel structures (both involve retreat-inducing advancements to 2), the Non-Initial Demotion Ban would allow structures like (64) but not (65):

(64)	1	BEN	LOC	(65)	1	BEN	LOC
	1	2	LOC		1	BEN	2
	1	CHO	2		1	2	3

In fact, however, multiple applicatives involving benefactive and locative are possible, as (10) above shows, but in such constructions, both the benefactive and the locative show “object” effects (see (28) and (29)). Thus the predicted structure (64) is inappropriate. Ironically, the ruled-out structure in (65) makes correct predictions regarding the final termhood of the nominals. Finally, Perlmutter’s analysis makes the wrong prediction concerning examples like (16), where the initial 2, 3, and benefactive simultaneously show “object” effects. Whether 3–2 advancement is earlier (66) (which violates the Successor Demotion Ban) or BEN–2 is earlier (67), only two of the three relevant nominals are incorrectly predicted to show “object” effects.

(66)	1	2	3	BEN	(67)	1	2	3	BEN
	1	3	2	BEN		1	3	CHO	BEN
	1	CHO	3	2		1	3	CHO	2

Thus, it is clear that Perlmutter’s analysis does not provide an adequate treatment of multiple applicative constructions. Although it accounts for the lack of multiple applicatives involving both benefactives and instrumentals, it does not predict the correct array of final terms in other multiple applicative constructions. In the absence of other data to distinguish our analysis from Perlmutter’s, we claim that our analysis is more comprehensive.

4. Conclusion

In sum, we have shown here that Kinyarwanda applicatives should not be given a uniform treatment. We claim that only one of the putative OBL–2 constructions in Kinyarwanda—the locative applicative—involves advancement to object. Thus, Kinyarwanda does not counterexemplify the 2-AEX, but is simply irrelevant to it. Since data from other languages support this law, we propose it for Universal Grammar. By positing the 2-AEX as a law of universal grammar, we hope to spark a discussion like that initiated by the proposal of the 1-AEX. The 1-AEX has triggered two lines of research. First, there has been much discussion of potential violations in various languages (see, for example, Gerds 1988, Ozkaragöz 1986). Second, various theories have offered explanations for 1-AEX effects (see, for example, Baker 1988, Marantz 1984).¹⁸

Our results here raise several issues, which we can only briefly outline here. First,

given that we have proposed the 2-AEX, which parallels the 1-AEX, we must also raise the questions of whether there is also a 3-AEX. To test for this, we require languages with more than one type of advancement to 3, an apparently rare group (see Gerds 1992). However, some preliminary results suggest that the 3-AEX may be necessary. Harris (1981) points out that Georgian has both BEN-3 and superessive-3 advancements, which apparently are mutually exclusive. Nash (1986) mentions that a variety of oblique relations (including adversity, comitative, and benefactive) can determine dative preverbs in Warlpiri, but these cannot co-occur. If we take these to be advancements to 3 (see Gerds 1992), then Warlpiri supports the 3-AEX. In the absence of an obvious counterexample, we tentatively propose the 3-AEX as a universal.

Second, if the 1-AEX, 2-AEX, and 3-AEX can all be maintained, then combining these laws into one principle would be an obvious simplification. In fact, Perlmutter and Postal (1984) suggest a universal, the Advancee Tenure Law (informally stated in (68)), which would encompass 1-AEX, 2-AEX, and 3-AEX effects.

(68) An advancee cannot be placed en chômage by an advancement.

They reject this, however, apparently on the basis of one set of data—the Kinyarwanda instrumental/locative multiple applicatives like (11). Under their analysis (see (62)), the instrumental advances to 2 and then is subsequently placed en chômage, thus violating (68). Since we have provided an analysis (54) of this data consistent with (68), we reopen the question of the appropriateness of this more general law. This raises two additional questions concerning the domain of the “Tenure” Law: (i) should it be limited to advancees, and (ii) is chômage by advancement the only relevant exclusion?

Advancees are only one type of nominal in the class of nominals holding “new” relations in a relational structure. Nominals that retreat, ascend, or revalue in multipredicate clauses should also be studied.¹⁹ There is some evidence that nominals that retreat cannot subsequently be placed en chômage (see Harris (1981) on Georgian and Hubbard (1985) on Albanian). Furthermore, several languages including Arabic (Salih 1985), Ilokano (Gerds 1986), Niuean (Sieter 1983), and Nubian (Abdel-Hafiz 1988), have been attested to allow raising of either the downstairs subject or object. However, it has not been claimed in any of these languages that both subject and object can raise simultaneously in the same domain.²⁰ A very different picture arises when revaluation in multipredicate clauses is considered. Gibson (1980), for example, shows that the causee in Chamorro is revalued as a 2 and then subsequently placed en chômage by OBL-2 advancement. Furthermore, in our analysis (represented in (54) above) of instrumental/locative multiple applicatives like (11), the instrumental is revalued as a 3 and subsequently placed en chômage by the advancing locative. In sum, preliminary results suggest that nominals that advance, retreat, or ascend may be “protected” by a Tenure law, while revalued nominals may not be.

Not only advancements but also retreats, ascensions, and revaluations may result in the chômage of a nominal. Which of these constructions can result in the chômage of an advancee? Again, little research has been reported on this issue. However, it can be noted that antipassives (taken as retreats in Relational Grammar) are blocked from placing advancees to object en chômage in Halkomelem (Gerds (1988)) and, at least in the case of specified nominals, in Chamorro (Gibson (1980)).

Although this discussion is necessarily sketchy, it is clear that a more comprehensive Tenure Law, perhaps along the lines of (69), should be proposed for further study.

(69) A nominal with a new relation (arising other than through revaluation) cannot be placed en chômage.

Notes.

*The following glosses are used for the Halkomelem and Ilokano data: adv advancement, aux auxiliary, det determiner, erg ergative, instr instrumental, obl oblique, pst past, tr transitive.

Unless otherwise stated, the Kinyarwanda data in this paper are from Kimenyi (1980). We have followed his system of interlinear glosses, which he gives on p. xv, for representing the Kinyarwanda data. Data taken from Kimenyi (1988) are indicated by (K 1988) following the English gloss. We thank Pierre Mvuyekure for his assistance in verifying and clarifying the Kinyarwanda data in Kimenyi (1980) and in providing additional examples (indicated by (PM) after the English gloss). Our research on Kinyarwanda was supported in part by the Department of Linguistics, SUNY at Buffalo, and by SSHRC grant #2063.

The following Relational Grammar abbreviations are used: 1 subject, 2 object, 3 indirect object, BEN benefactive, CHO chômeur, INSTR instrumental, LOC locative, P predicate, and \hat{P} P-chômeur.

¹The data in (3) and (4) are unacceptable no matter what order the verbal morphology or the noun phrases appear in.

²The lack of co-occurrence of advancements to 2 in has been pointed out for other languages as well. For example, Gibson (1980) notes that 3-2 and BEN-2 advancement are mutually exclusive in Chamorro.

³A formal rendition of this rule would be stated paralleling the formal version of the 1-AEX given in Perlmutter and Postal (1984).

⁴Within the Bantu literature, the term “applicative” is used more precisely to refer to examples like (7), which involves the suffix *-er*. However, we extend the term here to refer to any construction in which a non-patient nominal is an object argument. Kimenyi (1980, 1988) discusses other applicatives as well, including manner, goal, and possessive applicatives. We omit analysis of these here due to space limitations, but see Gerdtz and Whaley (in preparation) and also Polinsky and Kozinsky (to appear).

⁵There is some controversy over the status of sentences like (8). Our Kinyarwanda consultant thinks that sentences like (8) are somewhat artificial and vastly prefers the example in (32) below. Given that unadvanced locatives expressed as prepositional phrases have most of the properties of objects anyway (see section 2.2), advancement to object appears to fulfill no function in the grammar. Furthermore, our consultant considers sentences like those in (20) below, where the advanced locative goes on to take an active role in the syntax (i.e., passivizes, pronominalizes, or relativizes) to be somewhat better than basic examples like (8).

⁶Given that no advancement is posited in the case of clauses with benefactives, which

always take *-ir* verbal morphology, or ditransitive clauses, which sometimes take *-ir*, it is inappropriate to consider *-ir* to be advancement-signaling morphology. Rather it can be treated as a morpheme that extends the basic argument structure of the verb; see Gerdts (1992) for a relationally compatible treatment along this line. In this paper, we do not discuss cases where *-ir* refers to instrumental nominals.

⁷Kimenyi's data and those of our consultant thus contradict the data in Dryer (1983).

⁸Our consultant claims that examples like (26) are grammatical though they sound somewhat manufactured. These examples are better if the instrumental is expressed in a prepositional phrase.

⁹Multipredicate clauses, which are a reworking of the notion of Clause Union in classic RG, have been posited in the analysis of many kinds of structure-sharing constructions, including causatives, desideratives, resultatives, adversity passives, light verbs, serial verbs, possessor ascension, noun incorporation and duration/frequency adverbs (see Gerdts 1991a, 1991b, and references therein).

¹⁰The claim, then, is that Kinyarwanda causatives, like causatives in French, Georgian, Ilokano, Turkish, and many other languages, are structure-building. These languages contrast with Chamorro, Choctaw, Halkomelem, Swahili, and many other languages, whose causatives are not structure-building (see Gerdts 1991b, and references therein).

¹¹This claim is the RG equivalent of the structure for English instrumentals posited by Lakoff (1968). Lakoff's analysis, however, is biclausal, while ours is monoclausal.

¹²Noting that instrumental applicatives and causatives take the same verbal morphology *-iish*, Kimenyi (p. 164) suggests: "Causatives and instrumentals are in fact drawn from the same structure, the only difference being that while subjects of causatives are always animate, those of instrumentals are inanimate." However, he does not give a reanalysis of instrumental applicatives along these lines.

¹³Our restructuring rule for Kinyarwanda is similar in spirit to the rule of restructuring in languages like French, where the causee is restructured as a 2 if the inner predicate domain is intransitive but as a 3 if the inner predicate domain is a 3. However, since we claim that Kinyarwanda (though not apparently French) makes use of an "extra" term relation (a 4), the rule extends to accommodate ditransitive inner predicate domains as well.

We make this claim on the basis of instrumental applicatives only. Kinyarwanda causatives, as Kimenyi (1980) notes, are quite limited with respect to the structure of their inner predicate domains. Only intransitives and monotransitives with inanimate objects can form derivational causatives. Monotransitives with animate objects and ditransitives are excluded from the inner predicate domain of a causative.

An alternative treatment that posits that causees/instrumentals are always revalued as 4s (regardless of the valence of the inner predicate domain) incorrectly predicts that instrumentals and benefactives will be alike with respect to locative applicatives. However, as we have discussed above, instrumentals are chomeurs in locative applicatives while benefactives are final terms.

¹⁴Due to lack of space, we give no discussion of inner freeze effects here. See Gerdts and Whaley (in preparation) for data and discussion.

¹⁵Polinsky and Kozinsky omit Locative applicatives from their discussion since their consultants apparently reject these data. See footnote 5 above.

¹⁶Since more than one nominal shows “object” effects in data like (6), (7), and (9), some researchers (including Gary and Keenan (1977), and Kimenyi (1980, 1988)) have been led to the conclusion that such clauses have more than one direct object, thus violating the Stratal Uniqueness Law of Relational Grammar (Perlmutter and Postal (1983)), which, stated informally, prohibits more than one nominal bearing the same term relation (1, 2, or 3) per stratum.

The motivation for the retreat analysis of Perlmutter and Postal (1983) (see (55)-(57)) was to provide an analysis consistent with the Stratal Uniqueness Law. Note that our analysis also conforms to this law. See Gerdts and Whaley (1991, 1992) for discussion.

¹⁷Perlmutter (1989) gives a more precise version of this law making use of the Arc-Pair Grammar concept of **successor**.

¹⁸Although a “subject” landing site is available in Government/Binding theory, “object” positions have been excluded as landing sites (at least until recently) due to the Theta-Criterion. (See Gerdts 1992 for discussion.) It is probably due to this that 2-AEX effects have not received much attention in the GB literature.

¹⁹This question becomes interesting only once 2s and 3s are included in the discussion, since retreats, ascensions, and revaluations to 2 and 3 are common in many languages of the world but the 1 relation is seldom (if ever) involved in these constructions.

²⁰In some languages, e.g. Kinyarwanda (Kimenyi 1980), multiple possessor ascension appears to be possible. However, Carol Rosen (p.c.) has suggested that many cases of possessor ascension may, in fact, involve multipredicate clauses

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