Kinyarwanda Applicatives and Some Universal Laws

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1. Introduction.[1]

Kimenyi (1980) gives a detailed treatment of applicative constructions in the Bantu language Kinyarwanda.[2] He discusses several types of applicatives, including dative (1), benefactive (2), locative (3), and instrumental (4):[3]

(1) Umuhuûngu   y-a-haa-ye   umukoôbwa   igitabo.
     boy   he-pst-give-asp   girl   book
     'The boy gave the book to the girl.'

(2) Umukoôbwa   a-ra-som-er-a   umuhuûngu   igitabo.
     girl   she-pres-read-ben-asp boy   book
     'The girl is reading a book for the boy.'

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[2] Within the Bantu literature, the term "applicative" is used more precisely to refer to examples like (2), 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 Gerdts and Whaley (in preparation) and also Polinsky and Kozinsky (to appear).

[3] 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).

(3) Umugóre   y-oohere-jé-ho   isóko   umubooyi.[4]
    woman   she-send-asp-to   market   cook
    'The woman sent the cook to market.'

(4) Umugabo   a-ra-andik-iish-a   íbárúwa   íkárámu.
    man   he-pres-write-instr-asp   letter   pen
    'The man is writing a letter with the pen.'

Furthermore, he shows the interaction of these data with a variety of tests for objecthood and also gives examples involving more than one applicative. Data of this sort are given throughout this paper and form the basis for our discussion.

Two imporant questions are raised by the Kinyarwanda data: Do constructions with multiple objects exist? Can applicatives targeting the same argument position co-occur? Kimenyi answers yes to both of these questions, thus opening a fifteen-year debate concerning possible human languages. Many works have subsequently assumed the correctness of this position and have adopted analyses of other languages based upon Kimenyi's view of Kinyarwanda.

Here, we present an alternative account of Kinyarwanda that allows the above questions to be answered no. Neither 'base-generated' nor 'derived' multiple object constructions exist in Kinyarwanda. Instead, our analysis posits that Kinyarwanda has a more robust inventory of object-like argument positions than other known languages. Moreover, these different positions can be distinguished within the language by various means. Central to this viewpoint is our claim that the different applicatives target different argument positions rather than uniformly targeting the direct object position. This conforms to our expectations based on applicatives in other languages. In sum, Kinyarwanda is a somewhat unusual language, but not in the way that Kimenyi suggests.

In order to treat these issues in a precise fashion, we must cast the discussion into a formal theory. We deal with Kinyarwanda, as did Kimenyi, within the theory of Relational Grammar. We can then compare Kimenyi's analysis with other alternatives. Within this context, we can give a precise restatement of the two questions above: (1) Does Kinyarwanda violate the Stratal Uniqueness Law? (2) Does Kinyarwanda violate the 2-Advancement Exclusiveness Law? The following sections discuss the relevance of the Kinyarwanda data to each of these laws and then outline our proposed analysis.

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[4]There is some controversy over the status of sentences like (3). Our Kinyarwanda consultant thinks that sentences like (3) are somewhat artificial and vastly prefers the example in (36) below. Given that unadvanced locatives expressed as prepositional phrases have most of the properties of objects anyway (see section 3), advancement to object appears to fulfill no function in the grammar. Furthermore, our consultant considers sentences like those in (24) 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 (3).

1.1 The Stratal Uniqueness Law

Within a Relational treatment, Kimenyi's analysis posits that the above clause involve advancement to object, precisely 3–2, BEN–2, LOC–2, and INSTR–2 advancements respectively.[5] The structure of the above clauses has sparked much discussion, since, as noted by Kimenyi, the initial direct object in (1), (2), and (4) retains its object properties. For example, the direct object in the instrumental applicative in (4) undergoes passivization, pronoun incorporation and relativization, as seen in (5)[6]

(5) 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-andik-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'

Since the Dative in (1), the Benefactive in (2), and the Instrumental in (4) also show object properties, researchers (including Gary and Keenan (1977), Kimenyi (1980), and Bresnan and Moshi (1990)) 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)):

(6)   Stratal Uniqueness Law

      Let 'term$_x$' be a variable over the class of R-signs, that is '1', '2', or '3'. Then: If arcs A and
      B are both members of the C$_k$ stratum and A and B are both term$_x$ arcs, then A=B.

Stated informally, the Stratal Uniqueness Law prohibits more than one nominal bearing the same term relation (1, 2, or 3) per stratum.

In contrast, the initial direct object in the locative applicative in (3) loses its object properties, as the data in (7) show, and so has been claimed by Kimenyi (1980) to be a chômeur.

(7) a. *Igitabo   cy-oohere-j-w-é-ho   íshuûri   n'úúmwáalímu.
         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.'

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[5]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 P̂ P-chômeur.

[6]Section 2 discusses object properties in dative and benefactive applicatives.

c. *igitabo úmwáalímu y-oohere-jé-ho íshuûri
 book teacher he-send-asp-to school
 'the book that the teacher sent to school'

No Stratal Uniqueness Law violation is posited in the case of Locative applicatives.[3]

Thus, for Kimenyi there are two types of advancement to object in Kinyarwanda: those like Instr-to-object that result in double objects, as represented in the stratal chart in (8), and those like Loc-to-object that result in the chômage of the initial object, as represented in the stratal chart in (9).

(8)	1	P	2	INSTR		(9)	1	P	2	LOC
	1	P	2	2			1	P	CHO	2
	man	write	letter	pen			woman	sent	cook	market

Kimenyi's analysis raises two important questions. First, is there an alternative analysis that posits structures conforming to the Stratal Uniqueness Law? Second, why is there this difference between Dative, Benefactive, and Instrumental applicatives on the one hand, and Locative applicatives on the other? After all, if two object positions are available in Kinyarwanda, as necessary for (8) under Kimenyi's approach, why not make use of both object positions in Locative applicatives? Or alternatively, if Kinyarwanda has a way of licensing 2-chômeurs in Locative applicatives, why not make use of this relation in Dative, Benefactive, and Instrumental applicatives?

1.2 The 2-AEX

Although apparently a rare phenomenon, the property of having several different applicative constructions is not unique to Kinyarwanda. For example, Halkomelem, a Salish language of British Columbia (Gerdts 1988), has 3-2, BEN-2, DIR(ectional)-2, and CAUS(al)-2, as illustrated by the data in (9), and the Philippine language Ilokano (Gerdts 1986, 1987) has 3-2, BEN-2, LOC-2, and INSTR-2, as (10) illustrates.[7]

(9) a. ni ʔám-əs-t-əs   kʷθə sqʷəméyʔ ʔə kʷθə sθ'ámʔ
   aux give-advA-tr-3erg det dog   obl det bone
   'He gave the dog the bone.'
  b. ni q'ʷəl-əłc-t-əs łə słéniʔ ʔə kʷθə səplíl
   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 kʷθə sqʷəméyʔ
   aux startle-advC-tr-3erg det dog
   'He was startled at the dog.'
  d. ʔi yə-ʔéʔwəʔ-n-əs-əs łə słéniʔ
   aux ser-come-advD-tr-3erg det woman

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[7]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.

'He's coming toward the woman.'

(10) 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.'

Although these languages have more than one type of advancement to object, it is notable that such advancements are mutually exclusive. So, for example, in Halkomelem (cf. (*11)) and Ilokano (cf. (*12)), only one advancement to object is allowed per clause.[8,9]

(11) a. *ni ʔám-əs-ɬc-t-əs   ɬə sɬeniʔ   kʷθə sqʷəméyʔ   ʔə   kʷθə   səʔámʔ
        aux give-advA-advBtr-3erg   det woman det   dog   obl   det   bone
        'He gave the dog the bone for the woman.'

     b. *ʔi yə-ʔéʔwəʔ-ɬc-n-əs-əs   ɬə sɬéniʔ   ɬə   Mary
        aux ser-come-advB-advD-tr-3erg   det woman det   M.
        'He's coming toward the woman for Mary.'

(12) a. *In-ted-an-an   ko   ni   Maria   ni   Juan   iti   libro.
        pst-give-adv-adv   1gen   det   M.   det   J.   obl-det   book
        'I gave the book to John for Maria.'

     b. *P-in-ang-puted-an   ko   ni   Juan   ti   buneng   iti   kawayan.
        pst-adv-cut-adv   1gen   det   J.   det   knife   obl-det   bamboo
        'I cut down the bamboo with a knife for John.'

The above data thus suggest that it is possible to posit a universal restriction on advancements—the **2-A(dvancement) EX(clusive Law)** stated informally as follows:[10]

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

[9]The lack of co-occurence 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.

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

(13) The set of advancements to 2 in a single clause contains at most one member.

The law in (13) directly parallels the 1-Advancement Exclusive Law (Perlmutter 1978, Perlmutter and Postal 1984), which prohibits multiple advancements to 1 in a single clause. The 1-AEX, supported by data from a variety of languages, rules out such constructions as multiple passives and impersonal passives concomitant with unaccusative advancement.

However, "applicative" constructions in the Bantu language Kinyarwanda are a *prima facie* counterexample to the 2-AEX., since, as Kimenyi notes, multiple applicatives are possible in that language. Example (14) involves both benefactive and locative applicatives; (15) involves both locative and instrumental applicatives.

(14) 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.'

(15) Úmwáalímu   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.'

The combination of benefactive and instrumental applicatives is impossible, a fact for which Kimenyi offers no explanation. If examples (1-4) are thought to involve advancements to 2, then examples like (14) and (15) will counterexemplify the 2-AEX.

1.3 An Outline of our Analysis

Our research on Kinyarwanda, which we briefly summarize in sections 2 and 3, has yielded a very different picture of the applicative constructions. We claim that they should not be treated uniformly as advancement to object constructions. First, we posit that dative and benefactive applicatives involve no advancement at all. Rather, the range of phenomena can be accommodated by recognizing that some languages make use of a fourth term relation, i.e. a 4, in addition to the three term relations—1, 2, and 3—standardly assumed in RG. Second, locative applicatives do involve advancement (of the type OBL–3–2). In contrast, 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).

In section 3.3, 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 (14)), both benefactive and locative will be final arguments exhibiting object properties (a 4 and a 2 respectively). In locative/instrumental applicatives (see (15)), instrumental revaluation (to 3) will necessarily precede locative advancement due to inner clause freeze effects; 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 another proposal concerning Kinyarwanda applicatives in section 4. Perlmutter and Postal (1983) and Perlmutter (1984, 1989) invoke a retreat strategy for

some instances of applicatives. This analysis makes use of the two object relations—2 and 3—to accommodate the nominals in cases where Kimenyi claims there are multiple objects. Thus, their analysis provides an account of Kinyarwanda that conforms to the Stratal Uniqueness Law. However, since their analysis requires multiple advancements to 2, it violates the 2-AEX. Perlmutter (1984, 1989) makes a further proposal concerning multiple applicatives. He posits a new universal (the Non-Initial (Successor) Demotion Ban) that successfully allows benefactive/locative and blocks benefactive/instrumental combinations. However, this analysis makes the wrong prediction with respect to the final relations of the nominals in allowed instrumental/locative multiple applicatives.

To summarize, we have proposed an analysis of Kinyarwanda that is consistent with the Stratal Uniqueness Law. Furthermore, we claim that only one of the putative 3/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 5. In contrast, under Kimenyi's analysis, both of these laws are violated, although it remains a mystery why some applicative constructions nevertheless conform to these laws. The Perlmutter and Postal analysis maintains the Stratal Uniqueness Law but violates the 2-AEX. However, their approach runs into empirical problems when multiple applicatives are taken into consideration. We conclude that our analysis, which is consistent with these two laws of universal grammar, is more explanatory and empirically adequate than these two alternative treatments.

2. Dative and Benefactives

As Kimenyi (1980, 64–68) notes, both the direct object and the indirect object of ditransitive clauses like (1) exhibit object properties. As (16) and (17) show, both the direct object and the indirect object can passivize, appear as incorporated pronouns, and relativize.

(16) 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   umukoôbwa
          book   boy   he-pst-give-asp girl
          'the book which the boy gave the girl'

(17) 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. umukoôbwa   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 (1980, 182) points out, when both the direct object and indirect object are incorporated pronouns, the direct object precedes the indirect object, as (18) shows. The alternative order—that is, the incorporated indirect object preceding the direct object—is impossible.

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

Following Kimenyi (1980) and Dryer (1983), we represent (18) by the following stratal chart:

(19)   1   P   2   3
       boy give book girl

Thus, indirect object–to–object advancement (as posited in Kimenyi (1988) and Perlmutter and Postal (1983)) need not be posited for Kinyarwanda.

Turning to benefactive applicatives like (20), 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 (21)) and incorporate as a pronoun (see (22)):

(20)   Umugóre   a-rá-hé-er-a   umugabo   ímbwa ibíryo.
        woman   she-pres-give-appl-asp man   dog   food
        'The woman is giving food to the dog for the man.'

(21) a. Ibíryo bi-rá-hé-er-w-a   umugabo   ímbwa n'ûmugóre.
        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. Ímbwa i-rá-hé-er-w-a   umugabo   ibíryo n'ûmugóre.
        dog   it-pres-give-ben-pass-asp man   food by woman
        'The dog is given food for the man by the woman.'
    c. Umugabo a-rá-hé-er-w-a   ímbwa ibíryo n'ûmugóre.
        man   he-pres-give-appl-pass-asp dog   food by woman
        'The man is given food for the dog by the woman.'

(22)   Umugóre   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, (20) is given the following representation.

(23)   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.[11]

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.

3. Locatives and Instrumentals

Kimenyi (pp. 81–82; 94–96) shows that the locative and instrumental nominals in applicatives like (3) and (4) are "objects" by a variety of tests, including passivization, pronoun incorporation, and relativization, as shown in (24) for locatives and (25) for instrumentals.

(24) a. Iposita   y-oohere-j-w-é-ho   íbárúwa   n'úmugabo.
         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. íshuúri   úmwáalímu   y-oohere-jé-ho   igitabo
         school   teacher   he-rel-send-asp-to book
         'the school that the teacher sent the book to'

(25) 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.'

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[11]Given 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.

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 is several respects, as discussed in section 3.1. Furthermore, locatives and instrumentals are different even when they are not in applicative constructions, as discussed in section 3.2. These differences remain unexplained under Kimenyi's analysis. However, we posit a relational structure for locatives and instrumentals in section 3.3 that accounts for the phenomena in 3.1 and 3.2. Furthermore, this analysis is easily extended to multiple applicatives (see section 3.4).

3.1 Some Basic Differences.

First, the initial 2 is a final chômeur (and hence does not exhibit object effects) in the case of locative applicatives (26), but not in the case of instrumental applicatives (27).

(26) a. *Igitabo   cy-oohere-j-w-é-ho   íshuûri   n'úúmwáalímu.
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'

(27) 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-andik-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 (28), but not in instrumental applicatives like (30), as (*29) and (31) show.[12]

(28)   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.'

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

(29) 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.'

(30) Umugóre a-r-éerek-eesh-a ímashiîni ábáana amashusho.[13]
 woman she-pres-show-instr-asp machine children pictures
 'The woman is showing pictures to the children with a machine.' (K 1988)

(31) 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 (14) above. In this case both the locative (32) and the benefactive (33) show object effects.

(32) 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 úmwáana 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.'

(33) 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.'

---

[13]Our 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.

c. N-dá-bon-a　　　　umugabo　　úmwáana　　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 (34) shows.

(34) *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 (35). The columns show the effect of locative and instrumental applicatives on 2s, 3s, and benefactive respectively.

(35)

	2	**3**	**BEN**
locative	chômeur	chômeur	term
instrumental	term	term	*

3.2 "Unadvanced" Instrumentals and Locatives.

Kimenyi points out that some applicative constructions, including both locative and instrumental applicatives, have corresponding data where the nominal is introduced by a preposition. (36) corresponds to the locative applicative in (3), and (37) to the instrumental applicative in (4).

(36)　Umugóre　y-oohere-je　　umubooyi　kw'iisóko.
　　　woman　　she-send-asp　　cook　　　　to market
　　　'The woman sent the cook to market.'

(37)　Umugabo　a-ra-andik-a　　　　íbárúwa　　n'ííkárámu.
　　　man　　　he-pres-write-asp　letter　　　with pen
　　　'The man is writing a letter with the pen.'

Other researchers have assumed that the locative and instrumental nominals in (36) and (37) are "obliques", and thus from an RG point of view clauses like these would be equivalent to the initial structure of applicative constructions. Applicatives would involve advancement of the initial oblique nominal to object. However, we claim that Locatives, even though they are obliques, are nonetheless arguments of the predicate. Instrumentals, on the other hand, are not arguments of the main predicate in initial structure, but rather are adjuncts, and in RG terms, they constitute a predicate domain of their own. Locative and instrumental applicatives differ because the structures that underly them differ. First, we give a number of ways in which "unadvanced" Locatives and Instrumentals differ. Afterwards, we make our analyses of "unadvanced" and applicative Locatives and Instrumentals more precise and show how the effects in section 3.1 are accommodated.

3.2.1 Oblique pronoun incorporation.

As illustrated above, object pronouns are incorporated into the verb complex in Kinyarwanda. An incorporated pronoun form -ha also exists to refer to Locatives:

(38)   Ba-ra-kí-há-shyir-a.
         they-pres-it-there-put-asp
         'They put it there.'

In contrast, there is no form of incorporated pronouns for unadvanced Instrumentals; only advanced Instrumentals in applicative structures like (4) can be incorporated pronouns.

3.2.2 Oblique Subjects.

Kimenyi (pp. 129-130) shows that Locatives can be directly passivized, without being first advanced to object. In such passives, as in (39), the Locative appears with its preposition in subject position and the verb takes locative agreement.[14]

(39)   Kw'iiposita   h-ooherej-w-e   íbárúwa   n'úmugabo.
         to post office it-send-pass-asp   letter   by man
         'To the post office was sent the letter by the man.'

Instrumentals, however, do not appear as subjects in such constructions:

(40)   *N'ííkárámu   i-ra-andik-w-a   íbárúwa   n'úmugabo.
         with pen   it-pres-write-pass-asp   letter   by man
         'With the pen is written the letter by the man.'

Unlike Locatives, Instrumentals appear as subjects only in applied constructions, as in (4).

3.2.3 Object/subject reversal.

Kimenyi (pp. 141-146) discusses a structure in which the word order of the subject and the object nominals is reversed, giving the sentence a "passive reading". No passive morphology appears on the verb or on the postposed subject. The verb in such clauses agrees with the preposed object, as illustrated in (41b).

(41) a. Umuhuûngu   a-ra-som-a   igitabo.
        boy   he-pres-read-asp   book
        'The boy is reading the book.'
     b. Igitabo   cyi-ra-som-a   umuhuûngu.
        book   it-pres-read-asp   boy
        'The book is being read by the boy.'

---

[14]Bresnan and Kanerva (1989) give an extensive discussion of the same phenomenon in Chichewa.

Locatives behave like objects with respect to object/subject reversal, since they can appear in preverbal position, as in (42). In this case the verb takes locative agreement (see Kimenyi, pp. 141-142).

(42)   Kw'iishuûri   ha-gii-yeumúnyéeshuûri.
        to school   it-go-aspstudent
        'To school went the student.'

Unadvanced Instrumentals, however, cannot appear in preverbal position in a reversal construction, as (*43) shows.

(43)   *N'íîkárámu   i-ra-andik-a   úmwáalímu.
        with pen   it-pres-write-asp   teacher
        'With pen writes the teacher.'

3.2.4 Topicalization strategies.

As Kimenyi (pp. 191-196) points out, Locatives and Instrumentals are topicalized using different strategies. Locatives, like subjects, objects, indirect objects, and benefactives, are topicalized directly: the phrase appears to the left of the clause and a resumptive pronoun cross-referencing the preposed element appears in the verb. An example of a topicalized direct object appears in (44) and of a topicalized Locative in (45).

(44)   Igitabo,   úmwáana   a-ra-gi-som-ye.
        book,   child   he-pres-it-read-asp
        'The book, the child has just read it.'

(45)   Kuú   ntebe,   âbáana   ba-ra-h-iica-ye.
        on   chair   children   they-pres-there-sit-asp
        'On the chair, the children are sitting on it.'

The Locative appears with its preposition and the verb shows locative agreement.
    In contrast, Instrumentals cannot be topicalized in this fashion:

(46)   *N'íîkárámu,umukoôbwa   a-ra-y-andik-a   íbárúwa.
        pen   girl   she-pres-it-write-asp   letter
        'The pen, the girl is writing a letter with it.'

Instead, a second strategy, involving a resumptive pronoun, is used to topicalize Instrumentals:

(47)   Íkárámu,umukoôbwa   a-ra-andik-a   íbárúwa   ná   yo.
        pen   girl   she-pres-write-aspletter   with   it
        'The pen, the girl is writing a letter with it.'

This strategy is used to topicalize other elements, including possessors and nominals within relative clauses. However, Locatives cannot be topicalized in this manner, as (*48) shows.

(48) *Íntebe,   umukoôbwa   a-z-iicar-a   kûrí   yo.
      chair   girl   she-fut-sit-asp on   it
      'The chair, the girl will sit on it.'

3.2.5 Possessor ascension hosts.

As proposed by Kimenyi (pp. 97-98) and refined by Bickford (1986), Kinyarwanda has possessor ascension, where a possessor ascends to take on an object role.[15] As seen in (29a), possessors typically follow their heads and are introduced by a preposition, but when they ascend to object, as in (49b), they precede their heads and appear without a preposition.

(49) a. Umuhuûngu   y-a-twaa-ye   igitabo   cy'ûmukoôbwa.
         boy   he-pst-take-asp book   of girl
         'The boy took the book of the girl.'
      b. Umuhuûngu   y-a-twaa-ye   umukoôbwa   igitabo.
         boy   he-pst-take-asp girl   book
         'The boy took the girl's book.'

In the above example, the object serves as the host for possessor ascension. Locatives can also host ascension, as (50b) shows.

(50) a. Úmwáana   y-a-andits-e   izíná   rye   mu   igitabo   cy'ûmugabo.
         child   he-pst-write-asp name   his   in   book   of man
         'The child wrote his name in the man's book.'
      b. Úmwáana   y-a-andits-e   umugabo   mu   igitabo   izíná   rye.
         child   he-pst-write-asp man   in   book   name   his
         'The child wrote his name in the man's book.'

In contrast, unadvanced Instrumentals cannot serve as possessor ascension hosts:

(51) a. Umuhuûngu   y-a-andits-e   íbárúwa   n'ííkárámu   y'ûmukoôbwa.
         boy   he-pst-write-asp   letter   with pen of girl
      b. *Umuhuûngu y-a-andik-i-ye   íbárúwa   umukoôbwa   n'ííkárámu.
         boy   he-pst-write-appl-asp letter   girl   with pen
         'The boy wrote the letter with the girl's pen.'

3.2.6 Derivational causatives.

Kimenyi (pp. 164-165) discusses causatives formed with the derivational affix -iish. In such causatives, the causee appears immediately after the verb:[16]

---

[15]Bickford (1986) argues that inalienable possessors ascend to 2 while alienable possessors ascend to 3.

[16]A variety of forms mark the causative, including -eesh and -j.

(52) Umugabo   a-ra-som-eesh-a   ábáana   ibitabo.
     man   he-pres-read-caus-asp children   books
     'The man is making the children read the books.'

As (53) shows, derivational causatives can be formed on a clause containing a Locative.

(53) Umugóre   y-iica-j-e   úmwáana   kuú   ntebe.
     woman   she-sit-caus-asp   child   on   chair
     'The woman made the child sit on the chair.'

In contrast, derivational causatives cannot be formed on clauses that contain Instrumentals:

(54) *Úmwáalímu   a-ra-andik-iish-a   umúnyéeshuúri   n'íkárámu.
     teacher   he-pres-write-caus-asp student   with pen
     'The teacher made the student write with a pen.'

We have shown that Locatives and Instrumentals differ systematically in a variety of constructions. 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, possessor ascension hosts, and as an element in the inner structure of a derivational causative. Locatives do many, though not all, of the 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).

3.3 The Relational Structure of Instrumentals and Locatives

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 (36) above, are oblique arguments of the predicate, and thus are appropriately represented by the structure in (55).

(55)   1   P   2   LOC
         woman   send   cook   market

Given that locatives are initially oblique, we account for locative applicatives like (3) 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 (28), repeated as (56a), which would be represented as in (56b),where locative advancement takes place in a clause that contains both an initial indirect object:

(56) a. Umugóre   a-ra-he-er-a-mo   ishuúri   umuhuúngu ibitabo.
         woman   she-pres-give-appl-asp-loc school   boy   books
         'The woman gave the boy books in school.'

b.	1	P	2	3	LOC
	1	P	2	CHO	3
	1	P	CHO	CHO	2
	woman	give	books	boy	school

Recall that, as the data in (29) above show, the initial 3 in (56) is a final chômeur. Furthermore, the initial direct object loses its object properties as well. For example, it cannot passive (57a) nor be an incoroporated pronoun (57b).

(57) 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.'

Our analysis, as represented in (56b) accounts for this, since both of these nominals are chômeurs in final structure.

This analysis also accounts for data involving benefactives and locatives, such as (14), repeated here as (58a). 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 (58b) shows.

(58) a. 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.'

b.	1	P	4	LOC
	1	P	4	3
	1	P	4	2
	child	sit	man	chair

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 (37) given in (59).

(59) [[Umugabo arandika íbárúwa][n'ifkárámu.]]

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 sentences.

Furthermore, instrumentals are 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).[17]

First, we illustrate the notion of multipredicate clause by discussing derivational causatives in Kinyarwanda. For a causative such as (60), we propose the structure in (61).

(60)   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.'

(61)
	P		1	2
1	P̂	P	3	2
man	build	-iish	workers	house

The analysis in (61) claims that (60) 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.[18] Positing this type of causative for Kinyarwanda is consistent with the fact that both the causee (cf. 62) and the initial direct object (cf. 63) have object properties (Kimenyi, pp. 170–171); for example, they can passivize and can appear as incorporated pronouns:

(62) a. Inzuí-r-úubak-iish-w-a   abákozi   n'ûmugabo.
        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.'

---

[17]Multipredicate 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).

[18]The 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).

(63) a. Abákozi   bá-r-úubak-iish-w-a   inzu   n'ûmugabo.
        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.'

Gerdts and Whaley (1991, 1992) claim that instrumental applicatives likewise involve a multipredicate clause.[19] In fact, this is a multipredicate clause with the same structure, and also the same morphology, as a causative.[20] Thus, we would also represent (4) as in (64); 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.

(64)   P   1   2
        1   P̂   P   3   2
        man   write -iish pen   letter

The structure in (64), since it posits that both the instrumental and the direct object are final objects (a 3 and a 2, respectively), explains why both nominals have object properties (cf. (62) and (63) 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 (65):

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

The incorporated pronoun referring to the causee in (66) and the instrumental in (67) appears after the pronoun referring to the direct object, as predicted by (61) and (64), respectively.

(66)   Umugabo   a-rá-yi-b-uubak-iish-a.
        man   he-pres-it-them-build-caus-asp
        'The man is making **them** build it.'

---

[19]This 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.

[20]Noting 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.

(67)   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 (4) 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 (35), 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 (30) is a final chômeur, as seen in the following representation:

(68)   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:[21]

(69) 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 (64) 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 (30) would be represented as follows:

---

[21]Our 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 apparently not 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 and 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 chômeurs in locative applicatives while benefactives are final terms.

(70)

1	P̂	P	1	2	3
			4	2	3
woman	show	-iish	machine	pictures	children

Furthermore, (69) 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.

3.4 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 the one in (71).

(71) Úmwáalímu   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 or the direct object, can be passivized (72),
incorporated as a pronoun (73), and relativized (74).

(72) a. Ikíbáho cy-a-andik-iish-ij-w-é-ho   imibáre íngwa n'úúmwáalímu.
          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'úúmwáalímu.
          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'úúmwáalímu.
          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.'

(73) a. Úmwáalímu 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. *Úmwáalímu   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   ikíbáho   íngwa.
          teacher   he-pst-it-write-instr-asp-on blackboard   chalk
          'The teacher wrote it on the blackboard with chalk.'

(74) a. Dore ikíbááho 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 ikíbááho 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 ikíbááho 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 (75), involving first revaluation in the multipredicate clause and then locative advancement, predicts the correct array of data: only locatives show final object properties.

(75)

	P		1	2	LOC
1	P̂	P	3	2	LOC
1	P̂	P	CHO	2	3
1	P̂	P	**CHO**	**CHO**	**2**
teacher	write	iish	chalk	math	board

An alternative analysis with locative advancement in the earlier strata and revaluation in a latter stratum, as represented in (76), makes the wrong predictions concerning the final relations of the nominals.

(76)

	P		1	2	LOC
	P		1	2	3
	P		1	CHO	2
1	P̂	P	3	CHO	2
teacher	write	iish	chalk	math	board

The structure in (76) wrongly predicts that the instrumental should exhibit object effects.
Furthermore, (76) is independently ruled out in Kinyarwanda due to a general prohibition on morphosyntactic rules in the inner predicate domain of any multipredicate construction. For example, passives, object/subject reversals, and reflexives are ruled out in the inner domain of causatives and instrumental applicatives in Kinyarwanda. So, for example, the reflexive in the causative in (77) can only refer to the causer and not the causee, as Kimenyi (1988, p. 168-169) notes:

(77) Umugabo á-r-íi-reeb-eesh-a umugóre.
man he-pres-refl-watch-caus-asp woman
'The man is making himself watch the woman.'

/*'The man is making the woman watch herself.'

Given this general inner freeze for Kinyarwanda, nothing further needs to be said about multiple

applicatives like (71).

4. 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 Gerdts 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.[22]

To our knowledge, the only other syntactic treatment of Kinyarwanda multiple applicatives is Perlmutter (1984, 1989), which we 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 (1) involve the advancement of the initial 3 to 2 and the concomitant retreat of the initial 2 to 3, as represented in (78); benefactive applicatives like (2) and instrumental applicatives like (4) are given a similar analysis, as in (79) and (80).[16]

(78)	1	P	2	3	(79)	1	P	2	BEN	(80)	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:

(81)	1	P	2	LOC
	1	P	CHO	2

In addition, Perlmutter (1984, 1989) posits the Non-initial (Successor) Demotion Ban (82), which (among other things) blocks the retreat—though not the chômage—of any advancee to 2.[23]

(82) If an RN contains an arc A of the form [$Term_x$ (a,b) $<c_z c_j>$] 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

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[22]Polinsky and Kozinsky omit Locative applicatives from their discussion since their consultants apparently reject these data. See footnote 4 above.

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

(83) or the instrumental (84) advances in an earlier stratum, an advanced nominal is induced to retreat, and thus the construction is predicted to be ungrammatical.

(83)	1	BEN	INSTR	(84)	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 (85) is predicted because the advancee to 2 (the instrumental) is placed en chômage rather than retreating to 3; the structure in (86) is predicted to be ungrammatical, however, since the advancee to 2 (the locative) is induced to retreat.

(85)	1	2	INSTR	LOC	(86)	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 (72)–(74), 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 (85) shows, Perlmutter predicts the initial object in examples like (71) to be a final 3, and thus it should show object effects. This is not the case, as the data in (72)–(74) show. 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 (87) but not (88):

(87)	1	BEN	LOC	(88)	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 (14) above shows, but in such constructions, both the benefactive and the locative show object effects (see (32) and (33)). Thus the predicted structure (87) is inappropriate. Ironically, the ruled-out structure in (88) makes correct predictions regarding the final termhood of the nominals. Finally, Perlmutter's analysis makes the wrong prediction concerning examples like (20), where the initial 2, 3, and benefactive simultaneously show object effects. Whether 3–2 advancement is earlier (89) (which violates the Successor Demotion Ban) or BEN–2 advancement is earlier (90), only two of the three relevant nominals are predicted to show object effects, though, in fact, all three nominals do.

(89)	1	2	3	BEN	(90)	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.

5. The Advancee Tenure Law Revisited

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, Gerdts 1988, Ozkaragöz 1986). Second, various theories have offered explanations for 1-AEX effects (see, for example, Baker 1988, Marantz 1984).[24]

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 Gerdts 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 Gerdts 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 (91)), which would encompass 1-AEX, 2-AEX, and 3-AEX effects.

(91) 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 (71). Under their analysis (see (85)), the instrumental advances to 2 and then is subsequently placed en chômage, thus violating (91). Since we have provided an analysis (75) of this data consistent with (91), we reopen the question of the appropriateness of this more general law. This raises two additional questions concerning the

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[24]Although 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-Criteron. (See Gerdts 1992 for discussion.) It is probably due to this that 2-AEX effects have not received much attention in the GB literature.

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.[25] 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 (Gerdts 1986), Niuean (Seiter 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.[26] 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 (75) above) of instrumental/locative multiple applicatives like (71), 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 advances to object en chômage in Halkomelem (Gerdts1988) 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 comphensive Tenure Law, perhaps along the lines of (92), should be proposed for further study.

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

6. Conclusion.

This paper has discussed an interrelated set of Kinyarwanda data with respect to two important questions: (1) Does Kinyarwanda have multiple object constructions? (2) Can applicatives that target the same grammatical relation co-occur? The analysis of Kinyarwanda given by Kimenyi (1980, 1988) answers yes to both of these questions, thereby expanding the range of human language data. Our analysis answers no to these questions. Thus, we maintain that the Kinyarwanda data do not support an expansion of universal grammar in the fashion that Kimenyi suggests.

Although, our analysis shares many elements with Kimenyi's, it diverges from it in several crucial respects. First, what Kimenyi takes to be evidence for object-hood (pronoun

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[25]This 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.

[26]In 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 multiprediate clauses.

incorporation, passivization, relativization, etc.), we take as evidence for argument status. The range of object-like arguments made use of in this paper include three terms—2, 3, and 4—and one oblique argument—locative. For example, passivization in our analysis, as in Kimenyi (1980) and Perlmutter and Postal (1983), is not limited to direct objects in Kinyarwanda: 3s and (under our analysis) 4s also passivize, as do a certain class of locatives (discussed in section 3.2.2). Thus, our analysis of Kinyarwanda is not without cost; we must enlarge the class of term-like relations (at least in languages which have evidence for 4s) and we must claim that nominals other than direct objects can passivize in some languages. We maintain, however, that these necessary additions to the theory result in a much smaller expansion of universal grammar than would the alternative account. Abandoning the Stratal Uniqueness Law and the 2-AEX enormously increases the number of basic clause types and combinations of constructions allowed in universal grammar, and thus greatly complicates the task of motivating grammars for individual languages.

Second, what Kimenyi (1988) and Perlmutter and Postal (1983) take to be 3-2 and Ben-2 advancement, we take to be 'base-generated' structures. Dative nominals are monostratal 3s, while benefactives are monostratal 4s. What evidence exists that datives and benefactives are not uniformly final 2s, as claimed in previous analyses? These nominals behave differently in locative and instrumental applicatives. Datives (like direct objects) are chômeurs in locative applicatives, but are final terms in instrumental applicatives. Benefactives, on the other hand, are final terms in locative applicatives and cannot co-occur with instrumental applicatives. These differences are unexplained in Kimenyi's analysis. Under our analysis, they are predicted, given the structure we posit for locative and instrumental applicatives summarized below.

Third, in the analyses of Kimenyi (1988) and Perlmutter and Postal (1983), all applicatives uniformly involve advancement to 2. As mentioned above, dative and benefactive applicatives are not analyzed as advancements under our account. Furthermore, locative and instrumental applicatives are not given a uniform treatment. Locative applicatives involve advancement (of the type OBL–3–2), while instrumental applicatives 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). Justification for this viewpoint comes from an examination of the behavior of locatives and instrumentals in non-applicative constructions. Locatives clearly behave like oblique arguments and, like obliques in many other languages, may advance to object. Instrumentals, on the other hand, are not arguments of the main predicate but rather are adjuncts in a separate predicate domain. An analysis involving advancement is thus inappropriate for instrumental applicatives. A multipredicate clause analysis, however, suitably captures the type of structure-sharing between two predicate domains seen in instrumental applicatives.

Finally, Kimenyi (1980) gives considerable detail concerning allowed and disallowed multiple applicatives in Kinyarwanda. However, his analysis provides no explanation for these data. Our analysis explains the differential behaviour of datives and benefactives with respect to locative and instrumental applicatives. In the case of locative applicatives, the dative (3) but not the benefactive (4) will be placed en chômage by the advancement of the locative. In the case of instrumental advancement, the instrument will revalue to 4 in the presence of a dative (3). However, if the clause has a benefactive (4), the instrumental cannot be revalued since there is no argument postion lower than 4 available. Thus, benefactive and instrumental applicatives cannot co-occur. In addition, our grammar allows for the co-occurrence of locative and instrumental

applicatives and, moreover, unlike the analysis of Perlmutter (1984, 1989), makes the correct prediction concerning the final relations of the relevant nominals. Under our account, instrumental revaluation (to 3) will necessarily precede locative advancement, due to inner clause freeze effects; thus, only the locative will exhibit object properties, since the instrumental (a 3) and the initial 2 (if one is present) will be placed en chômage by the advancement of the locative.

We conclude that our grammar provides a relatively simple and a more satisfying account than previous treatments of a complex array of data in Kinyarwanda. In addition, it does so while maintaining the Stratal Uniqueness Law and the 2-AEX (or, alternatively, a more comprehensive law like the Tenure Law). Our analysis is thus consistent with the goal of providing a restricted theory of universal grammar in accord with the range of phenomena attested in human languages.

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