

Ditransitive Applicative Constructions : Synchronic Typology and Diachronic Continuum

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Ditransitive Applicative Constructions: Synchronic Typology and Diachronic Continuum

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This paper aims to provide a survey of recurrent properties of ditransitive applicative constructions (DACs) and their diachronic evolution. A particular effort is made to establish a classification of DACs and to locate the subtypes of DACs on the scale of increasing syntacticization within the framework of Role and Reference Grammar (Van Valin and LaPolla 1997).

Key words: applicative, ditransitive, grammatical relation, object, Bantu, Role and Reference Grammar

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1. Introduction

This paper consists of four interrelated parts. Section 2 is devoted to a synchronic classification of applicative constructions in terms of morphosyntax and information structure. Section 3 summarizes two previous theoretical accounts of DACs, Dryer (1986) and Bresnan and

Moshi (1990), with a particular focus on the cluster of their co-varying morphosyntactic properties in two Bantu languages, Kichaga and Chicheŵa. Section 4 outlines Peterson’s (1996) scenario of the diachronic change of DACs in the Bantu languages. Section 5 sketches an RRG account of the synchronic variation and diachronic evolution of DACs and suggests that adding primary object to the RRG inventory of grammatical relations (Haspelmath 2008) allows us to classify DACs in such a way that also elucidates their diachronic evolution. Section 6 is a conclusion.

2. Recurrent properties of applicative constructions

This section provides an array of morphosyntactic and information structural properties of applicative constructions in a wide range of languages including Bantu, Austronesian, Indo-European, and Caucasian languages and classifies DACs into four subtypes.

2.1. Morphosyntactic properties

First, examples (1)–(3) come from Kinyarwanda (Bantu). The applicative constructions in (1b), (2b), and (3a)–(3c) involve an extra affix attached to a verb stem. (1b) and (2b), respectively, realize an instrumental and a locative adjunct in (1a) and (2a) as a core argument. Likewise, (3a, b), respectively, realize a locative and an instrumental adjunct as a core argument, while (3c) realizes both of them as a core argument (Kimenyi 1988: 367–368, 370, 371). All of (1b), (2b), and (3a)–(3c) involve an increase in syntactic valency.¹⁾

- (1) a. *Umugóre a-ra-andik-a íbarúwa n’úkarámu.*
 woman she-PRES-write-ASP letter with.pen
- b. *Umugóre a-ra-andik-iish-a íbarúwa íkarámu.*
 woman she-PRES-write-INSTR-ASP letter pen
 ‘The woman is writing a letter with a pen.’
- (2) a. *Umwáalímu a-ra-andik-a imibáre ku kíbáaho.*
 teacher he-PRES-write-ASP math on blackboard
- b. *Umwáalímu a-ra-andik-á-ho ikíbáaho imibáre*
 teacher he-PRES-write-ASP-LOC blackboard math
 ‘The teacher is writing math on the blackboard.’
- (3) a. *Umwáalímu y-a-andits-é-ho ikíbáaho imibáre n’úngwa.*
 teacher he-PAST-write-ASP-LOC board math with.chalk
 ‘The teacher wrote math on the board with chalk.’
- b. *Umwáalímu y-a-andik-iish-ije úngwa imibáre ku kíbáaho.*
 teacher he-PAST-write-INSTR-ASP chalk math on board
 ‘The teacher wrote math on the board with chalk.’

- c. *Umwáalímu y-a-andík-iish-ije-ho ikíbaáho íngwa imibáre.*
 teacher he-PAST-write-INSTR-ASP-LOC board chalk math
 ‘The teacher wrote math on the board with chalk.’

Second, examples (4), (5), (6), and (7)–(8) come from Swedish, German, Amharic (Ethio-Semitic), and Chamorro (Austronesian), respectively. (4b), (5b), (6b, c), (7b), and (8b) realizes a prepositional argument in (4a)–(8a) as a core argument:

- (4) a. *Polisen sköt på tjuven.*
 police shot at robber
 ‘The police shot at the robber.’
- b. *Polisen besköt tjuven.*
 police shot robber
 ‘The police shot the robber.’ (Gronemeyer 1995: 25)
- (5) a. *Ted smierte Butter auf die Tischdecke.*
 Ted smeared butter onto the tablecloth
 ‘Ted smeared butter onto the tablecloth.’
- b. *Ted beschmierte die Tischdecke mit Butter.*
 Ted smeared the tablecloth with butter
 ‘Ted smeared the tablecloth with butter.’ (Michaelis and Ruppenhofer 2001)
- (6) a. *Aster bə-mət’rəgiya-w dəjǰ t’ərrəgə-čč.*
 Aster OBL-broom-DEF doorway swept-3F
 ‘Aster swept a doorway with the broom.’
- b. *Aster bə-mət’rəgiya-w dəjǰ t’ərrəgə-čč-ibb-ət.*
 Aster OBL-broom-DEF doorway swept-3F-APPL-3MO
 ‘Aster swept a doorway with the broom.’
- c. *Aster mət’rəgiya-w-in dəjǰ t’ərrəgə-čč-ibb-ət.*
 Aster broom-DEF-ACC doorway swept-3F-APPL-3MO
 ‘Aster swept a doorway with the broom.’ (Amberber 2000: 321, 322)
- (7) a. *Hu-tugi’ i kätta pära i che’lu-hu.*
 1SG-write the letter to the sibling-my
 ‘I wrote the letter to my brother.’
- b. *Hu-tugi’-i i che’lu-hu ni kätta.*
 1SG-write-DAT the sibling-my OBL.CN letter
 ‘I wrote my brother the letter.’ (Gibson 1992: 34)

- (8) a. *Ha-punu' si Miguel i bäbui pära guahu.*
 3SG-kill PN Miguel the pig for me
 'Miguel killed the pig for me.' (Gibson 1992: 34)
- b. *Ha-punu'-i yu' si Miguel nu i bäbui.*
 3SG-kill-BEN 1SG PN Miguel OBL.CN the pig
 'Miguel killed me the pig.' (Gibson 1992: 36)

Since applicativization (as well as causativization) has traditionally been defined as a valency-increasing operation (e.g., Dixon and Aikhenvald 2000), we may state that (5b), (6c), (7b), and (8b) involve a departure from applicativization as illustrated in (1)–(3).

Applicativization in (6b) merits further comments. It allows the applied argument *mät'rəgiya* 'broom' to undergo no morphosyntactic change and to remain oblique-marked despite the presence of the applicative suffix *-ibb*.²⁾ Furthermore, applicativization in (7b) and (8b) begs a question of why the theme/patient argument is unable to retain its core status as in (1b), (2b), and (3a)–(3c). If we follow Gerdts (1993) in assuming a typological parameter that specifies the number of syntactic arguments within a clause, we may be able to argue that Chamorro (unlike Kinyarwanda, English, and Japanese) allows at most TWO syntactic arguments to occur within a clause and that this parameter accounts for why applicativization deprives the theme argument in (7a) of its core argument status.

Third, (9b) (Spanish) promotes the locative adjunct in (9a) to a core argument in exchange for depriving the patient argument of its core argument status. (9b) represents a further departure from the applicative constructions in (5b), (6c), (7b), and (8b), since it not only involves no increase in the number of syntactic arguments, but also has no affix attached to the verb stem that signals applicativization (Mateu 2001: 1).

- (9) a. *Juan cargó heno en el carro.*
 Juan loaded hay on the cart
 'Juan loaded hay on the cart.'
- b. *Juan cargó el carro con/de carro.*
 Juan loaded the cart with/of hay
 'Juan loaded the cart with hay.'

It is important to note in this connection that applicativization as illustrated in (1)–(9) involves realization of an adjunct as an object-like argument, but applicativization in a syntactically ergative languages such as Dyirbal (Pama-Nyungan: Dixon 1972) realizes an adjunct as a subject. (10b) realizes an instrumental adjunct in (10a) as the subject:

- (10) a. *Ba-la-Ø yugu-Ø ba-ŋgu-l yaɾa-ŋgu ba-ŋgu-Ø*
 DEIC-ABS-4 tree-ABS DEIC-ERG-1 man-ERG DEIC-INSTR-4
bari-ŋgu nudi-n.
 axe-INSTR cut-TNS

- b. *Ba-la-Ø* *bari-Ø* *ba-ŋgu-l* *yaŋa-ŋgu* *nudil-ma-n*
 DEIC-ABS-4 axe-ABS DEIC-ERG-1 man-ERG cut-APPL-TNS
ba-gu-Ø *yugu-gu.*
 DEIC-DAT-4 tree-DAT
 ‘The man cut the tree down with an axe.’

The applicative suffix on the verb stem licenses the instrumental adjunct *bari* ‘axe’ to be realized as an absolutive-marked syntactic subject and leaves the patient argument *yugu* ‘tree’ dative-marked. Although (10) differs from (1)–(9) with respect to relational alternation, all of them involve an increase in syntactic valency.

Given (1)–(10) and their morphosyntactic properties reviewed above, I propose to classify the applicative constructions in (1)–(10) into four subtypes. Table 1 is a summary of the properties of the four subtypes of applicative constructions:

Table 1 Four Subtypes of Applicativization

	Extra Verbal Affix	Syntactic Valence	Case Marking	
			Applied Arg.	NON-applied Arg.
Type I	Yes	Increase	No Change	
Type II	Yes	Increase	OBL→ABS	ABS→DAT
Type III	Yes	No Change	OBL→ACC	ACC→OBL
Type IV	No	No Change	OBL→ACC	ACC→OBL

The first subtype is illustrated by the Kinyarwanda applicative constructions in (1b), (2b), and (3a)–(3c). They involve an increase in syntactic valency; their theme/patient (i.e., non-applied) arguments exhibit no apparent change in their coding properties.³⁾ The second subtype, illustrated by the Dyirbal applicative construction in (8b), involves an increase in syntactic valency, but requires the theme/patient argument to undergo a certain morphosyntactic change (indicated, for example, by the dative marking in (8b)). The third subtype, illustrated by the applicative constructions in German, Amharic, and Chamorro, involves no change in syntactic valency and requires the theme/patient argument to undergo syntactic “demotion” in exchange for realizing a non-argument as an object. Finally, the fourth subtype represents further departure from the third one, in that it involves no verbal affix that signals applicativization.⁴⁾

2.2. Information structural properties

As an initial step toward establishing a connection between the morphosyntax of DACs and their information structure, it is useful to take a look at “instrument inversion” in Toqabaqita (Austronesian), illustrated in (11b) and (12b), which applies to any transitive verb with an instrumental adjunct (Lichtenberk 2006: 761–763):

- (11) a. *Nau kwai kwaqi-a botho naqi qana naifa naqi.*
 1SG 1SG.FUT carve-3SG.O pig this INSTR knife this
 ‘I’ll carve this pig with this knife.’
- b. *Naifa naqi kwai kwaqi-a qana botho naqi.*
 knife this 1SG.FUT carve-3SG.O GEN.P pig this
 ‘This knife, I’ll carve this pig with.’
- (12) a. *Kera kwaqe-a doqora-ku qana naifa.*
 3PL.NONFUT slash-3SG.O sibling-1SG INSTR knife
 ‘They slashed my brother with a knife.’
- b. *Naifa naqi na kera kwaqe-a qana doqora-ku*
 knife this FOC 3PL.NONFUT slash-3SG.O GEN.P sibling-1SG
 ‘It was this knife that they slashed my brother with.’

The instrument inversion involves three morphosyntactic changes: realizing an instrumental adjunct as an object, realizing a patient argument as a genitive-marked adjunct, and an occurrence of the applied instrumental argument at the clause-initial slot. Lichtenberk notes that the instrument inversion occurs in topicalization constructions (e.g., (11b)), cleft constructions (e.g., (12b)), and relative clause constructions.

The instrument inversion constructions in Toqabaqita depart from the Kinyarwanda applicative constructions in (1)–(3) in three respects. First, they involve no affix attached to the verb stem that signals a “promotion” of an instrumental adjunct to object status. Second, they involve a syntactic “demotion” of the patient argument, which is indicated overtly by its oblique (i.e. genitive) marking. Third, they have a restriction on the position in which the applied argument occurs; it has to occur clause-initially. The first and second observation suggest that the instrumental inversion constructions in Toqabaqita belong to the fourth subtype of DACs in Table 1. The third observation suggests that the instrument inversion involves some kind of syntacticization and underscores the need to investigate the information structural basis of applicativization and to explain how such a word order restriction arises from its information structural property.

It is important to observe in this connection that the instrument inversion is allowed only when a patient argument is a lexical NP and that it is prohibited when the patient argument is a pronoun, as demonstrated by the ungrammaticality of (13b). The key to understand this restriction is that the instrument inversion demotes a theme/patient argument to an adjunct in exchange for promoting an instrumental adjunct to an object:

- (13) a. *Kera kwaqe nia qana naifa.*
 3PL.NONFUT slash-3SG.O 3SG INSTR knife
 ‘They slashed him with a knife.’

- b. **Naifa naqi na kera kwaqe-a qani nia.*
 knife this FOC 3PL.NONFUT slash-3SG.O GEN.P 3SG
 ‘It was this knife that they slashed him with.’

We may attribute the ungrammaticality of (13b) to the incompatibility of the highly topical element with the syntactically peripheral status (cf. Lichtenberk 2006: 778).

In order to spell out the information structural motivation for applicativization, it is worthwhile summarizing Donohue (2001), a quantitative study that investigates the textual function of applied arguments in the *Tukang Besi* (Austronesian) narrative.

In order to explore the information structural basis of applicativization, Donohue contrasts comitative, benefactive, instrumental, locative, goal, and source applicative constructions with their non-applicative counterparts in terms of referential distance (RD) (i.e., the number of clauses between the present reference of a participant and the preceding reference to the same participant) and topic persistence (TP) (i.e., the number of subsequent mentions of the given argument in the following ten clauses) (Givón 1983) of applied arguments and their oblique counterparts.⁵⁾ The RD is an index of the accessibility/topicality of a participant (a short RD implies high accessibility/topicality of the participant, while a long RD implies low accessibility/topicality), while the TP value measures how persistently a participant continues as a topic; it is related to how a speaker plans ahead which participant will be important and continued as a topic.

Tables 2(a, b), respectively, summarize the RD and TP values of applied arguments and their oblique counterparts in terms of their semantic roles. Tables 2(a, b) indicate that applied arguments involve a smaller RD value and a larger TP value than their oblique counterparts. This means that applicativization in *Tukang Besi* is used to introduce a recently mentioned participant (the average RD value of these applied arguments is 3.7, while that of their oblique counterparts is 11.0) that is going to be talked about for some time in the subsequent discourse (the average TP value of applied arguments is 3.9, while that of their oblique counterparts is 1.5).⁶⁾

Donohue’s quantitative account of the information structural property of applied arguments in *Tukang Besi* is in line with Lichtenberk’s (2006) account of instrument inversion in *Toqabaqita*, according to which an instrumental applied argument shows up when it undergoes relativization, clefting, or topicalization and occurs clause-initially. Given that relativization, clefting, and topicalization share the function of topic promotion (Geluykens 1992, Lambrecht 1994), we may be able to argue that both accounts point to the conclusion that applied arguments are semantically peripheral elements that have been introduced into the immediately preceding discourse and are syntactically promoted to object/subject status so that they may subsequently behave as a discourse topic.⁷⁾

Finally, (14a)–(14c) illustrate applicativization in Tswana (Bantu) whose apparent effect is restricted to information structure alone (Creissels 2004: 15):

- (14) a. *lòráátó ó-ápé-èl-à mó dzáráté-ñ.*
 Lorato SM3.1-cook-APPL-FV PREP 9-yard-LOC
 ‘Lorato does the cooking IN THE YARD.’

Table 2(a) RD and TP Values of Applied Arguments

	Referential Distance		Topic Persistence	
	Mean	SD	Mean	SD
Comitative	1.8	0.8	5.8	2.2
Benefactive	1.2	0.5	5.8	2.4
Instrumental	n.a.	n.a.	n.a.	n.a.
Location	10.5	13.4	1.5	0.7
Goal	1.3	1.0	2.6	2.7
Source	n.a.	n.a.	n.a.	n.a.
Average	3.7		3.9	

Table 2(b) RD and TP Values of Oblique Counterparts

	Referential Distance		Topic Persistence	
	Mean	SD	Mean	SD
Comitative	14.7	8.5	2.7	2.4
Benefactive	n.a.	n.a.	n.a.	n.a.
Instrumental	n.a.	n.a.	n.a.	n.a.
Location	10.5	9.4	1.0	1.2
Goal	11.5	8.7	1.3	1.4
Source	7.2	8.5	0.8	1.0
Average	11.0		1.5	

b. *mò-ń̀nà wá-mí ó-sw-éts-ì kó mò-ráfó-ń̀.*
 1-man 1.GEN-1SG SM3.1-die-APPL.PERF-FV PREP 3-mine-LOC
 ‘My husband died IN THE MINE.’

c. *kì-tsál-éts-w-ì kó kàńé.*
 1SG-give.birth-APPL.PERF-PASS-FV PREP Kanye
 ‘I was born IN KANYE.’

The locative phrases that are focused in (14a)–(14c) are underlined. Tswana has standard applicative constructions as illustrated in (1)–(3) as well, but what is peculiar about (14) is that they involve no valence change despite the presence of the applicative affix; they put the locative phrases in focus and contrast them with some other conceivable candidates.⁸⁾

The above discussion of applicativization in Toqabaqita, Tukang Besi, and Tswana suggests that applicativization is a strategy that introduces what is going to serve as a topic in the subsequent discourse. Another related observation is that applicativization may be syntacticized to varying degrees: it ranges from one with no morphosyntactic manifestation (e.g., Tswana) to one with syntactic promotion of an adjunct to an object with its occurrence restricted to a clause-initial slot (e.g., Toqabaqita). Since clefting, relativization, and applicativization all involve topic promotion, we may argue that their functional similarity provides

a straightforward explanation for why applicativization is used as an alternative to clefting in Tswana (Bantu) (Creissels 2004).

(15) provides a summary of the morphosyntactic and information structural properties of applicative constructions reviewed in this section:

(15) Recurrent Properties of Applicative Constructions

a. Morphology⁹⁾

There is an extra affix attached to the verb stem that signals applicativization.

b. Syntax

1. There is an increase in syntactic valence (i.e., the number of syntactic arguments within a clause).

2. There is a syntactic promotion of adjuncts to object/subject; they are promoted to object in syntactically accusative languages, while they are promoted to subject in syntactically ergative languages (e.g., Dyirbal).

c. Information Structure

Applicativization is a device that realizes as a core argument a semantically peripheral participant introduced into the immediately preceding discourse so that it may subsequently behave as a discourse-level topic.

3. Previous theoretical accounts of ditransitive applicative constructions

This section focuses on ditransitive applicative constructions in the Bantu languages, which have received theoretical treatments in Relational Grammar (RG) (e.g., Gary and Keenan 1977, Kimenyi 1980, 1988, Dryer 1983, 1986, Gerdts and Whaley 1991, 1992), Lexical-Functional Grammar (LFG) (e.g., Bresnan and Moshi 1990, Alsina and Mchombo 1993, Alsina 1996, Matambirofa 2010), and Generative Grammar (e.g., Baker 1988a, 1988b, Marantz 1993, Woolford 1993, M. Nakamura 1997, Pykkänen 2008).¹⁰⁾

The above-mentioned works address the question of whether or not applied arguments behave like theme/patient arguments morphosyntactically in terms of a set of grammatical constructions including object marking (pronominalization), passivization, reflexivization, reciprocalization, and unspecified object deletion.¹¹⁾

3.1. Three subtypes of DACs: Dryer (1986) and Bresnan and Moshi (1990)

Dryer (1986) proposes to divide ditransitive constructions into two types, direct object and primary object constructions, which are defined as in (16a,b):

(16) a. Direct Object Constructions

Transitive: Agent

Ditransitive: Agent Recipient

Patient
Theme

Direct Object (DO)

b. Primary Object Constructions

Transitive: Agent

Ditransitive: Agent

Patient
Recipient

← Theme

Primary Object (PO)

Direct objects (DO) refer to a grouping of theme/patient arguments of monotransitive constructions and theme arguments of ditransitive constructions, while primary objects (PO) refer to a grouping of theme/patient arguments of monotransitive constructions and recipient and applied arguments of ditransitive constructions.

Dryer (1986) points out that direct object and primary object constructions as defined in (16) may coexist in the same language and describes such a situation as split objectivity. Dryer intends to add new grammatical relations, primary and secondary object, to the traditional inventory, i.e., subject, direct object, and indirect object, within the framework of RG, but these terms have since been used with no theoretical implication.

Bresnan and Moshi (1990) propose to classify languages with DACs into “symmetrical object languages” (in which applied and theme/patient arguments behave similarly with respect to morphosyntactic constructions) and “asymmetrical object languages” (in which applied arguments behave differently than theme/patient arguments):

- (17) Two Types of DACs
- a. Symmetrical Object Language (e.g., Kichaga)
 - b. Asymmetrical Object Language (e.g., Chicheŵa)

Bresnan and Moshi couch their account of applicative constructions in terms of Lexical Mapping Theory (LMT), summarized in (18), and attribute this contrast to an “Asymmetrical Object Parameter” (AOP) in (19): asymmetrical object languages are those languages that have the AOP, while symmetrical object languages are those languages that don’t have the AOP:

- (18) Lexical Mapping Theory
- a. Thematic Hierarchy:¹²⁾
 Agent > Benefactive > Goal(Recipient)/Experiencer > Instrumental >
 Theme/Patient > Locative
 - b. Classification of Syntactic Functions (Bresnan and Kanerva 1989)
 SUBJ: [-r], [-o]
 OBJ: [-r], [+o]
 OBJ \emptyset : [+r], [+o] * $[\pm r]$ = ‘thematically restricted/unrestricted’
 OBL \emptyset : [+r], [-o] $[\pm o]$ = ‘+objective/-objective’
 - c. Intrinsic Role Classifications
 Agent: [-o]
 Benefactive/Recipient: [-r]
 Locative: [-o]
 Applied and Theme/Patient: [-r] or [+o]

d. Morpholexical Operations

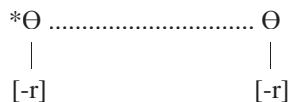
- Passivization: suppressing the highest theta role of a verb
 Applicativization: adding a new theta role to the theta structure of a verb
 Unspecified Object Deletion (Theme Suppression):
 suppressing a theme/patient role of a transitive verb

e. Default Syntactic Specifications

- The highest thematic role in the lexical form = [-r]
 Remaining thematic roles = [+r]

f. Well-formedness Conditions

1. The Subject Condition (SC):
 Every (verbal) lexical form must have a subject.
2. Function-Argument Biuniqueness (FAB):
 Each expressed lexical role must be associated with a unique function, and conversely.

(19) Asymmetrical Object Parameter (AOP)¹³⁾

(18a) states that the higher a thematic role is on the hierarchy, the more likely it is to be realized as a subject. (18b) is a decomposition of grammatical relations in terms of two features, restrictedness and objective. This feature decomposition system, in turn, is used to define some thematic roles in an underspecified manner as in (18c).¹⁴⁾ Specifically, agents are either realized as subjects (SUBJ) in active clauses or adjuncts in passive clauses (OBL Θ). The dual realization of agents is captured by characterizing it as '[-o]'. Likewise, benefactives and recipients are analyzed as having '[-r]'. This means that benefactives and recipients are realized either as subject or direct object. Finally, applied arguments and theme/patient arguments may bear the intrinsic feature '[-r]' or '[+o]'.¹⁵⁾

(20) and (21) illustrate how the LMT summarized in (18) and the AOP in (19) interact to yield the contrast between asymmetrical object and symmetrical object languages:

(20) Asymmetrical Object Language (e.g., Chichew̃a)

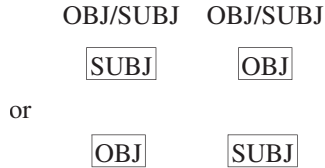
‘cook for’	<AG	<small>BENAPPL</small>	PT/TH>	
AOP:	[-o]	[-r]	[+o]	
Passive:	∅	←		suppressing the highest role
Default:	[+r]			

.....

OBJ/SUBJ OBJ Θ

SUBJ OBJ Θ

- (21) Symmetrical Object Language (e.g., Kichaga)
 ‘cook for’ <AG BEN_{APPL} PT/TH>
 AOP: [-o] [-r] [-r]
 Passive: Ø
 Default:



In (20), the AOP dictates that there may not be more than one non-actor argument that is intrinsically classified as ‘[-r]’. (18d) leads the lower role (theme/patient) to be given the feature ‘[+r]’. This means that the patient/theme argument is selected as the restricted object. The applied benefactive argument may be realized as a subject or object, but the subject condition in (18f1) requires that the benefactive argument becomes the subject.

In contrast, the lack of the AOP in Kichaga allows multiple non-actor core arguments to be intrinsically classified as ‘[-r]’. The FAB dictates that there may not be more than one unrestricted object/subject within a clause. This means that the applied benefactive argument or the patient/theme argument may be realized as the subject. This is the reason there are two ways to assign grammatical relations, as shown in (21).

Bresnan and Moshi’s (1990) proposal has exerted a deep influence on the literature on applicative constructions despite a counterargument by Woolford (1993) that some Bantu languages (e.g., SiSwati, Runyambo) don’t fit into the dichotomy (see Alsina 1996 for counter-criticism). Bresnan and Moshi’s terms, “symmetrical object (languages)” and “asymmetrical object (languages)”, have been used to distinguish a situation where multiple non-actor core arguments behave the same with respect to morphosyntactic constructions from the one where only one non-actor argument behaves as the object.¹⁶⁾ In what follows, I will keep using these two terms as descriptive (rather than theoretical) terms without presupposing the framework of LMT.

3.2. The Bresnan and Moshi criteria for object status

This subsection is devoted to listing a set of grammatical properties used by Bresnan and Moshi (1990) as criteria for identifying (thematically unrestricted) object status. These grammatical properties are divided into three groups, behavioral properties, coding properties, and their interactions, as in (22a)–(22c):

- (22) a. Behavioral Properties:
1. Passivization
 2. Reciprocalization
 3. Unspecified Object Deletion [UOD]

- b. Coding Properties:¹⁷⁾
 - 1. Object Marking
 - 2. Word Order
- c. Interactions between Behavioral and Coding Properties:¹⁸⁾
 - 1. Passivization and Object Marking
 - 2. Indefinite Object Deletion and Object Marking
 - 3. Indefinite Object Deletion and Passivization

Tables 3(a, b) provide a summary of the contrasts between Kichaga and Chicheŵa with respect to the coding and behavioral properties of their applied arguments.

Table 3(a) The Coding Properties of Applied Arguments

		Object Marker	Word Order
Kichaga	APPL	Patient and Applied	V-P-Applied and V-Applied-P
Chicheŵa	APPL BEN	Applied	V-P-Applied
	APPL INSTR/LOC	Patient and Applied	V-P-Applied and V-Applied-P

Table 3(b) The Behavioral Properties of Applied Arguments¹⁹⁾

		Passivization	Reciprocalization	UOD
Kichaga	APPL	Patient and Applied	Possible	Possible
Chicheŵa	APPL BEN	Applied	Impossible	Impossible
	APPL INSTR	Applied	Possible	Possible
	APPL LOC	Patient and Applied	Possible	Possible

Bresnan and Moshi argue that the word order variation in Table 3(a) is attributable to (19). Both applied and patient arguments are unrestricted in Kichaga, which lacks the AOP. This accounts for why Kichaga allows word order variation (either ‘V-P-Applied’ or ‘V-Applied-P’ is possible) under the assumption that thematically unrestricted objects may occur adjacent to the verb.

In contrast, Chicheŵa doesn’t allow word order variation when a benefactive applied argument is involved. Since a benefactive and recipient argument are intrinsically classified as ‘[-r]’ according to (18c), the patient argument has no choice but to receive the feature ‘[+r]’ because of the AOP. This accounts for why the benefactive applied argument alone may occur adjacent to the verb. The situation is different when an instrumental or locative applied argument is involved. (18c) allows either the applied instrumental/locative or patient argument to bear the feature ‘[-r]’; either the applied or patient argument may become an unrestricted object. This accounts for why either of them may occur adjacent to the verb.

A similar account holds for the contrast between Kichaga and Chicheŵa with respect to object marking, reciprocalization, and unspecified object deletion. Either applied instrumental/locative or patient argument in Kichaga and Chicheŵa may be realized as direct object, since either of them may bear ‘[-r]’. Under the assumption that unrestricted objects are targets of

object marking, passivization, reciprocalization, and unspecified object deletion, Bresnan and Moshi correctly derive the above contrast.

A complication arises with respect to the treatment of applied instrumental arguments in Chicheŵa. Under the assumption that either an applied or theme/patient argument may bear ‘[-r]’ according to (18c), we may predict that Chicheŵa allows either an instrumental applied or patient argument to passivize. However, this prediction is not borne out, since only the applied instrumental argument may undergo passivization in Chicheŵa, as demonstrated by the ungrammaticality of (23c):²⁰⁾

- (23) a. *Anyăni a-ku-phwány-ír-a mwála dēngu.*
 2-baboons 2S-PRES-break-APPL-FV 3-stone 5-basket
 ‘The baboons are breaking the basket with a stone.’
- b. *Mwála u-ku-phwány-ír-idw-á dēngu (ndí anyăni).*
 3-stone 3S-PRES-break-APPL-PAST-FV 5-basket by 2-baboons
 ‘The stone is being used (by the baboons) to break the basket.’
- c. **Dēngu li-ku-phwány-ír-idw-á mwála (ndí anyăni).*
 5-basket 5S-PRES-break-APPL-PASS-FV 3-stone by 2-baboons
 ‘The basket is being broken with a stone (by the baboons).’

In order to accommodate this typological wrinkle, Bresnan and Moshi appeal to an additional default rule in (24) to the effect that when there is a thematically higher-ranking argument, the patient/theme argument bears the ‘[+o]’ feature:

- (24) Language-Particular Special Default Rule
 <... Θ pt/th>
 [+o] |
 [+o]

Since the thematic hierarchy in (18a) ranks instrumental higher than theme/patient, the theme/patient argument has no choice but to receive ‘[+r]’ when it occurs with the instrumental applied argument. This is the way Bresnan and Moshi (1990) account for why the theme/patient argument fails to undergo passivization in instrumental applicative constructions in Chicheŵa.

The existence of the default rule in (24) has no influence on instrumental applicative constructions in the active voice. The ‘[-r]’ feature may be assigned to either the applied or theme/patient argument. This is why either of them may be realized as object markers.

A different situation obtains when instrumental applicative constructions are in the passive voice. (18d) requires the agent to be suppressed and (18c) allows either the applied or theme/patient argument to bear ‘[-r]’. (25a) is a situation in which the former and the latter, respectively, receive ‘[-r]’ and ‘[+o]’, while (25b) is a situation in which the former and the latter, respectively, receive ‘[+o]’ and ‘[-r]’:

(25) *phwany-ir* ‘break with’

a.	<AG	INSTR _{APPL}	PT/TH>
IC:	[-o]	[-r]	[+o]
Passive:	∅		
Default:			[+r]
<div style="display: flex; justify-content: space-around; width: 100%;"> SUBJ OBJ∅ </div>			
b.	<AG	INSTR _{APPL}	PT/TH>
IC:	[-o]	[+o]	[-r]
Passive:	∅		
Default:			[+o]
<div style="display: flex; justify-content: space-around; width: 100%;"> OBJ∅ OBJ </div>			

In (25a), the applied instrumental argument functions as the subject in compliance with the Subject Condition. The patient argument bears a combination of ‘[+o]’ and ‘[+r]’ (due to (18e)) and is realized as the restricted object. In contrast, in (25b), the patient argument bears ‘[+o]’ in addition to ‘[-r]’, since the default rule in (24) requires the patient argument to receive ‘[+o]’ when the applied instrumental argument bears ‘[+o]’. It is important to note that (25b) is excluded, since it violates the Subject Condition. This is how Bresnan and Moshi account for why only the applied instrumental argument may undergo passivization in Chicheŵa.

There is no need to devote much space to Kichaga applicative constructions. Kichaga lacks the AOP.²¹⁾ This licenses either an applied benefactive/instrumental/locative argument or a theme/patient argument to occur adjacent to a verb and to be a target of object marking, passivization, reciprocalization, and unspecified object deletion.

Chicheŵa and Kichaga are in contrast with respect to unspecified object deletion and reciprocalization in benefactive applicative constructions. This is attributable to (18c), according to which benefactives are intrinsically classified as ‘[-r]’, and (19), which allows only one non-actor core argument to bear ‘[-r]’. Given that the benefactive applied argument bears ‘[-r]’, the patient/theme argument may not bear ‘[-r]’. The theme/patient argument cannot be subject to unspecified object deletion or reciprocalization, under the assumption that these grammatical constructions target unrestricted objects alone.

Finally, we are ready to address how to accommodate the contrast between Chicheŵa and Kichaga with respect to (22c1)–(22c3). Bresnan and Moshi note that Kichaga allows the co-occurrence of passivization and object marking, passivization and unspecified object deletion, passivization and reciprocalization, unspecified object deletion and object marking, unspecified object deletion and reciprocalization, and reciprocalization and object marking. All of these grammatical properties target thematically unrestricted objects. It is not difficult to see that Chicheŵa doesn’t allow more than one of them to occur simultaneously, since Chicheŵa allows at most one unrestricted object because of the AOP. In contrast, Kichaga allows two of them to co-occur, since it allows more than one unrestricted object. Each of

them targets one of them.

To summarize, the AOP accounts for why two of the features: object marking, passivization, reciprocalization, and unspecified object deletion may co-occur in Kichaga, while they may not in Chicheŵa. Together with the intrinsic classification of benefactive as ‘[-r]’ and the thematic hierarchy in (18a), it also accounts for the asymmetry between benefactive and instrumental/locative applicative constructions in Chicheŵa (except for the fact that instrumental applied arguments behave like benefactive applied arguments with respect to passivization).

3.3. Applied arguments that don’t behave like objects

The previous literature on applicative constructions in the Bantu languages (e.g., Kimenyi 1980, 1988, Baker 1988a, 1988b, Alsina and Mchombo 1990, Bresnan and Moshi 1990, Gerds and Whaley 1991, 1992, Marantz 1993, Woolford 1993, Alsina 1996, and M. Nakamura 1997) concentrate on benefactive, instrumental, and/or locative applicative constructions. This situation limits the previous accounts to accommodate the whole picture of DACs, however, since other types of DACs in and outside Bantu may have different grammatical properties that don’t fit into the Bresnan and Moshi distinction between symmetrical and asymmetrical object.

As a first illustration, let us consider (26), taken from Chicheŵa, a representative example of an asymmetrical object language (Mchombo 2004: 88):

- (26) *Kalulú a-ku-phík-íl-a njala maûngu.*
 1a-hare 1SM-PRES-COOK-APPL-FV 9-hunger 6-pumpkins
 ‘The hare is cooking the pumpkins because of hunger.’

What is noteworthy about this motive applicative construction is that except for the word order, the applied argument shows no property of object. For example, it cannot become a target of object marking, as demonstrated by the contrast between (27c) and (27d) (Mchombo 2004: 88):²²⁾

- (27) a. *Ndí-ma-dy-él-á njala maûngu.*
 1SG-HAB-eat-APPL-FV 9-hunger 6-pumpkins
 ‘I eat pumpkins because of hunger.’
- b. *Maûngu ndí-ma-dy-él-á njala.*
 6-pumpkins 1SG-HAB-eat-APPL-FV 9-hunger
 ‘Pumpkins I eat because of hunger.’
- c. *Maûngu ndí-ma-wa-dy-él-á njala.*
 6-pumpkins 1SG-HAB-6.OM-eat-APPL-FV 9-hunger
 ‘Pumpkins I eat because of hunger.’

Table 4(a) Passivizability of Base and Applied Objects in Chicheŵa

	Benefactive	Instrumental	Locative	Motive
Base ○	×	×	○	○
Applied ○	○	○	○	×

Table 4(b) Object Marking of Base and Applied Objects in Chicheŵa

	Benefactive	Instrumental	Locative	Motive
Base ○	×	○	○	○
Applied ○	○	○	○	×

- d. **Njala* *ndí-ma-i-dy-él-á* *maŋgu*.
 9-hunger 1SG-HAB-9.OM-eat-APPL-FV pumpkins
 ‘Hunger I eat pumpkins because of.’

The contrast between (27c) and (27d) indicates that the applied motive argument cannot control object marking, while the patient argument can.

Given Tables 3(a, b) and (27), we may arrange the applied arguments in Chicheŵa on the following spectrum with respect to passivizability and object marking:²³⁾

The motive applicative constructions stand in contrast to the locative and benefactive applicative constructions, since object marking and passivization target theme/patient arguments, both theme/patient and applied arguments, and applied arguments in the motive, locative, and benefactive applicative constructions, respectively.

The second illustration of applied arguments not behaving like objects comes from Abaza (Northwest Caucasian). What is notable about applicative constructions in Abaza is that their applied arguments fail to share or inherit morphosyntactic properties of non-applied (patient/theme) arguments.

For example, Abaza has an ergative cross-referencing system in which an absolutive marker references theme/patient arguments, while an ergative marker references transitive subjects, but there is no cross-referencing marker that references any applied argument. This suggests that the Abaza cross-referencing system is not affected by applicativization. This is illustrated by the contrast between (28a) and (28b) (O’Herin 2001: 482):

- (28) a. **y-p-s-q’ə-t’**
 ABS.3SG.N-PV-ERG.1SG-break-DYN
 ‘I broke it.’
- b. **yə-l-čwə-p-s-q’ə-t’**
 ABS.3SG.N-P3SG.F-ADV-PV-ERG.1SG-break-DYN
 ‘I broke it to her disadvantage.’

(28b) realizes an adversative adjunct ‘to her disadvantage’ in (28a) as a core argument by

appeal to applicativization and involves an increase in syntactic valency. (28a) is a transitive clause whose two arguments are referenced by the respective cross-referencing marker. In contrast, the theme/patient argument is referenced by the absolutive agreement marker in (28b), while the applied argument is not. The contrast between (28a) and (28b) suggests that the applied argument is outside the Abaza cross-referencing system.

Furthermore, Abaza allows applicativization to be applied to intransitive as well as transitive verbs, as illustrated by (29a, b) (O’Herin 2001: 483):

- (29) a. **d-rə-cə-mfərq’wə-y-t’**
 ABS.3SG.H-P.3PL-COM-joke-PRES-DYN
 ‘S/he is joking with us.’
- b. arqan **s-s-la-qal-wan.**
 rope ABS.1SG-P.3SG.N-INSTR-climb-IMPERF
 ‘I climbed with the rope.’

(29a,b), respectively, involve applicativization of a comitative and an instrumental adjunct. It is important to see that the subjects remain referenced by the absolutive markers and that neither of the two promoted adjuncts is referenced by any absolutive cross-referencing marker. Taken together, (28) and (29) show that whether applicativization applies to transitive or intransitive verbs, it doesn’t affect their grammatical relation assignment.

Reflexivization in Abaza corroborates the above conclusion that applied arguments don’t share or take over the syntactic functions of base objects. In transitive constructions with no applicativization, a subject may serve as an antecedent of a reflexive pronoun in object position. However, this is not the case in transitive constructions with applicativization. The above discussion suggests that applicativization doesn’t necessarily allow applied arguments to take over the syntactic functions of theme/patient arguments (O’Herin 2001: 482):

- (30) **čə-y-č’wə-s-ga-t’.**
 REFL-APPL.3SG.MASC-ADV-ERG.1SG-bring-DYN
 ‘I bring myself to his disadvantage.’ (*I bring him(self)_i to his_i disadvantage.)

(30) allows the subject to control the patient argument anaphor, but it allows no applied argument to be an antecedent of the patient argument anaphor or a reflexive anaphor.

(30) is in contrast to a ditransitive construction in English, which allows the recipient argument to be an antecedent of the theme argument anaphor (Barss and Lasnik 1986):

- (31) a. I showed John_i himself_i (in the mirror)
 b. *I showed himself John (in the mirror)

The contrast between (30) and (31) suggests that the applied arguments in Abaza are inert syntactically.

The above Chichew̃a and Abaza data suffice to show that applicativization doesn’t nec-

essarily allow applied arguments to share or inherit some or all morphosyntactic properties of theme/patient arguments and that even in languages with applicativization that seem to privilege applied arguments morphosyntactically (e.g., Chicheŵa), there are some applicative constructions whose morphosyntactic description requires us to refer to theme/patient arguments (rather than applied arguments).

4. Dynamicizing the synchronic typology of ditransitive applicative constructions

This section introduces an attempt initiated by Peterson (1996) to dynamicize the Dryer-Bresnan-Moshi typology of ditransitive applicative constructions and sketches an alternative account of them within the framework of Role and Reference Grammar (RRG) (Van Valin and LaPolla 1997).

Peterson (1996) proposes a preliminary diachronic account of DACs with a particular focus on Western Bantu languages such as Basaa (Hyman and Duranti 1982). What is notable about the Basaa applicative construction is that it allows only a theme/patient argument to serve as the subject of the corresponding passive construction, as illustrated by the contrast between (33b) and (33c) (Peterson 1996: 293):

- (33) a. mɛ nlémbél máng!ɛ bijék.
 I cooked.APPL child food
 ‘I cooked the child food.’
- b. bijék bí nlémbná mángé.
 food it was.cooked.APPL child
 ‘Food was cooked (for) the child.’
- c. *mángé bí nlémbná bijék.
 child it was.cooked.APPL child
 ‘The child was cooked food.’

Peterson takes the above contrast as an indication that Basaa behaves as a direct object language with respect to passivization and argues that Basaa is in contrast with Eastern Bantu languages, in which if any non-actor core argument is exclusively associated with object status, it is the benefactive/recipient applied argument. Another observation made by Peterson is that some Bantu languages (e.g., Kikuyu, Kirimi) allow theme/patient and applied arguments to behave the same only when their semantic roles are recoverable on the basis of their animacy.²⁴⁾ He takes this observation as suggesting that some Bantu languages have been undergoing a drift from symmetrical object to asymmetrical object languages and that Bantu languages such as Kikuyu are located somewhere in between.

Under the assumption that symmetrical object languages arise from a development in which benefactive/recipient applied arguments have gained greater access to object status, but theme/patient arguments are not yet pushed from object status, Peterson proposes to arrange

Table 5 Diachronic Change in the Bantu Languages (Peterson 1996)

	Direct Object Language	Symmetrical Object Language	Primary Object Language
Languages	Basaa	Kichaga	Kikuyu	Chicheŵa
Patient ○	○	○	○/×	×
Applied ○	×	○	○	○

the Bantu languages (or, more precisely, their morphosyntactic constructions) on a continuum from direct object languages through the mediation of symmetrical object languages to primary object (asymmetrical object) languages, as in Table 5.²⁵⁾

The above scheme remains suggestive but lacks an explanation for the unidirectionality. It does serve, however, as a working hypothesis pending discovery of further information about the differential behavior of multiple non-actor core arguments of DACs.

5. A Role and Reference Grammar account

This section provides a summary of the RRG theory of grammatical relations detailed in Van Valin and LaPolla (1997: Ch.6) and its revision made by Haspelmath (2008), and sketches an RRG account of the synchronic variation and diachronic continuum of DACs.

5.1. The RRG theory of grammatical relations

Dryer (1986) and Bresnan and Moshi (1990) lay a foundation for a synchronic typology of DACs, while Peterson (1996) makes an initial attempt to recast the synchronic variation of DACs as a diachronic continuum from direct object to primary object (asymmetrical object) languages. What is missing in Peterson's (1996) account is an explanation for why direct object languages may develop into primary object languages through symmetrical object languages, but not the other way around. In what follows, I will argue that an extension of the RRG theory of grammatical relations along the lines suggested by Haspelmath (2008) (cf. Roberts 1995, Guerrero and Van Valin 2004, Van Valin 2007) allows us to explain the unidirectionality.

RRG proposes a radically different approach to grammatical relations than the majority of grammatical theories; it does not view grammatical relations as universally available primitives as in RG (Perlmutter 1983, Perlmutter and Rosen 1984) and the early LFG (Bresnan 1982) nor does it tie grammatical relations to particular structural positions as in Generative Grammar (Chomsky 1981, 1986, 1995).

(34) is the core part of the RRG theory of grammatical relations presented in Van Valin and LaPolla (1997).²⁶⁾

- (34) a. Grammatical relations are not universally available primitives; they arise from a restricted neutralization of semantic roles for morphosyntactic purposes (e.g., control, raising, relativization, agreement).
 b. The subject (or, to use the RRG term, the privileged syntactic argument (PSA))

is the only grammatical relation posited in RRG; there is no grammatical relation comparable to direct or indirect object in RG.

- c. The subject doesn't apply across the whole language; it is construction-specific in nature; each morphosyntactic construction has its own pivot or controller (a pivot refers to a target of a syntactic operation, while a controller supplies an interpretation for a pivot).

(34a) goes a long way toward accommodating a number of languages (e.g., Acehnese) whose morphosyntactic constructions don't require us to refer to any grammatical relation (Durie 1985; see also Bhat 1991 for related discussion).²⁷⁾

Van Valin and LaPolla (1997) illustrate what they term restricted neutralization, which yields grammatical relations, with reference to relative clause constructions and control constructions in English (Van Valin and LaPolla 1997: 252–253).

(35) Relative Clause Constructions in English

- Mary talked to the man. a. who [AGENT] bought the house down the street.
 b. who [PATIENT] the dog bit.
 c. to whom [RECIPIENT] Bill sold the house.
 Mary looked at the box. d. in which [LOCATION] the jewelry was kept.
 e. out of which [SOURCE] the jewelry had been taken.

(35a)–(35e) show that the head of relative clauses in English may bear virtually any semantic role; the head can be agent, patient, recipient, location, source, and so on. This means that English relativization involves a neutralization of semantic roles, but that it is not a restricted neutralization (since it may apply to more than one NP within a clause). This is an example of unrestricted neutralization and provides no evidence regarding the existence of grammatical relations in English.

In contrast, (36a)–(36e) show that not just any semantic role may be omitted when it is coreferent with the matrix subject; these control constructions have a restriction on which NPs may be omitted:

(36) Control Constructions in English

- a. Susan_i wants ______i to run in the park.
 b. Susan_i wants ______i to eat a hamburger.
 c. Susan_i wants ______i to be taller.
 d. *Susan_i does not want the police to arrest ______i.
 e. Susan_i wants ______i to be arrested by the police.

(36a)–(36e) suggest that the missing NPs in the dependent clauses in (36a, b) are actor arguments, while the missing NPs in (36c, e) are undergoer arguments. It is important to understand that the missing NPs in (36d, e) bear the same semantic role (undergoer) of the same verb. This means that the restriction cannot be stated in semantic terms. Another important point to note here is that the omitted NP is either the actor or undergoer argument;

only one of them may be omitted when both are available. This demonstrates that control constructions as in (36) involve a restricted neutralization.

(37) is a summary of what restricted neutralization means in RRG:

- (37) Restricted Neutralization²⁸⁾
- a. Neutralization: it is impossible to describe a specific phenomenon by appeal to any semantic role.
 - b. Restrictedness: when more than one argument is available, only one of them is eligible to function as a controller of a morphological encoding or a pivot of a syntactic operation.

A natural question that arises at this juncture is whether or not the subject (or the PSA, to use the RRG term) is the only grammatical relation available in RRG. In fact, RRG appeals to undergoer status where RG and the early LFG would appeal to direct object. As an illustration, let us consider the secondary predication in English. Examples are given in (38a)–(38e) (Hudson 1992: 263).

- (38) a. I ate the meat raw.
 b. John married Mary pregnant.
 c. John gave Mary the meat raw.
 d.*Mary gave John the book drunk.
 e.*The nurse gave John the medicine sick.

(38a)–(38e) demonstrate that theme arguments of ditransitive verbs and theme/patient arguments of transitive verbs may control a depictive predicate, while recipient arguments of ditransitive verbs may not. Since the RRG notion of undergoer covers theme/patient arguments of transitive and ditransitive verbs to the exclusion of recipient arguments of ditransitive verbs, we may see that the RRG notion of undergoer allows us to dispense with the notion of direct object:

(39) Macrorole Assignment in Transitive/Ditransitive Constructions

	Actor	Non-Macrorole	Undergoer (DO)
Transitive	Agent		Patient
Ditransitive	Agent	Recipient	Theme

This leaves us with a question of how to accommodate the notion of primary object with RRG, which leaves no room for grammatical relations other than the subject.

In order to assess the nature of primary object, it is useful to consider ditransitive constructions and their passive counterparts (Hudson 1992: 257):

- (40) a. Anne gave the children those sweets.
 b. The children were given those sweets by Anne.
 c. %Those sweets were given the children by Anne.

The fact that the recipient argument (and not the theme argument) in (40a) can become the subject of the corresponding passive construction in (40b) suggests that English groups non-macroroles of ditransitive verbs and undergoers in transitive verbs for the purpose of passivization.²⁹⁾ The important point is that it is impossible to semantically identify what undergoes passivization in English and that when both the theme and recipient argument are available, only the latter may undergo passivization.³⁰⁾ In light of (37), I follow Haspelmath (2008) (see Roberts 1995: 188–190 for a similar suggestion) in viewing the above neutralization as evidence for the notion of primary object as another grammatical relation apart from the subject in RRG.

5.2. An RRG account of ditransitive applicative constructions

The above account of the English passivization suggests that the change from direct object languages to primary object (asymmetrical object) languages through the mediation of symmetrical object languages is a process of syntacticization, since the former operates on a semantic basis (undergoer), while the latter involves a restricted neutralization and operates on a syntactic basis (primary object). Since syntacticization is a unidirectional process, we are able to explain why direct object languages may develop into primary object languages, but not the other way around.

The foregoing consideration leaves us with the question of how symmetrical object languages arise from direct object languages. It is important to recall from Section 5.1 that there are two types of neutralization of semantic roles in RRG: unrestricted and restricted neutralization. Both of them neutralize semantic role distinctions (e.g., actor vs. undergoer, undergoer vs. non-macrorole), but they differ with respect to whether morphosyntactic constructions target a particular argument or not; English relative clause constructions, as in (35), allow any one of multiple (prepositional) arguments within a clause to serve as its head, while control constructions, as in (36), allow only one argument within the embedded clause to be co-referent with the matrix subject. The former constructions involve unrestricted neutralization, while the latter involve restricted neutralization.

Against this backdrop, I propose that symmetrical object languages involve an unrestricted neutralization, since they allow any non-actor argument to behave as an object. Some other external factors may place restrictions on the choice of non-actor core arguments that may behave as an object, but the idea of unrestricted neutralization (as opposed to restricted neutralization) accounts for the similar morphosyntactic behavior of multiple non-actor core arguments in DACs and serves as an alternative to the AOP.

It is important to note in this connection that symmetrical object languages serve as a precondition for further syntacticization, since they embody neutralization of semantic role distinctions, one of the two conditions for positing grammatical relations in (37a, b). Since applied arguments, especially benefactive/recipient applied arguments, are more topical than theme/patient arguments (Section 2.2), we may assume that the unidirectional change from

symmetrical object to primary object languages is caused by an increasingly prominent role played by topicality in the information packaging of clausal information (cf. Givón 1979). In other words, syntacticization from symmetrical object to primary object (asymmetrical object) languages is motivated by the increasing influence of topicality on the linking between semantics and syntax. The consequence of this is that clausal elements with a relatively high degree of topicality (including actors and applied arguments) are more and more likely to play a prominent role in linking and to occupy a syntactically prominent position (i.e., primary object) in clausal syntax.

Table 6 is a summary of the above consideration:

Table 6 Diachronic Continuum in the Bantu Languages

	Direct Object Languages	Symmetrical Object Languages	Primary Object Languages
Languages	Basaa	Kichaga	Kikuyu	Chicheŵa
Neutralization	No	Unrestricted		Restricted
Patient/Theme	○	○	○/×	×
Applied	×	○	○	○

Finally, a word is in order about what is termed “alternating asymmetrical languages” by Alsina (1996: 679) (cf. Harford 1991). These languages look like symmetrical object languages at first sight, since they allow either an applied argument or a patient argument to receive object marking or to undergo passivization. Examples (41a)–(41d) come from Kitharaka (Bantu) (Harford 1991: 98–99).

- (41) a. Èékúró í-bá-rá-mú-túm-ír-è ngùò.
 2.women FOC-2.SM-PAST-1.OM-sew-PAST.APPL-FV 10.clothes
 ‘The women sewed clothes for her (=bride).’
- b. Èékúró í-bá-í-túm-ír-è mw-íkì.
 2.women FOC-2.SM-10.OM-sew-PAST.APPL-FV 1.bride
 ‘The women sewed them (=clothes) for the bride.’
- c. Mw-íkí ná-á-rá-túm-ír-w-é ngùò né-ékúró.
 1.bride FOC-1.SM-PAST-sew-PAST.APPL-PASS-FV 10.clothes by-2.women
 ‘The bride had clothes sewn for her by the women.’
- d. Ngúó ní-í-rá-túm-ír-w-é mw-íkì né-ékúró.
 10.clothes FOC-10.SM-PAST-sew-PAST.APPL-PASS-FV 1.bride by-2.women
 ‘The clothes were sewn for the bride by the women.’

(41a, b) show that either the benefactive applied argument or a theme/patient argument may undergo passivization, while (41c, d) show that either of them is referenced by an object

marker on the verb stem.

However, the parallelism between Kitharaka and symmetrical object languages ends when we examine whether passivization of one non-actor argument makes it impossible for the other to control an object marker on the verb stem or not. (42a) passivizes the benefactive applied argument and lets the patient argument control the object marker *i* ‘10.SM’, while (42b) passivizes the patient argument and lets the benefactive applied argument control the object marker *mu* ‘1.OM’ (Harford 1991: 100).

- (42) a. *Mw-iki na-a-ra-i-tum-iir-w-e ne-ekuru.
 1.bride FOC-1.SM-PAST-10.OM-sew-PAST/APPL-PASS-FV by-2.women
 ‘The bride had clothes sewn for her by the women’
- b. *Nguo ni-i-ra-mu-tum-iir-w-e ne-ekuru.
 10.clothes FOC-10.SM-PAST-1.OM-sew-PAST/APPL-PASS-FV by-2.women
 ‘The clothes were sewn for the bride by the women’

The ungrammaticality of (42a, b) demonstrates that passivization of one non-actor core argument prevents the other from controlling object marking.

(42a, b) stand in contrast with the Kichaga counterparts in (43a, b), both of which are grammatical (Bresnan and Moshi 1990: 153–154):

- (43) a. M-kà n-ǎ-í-kì-lyí-í-ò.
 1.wife FOC-1.SM-PRES-7.OM-eat-APPL-PASS
 ‘The wife is being benefitted/adversely affected by someone’s eating it.’
- b. K-í-ń-lyì-í-ò.
 7.SM-PRES-1.OM-eat-APPL-PASS
 ‘It (i.e. the food) is being eaten for/on him/her.’

(43a) allows the benefactive applied argument to undergo passivization, while letting the patient argument control the object marker *kì*. The contrast between (42a, b) and (43a, b) suggests that Kitharaka is not a symmetrical object language, which allows more than one non-actor core argument to behave as an object.

The question that remains to be answered is where alternating asymmetrical languages are on the continuum from direct object languages to primary object languages in Table 6. My tentative suggestion is that both direct object languages and alternating asymmetrical languages operate on the basis of undergoer status, but that they differ with respect to whether or not they allow a marked undergoer assignment (i.e., assigning an undergoer status to the second lowest-ranking core argument rather than the lowest-ranking one): alternating asymmetrical languages allow it, while direct object languages don’t. For example, (41a, b), respectively, assign an undergoer status to the benefactive applied and patient argument. This assumption accounts for why either the benefactive applied or patient argument may undergo passivization or control object marking on the verb stem.

Table 7 Diachronic Continuum in the Bantu Languages [Revised]

	Direct Object Languages	Alternating Asymmetrical Languages	Symmetrical Object Languages	Primary Object Languages
Languages	Basaa	Kitharaka	Kichaga	Chicheŵa
Neutralization	No	No	Unrestricted	Restricted
Patient/Theme	○	○	○	×
Applied	×	○	○	○

Given that alternating asymmetrical languages operate on a semantic basis even if they allow a marked undergoer assignment and therefore are less tied to undergoer status than direct object languages, I propose to locate alternating asymmetrical languages between direct object languages and symmetrical object languages.

The whole continuum in Table 7 describes a unidirectional process of syntacticization in which the linking system is becoming less and less sensitive to semantic roles and is becoming more and more sensitive to differential degrees of topicality.³¹⁾ The increasingly prominent role played by topicality brings about the unrestricted and then the restricted neutralization of semantic roles.³²⁾ The result is the linking system that operates on the syntactic notion of primary object.

To sum up this section, adding primary object to the RRG inventory of grammatical relations makes it possible not only to provide the principled synchronic typology of DACs (at least) in the Bantu languages, but also to recast synchronic typology as the diachronic continuum in Table 7.

6. Conclusion

This paper provides a preliminary survey of the synchronic typology and diachronic change of DACs. It reviews three grammatical relation-based synchronic and diachronic accounts of DACs, Dryer (1986), Bresnan and Moshi (1990), and Peterson (1996), and attempts to recast the synchronic three-way distinction of DACs, direct object, symmetrical object, and primary object (asymmetrical object) languages, in terms of RRG linking theory (Van Valin and LaPolla 1997) and its revision by Haspelmath (2008), and to locate the three types of DACs along a syntacticization continuum that ranges from an undergoer-based system (i.e., direct object languages) to a primary object-based system (i.e., primary object languages).

Abbreviations

ABS	absolutive	ACC	accusative
ADV	adversative	APPL	applicative
ASP	aspect	AP	antipassive
BEN	benefactive	CN	common noun
COM	comitative	CONN	connector

DAT	dative	DEF	definite
DEIC	deictic	DYN	dynamic indicative
ERG	ergative	FOC	focus
FV	final vowel	FUT	future
GEN	genitive	GEN.P	general preposition
H	human	HAB	habitual
IMPERF	imperfective	INSTR	instrumental
LOC	locative	MASC	masculine
N	non-human	NONFUT	non-future
O	object	OBL	oblique
OM	object marker	P	applied argument
PASS	passive	PAST	past
PERF	perfective	PERS	personal
PL	plural	PN	personal noun
PREP	preposition	PRES	present
REFL	reflexive	S	subject
SM	subject marker	SG	singular
TNS	tense		

Notes

- 1) Multiple applicative constructions such as (3c) abound in Kinyarwanda. See Marlett (1986) (Sierra Popoluca), Constable (1989) (Huastec), O'Herin (2001) (Abaza), Lamoureux (2004) (Maasai), Kiyosawa (2006) (Salish), and Beck (2006) (Upper Necaxa Totonac) for examples of multiple applicative constructions outside the Bantu languages.
- 2) See Section 2.2 for discussion of the discourse-pragmatic function of applicativization with no morphosyntactic effect. Taba (Austronesian: Bowden 2001) has applicative constructions analogous to (6b), in which an applicative affix isn't accompanied by any morphosyntactic change of an applied argument.
- 3) Needless to say, applicativization may affect the behavioral properties of non-applied arguments (i.e., theme/patient arguments) even when there is no change in their coding properties. See Section 3 for discussion of previous attempts to explain the behavioral changes of theme/patient arguments.
- 4) The second, third, and fourth subtype of applicativization (but probably not the first one) cause the argument structure to change. See Dowty (1991), Levin (1993), and Beavers (2006), among others, for related discussion.
- 5) To calculate RD, we need to look back to the clause(s) prior to the given reference and count each clause up to and including the clause in which the participant was most recently mentioned by a variety of morphosyntactic devices ranging from a zero-anaphora and an indefinite lexical NP (the maximum RD value is set to 20 for practical purposes) (Givón 1983). See Givón (1994) for a different formulation of the RD.
- 6) Locative applied arguments are different from other applied arguments, in that their RD value is the same as that of their oblique counterparts and their TP value is the same as that of the average of

the oblique counterparts to all the applied arguments. Donohue (2001) provides no explanation for these peculiarities of locative applied arguments.

- 7) Note that “topic promotion” as used in this paper is intended as a cover term that subsumes both promotion to a primary topic and promotion to a secondary topic (Givón 1979).
- 8) See also Marten (2003) for Swahili examples of applicativization with no morphosyntactic change. Marten names the pragmatic effect of such applicativization “concept strengthening”.
- 9) We may modify (15a) in such a way as to include an auxiliary verb as well as an affix. This move allows us to include the following Japanese example (b) under the rubric of applicative constructions:
 - a. *Taro-ga Jiro-notameni hon-o kat-ta.*
 Taro-NOM Jiro-for book-ACC buy-PAST
 “Taro bought a book for Jiro”.
 - b. *Taro-ga Jiro-ni hon-o katte-age-ta.*
 Taro-NOM Jiro-DAT book-ACC buy-CONN-give-PAST
 “Taro bought Jiro a book”.
- 10) See Marten, Kula, and Thwala (2007) for a summary of how ten southeastern Bantu languages behave with respect to 14 parameters including object marking, word order, and passivization in ditransitive (applicative) constructions.
- 11) Word order is not regarded as a reliable diagnostic for object status (Rugemalira 1991, Schadeberg 1995) (see also Thwala 2006 for an alternative account of word order in DACs).
- 12) The thematic hierarchy in (18a) remains a matter of debate. For example, Woolford (1993: 684) adopts the hierarchy: ‘Agent » Benefactive > Goal > Theme > Instrument/Locative’. A piece of evidence adduced by Woolford in support of the above hierarchy comes from the word order facts in Fula (Bantu), in which a benefactive NP has to precede a theme NP, which has to precede an instrumental NP (cf. Alsina 1996: 698–709). Woolford (1993) generalizes this observation to her version of thematic hierarchy and uses it to account for the word order and passivization data (when two non-subject arguments in applicative constructions are available for passivization, only the one that is ranked higher in the thematic hierarchy may be able to undergo passivization).
- 13) The lack of the AOP doesn’t license multiple non-actor core arguments to be intrinsically classified as ‘[-r]’, since this would lead to a violation of the FAB in (18f) (cf. Alsina 1996, MacKay and Trechsel 2008).
- 14) We may ask whether passivization is a morpholexical operation or not (Dubinsky and Simango 1996; cf. Van Valin and LaPolla 1997). Space limitation precludes a detailed assessment of the LMT, but I refer the reader to Rugemalira (1993: 233–238) and Roberts (1995: 191–196) for a critical assessment of the LMT.
- 15) There is typological variation with respect to the intrinsic classifications. For example, Harford (1990) argues that theme arguments in Shona have no intrinsic classification. Furthermore, benefactive/recipient arguments aren’t ‘[-r]’ in some Western Bantu languages (e.g., Basaa), since they don’t undergo passivization (Peterson 1996: 293–294).
- 16) It is worthy of emphasis that symmetrical object languages don’t refer to a situation in which either one of more than one non-subject argument behaves as “object” (Alsina 1996).
- 17) A word is in order about subject markers (SM) and object markers (OM) attached to the verb stems in the Bantu languages. First, SMs obligatorily double lexical subjects; they need to co-occur with

overt subjects and agree in the relevant features. SMs behave like agreement markers and remain inactive syntactically in the presence of overt subjects. However, they serve as pronominal arguments in the absence of overt subjects. For example, they may become the antecedents of pronouns in the absence of the corresponding lexical subjects. In sum, SMs are required to occur in the Bantu languages and are ambiguous between grammatical agreement markers and incorporated pronouns, depending on the presence/absence of overt subjects (see Morimoto 2006 for related discussion).

Likewise, OMs in many of the Bantu languages are pronominal arguments; they display the same syntactic behaviors as free pronouns (in dependent-marking languages) in the absence of overt objects. On the other hand, OMs also behave as agreement markers in the presence of overt objects (Bresnan and Mchombo 1987). The difference between SMs and OMs is that the former are obligatory, while the latter aren't (they may remain unrealized). Swahili is an exception in this respect, in that the OMs require overt objects to be present and remain syntactically inactive. This means that the Swahili OMs always serve as grammatical agreement markers.

- 18) Bresnan and Moshi (1990) also cite cooccurrence of reciprocals with passivization/unspecified object deletion. These are interactions among the behavioral properties in (22a).
- 19) Reciprocalization and unspecified object deletion in Table 3(b) target patient/theme arguments.
- 20) It is important to note here that symmetrical object languages aren't defined as those that allow more than one non-subject argument to behave as object as in locative applicative constructions in Chicheŵa. Alsina (1996) names such languages (e.g., Kitharaka) "alternating languages" (see Harford 1991), which are distinguished from symmetrical object languages, which allow more than one non-subject argument to bear '[-r]' simultaneously.
- 21) The lack of the AOP is comparable to Baker's (1988a) assumption that symmetrical object languages such as Kinyarwanda have an ability to assign two structural Accusative cases.
- 22) Mchombo (2004) leaves it unclear whether or not an applied motive argument as illustrated in (26) may become a target of reciprocalization or unspecified object deletion.
- 23) Marten and Kula (2007) note that passivization and object marking have a strong tendency to co-vary.
- 24) Mchombo and Firmino (1999) discuss another Bantu language, Gitonga, which behaves like a symmetrical object language when the two non-actor arguments have different degrees of animacy, but behave like an asymmetrical object language when they have the same degree of animacy. They defend the distinction between symmetrical and asymmetrical object languages by redefining the AOP as a syntactic default that may be overridden by semantic and/or discourse-pragmatic factors including animacy. See also Demuth et al. (2005) and Yoneda (2009) for discussion of the role played by animacy in the morphosyntax of DACs in Sesotho and Herero (Bantu), respectively.
- 25) See Company-Company (2001) (see also Company-Company 2003, Bleam 2003, Bascuñán 2006, Labelle 2008, Duffer and Stark 2008, and Da Conceição 2009 for further data and discussion) for an analysis and discussion of an analogous diachronic shift in Romance languages. Company-Company (2001) argues that Spanish has been acquiring primary object properties with respect to case marking of non-actor core arguments in ditransitive constructions.
- 26) See W. Nakamura (2000) for a summary of the RRG theory of grammatical relations.
- 27) See Van Valin and LaPolla (1997: Ch.4) for a detailed account of the RRG theory of semantic roles

- including macroroles (actor and undergoer).
- 28) A pivot is an NP that is the target of syntactic operations such as passivization, raising, and relativization, while a controller is an NP that controls morphological expressions such as case marking, agreement, and cross-reference.
 - 29) Assigning an undergoer status to the recipient argument in (40a) in violation of the actor-undergoer hierarchy (Van Valin and LaPolla 1997) à la Roberts (1995), Guerrero and Van Valin (2004), and Van Valin (2007) makes it impossible to explain why theme arguments of ditransitive verbs behave like theme/patient arguments of transitive verbs as in (38).
 - 30) See Siewierska and Hollmann (2007) and Haddican (2010) for data from some dialects of British English.
 - 31) This doesn't mean that all direct object languages will drift toward primary object languages. Dufter and Stark (2008) compare indirect object doubling (IOD) in Spanish and Italian and note that IOD in Spanish is obligatory in many cases and possible elsewhere, while it is highly constrained in Italian. Dufter and Stark observe that the overall frequency of IOD in Spanish has shown a steady increase since medieval times, while IOD in Italian has become restricted to certain prototypical contexts (1st person experiencer indirect object). This suggests that the topicality-driven drift toward primary objectivity is one (albeit powerful) motivation that is in competition with the other ones.
 - 32) It is at least debatable whether syntacticization as described in Table 7 is amenable to any parametric account or not. See Roberts (2007: Ch.4) for discussion of how to accommodate diachronic changes to a parametric account.

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