CHAPTER 4

RECIPROCAL AND POLYADIC

(REMARKABLE RECIPROCALS IN BANTU)¹

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1. Introduction

The reciprocal event structure constitutes a significant coding problem for languages: the reciprocity implies **symmetry**, in contrast with the inherent **asymmetry** of event construal in natural languages (Langacker 1991:222; Croft 1994:90). The problem resides so deeply in the nature of grammar that it persists even in artificial meta-languages of linguistics, so that in order to render the reciprocal semantics linguists would resort to a

combination of <u>two</u> converse propositions (or their equivalent in another meta-language), as roughly represented by the following scheme:

(1) $[\underline{A \text{ AND } B}] \underline{V} + \underline{REC} = (A \underline{V} B) \text{ AND } (B \underline{V} A).$

In contrast with this, many natural languages do encode a reciprocal situation by means of a single clause, or, in other words, as a single event.² This means that they succeed in finding a solution for the coding problem posed by the contradiction between reciprocity and asymmetrical event construal.

Basically, this solution is very simple: the reciprocal participants are just treated as a single whole, that is, instead of encoding symmetry, languages encode role identity between the reciprocal participants. In a sense, this is true for any language: if a language has a mono-clausal reciprocal construction, all reciprocal participants can or must be represented by a single constituent ("simple" reciprocal construction in terms of Chapter 00), the relation between these participants being signaled by some overt marker elsewhere in the clause. In some languages, however, the essence of this coding solution is also reflected in the choice of the reciprocal marker, that is, the reciprocal encoding can be viewed as one of the functions of a more abstract grammatical device signifying role identity between separate participants. This phenomenon is interesting, since the reciprocal markers are commonly thought of as expressions signifying co-reference between participants serving different roles in the situation, a notion which reflects only one of the available typological options. The strategy to be discussed in this paper is precisely opposite: what is marked is not that two roles are performed by a same referent. but rather that that two (or more) referents are assigned the same type of participation in the event.

The present paper explores this coding strategy on the basis of one language family, Bantu, which gives particularly revealing material for such a study, although references other languages exhibiting similar phenomena are employed to integrate Bantu evidence into a cross-linguistic context.³

2. Polyadic roles and participant sets: a summary of cross-linguistic evidence and some theoretical implications

The reciprocal belongs to a wide range of complex event structures that assign the same type of participation in the event to multiple participants. Apart from the reciprocal, this type of event structure subsumes the sociative (collective), the distributive, the converse (chaining), the competitive, etc. This event type will be referred to below as **polyadic**, cf. the following definition:

(2) <u>Definition</u>. Some type of participation in an event constitutes a **polyadic participant** role if it <u>must</u> be shared by minimally two separate participants. An event structure counts as **polyadic** if it contains a polyadic role.

For the sake of simplicity, and following the general convention adopted in this volume for "reciprocal participants", the participants playing a polyadic role will be referred to as "polyadic participants".

The cross-linguistic relevance of the polyadic event type is manifested by a recurrent marking pattern whereby one morpheme is used to encode different polyadic structures (Lichtenberk 1985, 1999; Kemmer 1993:98-99, 1996:232). This marking

pattern has been attested in a variety of non-related languages (e.g. Bantu, Turkic, and Oceanic) and is extensively exemplified in many chapters of this volume. A few representative examples are given below:

KINYAMWEZI (Maganga, Shadeberg 1992:164).

(3) *chim-ana* 'fight with knives'; *-ikal-ana* 'live together'

YAKUT (Ch.24: 9.2.1.1, 9.2.1.2)

(4) *tapta-s-* 'love each other'; *kös-üs-* 'fly together'

NÊLÊMWÂ: (Chapter 14: 3.1.1.1, 8.4.2)

(5) *pe-yage-i* 'help each other'; *pe-hâgee* 'fish together'; 'fish in different localities'

TUVA (Chapter 25: 5.5.2)

(6) *toolda-š-* 'tell fairytales to each other'; 'compete in telling fairytales'.

The invariant semantic impact of a polyadic affix is to signal that the primary participant role is polyadic; moreover, the polyadic role always includes at least one participant role (most often, the primary one) of the basic event structure. The semantic variable which is most important in the context of the present paper is the relationship between the polyadic role and other participant roles specified by the basic verb: the polyadic role of the reciprocal, chaining, and converse events can be described as the combination of **two** participant roles of the basic event structure; the polyadic role of sociative, distributive, and competitive events is identified with a **single** role of the basic event structure. In this sense, the latter type of polyadic event is semantically closer to a simple event with multiple primary participants and therefore can be said to involve a less significant modification of the basic event structure. A formal counterpart of this distinction is the well-known syntactic difference between the reciprocal-like polyadic and the sociative-like one: the former is a valence-decreasing construction, whereas the latter retains the valence of the basic verb.

The polyadic participant role can be viewed as an instance of a more abstract notion of **participant set**, which covers all cases where two or more separate individuals are ascribed the same type of participation in the event, including NP-conjunction (Maslova 1999). The polyadic can be described as an **event-internal** participant set (since it involves a modification of event structure), the NP-conjunction, as an **event-external** participant set. The semantic affinity between these phenomena is supported by the fact that they are encoded by means of formally identical morphemes in a number of languages. For example, the Yukaghir morpheme **n**'e renders the reciprocal meaning if prefixed to a verb and serves as an NP conjunction marker if suffixed to a noun, cf.:

KOLYMA YUKAGHIR (field notes)

(7) *odu-pe kukujerd'i-pe-<u>n'e</u> <u>n'e</u>-nuk-telle <u>n'e</u>-lejtej-ngi Yukaghir-PL Even-PL-COM REC-find-SS:PFV REC-learn-3PL:INTR 'The Yukaghir and the Even met each other and got to know each other.'* (see Chapter 00 for further examples). Similar marking patterns are attested in Riau Indonesian (David Gill, p.c.), Thargari and Yinggarda (Dixon.1980:433), and, presumably, in Bantu (see 3.2-3.3 for a discussion).

A trivial and near-universal manifestation of the intrinsic link between the two types of participant sets is their typical co-occurrence within the same construction: the polyadic role must be represented by some NP(s), and a conjunction of two separate NPs appears to be the most natural way to refer to these individuals. This simple fact gives rise to an interesting cross-linguistic conflict. On the one hand, the data collected in this volume appears to reveal the following implicational universal:

(8) If a language has a discontinuous reciprocal construction, it also has a simple reciprocal construction (but not vice versa).

In other words, if a language has a reciprocal construction, then the reciprocal participants can or must be represented by one (subject) constituent, whereas the possibility to represent these participants by two different constituents (discontinuous construction) is the typologically marked option. Thus, the typologically unmarked syntactic type of the reciprocal construction contains two **coordinate** NPs in the subject slot. On the other hand, the NP-coordination is a typologically marked strategy of NP-conjunction; the only universal strategy of NP-conjunction is the **comitative** marking, whereby the conjoined NPs are not parts of the same constituent and have different syntactic ranks (Mithun 1988:337-339; Stassen *forthcoming*). Thus, the cross-linguistically unmarked comitative strategy is highly marked in the context of a reciprocal construction. Furthermore, the NP-coordination emerges a necessary prerequisite for the development of a reciprocal construction, so that the following universal must hold:

(9) If a language has a reciprocal construction, it also has the coordinate strategy of NPconjunction.

Strictly speaking, this implication is valid only if a language-specific reciprocal marker is defined on the basis of the diagnostic sub-type suggested in Chapter 00 (1.3): this diagnostic feature, as formulated, is applicable only if the language has a coordinate NP-conjunction. Yet the markedness conflict outlined above suggests that there should exist a more universally available sub-type of reciprocal construction, and it can only be a construction in which the reciprocal participants are denoted by a single (plural or collective) NP, rather than by two conjoined NPs. This sub-type is referred to below as "plain reciprocal". It is clear that the plain reciprocal is available in any language that has a reciprocal construction. What is more interesting is that there exists at least one language that has **only** plain reciprocal. This is the case in Ngiyambaa (a Wiradhuric language); as shown by the following example, this language has a reciprocal marker, cf.:

Ngiyambaa (Donaldson 1980:166) (10) *Miri gadha-la-nha* dog(ABS) bite-REC-PRES "The dogs are biting each other"

However, if the reciprocal participants have to be denoted by two different NPs (as, e.g., in *The dogs and the dingoes are biting each other*), this reciprocal marker is unaccessible,

and a combination of two clauses is required to render a reciprocal situation (Donaldson 1980:168). The plain reciprocal construction exists, but the simple reciprocal construction with conjoined NPs does not. To put it in other words, two simple situations can be rendered by means of a single reciprocal clause only if the (potential) reciprocal participants are conceived of as similar enough to be signified by the same lexical item.

The case of Ngiyambaa suggests that an accurate typological description of reciprocal constructions must distinguish between three (rather than two) syntactic types:

- (11) A. Plain reciprocal: the polyadic role slot is filled by a single NP.
 - B. Coordinate reciprocal: the polyadic role slot is filled by two coordinate NPs.
 - C. Discontinuous reciprocal: the polyadic role slot is split into two syntactic slots with different ranks, one of which must be filled by a comitative NP.

These types constitute a usual implicational hierarchy: if a language has a lower-rank reciprocal construction, it also has all higher-rank constructions (but not vice versa). From the syntactic point of view, the most important distinction is of course between the simple (A & B) and discontinuous (C) reciprocal, as suggested by the classification in Chapter 00. The cross-linguistic significance of this distinction is supported by the fact reflected in (8): there are many languages that have simple reciprocal constructions, but no discontinuous constructions.

Semantically, however, it may be more important to draw the distinction between the plain (A) and "split" (B & C) reciprocal: in the former case, the reciprocal role is represented by a single NP, which implies that all reciprocal participants are conceptualized by means of the same lexical item; in the latter case, each reciprocal participant is referred to by a distinct NP. Apart from the existence of plain-only reciprocals (as in Ngiyambaa), which seems to be a cross-linguistically rare case, there are at least two other typological reasons to consider this semantic distinction as no less significant than that between the simple and discontinuous constructions. One reason is clear from the above discussion: a "split" reciprocal construction requires a non-universal grammatical mechanism (NP-coordination), whereas a plain construction does not. Secondly, a number of languages exhibit no clear-cut distinction between the coordinate and comitative strategies of NP-conjunction, hence, between the coordinate and discontinuous reciprocal (Stassen forthcoming), cf. e.g. Chapter 00 (5.4) on Yukaghir.

To sum up, the reciprocal meaning exhibits a variety of cross-linguistic (hence, diachronic) relations to other types of participant sets. Bantu provides extremely rich material for a more detailed analysis of these relations, since virtually each semantic affinity discussed in this section is matched by a certain formal affinity in some (but not all) Bantu languages.

3. Reciprocal, polyadic and participant set across Bantu

Many Bantu languages instantiate the polyadic strategy of reciprocal marking in that the reciprocal and sociative event types are subsumed under a single verbal category (cf. (Dammann 1954) for an extensive exemplification and discussion). The polyadic suffix is rendered in grammars of various Bantu languages as **-an-**, **-na-**, **-ne** or **-ana-** (sometimes, different forms are given in different grammars of one language). The NP-conjunction is signaled by a formally similar adnominal morpheme, n(a), which can serve either as a comitative marker or as a coordinate conjunction.

3.1 Event-structure marking in Bantu: an overview. The Bantu verb has an obligatory subject marker and, in some languages, an object marker. In addition, there are obligatory tense/aspect markers and a verb-final modal marker ("final vowel") (Wald 1992:159). The Bantu languages have a rather wide range of verbal suffixes modifying the event structure (so called "verb extensions"). Most widely attested are passive, causative, anticausative, applicative, and reciprocal/polyadic. Other (less frequent and/or less productive) derivational meanings are reversive, introversive (absolutive), and a set of aspectual and quantificational meanings (e.g., extensive). The major valence-changing operations are illustrated by the following examples:

Passive: SWAHILI (Vitale 1981:116)

(12)	a.	<i>nyoka a-li-mw-uma Halima</i> snake 3SG-PAST-3SG-bite Halima 'A snake bit Halima.'		
	b.	Halimaa-li-um-wanaHalima3SG-PAST-bite-PASSAd'Halima was bitten by a snake.'		
Caus	ative	: SWAHILI (Vitale 1981:116)		
(13)	a.	<i>Halima</i> a-li-ki-pika Halima _i 3SG _i -PAST-3SG _j -cook 'Halima cooked the food.'	<i>chakula</i> food _j	
	b.	Juma a-li-m-pik<u>-isha</u>		chakula

Juma_k $3SG_k$ -PAST- $3SG_i$ -cook-CAUS Halima_i food_j 'Juma caused Halima to cook the food.'

Anticausative: LAMBA (Doke 1938:182)

(14) Amapili aa-won<u>-eka</u>
 Mountains 3PL-see-ACAUS
 'Mountains have appeared / become visible.'

Anticausative constructions may render stative, inchoative, or potential meaning.

Applicative: *KINYARWANDA* (Kimenyi 1988:370)

(15)	a.	Umugóre	a-kora	akazi	ku	amafaraanga	máke
		woman	3SG-work	work	for	money	few
	'The woman does the work for a small amount of money.'						

b. *Umugóre* **a-kor-<u>era</u>** akazi amafaraanga máke woman 3SG-work-APPL work money few 'The woman does the work for a small amount of money.' **Reciprocal:** *SWAHILI* (Vitale 1981:147)

(16)	a.		<i>a-na-m-penda</i> 3SG _i -PRES-3SG _i -love		Halima love H. i			
			ves Halima.'					
	b.	Juma	na	Halima	wa-na-pend- <u>ana</u>			
		J. _i	CNJ	Н. _ј	3PL _{i+j} -PRES-love-REC			
	other.'							
Refle	vive	is signifie	d by a v	erhal prefiv	which replaces the object			

Reflexive is signified by a verbal prefix which replaces the object agreement marker, cf.:

Reflexive: *SWAHILI* (Vitale 1981:137)

(17)	а	Ahmed	a-na-m-penda	Halima
		Ahmed _i	3SG _i -PRES-3SG _j -love	Halima _j
		'Ahmed l	oves Halima.'	-

b. Ahmed a-na-<u>ji</u>-penda Ahmed_i 3SG_i-PRES-REFL-love 'Ahmed loves himself.'

Thus, in accordance with the general cross-linguistic tendency (Kemmer 1993:100), the polyadic reciprocal-encoding strategy does not subsume the reflexive meanings. On the other hand, some Bantu languages have developed (presumably new) reflexive-based reciprocal constructions (see 5).

The markers of event structure can be easily combined within one verb stem, cf.:

KINANDE (Hyman 1993:3)

(18) *-imb-ir-<u>an</u>-isi,-bu-a* -sing-APPL-REC-CAUS-PASS-FV 'be caused to sing for each other'

The ordering of valence-changing suffixes is motivated by two conflicting principles: a Pan-Bantu "default" morphotactic template [CAUS-APPL-REC-PASS], and the principle of compositionality (semantically grounded ordering, as illustrated by (15)). The potential conflicts between these principles are resolved differently across the Bantu languages (Hyman 2001).

3.2 Distribution of the polyadic meanings. The semantic impact of the regular -(a)n(a)-marking is to subsume the underlying simple event under the polyadic event structure. All polyadic constructions in Bantu are subject-oriented. Presumably, all the reciprocal applications of this marker can be subsumed under the "canonical" reciprocal type, cf. (16) and (19):⁴

BABUNGO (Schaub 1985:209-210)

(19) a. mè táa báa yé ghô mbìsii
 I FUT again see you tomorrow
 'I shall see you again tomorrow'

b.	sì	táa	báa	yé- <u>né</u>	mbìsii
	we:DU	FUT	again	see-REC	tomorrow
	'We shal				

Thus, the reciprocal use of the polyadic suffix entails detransitivization (cf. 3.4 for a significant exception). In particular, if a language has object agreement on the verb, the reciprocal interpretation and the object agreement marker are mutually exclusive (Vitale 1981:150), cf. (16a) and (16b). As a result, the reciprocal and sociative meanings are clearly distinguished by the de-transitive effect associated with the former, cf. (20).

KINYARWANDA (Coupez 1985:15)

(20)	a.	<i>-kurèba</i> look 'look at a 1	<i>umugabo</i> man nan'	>	<i>kurèb-ana</i> look-RECP 'look at one another'		
	b.	0 0	<i>umurimá</i> field a field'	>	<i>-guhîng-ana</i> cultivate-SOC 'cultivate a field	<i>umurimá</i> field together'	

Generally, the reciprocal interpretation of -(a)n(a)- seems to be preferred over the sociative one. This preference manifests itself in various ways. Cross-linguistically, there are Bantu languages where this suffix can render only the reciprocal meaning (i.e. the sociative meaning is impossible). This is the case, e.g. in Venda (Poulus 1990:188-189) and Babungo (Schaub 1985:209-210). In some other languages, the reciprocal meaning seems to be more frequent in texts (cf., e.g. (Shepardson 1986) for Swahili) and/or it is the only possible interpretation in all cases where the reciprocal meaning is compatible with the lexical meaning of the basic verb, that is, the sociative interpretation of the polyadic marking is available only if the reciprocal one is precluded by the lexical context. Unfortunately, the available data on most Bantu languages is controversial as to whether this tendency is manifested only by the relative frequencies of the alternative interpretations of identical forms, or the meaning of the suffix is pre-determined by the verb stem. For Swahili, for instance, Shepardson (1986) obviously adopts the former hypothesis, whereas Dammann (1954:164) mentions only few cases where one verb form can have either meaning and considers them as exceptions produced by neutralization of the formal distinction between a sociative verb derived from a simple stem and the corresponding reciprocal derived from the applicative stem, cf.:

SWAHILI (Damman 1954:164)(21) furah-i-ana1. <be.happy-APPL-REC> 'be rejoiced by each other'2. <be.happy-0-REC> 'be happy together.'5

In some Bantu languages, the polyadic suffix can be used as verbal comitative marker, so that the comitative participant occupies the object slot, cf.

NKORE-KIGA (Taylor 1985:67)

(22) *y-a-ija-<u>na</u> embwa* 3SG-TP-come-COM dog 'He came with/brought a dog'.

In Duala (Ittmann 1939:141) the comitative is marked by a suffix which is tonally distinct from the genuine polyadic one, yet this distinction is neutralized in some forms and/or contexts, cf.:

DUALA (Ittman 1939:140-141)

(23)	dípà	'beat'	>	dípà- ne	'beat each other'
					'beat with
	énè	'see'	>	énè- ne	'see each other
		!1-!			'see with'
	topo	'speak'	>	topo -ne	'discuss each other'
	ipe	'cook'	>	ip -ane	'speak with, scold' 'to cook with each other, together'
	ipe	COOK	-	ip-une	'cook with/in'

Generally, the comitative function of -(a)n(a)- appears to be significantly less frequent across the Bantu languages than the reciprocal and sociative functions; this meaning is more commonly encoded by means of the nominal comitative marker (cf. 3.3).

Apart from the regular polyadic marking, the polyadic suffix is commonly present in **lexical reciprocals**, cf.

TSWANA (Cole 1955: 210)

(24)	-tšhw ana	'resemble, be like each other'
	-kôp ana	'meet, meet one another'
	-tlhak ana	'mix, mix with each other'
	-lek ana	'be equal, be equal to each other'.

VENDA (Poulus 1990:188-189)

(25)	-fan-	'resemble, be like each other'
	-ling an-	'be equal'
	-kuvhang an -	'collect, gather'
	-tang an -	'meet'
	-vang an -	'become mixed up'
	-vhumb an -	'become interlocked, stuck together'
	-thalang an-	'be a distance away from someone'

The corresponding simple stem may exist, but the meaning of the lexical reciprocal is not semantically predictable, cf.

SWAHILI (Мячина 1966)

(26)	<i>-sem-a</i> 'say'	>	sem-ana 'insult each other',
	<i>-shik-a</i> 'grab'	>	-shik-ana 'be friends',

-on-a 'see' > -on-ana 'see each other, meet' -shind-a 'win' > -shind-ana 'compete'.

Fossilized instances of the polaydic suffix seem to exist in virtually all Bantu languages. In some languages, the polyadic marking is fully lexicalized, whereas the reciprocal meaning is expressed by a non-polyadic construction (e.g. in Luvale and Babungo, cf. 5).

To sum up, the distribution of various functions of the polyadic suffix across Bantu can be represented by means of the following hierarchy, where these functions are ordered from the most widely-spread down, cf.

(27) <u>lexical reciprocal</u> > <u>reciprocal</u> > <u>sociative</u> > <u>comitative</u>.

Thus, the meanings associated with the polyadic suffix in various Bantu languages range from a general set-introducing function (whereby it covers two different polyadic event types and a verbal comitative, i.e. a certain technique of NP-conjunction) to the symmetrical event structure conceived of as an inherent property of a closed class of events (lexical reciprocals).

3.3 NP-conjunction. The Bantu languages have a single NP-conjunction marker, n(a), which functions both as a comitative marker and as a coordinate conjunction. If the conjoined NPs are associated with the subject, the coordination and the comitative are distinguished by the linear position of the NP introduced by n(a) and by the verb agreement: the coordinated NPs take the subject (pre-verbal) linear position and control the plural agreement marker; the comitative phrase takes the post-verbal position, the verb agreement being controlled by the pre-verbal NP alone, cf.:

VENDA (Poulus 1990:403)

(28)	a.	Vele	<u>na</u>	khotsi	anga	vha	khou	shuma	giratshi-ni
		V.i	CNJ	fatherj	my	3Pl _{i+j}	PRES.CONT	work	garage-LOC
		'Vele	and my	father are	working	g in the	garage.'		

b. *Vele* **u** *khou shuma* <u>**na**</u> *khotsi anga giratshi-ni* V. i 3SG i PRES.CONT work CNJ father j my garage-LOC 'Vele is working in the garage with my father.'

Thus, Bantu may be assumed to instantiate the widely attested development of the NP-coordination on the basis of the comitative (Mithun 1988:337-339).

In contrast with the NP-coordination, the comitative use of the NP-conjunction marker does not necessarily imply the conceptual identity between the roles assigned to the comitative and the primary participant. As a result, the comitative marking can be employed, at least in some Bantu languages, as a sort of role-marker which serves to introduce a participant **without** identifying its role with that of the primary participant; for example, Kimenyi (1988:369) describes the comitative n(a) as a marker of *manner* (cf. (29)). A clear distinction between the roles assigned to the primary and the comitative participant is particularly common for the verbal comitative construction, which is marked by the polyadic suffix (cf. 3.2).

It can be easily observed the NP-conjunction and the polyadic are signified by formally similar morphological items, -n(a)- and -(a)n(a)- respectively (in fact,

depending on the morphological analysis adopted by a grammar, these items can turn out formally identical).⁶ The similarity between these items, hence, the possibility of an etymological relation, is commonly mentioned in grammars of Bantu languages (cf., e.g., Taylor 1985:67); as mentioned in Section 2, such formal affinities are attested in other languages as well, which suggests that the similarity is hardly accidental. The comitative function constitutes a clear semantic overlap between these morphemes, cf. the following pair of examples:

KINYARWANDA (Kimenny 1988:369)

(29)	a.	<i>umugóre</i> woman 'The woman	<i>a-ra-kôr-a</i> 3SG-PRES-do-FV is working with enthus			<u>n'-</u> ûmweête COM-enthusiasm	
	b.	woman	<i>a-ra-kôr-<u>an</u>-a</i> 3SG-PRES-do-COM is working with enthu		<i>akazi</i> work	<i>ûmweête</i> enthusiasm	

Such examples suggest that the polyadic suffix and the NP-conjunction marker represent different functions of essentially the same **set-introducing** device. Generally, these functions are associated with different grammatical contexts: the verbal suffix signals the polyadic event structure, while the adnominal morpheme signals NP-conjunction. The verbal comitative violates this iconic correlation, thereby showing that a morpheme can occur in both grammatical contexts.⁷

3.4 Syntactic types of the polyadic constructions. The comitative variant of the NP-conjunction is regularly employed to create the **discontinuous** variant of the polyadic construction, where two participants with the polyadic role take different syntactic positions; sentence (16c) illustrates this option for the reciprocal sub-type (cf. (16b)), sentence (30), for the sociative sub-type.

SWAHILI (Vitale 1981:147)

(16) c. Juma a-na-penda-<u>ana</u> na Halima J. 3SG.SBJ-PRES-love-REC CNJ H. 'Juma and Halima love each other.' (*lit.* 'Juma loves each other with Halima.')

KINYARWANDA

(30)	umubyeeyi	a- 0 -kor- <u>ana</u>	n- umwaana	we		
	parent	3SG-PRES-work-SOC	CNJ-child	her		
	'The mother is working with the child (who is also working)'					

In particular, the comitative marker is employed to introduce the secondary participant of lexical reciprocals, cf.:

VENDA (Poulus 1990:440)

(31) a. *murathu wanga u <u>fan</u>a <u>na</u> inwi* brother my 3SG look.like CNJ you 'My brother looks like you.'

b.	Vele	0	mal <u>an</u> a	<u>na</u>	khaladzi	anga	
	Vele	3SG	be.married	CNJ	sister	my	
	'Vele	is marrie	d to my sister	.'		-	

The existence of the discontinuous polyadic option in Bantu can be viewed as an implication of the general properties of the NP-conjunction, i.e. of the very fact that a single marker is able to create both the coordinate NP structure (hence, the "simple" construction) and the comitative (hence, "discontinuous") construction, cf. absolutely parallel pairs of examples in (28) and (32).

VENDA (Poulos 1990:189)

- (32) a. *musidzana <u>na</u> mutukana vha khou rw-<u>an</u>-a* girl CNJ boy 3PL PRES.CONT hit-RECP-FV "The girl and the boy are hitting each other.'
 - b. *musidzana u khou rw-an-a <u>na</u> mutukana girl 3SG PRES.CONT hit-RECP-FV CNJ boy (lit.) "The girl is hitting each other with the boy."*

A less trivial phenomenon is the existence of **transitive** polyadic constructions, whereby one polyadic participant takes the object position. In the reciprocal construction, the identity of the roles assigned to the reciprocal participants is indicated by the plural subject agreement on the verb (like in the simple reciprocal construction, cf. (33a) and (33b):

TONGA (Collins 1962:74)

- (33) a. *bana ba-la-yand-ana* children 3PL-PRES-love-REC 'The children love each other.'
 - b. Joni ba-la-yand-ana amukaintu wakwe
 J. 3PL-PRES-love-REC wife his
 'John and his wife love each other.' (lit. 'John mutually loves his wife.')

Note that the sociative variant of the transitive polyadic construction is represented by the verbal comitative (see (22)).

In both simple and discontinuous constructions, the event-internal participant set (i.e. the polyadic role) and the corresponding event-external set are signaled by two different instances of the set-introducing morpheme. Accordingly, it can be claimed that these instances represent two different (albeit formally similar) morphemes. In a transitive reciprocal construction, these two functions are accomplished by means of a single instance of this morpheme: in examples like (33b), the verbal suffix simultaneously indicates that the event is reciprocal and conjoins the NPs referring to the reciprocal participants (note the plural subject marking on the verb). This situation seems to be extremely rare cross-linguistically, yet it reveals in a particularly striking fashion that one and the same morpheme can, in principle, serve both set-introducing functions, even though these functions are generally associated with different grammatical contexts (see Section 6 for further discussion).

4. Interaction of the polyadic with other event structure categories

4.1 Transitivity. Generally, there is no correlation between the transitivity and the concept of participant set: the integration of a participant set into the event structure can involve adding a valence slot (comitative), reducing a participant slot (reciprocal) or leaving the valence pattern intact (sociative). As a result, if the polyadic marker is eventually employed as a valence-changing device, it can, in principle, acquire both valence-increasing and valence-decreasing function. Precisely this situation is attested in Bantu:

In some Bantu languages the (a)n(a)-marking can be used as a <u>non-reciprocal</u> detransitivizer, although this phenomenon is very rare and highly lexically constrained. Both agent-suppressing and patient-suppressing instances are attested. For example, in Babungo, the reciprocal suffix **-ne** (cf. (19)) can render the **anticausative** (34) meaning, cf.:

BABUNGO (Schaub 1985:209-210)

- (34) a. *mè* **ngà'** *shúufwè* I open:PF door 'I opened the door.'
 - b. *shúufwè* **ngà'-nè** door open-ACAUS:PF 'The door opened.'

KinyaRwanda has a relatively rare **introversive** suffix (i.e., a patient-suppressing detransitivizer), which is identical in form with the reciprocal one, cf. *-érek-* 'to show somebody something' > *-érek-an-* <-show-INTRV-> 'to show (something)' (Coupez 1985:19). The suffix sometimes implies habitual meaning.⁸ Notice that the formally identical suffix, in the same language, can create the comitative applicative construction (cf. (29b)). In other words, one suffix is applied to suppress and to add the direct object. A similar situation is found in Duala, where the comitative suffix (see (23)) also functions as the anticausative marker, e.g., *énè-ne* 'to become visible, to appear' vs. 'to see with': if a verb containing this suffix is used intransitively, only the anticausative interpretation is possible (Ittmann 1939:141).

4.2 Applicative. If the polyadic suffix is immediately preceded by an applicative one, the resulting meaning is most frequently rendered as reciprocity in the sense "for one another", i.e. the reciprocal relation is established between the primary participant and the benefactive participant introduced by means of the applicative suffix. The effect can be described as mutual resolving of ambiguity: on the one hand, the applicative suffix can assign the direct object function to a benefactive, locative, or causal participant, whereas the polyadic "selects" the meaning appropriate for the reciprocal relation, cf. the following examples from Kinande: *-imb-* 'sing' > *-imb-ir-* 'sing to/for (person); at (place); for (reason)' > *-imb-ir_an-* 'sing for each other' (Hyman 1993:8). On the other hand, the applicative suffix determines the reciprocal (rather than the sociative) interpretation of the polyadic.

In an apparent contradiction with this interpretation, some Bantu languages have developed a compound <u>sociative</u> marker analyzable as a frozen combination of the applicative and the polyadic. For example, the simple reciprocal marker in Haya is non-productive; it is replaced by two compound markers: a sociative marker -elan(a)/-ilan(a) (e.g., nyw-<u>elana</u> 'drink together (with each other)', l-<u>ilana</u> 'to eat together (with each other)') and a reciprocal marker -angan(a) (cf. *bon-angana* 'to see each other'). The former is analyzed as a frozen [APPLICATIVE + POLYADIC] combination, the latter, as the [EXTENSIVE + POLYADIC] combination (Dammann 1954:165, 168-169). However, this contradiction is illusive; in fact, the reciprocal differs from the sociative in that its polyadic role represents a combination of two roles of the underlying event. If a combination of the applicative stem, hence the reciprocal reading of the polyadic suffix. Once such a combination is frozen, the underlying event is signified by the simple (intransitive) stem, hence the sociative reading of the frozen combination.

4.3 Anticausative. A combination [ANTICAUSATIVE + POLYADIC] can produce two quite different semantic outputs. The first option does not involve any deviations from the polyadic semantics and can thus be considered predictable: the polyadic is interpreted as the "patient-oriented" sociative, cf. *SWAHILI -somesh-* 'teach' > *-somesh-ek(a)* 'get taught' > *-someshek-an(a)* 'get taught together'. This situation is illustrated in (35) for Tswana (the anticausative suffix is $-\hat{eg}(a)$, the anticausative+reciprocal complex form is *-agan(a)*, by assimilation from *- \hat{eg} -*an(a)*).

TSWANA (Cole 1955:211)

(35) -mena 'fold' > -men-êga 'become folded'> -men-ag-ana 'become folded together'
-roka 'sew' > -rok-êga 'become sewn' > -rok-ag-ana 'become sewn together
-pitla 'crush, squeeze' > -pitl-êga > 'become crushed' > -pitl-ag-ana become crushed together'
-bopa'mould' > -bop-êga 'become moulded' > -bop-ag-ana 'become moulded or fused together'

The resulting verbs are intransitive (like the corresponding anticausative forms) and signal that several inactive participants are associated in a joint state (getting into a joint state), whereby the active initiator of this state is eliminated from the case frame. The latter can then be introduced again by means of the causative suffix, but remains outside

the scope of the polyadic marker, cf. *-men-ag-an-ya* 'fold together', *-rok-ag-an-ya* 'sew together', *-pitl-ag-an-ya* 'crush together'. Given that the primary participant is eliminated by the anticausative, the patient-oriented sociative is the only semantically predictable output of the combination.

However, in some cases the polyadic suffix apparently simply loses its meaning in the context of the anticausative suffix. Swahili seems to give the most striking example of this effect: the [ANTICAUSATIVE + POLYADIC] combination tends to have just the anticausative meaning, cf. *-on-ik-an(a)* 'be visible' (*on-a* 'see', *on-ik(a)* 'be visible'), *-pat-ik-an(a)* 'be obtainable' (*-pat(a)* 'get, obtain', *pat-ik(a)* 'be obtainable'), etc. According to Dammann (1954:169), there is no semantic distinction between simple anticausative forms and the corresponding anticausative polyadic forms; he mentions, however, that the latter might have had an additional habitual meaning (1954:170). On the other hand, the complex forms seem to replace the simple anticausative forms, at least for some verbs. The latter observation is supported by the results of text counts in (Shepardson 1986), which show that the [ANTICAUSATIVE + POLYADIC] combination occurs much more frequently than the anticausative suffix alone.

In some other Bantu languages, there is a clearer semantic distinction between the anticausative suffix and the [ANTICAUSATIVE + POLYADIC] combination. For example, in Shambala this distinction seems to be associated with the intensification of property, cf.: *tail-ik(a)* 'be known, knowable' vs. *tail-ik-an(a)* 'be well-known, widely known', *jil-ik(a)* 'be eatable' vs. *jil-ik-an(a)* 'be good to eat', *on-ek(a)* 'be or become visible' vs. *on-ek-an(a)* 'become well visible' (Dammann 1954:169). That is, the polyadic suffix marks a higher degree of the property denoted by the anticausative verb. It seems that this phenomenon can be viewed as a rather predictable result of the combination of a polyadic event structure and a single-entity primary participant. If a polyadic predicate is applied to a single entity, the latter is construed as a whole consisting of some parts (due to the idea of participant set inherent in the polyadic semantics). The resulting meaning would then be, roughly: 'each part of this whole has this property'. Now an assertion like 'Each part of X is (becomes) visible' is clearly "stronger" than just 'X is (becomes) visible' (inasmuch as that the latter can mean 'Some parts of X are (become) visible' as well). That is, the polyadic predicate denotes a higher degree of the property than the non-polyadic one. This tentative explanation can presumably account for the "loss" of the polyadic meaning (as in Swahili) as well: if a language provides two constructional options to express the meaning like 'X has/gets a property P', one of which implies that each part of X has/gets this property, and the other is vague with respect to whether "the whole X" or only some part of it has this property, it seems highly probable that the first option would be used more frequently.

4.4 Quantification of situations. The interaction between the polyadic and quantification of situations (cf. Lichtenberk 1999; Kemmer 1996) plays a rather marginal role in the Bantu languages. Generally, the simple polyadic marking appears to imply that the event is conceived as a single whole; the complex internal structure of reciprocal events is reflected only in the compound suffixes that resolve the ambiguity of the polyadic semantics. The resulting reciprocal suffixes can be associated with the multiplicity of sub-events.

For example, in Kikongo the compound reciprocal marker (-asan(a)) used to have an additional **iterative** meaning (a series of separable sub-events), in contrast with the non-iterative simple marker (a single event); this distinction is now neutralized, and the simple marker is loosing its productivity in favor of the phonologically "heavier" one (Dammann 1954:165-166). Luba-Kasai has only a complex reciprocal marker, -ángán(á), which can have either the reciprocal meaning (e.g. -kwata 'take, catch' > -kwat-ángáná 'to catch, to grasp each other', -mona 'see' > -mon-ángáná 'to see each other, to visit each other'), or the **extensive** meaning, cf. -dima 'cultivate' > -dím-ángáná 'to cultivate always, everywhere' (Burssens 1946:74).

On the other hand, some compound suffixes containing the polyadic morph appear to have **only** quantificational meaning. For example, Luba-Kasai has still another compound suffix, *-akan(a)*, which never expresses the reciprocal meaning and is described in (Burssens 1946:76) as **extensive** (intensive); its use is illustrated by the following examples: *-énd-ákáná* 'aller de côte et d'autre, se promener', *-tamb-ákáná* 'passer et repasser, aller et venir'.⁹

5. Reciprocal without polyadic

Some Bantu languages have reflexive-based reciprocal constructions. The reflexive-based reciprocals appear to occur in those languages where the polyadic marking is highly lexically constrained (cf. 3.2).

In <u>Luvale</u>, for example, the compound reciprocal and sociative suffixes can be attached only to a few verb stems, cf.:

LUVALE (Horton 1949:102-103)

- (36) a. -*iw-asana* 'consult, agree; lit. hear each other'
 -*sép-asana* 'cross one another (as sticks)'
 -*hùng-asana* 'annul one another (as counter-accusations)'
 - b. -pàl-akana 'press or squeeze together'
 -xìnd-akana 'press, squeeze, crowd'
 -ly-ángana 'eat together, i.e., at each other's place'

The regular means of expressing the reciprocal meaning is the reflexive prefix, cf.:

LUVALE (Horton 1949:117)

(37) a. *Vali* **na-ku-<u>li</u>-veta** they FUT-3PL-REFL-beat 'They are beating one another.' b. *Vyuma* vi-na-<u>li</u>-fwane things 3PL-PERF-REFL-resemble 'The things resemble each other.'

The reflexive prefix can be combined with the old reciprocal suffix *-asana*, cf. *-li-iw-asana* 'come to agreement with one another', *-li-sèl-asana* 'pass by one another' (Horton 1949:103). Both simple and discontinuous reciprocal constructions with *li-* are attested, cf.:

LUVALE (Horton 1949:117)

(38)	a.	Na-va- <u>li</u> -pangila	vyama
		FUT-3PL-REFL-divide	things
		'They will divide things an	ong themselves.'

b. *Mwa-ka-<u>li</u>-pangila* vikumba na-masepa jenyi 3SG-FUT-REFL-divide goods COM-friends his 'He will divide goods with his friends.'¹⁰

Another formal type of a reflexive-based reciprocal construction is attested in Babungo (Schaub 1985:113), where the polyadic suffix is also highly lexicalized. The reciprocal meaning is regularly expressed by means of a reduplicated pronoun which refers to the whole group of reciprocal participants. This pronoun phrase is added at the end of the sentence (i.e., it occupies the position which is characteristic of adverbial). The non-subject constituent involved into the reciprocal relation is represented by a pronoun correferent with the subject (i.e., identical with that within the final pronominal phrase), sometimes accompanied by the word 'body' (common for the Babungo **reflexive** constructions as well), cf.:

BABUNGO (Schaub 1985:113)

(39)	<i>Làmbí</i> Lambi 'Lambi a	and N	Idula	help:PF	bo		<i>vëng</i> , their	<u>vëng</u> they	<u>vëng</u> they
(40)	vìng	bíng	nú	bwe e	tí	vìng,	<u>vìn</u>	g	<u>víng</u>
	you:PL 'Confess	•	•	bad	to	you:PI	L you	I:PL	you:PL
(41)	<i>yìa</i> we:EXCL	<i>túngm</i> shoot-		g <i>ò'see</i> cones	<i>máa</i> at		,	<i>yiia</i> , our:EX	CL
	<u>yìa</u> we:EXC	L	<u>vía</u> we:EX0	CL					

'We shot stones at each other.'

The underlying idea is to indicate the coreference of the (group of) participants in a nonprimary role to that in the primary role (exactly as in the reflexive construction). However, the final pronominal phrase distinguishes the reciprocal construction from the reflexive one. It seems worth noting that (in contrast with the polyadic reciprocals), the new reflexive-based reciprocal constructions are not restricted to the "canonical" type (cf. sentences (38), (41)), i.e. these reciprocal constructions apparently cover a wider range of imaginable reciprocal situations.

6. Some diachronic implications

The possible functions of the Bantu set-introducing morpheme are summarized in the following scheme:

(42) Reciprocal > Sociative > V-comitative > N-comitative > NP-coordination,

where "V-comitative" and "N-comitative" denote verbal and nominal instances of the comitative marking, ">" is intended to reflect the degree of integration of the participant set into the event structure (see Section 2). Each pair of neighboring functions on this scale represents a clearly semantically motivated and typologically recurrent marking pattern and can be safely assumed to be expressed by the same morpheme (if not synchronically, then diachronically). What is interesting about the Bantu languages is that one morpheme is employed in <u>every</u> context which requires integration of a participant set into the clause structure (of course, this statement is true only for the whole family, not for each individual language).

Interestingly, the central part of scale (42) (i.e. the verbal comitative and, to a lesser degree, the sociative) represents the least frequent functions of this morpheme across the Bantu languages (see Section 3.2), i.e. the central part of the semantic network associated with participant sets seems to be most easily lost in the course of diachronic evolution. This hypothesis is supported by typological evidence: as mentioned in Section 2, some languages exhibit the marking pattern that subsumes only the reciprocal meaning and the NP-conjunction, i.e. the "central" functions which would provide the semantic motivation of this marking pattern are missing at the synchronic level. This suggests that the grammatical context of such a general set-introducing device imposes strong constraints on its semantic interpretation. If the set-introducing marker is attached to a verb stem, the participant set tends to be interpreted as event-internal, and, ultimately, as involving the most significant modification of event structure, i.e. reciprocal.

Schaldt (1996) suggests that the Bantu reciprocal results from grammaticalization of the NP-conjunction marker (comitative); indeed, this seems to be the most plausible hypothesis, given that, cross-linguistically, bound morphemes develop from free ones, but hardly vice versa. However, the grammaticalization theory also predicts that the meaning of such a morpheme must become more abstract (more "grammatical"); if so, then the development of an NP-conjunction into a reciprocal marker can hardly be appropriately described as grammaticalization: here, a free item with a highly abstract (grammatical) semantics is hypothesized to evolve into a very semantically specific marker of event structure. Accordingly, the hypothesized development imposes strong lexical constraints on the verb stem, in contrast to what should happen in the course of genuine grammaticalization. Interestingly, Voelz suggests that the reciprocal marker has been detached from the verb and attached to the NP and is ultimately grammaticalized as the only conjunction (1977:66). This hypothesis conforms to the principle of semantic unidirectionality, but involves a doubtful assumption that a suffix can be detached from its stem and evolve into a free morpheme.

To sum up, the Bantu data seem to reveal a development essentially different from grammaticalization: a grammatical item is recruited by a language to solve the coding problem posed by a specific meaning; in this case, a specialized reciprocal marker develops from a general set-introducing device.

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Notes

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2. This paper discusses only mono-clausal reciprocal constructions.

3. It should be stressed that, in contrast with other language- and family-specific papers in this volume, this one is written by a non-expert. All examples are taken from published descriptions and analyzed and glossed according to these descriptions.

4. It should be noted that the direct object in the Bantu languages is not rigidly opposed to other object types; a sentence may contain two or three bare NPs which appear to be plausible candidates for this syntactic role (cf., for example, (Kimenyi 1988:366)). Hence, this constraint may be less strong than in languages with a more strict distinction between the direct object and more peripheral syntactic roles. What is essential, however, is that the reciprocal construction always involves the primary participant (subject) and another syntactically prominent (secondary) participant of the underlying role-oriented event, and the latter participant slot is absent from the reciprocal construction.

5. The distinction is neutralized because in Swahili vowel-final loan words take an element $-(l)e_{-/-}(l)i_{-}$ when the reciprocal suffix is attached, and the former is identical in shape to the applicative suffix.

6. Schladt (1996) summarizes evidence indicating that the reciprocal (i.e., polyadic) suffix across Bantu has the form **-na** (rather than **-an-**, as suggested by many authors on the basis of the obligatory grammatical status of the final vowel, see 3.1). For him, this point is a crucial prerequisite for establishing a grammaticalization path leading from a free ad-nominal marker to the verbal reciprocal.

7. A piece of the family-internal evidence in favor of this account is given by the fact that some other Bantu morphemes can also be employed as both pre-nominal and verbal (applicative) markers, with a slight formal modification. For example, in KinyaRwanda, the locative prepositions mu, ku and i can be suffixed to the verb in the form -mo, -ko and -yo respectively (Kimenyi 1988:368).

8. Coupez (1985:19) describes this suffix as homonymous to the polyadic one. A piece of evidence in favor of this interpretation is given by the fact that the suffixes can be combined within one verb form, cf. *-érek-an-an* <-show-INTRV-SOC-> 'to show together'. Yet the reciprocal suffix itself can be doubled in some other languages, cf. the following example from Xhosa: *-buz-an-él-an-* <-ask-REC-APPL-REC-> 'ask exclusively for one another' (Hyman 1993:11). Be it as it may, this formal overlap seems worth mentioning in the context of this paper.

9. On the basis of these examples, the meaning of the suffix could be more precisely described as **alternative** (motion in different directions).

10. The verb *divide* is certainly somewhat "conspicuous", as far as the reciprocal meaning is concerned. Unfortunately, however, the examples provided by Horton give no better possibility to illustrate this distinction.