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Reciprocals in Yéli Dnye, the Papuan language of Rossel Island

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Yéli Dnye has two discernable dedicated constructions for reciprocal marking. The first and main construction uses a dedicated reciprocal pronoun *numo*, somewhat like English *each other*. We can recognise two subconstructions. First, the ‘*numo*-construction’, where the reciprocal pronoun is a patient of the verb, and where the invariant pronoun *numo* is obligatorily incorporated, triggering intransitivisation (e.g. A-NPs become absolutive). This subconstruction has complexities, for example in the punctual aspect only, the verb is inflected like a transitive, but with enclitics mismatching actual person/number. In the second variant or subconstruction, the ‘*noko*-construction’, the same reciprocal pronoun (sometimes case-marked as *noko*) occurs but now in oblique positions with either transitive or intransitive verbs. The reciprocal element here has some peculiar binding properties. Finally, the second independent construction is a dedicated periphrastic (or *woni...woni*) construction, glossing ‘the one did X to the other, and the other did X to the one.’ It is one of the rare *cross-serial dependencies* that show that natural languages cannot be modelled by context-free phrase-structure grammars. Finally, the usage of these two distinct constructions is discussed.

1. Background

Rossel Island (154.14 E, 11.22 S), lying c. 450 km offshore to the east from New Guinea is the easternmost landfall of the Louiseade archipelago. It is a ‘high’ island, roughly equidistant between the Solomons and New Guinea, and belongs territorially to Papua New Guinea, although there is little commerce with the mainland. Four thousand souls live on Rossel, all primarily (or only) speakers of Yéli Dnye, a so-called ‘Papuan’ (i.e. non-Austronesian) language. The language is an isolate, with no known connections to any other extant language (various speculations by Wurm 1982 and others notwithstanding). Latest bioinformatic

methods applied to structural properties still leave the matter unresolved (Dunn et al. 2005). Earlier materials are confined to a sketch grammar detailing phonology and verbal inflection and a 3000 word dictionary (Henderson 1995, Henderson & Henderson 1999), but a full grammar and many detailed papers have been prepared by the present author (see references in the bibliography).

The language has many unusual properties. It has a huge phoneme inventory (90 phonemes by traditional criteria), with some segments unique to phonetic science (Maddieson & Levinson, in prep.). Verb agreement is exhibited through (a) an immense arrays of proclitics (over 1000), which are portmanteau morphs expressing negation, tense, aspect, person/number of subject, deixis, evidentiality, associated motion, counterfactuality – potentially all in one monosyllable, (b) a somewhat smaller set of enclitics which code for both subject and object properties, transitivity, and all the tense/aspect/person/number features, but using a classification which cross-cuts the proclitic categories. One aspect of this cross-classification, relevant below, is the collapse of the 9 person/number categories of the proclitics into 2 categories for most of the enclitics:

Table 1. Monofocal/Polyfocal distinction as a cross-classification of the nine person-number distinctions in enclitics

	Singular	Dual	Plural
1st person	MONOFOCAL	POLYFOCAL	
2nd person			
3rd person			

Most verbs supplete, especially on tense, mood and aspect, but sometimes on other features (like person) too. Morphological derivation is however pretty restricted. Syntactic structure is flat; both the NP and the immediate verbal complex (verb and its clitics) are highly structured (although there is no VP), but the order of major phrases is free (although typically verb final).

Relevant for the present topic is the fact that the language is strongly ergative. Noun phrases are case-marked on an ergative-absolutive basis (the absolutive being unmarked), and there is a full range of other cases, including an experiencer case. All NPs, including pronominals, can be ergative case-marked, and only personal pronouns (not e.g. relative pronouns or Wh-pronouns) can in certain circumstances be subjects of transitive clauses and unmarked as ergative. While the agreement proclitics on the verb are 'nominative' in character, in the sense that they are indifferent to transitive vs. intransitive subjects, there are partially redundant enclitics on the verb that treat subjects of transitive vs. intransitive clauses entirely differently – they look more 'ergative' in character (see Levinson,

in prep. a). Many aspects of the grammar – e.g. argument structure alternations, nominalisations, quantifier floating – hinge on the distinction between ergative vs. absolutive noun phrases, and in this sense the language can be said to be syntactically ergative (Levinson, in prep. a).

Another aspect of the grammar pertinent to the present topic is the formation of reflexives. Reflexives are formed with a special reflexive/emphatic nominal, *chóochóó*. Where the reflexive pronoun is in patient role (i.e. can be interpreted as the object of a transitive verb), the verb is inflected like a normal transitive and the reflexive is in unmarked (presumably absolutive) case bound by an ergative subject.¹ Because the element *chóochóó* is also an emphatic, there is a general ambiguity in interpretation of these structures:

- (1) *Weta ngê chóochóó dê* *vy:a Ø*
 Weta ERG 3.self 3SBJ.ImmPast hit MonofocalsBJ.3SG.OBJ.PROX.tense
 i. ‘Weta killed himself’
 ii. ‘Weta himself killed (that animate entity)’

This construction contrasts with the corresponding reciprocal pronoun constructions (specifically the *numo* subconstruction, described below) in systematic ways. The subject of reflexives is in ergative case, while that of the corresponding reciprocal must be in the absolutive (unmarked) case; the reflexive pronoun has nine variants for person/number, while the reciprocal pronoun is indeclinable; the reflexive pronoun acts like a normal O-argument in absolutive case, while the reciprocal pronoun is obligatorily incorporated. (The one thing they have in common is that agreement marked in transitive enclitics is neutralised to 3rd person object regardless of actual subject person, but this is optional for reflexives and obligatory for reciprocals). Moreover, there does not seem to be any semantic overlap which would allow the same scene to be coded either reflexively or reciprocally.

2. Reciprocal coding

Reciprocal events are coded using one of the constructions in the following table, each of which is explained in one of the following sections. As mentioned, the *numo* and *noko* subconstructions are treated as subtypes of a single major dedicated reciprocal construction, somewhat similar to *each other* constructions in

1. The reflexive pronoun is never directly case-marked. It can occur in the subject position of e.g. nominal clauses, and it can occur coreferential with an explicit object – the complexities lie beyond the current essay (see Levinson, in prep. b).

English. However, the constructional details of the two variants are sufficiently specialised to warrant separate description below.

Table 2. The reciprocal constructions

Properties	Reciprocal pronoun construction			Periphrastic construction
	(i) <i>numo</i> -subconstruction	(ii) <i>noko</i> -subconstruction		<i>woni-woni</i> construction
		Oblique	possessive	
Case of subject	absolutive	ergative, absolutive	ergative, absolutive, experiencer	ergative
Transitive enclitics	+ in punctual aspect – in continuous aspect	+/-	+	+
Deviant agreement	+	–	–	–

2.1 The *numo* subconstruction – reciprocal pronouns as patients of transitive verbs

Let us concentrate first on the *numo* subconstruction. *Numo* is a dedicated reciprocal pronoun, unlike most other pronouns invariant for number/person (but presupposing dual or plural). In the eponymous construction, *numo* can be understood to be a kind of object of the verb, which must be a transitive root (all verbs are transitive or intransitive, and there are few valence-changing operations). However, *numo* in this construction is obligatorily incorporated and the subject of the verb must be in the absolutive case.² Compare the following normal transitive (a) with its corresponding reciprocal (b):

- (2) a. *Kakan ngê Nganapwe-Ø wunê kp:anê Ø*
 Kakan ERG Nganapwe-ABS 3HAB.CI chasing MFS.3SG.OBJ.PROX.TR
 ‘Kakan habitually chases Nganapwe.’

2. There is regular incorporation in this language, but as we will see this construction has irregular transitivity features. Example (a) shows a transitive sentence, and (b) its regular incorporated counterpart:

- (a) *tpile nyimo ghêèghêè té*
 thing 2SG/1dualImmFut.CI+Motion washing pl.OBJ.MF.SBJ.TR
 ‘We 2 are going to wash the dishes (things).’
 (b) *nyimo tpile ghêèghêè mo*
 2SG/1dualImmFut.CI+Motion thing washing dualSBJ.PROX.INTR
 ‘We two are going dishes-washing.’

- b. *Kakan- Ø Nganapwe- Ø wunê numo*
 Kakan-ABS Nganapwe-ABS 3_{HAB.CI} each.other
kp:anê mo
 chasing 3DualsBJ.PROX.INTR.CI
 ‘Kakan and Nganapwe habitually chase each other.’

Note that in (b), in addition to the loss of ergative case on the subject, *numo* now appears between the verbal proclitic (here *wunê*) and verb (*kp:anê*) – a position only open to incorporated objects.³ Note also that the verbal enclitic *mo* at the end of the sentence marks the clause as intransitive. As a second illustration, the following shows a pair of sentences in the habitual mood (without overt NPs, as is typical) – they differ only in that the second is reciprocal and behaves like an intransitive:

- (3) a. *a vye dumo*
 3_{HABCONTPROX} hitting pfs_{subject}3DualObject_{HABCONTPROX.TR}
 ‘They-Dual₁ are habitually hitting them-Dual₂’
 (i.e. those two guys are habitually hitting those other two guys)
- b. *a numo vyeé nódo*
 3_{HABCONTPROX} each.other hitting _{HABCONTPROX.DualSubject}.INTR
 ‘They two are habitually hitting each other.’

Although the ergative marking of the subject is always lost and *numo* is always incorporated in this reciprocal subconstruction, the marking of transitivity in the enclitic is complex and variable, according to aspect. Just in case the aspect is continuous (in either the indicative or habitual mood),⁴ the verbal enclitics are fully intransitive (in the sense that they are drawn from a distinct set restricted to intransitive verbs). In all other cases, the enclitics are transitive, despite the fact that the subject is in absolutive case and the object (the reciprocal pronoun *numo*) is incorporated. But these transitive clitics are deviant in the sense that they have frozen person/number values – they always encode a Monofocal subject (that is, a singular *or* 1st person subject) and a 3rd person object – despite the fact that a reciprocal sentence must logically have a dual or plural subject and an object

3. There is evidence that *numo* is not an ordinary incorporated nominal, because another nominal can be incorporated with it as in:

ka numo mbodo l:âmol:âmo mo
 Cert3SG.CI each.other head fixing DualsBJ.INTR
 ‘They are fixing each other’s heads (delousing).’

However, Yéli Dnye does allow phrasal incorporation in other cases too.

4. For language internal reasons, habitual must be interpreted as a mood and not an aspect.

matching in person/number. The following sentences, each constituted by just a verb and its clitics (+/- *numo*), illustrate these different values of the enclitics.

- (4) a. **proclitic** **verb** **enclitic**
nmî *vy:a* *té*
 1PL.ImmPast.Punct hit.PROX Monfocal.SBJ.3PL.OBJ.ImmPast
 ‘We3 hit them3 today.’
- b. *nmî* *numo* *vy:a* *té*
 1PL.ImmPast.Punct each.other hit.PROX Monfocal.SBJ.3PL.OBJ.ImmPast
 ‘We3 hit each other today.’
- c. *dê* *vy:a* *t:oo*
 3.ImmPast.Punct hit.PROX Polyfocal.SBJ.3PL.OBJ.ImmPast
 ‘They3 hit them3 today.’
- d. *dê* *numo* *vy:a* *té*
 3.ImmPast.Punct each.other hit.PROX Monofocal.SBJ.3PL.OBJ.ImmPast
 ‘They3 hit each other.’

Sentence (a) shows a normal transitive, with an enclitic encoding a monofocal (here 1st person plural) subject and a 3rd person plural object. Note how the reciprocal counterpart in (b) happens to have the same enclitic as (a), even though the object is now actually 1st person. If we take a normal transitive clause with a 3rd person subject as in (c), we see that it takes a different enclitic, *t:oo*, coding a Polyfocal subject (2nd or 3rd person dual or plural) and a 3rd plural object. The reciprocal counterpart of this sentence given in (d) has an enclitic marking Monofocal subject even though the subject is actually Polyfocal. In this way, whenever the intransitivised verb peculiarly takes transitive enclitics, it does so in a deviant manner.

Thus, although Yéli Dnye has productive incorporation with concomitant intransitivisation (A-role subject becomes absolutive, verb inflects as intransitive), this construction is special because (a) the incorporation is obligatory, (b) intransitivisation is partial in the punctual aspect, (c) verbal agreement is deviant in the punctual aspect.

To summarise, here is how to cook the *numo* subconstruction:

1. Encode the A-argument in absolutive case;
2. Add *numo* inside the verbal proclitics in the slot reserved for incorporated objects;
3. If the aspect is punctual, make the verbal enclitic inflect like a transitive – but use deviant agreement in the verbal enclitic, which must code *as if* for a 3rd person object and *as if* for a Monofocal Subject, as appropriate for the tense;

4. If the aspect is continuous, make the verb intransitive – use the dual or plural verbal enclitic appropriate to the actual subject number (dual, plural) and the tense.

Thus, only verbs in the continuous aspect trigger the full marking of intransitivity, as in Table 3:

Table 3. Special properties of the *numo* subconstruction

Aspect	Punctual	Continuous
A-NPs Absolutive	+	+
Incorporated <i>numo</i>	+	+
Intransitive inflection	–	+
Transitive inflection as if singular subject and 3rd person object	+	–

A point worth emphasizing is that, although the fully intransitivising pattern in the continuous aspect is parallel to other cases of object incorporation, the punctual pattern is entirely unique to this construction: there are no other constructions in the language where an incorporated object triggers transitive enclitics, and no other cases where the agreement system is systematically shifted to the singular (Monofocal) for a necessarily plural subject. That makes it a unique subconstruction.

2.2 The *noko* subconstruction – reciprocals in oblique and possessive positions

Just like the English reciprocal *each other*, the Yéli Dnye reciprocal pronoun can occur outside the object slot of a transitive verb, in oblique adjuncts and possessive phrases (cf. *They bumped against each other*, *They like each other's friends*). In these other slots, the reciprocal pronoun is liberated from the special constructional correlates seen in the prior section.

I will call this variant of the reciprocal pronoun construction the *noko* subconstruction, after its typical exponent element, *noko*, which is the same reciprocal pronoun as in the prior section, but here in dative/allative form (it is possible to substitute this suppletive dative form with the non-suppletive *numo ka*, 'to each other'). Unlike the *numo* subconstruction, the *noko* subconstruction has no constraints on the subject, which can be ergative or absolutive, or on the verb which can be transitive or intransitive, or on the inflectional system which just agrees as usual (with a wrinkle mentioned below). *Noko* or its equivalents can occur

wherever a pronoun can occur in oblique or possessive phrases (even, it seems, when not bound by a higher NP). Unlike almost every other pronoun in the language,⁵ which has its own nine-cell paradigm (3 persons, singular/dual/plural), *noko/numo* is invariant.

Noko can thus occur in transitive clauses with ergative subjects, both implicit and explicit:

- (5) a. *kópu dè noko dnye dy:ââ*
 message two to.each.other 1DualImmPastPI send
 ‘We2 sent 2 messages to each other (today).’
- b. *Pikwe Lamonga y:oo Mutros noko dè y:ee*
 Pikwe Lamonga ERG+PL tobacco to.each.other 3ImmPastPI gave
ngmê
 PFS_3SG.OBJ.PROX(tvPostN)
 ‘Pikwe and Lamonga gave the tobacco to each other.’

Note that in (b) a Polyfocal subject receives Polyfocal marking in the enclitic, unlike in the *numo* construction. Further, fully intransitive clauses with intransitive verbs can host *noko*:

- (6) a. *yoo noko ka kwopwepe té*
 people to.each.other Def3PRS.CI quarrel PL.SBJ.PROX.INTR
 ‘The people (3+) are quarreling with each other.’
- b. *yoo numo ka (=noko) ka dnyepéli té*
 people each.other DAT Def3PRS.CI squabbling PL.SBJ.PROX.INTR
 ‘The people are squabbling with each other.’
- c. *Teacher yoo noko ka mbumu té*
 Teacher plural to.each.other Def3PRS.CI talking PL.SBJ.PROX.INTR
 ‘The teachers are talking to each other.’

Many oblique positions are introduced by postpositions, and *numo* (not *noko* in this case) can occur as the complement of many other postpositions, in both transitive and intransitive clauses.

- (7) a. *Kakan Ghalyu y:oo nté numo u l:êê diy:o dè ch:ee*
 Kakan Ghalyu ERG+PL food each its reason 3ImmPast cook
ngmê
 PFS_3SG.OBJ.PROX(tvPostN)
 ‘Kakan and Ghalyu cooked for each other’ (lit. ‘on account of each other’).

5. The relative pronoun *n:ii* and the interrogative pronoun *n:uu* seem to be the only other invariant personal pronouns. Most pronouns have, in addition to their 9-cell array, suppletive variants for various cases (as with *noko*).

- b. *tp:ee dmââdi numo 'nuwo ka nt:uu mo*
 boy girl each.other nose+LOC 3PRS.CI kiss/salivate SBJ.DU
 'The boy and girl are kissing each other on the nose.'
 lit. 'salivating/kissing on each other's noses' (putting noses together is
 sign of affection)

Just as in English, this subconstruction can extend to a fairly loose sense of reciprocity of a chaining sort (cf. the familiar 'sit next to/kiss/be on top of/be touching each other'):

- (8) a. *Yidika Mwolâ numo chedê ka tóo mo*
 Yidika Mwolâ each near 3PRS.CI sit DualCI.PROX.INTR
 'Yidika and Mwolâ are sitting next to each other.'
- b. *Yidika Mwolâ Pikuwa numo chedê ka pyede*
 Yidika Mwolâ Pikuwa each.other near 3PRS.CI sit.PL
té
 DualCI.PROX.INTR
 'Yidika, Mwolâ and Pikuwa are sitting next to each other.'
- c. *pileti dyuu numo u pwopwo a wee*
 plate pile each.other 3SGPoss top 3PRS.CI stand.PL
 'The pile of plates are standing on top of each other.'
- d. *keeme kîgha numo p:uu ka pyede*
 mango fruit each.other on/against 3PRS.CI sit.PL
 'The mangos are touching each other.'
- e. *tiini dyuu numo u kwo kwo a wee*
 tin pile each.other inside inside 3PRS.CI stand.PL
 'The pile of tins are stacked inside one another.'

There is a distinct subtype of *noko*-construction which involves the reciprocal pronoun acting as the possessor of a core, non-oblique argument:

- (9) *kî yéli y:oo numo kóo dmi kêdê*
 these people ERG.PL each.other hand CL CERT3SGImmPastPI
mgîmî ngmê
 grab PolysBJ.F3SG.OBJ
 'These people grabbed each other's hands.'

Notice that this contrasts with possessives inside sometimes covert oblique phrases as in (7b), and that the fact that the head noun is not the reciprocal blocks the incorporated *numo*-construction. *Numo* here is a mere possessive modifier within an NP.

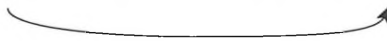
Although the *noko*-construction as a whole seems familiar enough from its English counterpart (a similar invariant reciprocal pronoun of fairly free

occurrence), there are a couple of interesting properties. First, the binding constraints are unclear. For example, the language has experiencer ‘subjects’ marked with the dative or a special experiencer case. The reciprocal pronoun can be such an experiencer ‘subject’ bound by a possessive in another NP as in (a) below, but equally it can occur in such a possessive NP and be bound by such an experiencer subject as in (b):

- (10) a. *yi yi dē noko a kwo mo*
 their desire Dual to.each.other 3CI standing 3DualsBJ.INTR
 ‘They want/need each other.’
 lit. ‘Their two desires are standing to each other.’
- b. *Yidika Pikwe numo nee dē u yi dē*
 Yidika Pikwe each.other’s canoe Dual 3SG.POSS desire Dual
y:e a kwo mo
 DualEXP 3CI stand DualsBJ
 ‘Yidika and Pikwe each want the other’s canoes.’
 lit. ‘Yidika and Pikwe each other’s two canoes its two desires are standing to them.’

In the (a) case the dual desires are the surface subject, as reflected in the verb inflection, and the dative-case reciprocal *noko* is the experiencer ‘subject’ bound by the possessive *yi* in the Absolutive NP (surface subject). In the (b) sentence, the possessive *numo* reciprocal is bound by the Experiencer-case-marked resumptive pronoun (*y:e*) (referring to Yidika and Pikwe). So here the Experiencer subject binds the possessive in the Absolutive NP. This suggests that the binding is determined by degrees of obliqueness or embeddedness:

(11a) [[Their] desires] are standing [to each other]



(11b) [[[Each other’s] canoes] their] desire] are standing [to them]



In general, the binding properties of reciprocals and reflexives may help us to understand the as yet unresolved questions about the syntactic status of Yélí Dnye arguments. Note that in the first, *numo*-subconstruction, we saw that an ergative NP may not bind the incorporated absolutive O-NP (*numo*) – this is a constraint that holds across the board, although ergative NPs can bind reciprocal pronouns in oblique or possessive constructions. On the other hand, absolutive NPs can bind incorporated reciprocals or oblique ones. Now we have just seen that possessors may bind, or may be bound by, experiencer NPs. Very tentatively these facts jointly suggest a binder hierarchy like the following:

Absolutive > Ergative > Oblique > $\left\{ \begin{array}{l} \text{Possessive} \\ \text{Experiencer} \end{array} \right.$

where each can only bind an NP lower or equal on the hierarchy. Such a hierarchy would be in line with the fact that Yéli Dnye shows other evidence of being a syntactically ergative language (Levinson, in prep. a). Note that a simpler solution, whereby the verbal clitics are actually the binders, won't work given the experiencer sentences where the inflections agree with the surface absolutive (e.g. in (8b) the experiencer binds the reciprocal, but the verb agrees with the absolutive 'desire' nominal).

Finally, a curious phenomenon occurs with verbs of giving, which supplete on person of recipient. We earlier noted that in the *numo*-subconstruction in the punctual aspect where transitive agreement clitics occur, these enclitics encode a singular (actually Monofocal) subject and 3rd person object regardless of actual person/number. Now in the one case where oblique reciprocals can control 'agreement', this too is 3rd person. This case is the verb 'to give' which has different forms for 'give to 3rd person' and 'give to 1st/2nd person', thus 'agreeing' with the person of the recipient, as in (a) below:

- (12) a. *u.kwo ngmêda y:oo, a ka*
 him.DAT INDEF.1SGImmPast give.to.3rd(non-followed) 1SG DAT
ngmêda kê
 INDEFetc. give.to.1/2
 'I gave him one book, and he gave me/you one.'
- b. *puku dmi dê noko dnye y:ee*
 book bundle two to.each.other 1Dual.ImmPast.PI give.to3rdPerson
dê
 MFS.3DualOBJ.PROX
 'We2 gave each other the two books.'

Now notice that in (b) despite the reciprocal 1st/2nd person reciprocation, *y:ee* 'give-to-3rd-person' is used instead of the expected *kê* 'give-to-1st/2nd-person'.⁶ Thus there is something quite systematic in this 3rd person agreement with reciprocals.

6. The verb forms *y:oo* and *y:ee* are the same verb – the forms alternate according to whether there is a non-zero enclitic (followed form) or a zero one (non-followed form).

2.3 The periphrastic *woni...woni* construction

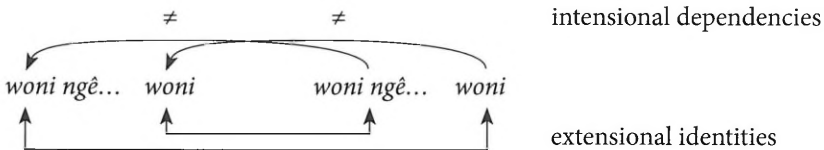
There is a totally unrelated construction that can have a systematic reciprocal interpretation. This is based on the pronoun *woni*: a sequence *woni...woni* has the interpretation ‘the one ... the other’:

- (13) *kî pini wonî ngê woni da mgoko*
 That man the.one ERG the.other 3ImmPast+CLOSE hug
 ‘The one man hugged the other.’

When however two such *woni...woni* sequences occur they have an unambiguously reciprocal interpretation:

- (14) *kî pini wonî ngê woni da mgoko,*
 That man the.one ERG the.other 3ImmPast+CLOSE hug
wonî ngê woni myedê mgoko
 the.other ERG the.one also.3ImmPast hug
 ‘The one man₁ hugged the other₂, and also the other₂ hugged the one₁’
 (i.e. They hugged each other one by one)

The *woni...woni* construction seems to be used, in preference to the *numo* or *noko* constructions, for reciprocal actions which are not simultaneous, but which can rather be thought about as two separate events. The reciprocal use of the construction has some theoretical interest: it is one of the rare *cross-serial dependencies* that show that natural languages cannot be modelled by context-free phrase-structure grammars (of the GPSG type, see Partee, ter Meulen & Wall 1990:503ff). For the *intensional* (as opposed to *extensional*) dependencies in question are of the following sort, where the second *woni ngê* (*woni* + ERG) depends for its interpretation on its contrast to the first *woni ngê* (the second ‘the other’ means ‘not the prior one in the same syntactic role’), and similarly for the two instances of *woni* in the unmarked Absolutive case:



Summarising this section, we have three distinct constructions, each with their own complexities. Interest now turns to how they are actually deployed.

3. Semantics and usage patterns

3.1 General remarks

On the basis of systematic elicitation data (MPI Field Manual 2003, Reciprocals Questionnaire; Evans & Nordlinger 2004), a number of general observations can be made.

It was noted at the beginning of this paper that usage of reciprocals does not overlap with reflexives. Nor does it overlap with distributives, which are expressed with two different constructions – the first involving *ntémwintémwi* as in (a) entails that the predicate holds for each subject, and the second involving reduplicated numerals as in (b) entails ‘n-at-a-time’ (batch application of the predicate):

- (15) a. *Mwonî Yidika Chris k:ii nt:uu ntémwintémwi ka pîpî ngmê*
 Mwonî Yidika Chris banana fruit each 3CI eating PFS3SG.OBJ
 ‘Mwonî, Yidika and Chris are each eating a banana.’⁷
- b. *Mwonî ngê dee w:uu miyó miyó ka nt:ene*
 Mwonî ERG yam seeds two two 3CI planting
 ‘Mwonî is planting yams two-by-two (two in each hole).’

Despite this lack of overlap with reflexivity or distributivity, usage of the reciprocal is quite broad. For example, where an event occurs in which each party does a distinct but complementary action (as in giving~receiving), the reciprocal is sometimes employed:

- (16) a. *pini n:ii dê y:oo tuu noko dê y:ee*
 man who two ERG axe to.each.other 3ImmPast give.to3
ngmê, kê vyîlo
 PFS3SG.OBJ that the.one
 ‘The two men who gave each other an axe, those two.’
- b. *pini n:ii dê y:oo tuu dê noko dê y:ee*
 man who two ERG axe Dual to.each.other 3ImmPast give.to3
d:oo, kê vyîlo dê
 PFS3SG.OBJ that the.one Dual
 ‘The two men who gave each other the two axes, those ones.’

The (a) sentence is easily read as describing a single axe-giving event. Although the (b) sentence has the natural interpretation of an exchange of axes, it can also

7. The ergative marker may be dispensed with in a list of three or more names.

be read as one man gave the other two axes! Other asymmetrical relations expressed with the reciprocal include chasing, following, etc.:

- (17) a. *Yidika Lamonga numo kuwó ka paa mo*
 Yidika Lamonga each.other behind 3CI walk DualSBJ
 ‘Yidika and Lamonga are walking behind one another.’
 b. *mbêpê pyu yoo wunê numo kp:anê té*
 running doers PL 3HAB.PROX+CLOSE each.other chase PL.SBJ
 ‘The runners are chasing each other (round the track).’

There appear to be a number of non-obvious grammatical constraints that emerged from this elicitation. Speakers do not like more than one PP in a sentence, and so a spatial PP will block a reciprocal PP, and vice versa:

- (18) a. *Yidika Mwolâ numo chedê ka tóó mo*
 Yidika Mwolâ each.other near 3PRS.CI sit DualCI.PROX.INTR
 ‘Yidika and Mwolâ are sitting next to each other.’
 b. *Yidika Mwolâ siit mbêmê ka tóó mo*
 Yidika Mwolâ bench on 3PRS.CI sit DualCI.PROX.INTR
 ‘Yidika and Mwolâ are sitting on a bench.’

Although verbs like ‘speak to’ and ‘hug’ usually presuppose reciprocal actions and so don’t require overt reciprocals, they can happily occur with them. On the other hand, there are some verbs that do seem to require reciprocals, notably verbs of quarreling:

- (19) a. *yoo noko ka dnyepéli té*
 PL RECIP.DAT CERT3CI quarrel PL.INTR
 ‘They are arguing with each other.’
 b. *yoo noko ka kwopwepe té*
 PL RECIP.DAT CERT3CI quarrel PL.INTR
 ‘They are quarrelling with each other.’

Other facts about usage emerge from the description of a systematic set of video-clips, to which we now turn.

3.2 Description of video stimuli

The clips in the MPI 2004 Field Manual (Evans et al. 2004) oppose such features of reciprocal actions as whether they are simultaneous vs. sequential, symmetrical vs. asymmetrical, chained vs. melee, etc. The distribution of the constructions

over the 64 clips (as used by just one consultant)⁸ was examined to see if there was a clear restriction of one construction to a restricted class of types of scene. What one might expect is that the less prototypical or more marginal a reciprocal scene is, the less likely it is to receive a core reciprocal construction. Twelve scenes were described without using one of our three reciprocal constructions, i.e. in non-reciprocal terms. Of these, 9 scenes had indeed no reciprocation of actions, two were ‘melee’, and one involved sequential chaining without reciprocation. It is clear in all these cases why a reciprocal was avoided: for example in one of the melee scenes (scene 32) a single girl gives to each of three other girls a present and gets one from each in exchange – this could not be coded accurately using one reciprocal clause, it would take three.

Similarly, the periphrastic *woni...woni* construction might have been expected on Gricean grounds to pick up less stereotypical reciprocal scenarios. There were just six usages – four of them were indeed on sequential or delayed reciprocal actions (scene 2, 22, 46, 58), but two (scenes 41, 54) were prototypical simultaneous acts of giving or slapping between two protagonists.⁹

At the other end of the constructional range, it might be expected that the incorporated *numo* subconstruction might be more restricted in use than the oblique *noko* subconstruction, since incorporation often carries stereotypical connotations. There were fourteen uses of the *numo* subconstruction, and of these five (scenes 23, 42, 44, 48, 64) lacked simultaneous pairwise reciprocation. Of these five, three scenes involved hitting, of which two involved non-simultaneous reciprocation of action, while one scene (48) involved non-reciprocation (a chain of actors, with the first hitting the second, the second the third, etc.). Scene 23 involved one active hugging participant and one passive – this was described using the strong reciprocal by other consultants too. Scene 64 (one way chasing) shows the potentially broad application of this construction.

8. Three other consultants’ descriptions were collected and transcribed but not yet analysed. The frequency of constructions used by the informant is shown in the following table (in 12 cases no reciprocal was used):

	Reciprocal pronoun construction		Periphrastic construction
	(i) <i>numo</i> -subconstruction	(ii) <i>noko</i> -subconstruction	<i>woni-woni</i> construction
		oblique	possessive
Frequency	14	25	5
			6

9. Perhaps the prediction was wrong – the *woni-woni* construction is both more verbose and actually more precise than the others, which permit a greater latitude for asymmetrical event description.

Finally, we turn to the *noko*-construction, using the reciprocal pronoun in oblique or possessive constructions. A prediction here was that the possessive version, as in ‘They hit each other’s shoulders’, might code more prototypical reciprocal events compared to the oblique PP version as in ‘they hit on each other’s shoulders’. There were just six of this possessive type, and four of them involved all parties pairwise reciprocating (5, 38, 62, 63), while the other two involved simultaneous pairwise reciprocation, without cross-pair reciprocation (13, 49). The oblique *noko* construction appeared fairly unconstrained in use, being happily applied to sequential (non-immediate) reciprocation, and to four asymmetrical scenes (1, 17, 25, 39) without reciprocation (involving one way talking, hitting, looking and chasing).

The results suggest that the four options – avoiding a reciprocal, using the *woni-woni*, *numo* or *noko* constructions – are systematically deployed, with the *numo* and possessive *noko* constructions being most constrained to prototypical reciprocal scenes. Since there were overlaps in distribution (e.g. *woni-woni* being used to code prototypical scenes), it seems unlikely that the coding is entirely due to semantic factors. More likely is that where a range of constructions can be employed, the use of one rather than another is motivated by Gricean pragmatic factors. Suppose, for example, that the use of the *numo* construction I-implicates (Levinson 2000) stereotypical scenarios – then avoidance of use of this form may suggest that the scene is less than prototypically reciprocal. Similarly, use of a verbose form like the *woni-woni* construction may suggest (by M-implicature, Levinson 2000) that a more direct reciprocal would be misleading. A pragmatic analysis of the oppositions here would predict some of the flexibility of actual usage.

4. Conclusions

This language isolate clearly has two dedicated reciprocal constructions, one of which has well defined subtypes, which thus treat reciprocity as a distinct semantic domain, not overlapping with e.g. distributive or reflexive situations. The main construction, with its three subtypes, is built on an indeclinable reciprocal pronoun. Linguistically most interesting is the incorporated *numo*-subconstruction, which shows varied degrees of intransitivisation under aspect alternation. This construction, along with a possessive reciprocal construction, seems generally restricted to prototype reciprocal scenes, even though it semantically extends to one-way actions of giving, chasing and the like.

Abbreviations

(Where space permits, these abbreviations are spelt out for ease of reading.)

1, 2, 3	grammatical person	MFS	Monofocal Subject
ABS	absolutive case	OBJ	Object
CERT	'certain' (epistemic modifier)	pl/PL	Plural
CI	continuous indicative	PF	Polyfocal (2nd, 3rd person dual or plural)
CONT	continuous aspect	PFS	Polyfocal Subject
+CLOSE	deictic 'hither'	PI	punctual indicative
DAT	Dative	POSS	possessive
DU	Dual	PRS	present tense
ERG	ergative case	PROX	proximate tense (3 tenses closest to coding time)
EXP	experiencer case		
HAB	Habitual	PUNCT	punctual aspect
ImmFut	immediate future tense	SG	Singular
ImmPast	immediate past tense	SBJ	subject
INTR	intransitive	TR	transitive
MF	Monofocal (singular or 1st person)		

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