Reciprocal constructions in Mian 1

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Abstract: Despite the ongoing interest in reciprocal situations, which form a central part of our social, intellectual and moral lives, and the linguistic encoding of such situations in different languages, studies of reciprocals in Papuan languages remain under-represented in the reciprocal literature. The Trans New Guinea languages Mian, Amele and Hua have a reciprocal construction in which the reciprocal subevents are expressed by individual transitive verbs plus an existential verb expressing that the reciprocal action is done together. Mian goes one step further and fuses this construction into a single verb with a reciprocal suffix -sese. *The present paper is an in-depth analysis of the morphology, syntax and semantics of reciprocal constructions in Mian, including a comparison with Amele, and an analysis of the diachronic development of the Mian reciprocal, whose origin presumably lies in a biclausal description in which the reciprocal subevents are spelled out separately and sequentially.*

Keywords: reciprocals; transitivity; Trans New Guinea; Mian; Amele.

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1 Introduction

In recent years there has been a strong theoretical and typological interest in the study of reciprocal constructions and the situations for whose description they are employed in the languages of the world (Dalrymple, Kanazawa, Mchombo & Peters 1994, 1998; Frajzyngier & Curl 2000; Behrens 2007; Nedjalkov 2007a; König & Gast 2008; Evans 2010; Evans, Gaby, Levinson & Majid 2011). This literature investigates a wide range of types of such constructions, yet contains only little on reciprocals in Papuan languages, though some interesting facts have been noted about the Trans New Guinea (TNG) languages Amele (Roberts 1987) and Hua (Haiman 1980), where multi-verb constructions with a special type of switch-reference marking are used to express reciprocal situations. These points are taken up by Evans (2008, 2010) and will figure prominently in this article.

This type of reciprocal construction is restricted to Papuan Highlands languages. The Papuan language Mian (TNG, Ok family; Fedden 2011) has two related reciprocal constructions which are similar to those found in Amele or Hua.[2] The aim of this paper is to give a thorough synchronic and diachronic analysis of these two constructions, which are interesting to typologists in general, to anyone working on or interested in reciprocals, and to historical linguists as an unusual construction for which a source can be continuingly reconstructed.

[2] There are chapters dedicated to reciprocals in the Papuan languages Savosavo (Wegener 2011), Rotokas (Robinson 2011), and Yélî Dnye (Levinson 2011) in the volume by Evans, Gaby, Levinson and Majid (2011). None of these are TNG languages and they do not have the complex constructions found in Mian.

The first construction type is illustrated in examples (1) to (3). Examples (4) to (7) below illustrate the second type. Both types are dedicated reciprocals in the sense that they can only have reciprocal semantics. As more detailed explanation of the component parts of these constructions will be provided in sections 2 and 3 I will just highlight the most important features here.

(1) *(ī)* *i-nâ'-sese-bl-Ø-io=be*
(3PL) PL.AN.O-hit.PFV-RECP-exist-IPFV-2/3PL.AN.SBJ=DECL
'They (more than two) are hitting each other.'

The reciprocal morpheme is *-sese*. The free pronoun is optional (hence in brackets) but if present it has to be in the plural. The reciprocants have to be encoded as both subject and object. The reciprocal verb remains transitive. The whole set of reciprocants is cross-referenced on the verb as subject (suffixal *-io*) and object (prefixal *i-*) and the cross-referencing affixes are both in the plural. Example (1) can only be used if there are more than two participants involved in a reciprocal action. If there are exactly two participants of the same sex—and only in this case—(2) or (3) have to be used. They cannot be used otherwise.

(2) *(ī)* *a-nâ'-sese-bl-Ø-io=be*
(3PL) 3SG.M.O-hit.PFV-RECP-exist-IPFV-2/3PL.AN.SBJ=DECL
'They (two males) are hitting each other.'

(3) *(ī)* *wa-nâ'-sese-bl-Ø-io=be*

(3PL) 3SG.F.O-hit.PFV-RECP-exist-IPFV-2/3PL.AN.SBJ=DECL

'They (two females) are hitting each other.'

In (2) and (3) everything is as in (1) with the exception that the object prefix has to be in the singular and reflect the gender of the participants, i.e., *a-* 'third person singular masculine' or *wa-* 'third person singular feminine'. Throughout this paper I will call the construction exemplified in (1) to (3) the *sese*-construction because it contains the reciprocal suffix *-sese*.

There is an alternative construction for (1), (2), and (3), illustrated in (4) with a plural object prefix, (5) with a 'third person singular masculine' prefix and (6) with a 'third person singular feminine' prefix:

(4) *(ī)* *i-nâ'-s-e* *i-nâ'-s-e*

(3PL) PL.AN.O-hit.PFV-DS.SEQ-3SG.M.SBJ PL.AN.O-hit.PFV-DS.SEQ-3SG.M.SBJ

bl-Ø-io=be

exist-IPFV-2/3PL.AN.SBJ=DECL

'They (more than two) are hitting each other.'

(5) *(ī)* *a-nâ'-s-e*

(3PL) 3SG.M.O-hit.PFV-DS.SEQ-3SG.M.SBJ

a-nâ'-s-e

3SG.M.O-hit.PFV-DS.SEQ-3SG.M.SBJ

bl-Ø-io=be

exist-IPFV-2/3PL.AN.SBJ=DECL

'They (two males) are hitting each other.'

(6) *(ī)* *wa-nâ'-s-e*

(3PL) 3SG.F.O-hit.PFV-DS.SEQ-3SG.M.SBJ

wa-nâ'-s-e

3SG.F.O-hit.PFV-DS.SEQ-3SG.M.SBJ

bl-Ø-io=be

exist-IPFV-2/3PL.AN.SBJ=DECL

'They (two females) are hitting each other.'

This particular type of reciprocal construction has been called the 'zigzag' type by Evans (2008, 2010),[3] and this is the term I will use as well. This construction is illustrated in examples (4) to (7). The reciprocal subevents of hitting appear in a serial verb construction. The subevents are expressed sequentially by two verbs,

[3] Evans (2008) calls these 'zigzag summative constructions', Evans (2010) 'unified zigzag constructions' but the idea and the analysis provided are the same.

whose lexical stem is always identical, in this case *-nâ'* 'hit (PFV)'. These are the zigzag verbs expressing the individual subevents within a larger reciprocal event.

If there are more than two participants, the object prefix must be in the plural, as in (4). If there are two participants of the same sex object inflection reflects the gender of the two participants, as in (5) and (6). There is an existential verb at the end of the serialization carrying the subject inflection, which is always plural expressing the full set of reciprocants. There is no morpheme *-sese* in this constructional variant. Instead the zigzag verbs each carry a switch-reference suffix *-s* indicating 'different subject, sequential' in an atypical circular fashion referencing each other, followed by a subject suffix. The latter is frozen to the third person singular masculine. This can be seen in (7) below, where the subject of the first zigzag verb is the female participant (hitting the male participant), yet the subject suffix is *-e*, and not the expected *-o* 'third person singular feminine'.

If the set of reciprocants consists of one male and one female participant the zigzag construction has to be used. One verb carries a masculine object prefix, the other a feminine object prefix. Example (7) has no equivalent *sese*-construction:

(7) *(ī)* *a-nâ'-s-e*

(3PL) 3SG.M.O-hit.PFV-DS.SEQ-3SG.M.SBJ

wa-nâ'-s-e

3SG.F.O-hit.PFV-DS.SEQ-3SG.M.SBJ

bl-Ø-io=be

exist-IPFV-2/3PL.AN.SBJ=DECL

'They (F+M) are hitting each other.'

In both reciprocal constructions the reciprocants have to be animate. Events involving inanimate participants cannot be encoded with either the *sese-* or the zigzag-construction. The corpus does not contain any such examples and constructed examples involving inanimate reciprocants were consistently rejected by speakers.

After discussing both types of Mian reciprocal (*-sese* and zigzag) in detail including their semantics I propose a historical scenario in section 6 which traces the zigzag reciprocal construction back to its origin as a biclausal description involving a clause chaining construction in which medial verbs are marked for different subject relative to the subject of the succeeding clause. I propose that the constructions exemplified in (1) to (3) are essentially fused versions of the zigzag constructions illustrated in (4) to (6), whereby the sequence *V-s-e V-s-e* of the zigzag reciprocal was fused into *V-sese*.

The zigzag reciprocal construction can also be found in the TNG languages Amele (Roberts 1987) and Hua (Haiman 1980). Below I discuss the zigzag reciprocal in Amele in more detail. However, neither Amele nor Hua have gone as far as Mian, i.e., to the point of fusing the zigzag construction into a single predicate with a unique and segmentable reciprocal morpheme (*-sese* in Mian).

The data presented in this paper are from the eastern Mian dialect and are mainly descriptions of reciprocal situations, elicited with the help of 64 video clips devised

by the Reciprocals project at the Max Planck Institute for Psycholinguistics, Nijmegen (Evans, Levinson, Enfield, Gaby & Majid 2004; Evans, Gaby, Levinson, & Majid 2011). The clips are available at http://fieldmanuals.mpi.nl/login/referer/. These data are supplemented with elicited examples from my own corpus and with examples from the Mian New Testament (Smith & Weston 1986). All Mian data presented in this paper were collected by the author. The source is given in square brackets for examples from the spontaneous corpus and examples from the responses to the video clips. Other elicited examples are unmarked.

Mian belongs to the Ok family of languages, which is named after the widespread word *ok* 'river, water' (Healey 1964; Voorhoeve 2005). The Ok family belongs to the larger TNG family (Wurm 1982; Ross 2005; Pawley 2005). Mian is spoken in Telefomin District of Sandaun Province in Papua New Guinea. The eastern dialect has approximately 1,400 speakers and is the base for a comprehensive grammatical description of the language (Fedden 2011). Most speakers under 75 also speak Tok Pisin, the variety of Neo-Melanesian Pidgin spoken in Papua New Guinea. Most young speakers have some knowledge of English. Older male speakers above 50 years of age also speak or at least understand the closely related neighboring language Telefol.

Mian is a word tone language, i.e., the domain in which five lexically specified tonal melodies contrast is the entire phonological word and not the syllable (Donohue 1997). In the examples, the five tonal melodies are written as follows: *mēn* 'child' (H), *mén* 'string bag' (LH), *klâ* 'properly' (LHL), *fè* 'carrion' (HL). Low tone is unmarked: *am* 'house' (L).

For roughly two thirds of the verb stems that have been recorded in the corpus (comprising roughly 300 verb stems) there is a perfective-imperfective distinction in the stem. Whenever a verb stem is cited its aspect value is given in brackets if a given stem is unequivocally perfective of imperfective, such as *baa* 'say (PFV)' and *o* 'say (IPFV)'. For trans-aspectual verbs, which can be used in the perfective and the imperfective, a single form is given, e.g., *fu* 'cook'.

Mian is head-marking (Nichols 1996). The neutral word order is S(O)V in all clause types but constituent order is relatively free with the restriction that the verb always has to be clause-final and is only followed by an illocutionary particle. Word order within the NP is fixed. The language is strongly zero-anaphoric, i.e., all argument NPs are typically elided, if referent identity is retrievable from the context or world knowledge. The syntax of the language is characterized by very frequent use of serial verb constructions and clause chaining with anticipatory switch reference marking.

Before delving into the analysis of Mian reciprocals I give a brief sketch of two important characteristics of Mian morphosyntax which are important for understanding reciprocal constructions. These are argument cross-referencing and switch reference (S/R) in clause chains, which have already been touched upon in the introductory remarks. These grammatical areas are important because the reciprocants are indexed by means of affixes and the *sese*-reciprocal is presumably the result of a historical development whose origin was a clause chaining construction involving S/R marking.

199

200 1.1 Argument cross-referencing

201

202 Mian verb morphology is complex and mildly polysynthetic. For the discussion of
203 reciprocals, we need to look at the subject, object, and recipient affixes for animates,
204 all of which are marked on the verb by means of an affix. The language does not
205 have morphological case or adpositional marking for core grammatical relations.
206 Instead, all subjects are obligatorily indexed on all finite verb forms by a pronominal
207 suffix, regardless of whether they are subjects of an intransitive or a transitive clause,
208 whereas objects are marked by a pronominal or a classificatory prefix for some verbs
209 and not at all for other verbs, as will be explained below. Whether a verb indexes its
210 object is lexically determined. An example of an intransitive verb is (8):

211

212 (8) *ē* *gen-b-e=be*

213 3SG.M be_sick.IPFV-IPFV-3SG.M.SBJ=DECL

214 'He is sick.'

215

216 Most transitive verbs in Mian do not index their object. An example of such a
217 verb is *dowôn'* 'eat (PFV)', as in (9):

218

219 (9) *Milsen=e* *ablam=o* *dowôn'-Ø-e=be*

220 PN=SG.M nut_species=PL.N1 eat.PFV-REAL-3SG.M.SBJ=DECL

221 'M. ate the ablam nuts.'

There are two classes of transitive verbs that do index their objects. The first class indexes the object with a pronominal prefix. This class comprises seven verb stems only, namely *-têm'* 'see (PFV)', *-temê'* 'see (IPFV)', *-lò* 'hit, kill (PFV)', *-nâ'* 'hit, kill (PFV)', *-e* 'hit, kill (IPFV)', *-ntamâ'* 'bite (PFV)', and *-fû'* 'grab (PFV)', all of which—with the notable exception of 'see'—are high on the transitivity scale (Hopper & Thompson 1980). An example is (10):

(10) *naka=e* *unáng=o* *wa-têm'-Ø-e=be*
man=SG.M woman=SG.F 3SG.F.O-see.PFV-REAL-3SG.M.SBJ=DECL
'The man saw the woman.'

There is a second type of object prefix which is obligatory for about 50 verbs, almost exclusively verbs of object handling, such as 'give', 'put', 'throw', 'get', and 'turn' (Fedden 2011: 194-195).[4] These classificatory prefixes index the object, signal number and classify the object according to certain salient characteristics of its referent, viz. sex, shape, and function. Example (11) shows the transitive verb *-ò* 'get (PFV)' with the classificatory prefix *tob-*, which is used for long objects in the singular, for example a single tobacco leaf.

(11) *nē* *memâlo* *fút=e* *tob-ò-n-i=a*
1SG now tobacco=SG.N1 3SG.LONG.O-get.PFV-SS.SEQ-1SG.SBJ=MED

[4] Classificatory prefixes operates on an absolutive basis (Keenan 1984), i.e., the prefix classifies the object of transitive verbs and the subject of the intransitive verb 'fall', which is never reciprocal and therefore ignored here.

244 ‘Now I get the tobacco leaf, and then I ...’ [Rolling smokes]

245

246 Unlike such languages as Waris (Brown 1981; Seiler 1983), the classificatory
247 morphemes in Mian cannot be traced back to source verbs. The classificatory
248 prefixes form a second system of nominal classification apart from the gender
249 system.[5] They are not agreement affixes but verbal classifiers (Aikhenvald 2000:
250 152). The forms of the classificatory prefixes are given in Table 1.

251

252 [Insert Table 1 about here]

253

254 Recipient objects are indexed with a suffix in the verb *-ûb’-* ‘give (PFV)’ in the
255 perfective.[6] The imperfective forms attach to the suppletive form *-ka-* ‘give (IPFV)’.
256 On triple agreement in the ditransitive verb *-ûb’-* ‘give (PFV)’ (which indexes the
257 subject, the recipient and the theme), see Fedden (2010: 461-462, 477-482). Both
258 *-ûb’-* and *-ka-* obligatorily index the theme object (the gift) with a classificatory
259 prefix. An example of *-ûb’-* ‘give (PFV)’ is (12):

260

261 (12) *nē* *naka=e* *éil=o*

262 1SG man=SG.M pig=SG.F

263

[5] The class containing male referents (and some inanimates) is called the M-class and the class containing female referents (and many inanimates) is called the F-class. This is a reminder that these classes are similar to ‘masculine’ and ‘feminine’, respectively, but they cannot be called that because the terms are already in use for two of the Mian genders.

[6] This verb has the allomorphs *-ût’-* before /n/ and *-ˆb’-* after a vowel (and *-ˆt’-* between a vowel and /n/) where only /b/ (or /t/) is realized segmentally but the LHL tone remains. The apostrophe indicates that the verb is off-stem accented, which means that the tonal melody attaches to the tone-bearing unit immediately to the right of the verb root.

om-ûb'-a-Ø-i-bio=be

3SG.F_CL.O-give.PFV-3SG.M.R-REAL-1SG.SBJ-GPST=DECL

'I gave the sow to the man.'

In the perfective, lexical verbs are compounded with *-ûb'-* 'give (PFV)' to introduce a recipient object into the argument structure of the verb. The recipient object is indexed by means of a suffix immediately following *-ûb'-* 'give (PFV)'. Note that *-ûb'-* 'give (PFV)' does not have a classificatory prefix in this construction. An example is (13):

(13) *kasak=e*

kasak_ritual=SG.N1

ale-ˆb'-e-Ø-ib-bio=ta

show-give.PFV-PL.AN.R-REAL-2/3PL.AN.SBJ-GPST=MED

'they had shown us the Kasak (ritual), and then ...' [Kasak ritual]

While subject and object affixes are independent of aspect the form of the suffix indexing the recipient depends on aspect. In the imperfective the recipient suffixes have slightly different forms and are appended to the verb stem directly. An example is (14):

(14) *unín=o* *ifu-ye-b-o=be*

287 food=N2 serve.IPFV-PL.AN.R-IPFV-3SG.F.SBJ=DECL

288 'She is serving food for us / you (PL) / them.'

289

290 The forms of all argument cross-referencing affixes in the third person are given

291 in Table 2.[7]

292

293 [Insert Table 2 about here]

294

295 There is some allomorphy in the plural object prefixes. The verb *-e* 'hit, kill

296 (IPFV)' takes *y-*, and *-nâ'* 'hit, kill (PFV)' takes *ya-* or *i-*. The remaining five verbs

297 take *ya-*.

298

299

300 1.2 Clause chaining and switch reference marking

301

302 Clause chaining constructions are a typical feature of Mian discourse and widespread

303 in TNG languages (Foley 2000: 357). Clause chains consist of one or more medial

304 clauses and one final clause. The former have medial verbs with anticipatory S/R

305 morphology relative to the following clause, indicating co-reference or disjoint

306 reference of the subject (Stirling 1993). Final verbs, on the other hand, are inflected

307 for various tense categories, polarity and illocutionary force, which have scope over

308 the whole clause chain (Foley & Van Valin 1986; Reesink 1983). As clause chains in

[7] The allomorphy conditions for the subject suffix are complicated (depending on both the phonological and the morphological context) and irrelevant for the purpose of this paper (see Fedden 2011: 262-265).

Mian can be very long it is often necessary for practical reasons to confine an example to a part of the clause chain in order to make a certain point. In this case the example might not contain a final clause. An example illustrating a part of a clause chain is given in (15):

(15) a. *tóm=e* *belâ-s-e=ta*
stone=SG.N1 open.PFV-DS.SEQ-3SG.N1.SBJ=MED

b. *mín yē* *fiou* *fiou* *ga-b-e=to*
man there thwack thwack say.IPFV-DS.SIM-3SG.M.SBJ=MED
'the stone (gate) opened and the man was going thwack, thwack (i.e., hitting his adversaries who were trying to prevent him from leaving through the opening)' [Danenok and his brother]

In (15) subject reference is disjoint. The subject in clause (a) is the stone, the subject in clause (b) the male protagonist. This is indicated by the suffix *-s* on the verb *belâ* 'open (PFV)'. For the Mian reciprocal construction only the 'different subject' suffixes *-s* and *-b* are relevant. Mian S/R suffixes also carry information about event sequentiality or simultaneity. The suffix *-s* has event sequentiality as part of its meaning, the suffix *-b* has simultaneity as part of its meaning. These two suffixes are contrasted in a very similar frame in (16) and (17):

(16) *ē* *bín=o* *we-s-e=a*

3SG.M floor=N2 sweep-DS.SEQ-3SG.M.SBJ=MED

naka *mak=e* *unín=o* *fu-n-e-bio=be*

man other=SG.M food=N2 cook-REAL-3SG.M.SBJ-GPST=DECL

'He swept the floor and then somebody else prepared food.'

(17) *ē* *bín=o* *we-b-e=a*

3SG.M floor=N2 sweep-DS.SIM-3SG.M.SBJ=MED

naka *mak=e* *unín=o* *fu-b-e=be*

man other=SG.M food=N2 cook-IPFV-3SG.M.SBJ=DECL

'While he is sweeping the floor, somebody else is preparing food.'

The S/R suffixes *-s* and *-b*, both of which signal disjoint subject reference and which are associated with perfective and imperfective aspect, respectively, play an important role in the zigzag reciprocal construction and are the key to the diachronic scenario which I propose in section 6. For a detailed description and analysis of the Mian S/R system, see Fedden (2011: 421-470) and Fedden (2012).

2 The *sese*-reciprocal construction

The topic of this section is the reciprocal construction with the reciprocal suffix *-sese*. The only function of this construction is to encode reciprocal situations. The construction does not participate in any reflexive, collective, or distributive polysemies. An example of a transitive verb inflected with *-sese* is (18):

(18) *ī* *i-nâ'-sese-bl-Ø-io=be*

3PL PL.AN.O-hit.PFV-RECP-exist-IPFV-2/3PL.AN.SBJ=DECL

'They are hitting each other.' (i.e., are engaged in reciprocal hitting)

All Mian reciprocals are formed with the existential verb *bi~bl* 'exist',[8] whose subject suffix has to be plural, expressing the whole set of reciprocants. I analyze the existential verb as a suffix because the whole verb complex in (18) forms a single phonological word with respect to tone assignment and because the initial /b/ in the existential verb is not prenasalized, which it would be in isolation. The construction illustrated in (18) has a number of interesting properties which I point out in the following.

First, the suffix *-sese* cannot be used with imperfective stems. It can be appended only to perfective stems or trans-aspectual stems, which do not formally distinguish between perfective and imperfective aspect. The suffix occurs directly after the stem or if the verb is compounded with *-ûb'-* 'give (PFV)' after the recipient suffix; see examples (22) to (24) below. The existential verb at the end of the *sese*-construction also has the aspectual function of expressing imperfectivity. It does not only serve as the host for the subject inflection. As *-sese* can only be used in the perfective an

[8] The allomorphy works as follows: *bl* is chosen before /i/, *bi* is chosen elsewhere.

additional verb introducing imperfectivity is necessary, if one wants to describe an on-going situation which consists of bounded reciprocals subevents.

Second, and more importantly, reciprocants have to be (i) subjects and (ii) one of either object or recipient, depending on the argument structure of the verb. It is typologically unusual for a reciprocal construction employing a verb-marking strategy that both reciprocant argument positions have to be filled and that the reciprocal verb remains transitive (Nedjalkov 2007b: 12, 40).[9] The whole set of reciprocants is cross-referenced on the existential verb. The subject affix is always in the plural. The object affix is in the plural, if there are more than two reciprocants (cf. example (1) above). It is in the singular, if there are exactly two reciprocants of the same sex (cf. examples (2) and (3) above). (For two reciprocants of different sex the zigzag construction has to be used; see example (7) above).

In example (18) above and example (19) immediately below the reciprocants are the subject and the object:

(19) *ī* *ya-têm'-sese-bl-Ø-io=be*

3PL PL.AN.O-see.PFV-RECP-exist-IPFV-2/3PL.AN.SBJ=DECL

'They are looking at each other (i.e., exchanging glances with each other).'

The object index can come from the set of classificatory prefixes as well. An example is provided in (20):

[9] On transitive reciprocals in Oceanic languages, see Moyse-Faurie (2008: 154). On transitive reciprocals in Seri, an isolate from northern Mexico, see Marlett (2005: 61).

(20) *ī* *mak=i* *dim*

3PL other=PL.AN on

do-tamaa-sese-s-ib=a

PL.AN.O-step_on.PFV-RECP-DS.SEQ-2/3PL.AN.SBJ=MED

'they trampled on one another and then someone else …' [Luke 12, 1]

Reciprocants can also be the subject and the recipient, which in the perfective is always indexed with a suffix on the verb *-ûb'-* 'give (PFV)' (on the allomorphy, see footnote 6). This recipient suffix can refer to a proper recipient of some physical transfer of an object (21), the recipient of a verbal message (22), a benefactive possessor (23) or a malefactive possessor (24):

(21) *naka=i=a* *unáng=a=i*

man=PL.AN=and woman=and=PL.AN

toula-biaan-ib=a

sit_down.PFV-exist.IPFV.SS.SIM-2/3PL.AN.SBJ=MED

inaminamino *ol-ò-n-ib=a*

all_kinds_of_stuff PL.RESID.O-take.PFV-SEQ-2/3PL.AN.SBJ=MED

mak=i

other=PL.AN

o-Øˆ-yen-sese-bl-Ø-io=be

PL.RESID.O-give.PFV-PL.AN.R-RECP-exist-IPFV-2/3PL.AN.SBJ=DECL

'While men and women are sitting they take all sorts of things and give them to each other.' [MPI clip 21]

(22) *ī* *baa-ˆb'-e-sese-bl-Ø-io=be*

3PL talk.PFV-give.PFV-PL.AN.R-RECP-exist-IPFV-2/3PL.AN.SBJ=DECL

'They are talking to each other.'

(23) *ī* *mak=i* *memê=i* *klâ*

3PL other=PL.AN children(PL)=PL.AN very

kimâa'-ˆb'-e-sese-bl-Ø-io=be

care_for.PFV-give.PFV-PL.AN.R-RECP-exist-IPFV-2/3PL.AN.SBJ=DECL

'They are caring well for each other's children.'

(24) *ī* *am* *as=o*

3PL house fire=PL.N1

o-tanà-ˆb'-e-sese-bl-Ø-io=be

PL.RESID.O-set(fire).PFV-give.PFV-PL.AN.R-RECP-exist-IPFV-2/3PL.AN.SBJ=DECL

‘They are burning (lit. setting fires to) each other’s houses.’

The reciprocal suffix is always *-sese* regardless of the person value of the reciprocants. This can be seen from example (25), where the reciprocants are in the first person:

(25) *nībo* *ya-têm’-sese-bi-Ø-obo=be*
1PL.INCL PL.AN.O-see.PFV-RECP-exist-IPFV-1PL.SBJ=DECL
‘We (INCL) are throwing glances at each other.’

In each of these examples, the existential verb *bi~bl* is imperfective and means ‘they are (there)’, thus denoting a reciprocal event which is on-going at the moment of speaking or takes place habitually. The existential verb takes regular inflection, for example *-so* to express the hesternal past:

(26) *ī* *i-nâ’-sese-bi-n-ib-so=be*
3PL PL.AN.O-hit.PFV-RECP-exist-REAL-2/3PL.AN.SBJ-HPST=DECL
‘Yesterday they were hitting each other.’

Apart from bearing the subject inflection the existential verb also has the function to signal imperfective aspect. This aspectual function is the same as in non-reciprocal predicates, where the existential verb expresses a continuous action, as in (27):

(27) *ē* *wen-bi-n-e-so=be*

3SG.M eat.IPFV-exist-REAL-3SG.M.SBJ-HPST=DECL

'Yesterday he was eating.'

When the set of reciprocants is larger than two all cross-referencing affixes indexing the reciprocants have to be in the plural. In a reciprocal situation with only two participants object affixes must appear in the singular though the subject suffix remains plural, as in (28), contrasted with the ungrammatical utterance in (29):

(28) *unáng* *asú* *uláab=i* *[…]*

woman two age_mate=PL.AN […]

wéng=o *o-biaan-ib=a*

language=N2 say.IPFV-exist.IPFV.SS.SIM-2/3PL.AN.SBJ=MED

mele-ˆb'-o-sese-bl-Ø-io=be

touch.PFV-give.PFV-3SG.F.R-RECP-exist-IPFV-2/3PL.AN.SBJ=DECL

'While the two women of similar age […] are talking they are touching each other.' [MPI clip 3]

(29) **unáng* *asú* *uláab=i*

woman two age_mate=PL.AN

mele-ˆb'-e-sese-bl-Ø-io=be

touch.PFV-give.PFV-PL.AN.R-RECP-exist-IPFV-2/3PL.AN.SBJ=DECL

Intended: 'The two women of similar age are touching each other.'[10]

In a reciprocal situation with exactly two participants Mian expresses the agents together but keeps the patients (or recipients) apart, i.e., the subject suffix on the existential verb is plural while the object affix on the main verb is singular. This treatment of objects as singular in reciprocals with just two reciprocants is a partially iconic strategy because the patient (or recipients) of any reciprocal subevent is always going to be only a single participant. The agents, on the other hand, are not differentiated.

If the reciprocal relation is between subject and object but the verb in question does not index its object (as mentioned under 1.1 above) the *sese*-construction is also possible:

(30) *ī* *dowôn'-sese-bl-Ø-io=be*

3PL eat.PFV-RECP-exist-IPFV-2/3PL.AN.SBJ=DECL

'They eat each other.'

Verbs with the suffix *-sese* can be further inflected for various TAM or S/R categories, for example *-n* 'realis' in (31) or *-s* 'different subject sequential' in (32) [repeated from (20)]:

[10] Note that on its own the verb in (29) is fine and means 'they (more than two) are touching each other', but it cannot be used for just two participants who are engaged in a reciprocal action.

(31) *īb* *sinwalo* *klâ*

2PL brothers properly

go-ˆb'-e-sese-n-in=e!

like.PFV-give.PFV-PL.AN.R-RECP-REAL-2/3PL.AN.SBJ.HORT=HORT

'You must love each other! ' [John 15, 12]

(32) *ī* *mak=i* *dim*

3PL other=PL.AN on

do-tamaa-sese-s-ib=a

PL.AN.O-step_on.PFV-RECP-DS.SEQ-2/3PL.AN.SBJ=MED

'they trampled on one another and then…' [Luke 12, 1]

Summarizing, there are four templates for the *sese*-construction. Template 1 is used if a verb indexes its object with a pronominal or a classificatory prefix. Template 2 is used for the verb *-ûb'-* 'give (PFV)', which indexes the (recipient) object with a suffix. It is also employed for the zero root *-Øˆ-* 'give (PFV)', which shows up in some of the examples in this article. (For more information on the zero root, see Fedden 2010: 469-470). Template 3 is employed if a verb combines with *-ûb'-* 'give (PFV)', which indexes the (recipient) object with a suffix. The templates under (a) where the non-subject reciprocant argument is plural are used for more than

two reciprocants. The templates under (b) where the non-subject argument is singular are used for exactly two reciprocants (of the same sex). Template 4 is used for transitive verbs that do not index their object. In this case it is not necessary to distinguish between subtypes (a) and (b) because the verbs following this template do not have object affixes which would be able to encode a number difference between a singular and a plural object. There can be more than two reciprocants or exactly two of the same or different sex.

Template 1 a. PL.O-V_{stem}-*sese*-exist-IPFV-PL.AN.SBJ=DECL

b. SG.O-V_{stem}-*sese*-exist-IPFV-PL.AN.SBJ=DECL

Template 2 a. CP-give-PL.R-*sese*-exist-IPFV-PL.AN.SBJ=DECL

b. CP-give-SG.R-*sese*-exist-IPFV-PL.AN.SBJ=DECL

Template 3 a. (CP-)V_{stem}-give-PL.R-*sese*-exist-IPFV-PL.AN.SBJ=DECL

b. (CP-)V_{stem}-give-SG.R-*sese*-exist-IPFV-PL.AN.SBJ=DECL

Template 4 V_{stem}-*sese*-exist-IPFV-PL.AN.SBJ=DECL

The brackets in template 3 indicate the presence of a classificatory prefix if the verb which is compounded with *-ûb'-* 'give (PFV)' takes a classificatory prefix, e.g., *-tanà* 'set(fire) (PFV)' in (24) above, or the absence of the prefix in verbs which do not take them, e.g., *baa* 'say (PFV)' in (22) above. The classificatory prefixes in templates 2 and 3 index the theme and do not enter into reciprocal relations.

Reciprocal relations can only be expressed between agent and patient or agent and recipient (Fedden 2010: 473-474).

3 The zigzag reciprocal construction

In this section I look in detail at the second reciprocal, the zigzag construction. Like the *sese*-construction it is a dedicated reciprocal. Contrary to the *sese*-construction, which is a single word, the zigzag construction consists of three words. The examples (33) and (34) below illustrate this variant for the verb *-têm'* 'see (PFV)', which obligatorily indexes its object with a prefix, and the verb *mele-* 'touch (PFV)', which must form a compound with *-ûb'-* 'give (PFV)' followed by a recipient suffix. Example (35) illustrates the zigzag construction with a verb that does not index its object.

(33) *ī* *a-têm'-s-e*
3PL 3SG.M.O-see.PFV-DS.SEQ-3SG.M.SBJ

wa-têm'-s-e
3SG.F.O-see.PFV-DS.SEQ-3SG.M.SBJ

bl-Ø-io=be
exist-IPFV-2/3PL.AN.SBJ=DECL

583 ‘They (F+M) are throwing glances each at the other.’

584

585 (34) *ī* *mele-ˆb’-o-s-e*

586 3PL touch.PFV-give.PFV-3SG.F.R-DS.SEQ-3SG.M.SBJ

587

588 *mele-ˆb’-a-s-e*

589 touch.PFV-give.PFV-3SG.M.R-DS.SEQ-3SG.M.SBJ

590

591 *bl-Ø-io=be*

592 exist-IPFV-2/3PL.AN.SBJ =DECL

593 ‘They (M+F) are touching each other.’

594

595 (35) *ī* *dowôn’-s-e* *dowôn’-s-e*

596 3PL eat.PFV-DS.SEQ-3SG.M.SBJ eat.PFV-DS.SEQ-3SG.M.SBJ

597

598 *bl-Ø-io=be*

599 exist-IPFV-2/3PL.AN.SBJ =DECL

600 ‘They eat each other.’

601

602 The suffix *-s* is a S/R marker indicating ‘different subject’ and ‘sequentiality of
603 events’ (introduced in section 1.2 above) and *-e* is a conventionalized form of the
604 subject cross-referencing suffix frozen to the third person singular masculine
605 whatever the person, number or gender of the reciprocants actually is.

606 As in the *sese*-construction there is a final existential verb in the (animate) plural
607 summarizing the reciprocal action as a whole and indexing the whole set of
608 reciprocants. The existential verb has the aspectual function of expressing
609 imperfectivity. As the subevents which are expressed in the zigzag verbs are
610 perfective an additional verb introducing imperfectivity is necessary, if one wants to
611 describe an on-going situation which consists of such bounded reciprocal subevents.
612 The zigzag construction is restricted to the third person. The following example
613 (36) was rejected as ungrammatical:
614
615 (36) **nībo na-têm'-s-e*
616 1PL.INCL 1SG.O-see.PFV-DS.SEQ-3SG.M.SBJ
617
618 *ka-têm'-s-e*
619 2SG.O-see.PFV-DS.SEQ-3SG.M.SBJ
620
621 *bi-Ø-obo=be*
622 exist-IPFV-1PL.SBJ=DECL
623 Intended: 'We (INCL, i.e., you and me) are throwing glances at each other.'
624
625 The zigzag construction is formed according to the following four templates.
626 Template 5 is used if a verb indexes its object with a pronominal or classificatory
627 prefix. Template 6 is for *-ûb'-* 'give (PFV)' (and for *-Øˆ-* 'give (PFV)') and Template 7

for verbs compounded with *-ûb'-* 'give (PFV)'. Transitive verbs which do not index their object (see subsection 1.1 on argument marking) use Template 8.

Template 5	a.	PL.O-V_{stem}-*s*-*e*	PL.O-V_{stem}-*s*-*e*	exist-IPFV-PL.AN.SBJ=DECL
	b.	SG.O-V_{stem}-*s*-*e*	SG.O-V_{stem}-*s*-*e*	exist-IPFV-PL.AN.SBJ=DECL
Template 6	a.	CP-give-PL.R-*s*-*e*	CP-give-PL.R-*s*-*e*	exist-IPFV-PL.AN.SBJ=DECL
	b.	CP-give-SG.R-*s*-*e*	CP-give-SG.R-*s*-*e*	exist-IPFV-PL.AN.SBJ=DECL
Template 7	a.	(CP-)V_{stem}-give-PL.R-*s*-*e*	(CP-)V_{stem}-give-PL.R-*s*-*e*	exist-IPFV-PL.AN.SBJ=DECL
	b.	(CP-)V_{stem}-give-SG.R-*s*-*e*	(CP-)V_{stem}-give-SG.R-*s*-*e*	exist-IPFV-PL.AN.SBJ=DECL
Template 8		V_{stem}-*se*	V_{stem}-*se*	exist-IPFV-PL.AN.SBJ=DECL

The Mian zigzag reciprocal construction has the following noteworthy features:

First, the verbs describing the subevents—of throwing glances in (33) and of touching in (34)—have subject suffixes in the expected slot but these subject suffixes are in the third person singular masculine (*-e*) regardless of the actual person, number or gender of the reciprocants. The transitive verbs describing the subevents have two argument slots each. They are regular transitive verbs with the exception that the subject suffix is always *-e*.

Second, the DS suffix *-s*, which is normally only anticipatory, indicating that the verb of the next clause has a different subject, shows an unusual non-linear or circular behavior. For the second verb DS marking is not calculated with respect to the third verb (the existential verb) but rather with respect to the first. If it was

calculated with respect to the existential verb we would expect SS marking to be possible in the second verb because SS marking is the default if the set of referents of the subject in one clause is properly included in the set of referents in the following clause (Fedden 2011: 460). Yet, only DS marking is possible in reciprocals.

These features are highly reminiscent of what can be found in the TNG language Amele (of the Gum family, spoken in Madang Province). Roberts (1987: 306) points out that "[b]oth coordinate verbs are marked for third person singular subject and for different subject (DS) following. Therefore they cross reference each other even though they are in linear sequence". Also see Haiman (1980: 433) on the circular behavior of S/R marking in Hua reciprocals. An example from Amele is (37):

(37) Amele

age	*qet-u-do-co-b*	*qet-u-do-co-b*	*eig-a*
3PL	cut-PRED-3SG-DS-3SG	cut-PRED-3SG-DS-3SG	3PL.SBJ-TODPST

'They cut each other.' (Roberts 1987: 132)

The way reciprocals are expressed in Amele depends on whether the reciprocating roles are between agent and patient, as in (37), or between agent and recipient, in which case a slightly different construction has to be used. An example is (38):

(38) Amele

age	*jacas*	*qet-i*	*do-co-b*	*do-co-b*	*eig-a*
3PL	tobacco	cut-PRED	3SG-DS-3SG	3SG-DS-3SG	3PL.SBJ-HODPST

676 ‘They cut tobacco for each other.’ (Roberts 1987: 133)

677

678 In (38), the lexical verb appears only once and what constitutes the zigzag verbs is
679 a reduplication of some material, which according to Robert’s gloss does not seem to
680 contain any lexical material. Evans (2010: 82fn52) proposes the following alternative
681 analysis for the zigzag verbs *docob docob* in (38), based on the fact that ‘give’ is a
682 zero-root verb in Amele (according to Roberts 1987; also see Z’graggen 1975, 1980).
683 On the exceptional grammatical behavior of ‘give’-verbs cross-linguistically, see
684 Comrie (2003).

685

686 (39) Amele
687 *do-Ø-co-b*
688 3SG-give-DS-3SG
689 ‘He gives (to) him.’

690

691 If this analysis was correct then (38) would be literally ‘they$_{k+l}$ tobacco cut
692 he$_k$.gives.him$_l$ he$_l$.gives.him$_k$ they$_{k+l}$.are’, where k≠l. The indices are meant to
693 express the disjoint-subject meaning. Although a plausible analysis, it runs into
694 problems because the prefix *do-* is not part of any of the Amele object paradigms, all
695 of which are exclusively suffixal to boot (Roberts 1987: 279; Roberts 1998: 3).
696 Roberts (1998: 20, 25-27) interprets the lexical stem of ‘give’ as suppletive with
697 respect to the recipient. The form *ut-ec* ‘give to him/her’ is analyzed as follows:

698

(40) Amele

ut-ec

give.3SG.IO-INF

'give to him/her'

An alternative analysis of 'give' in Amele has been proposed by Reesink (pers. comm., and discussed in Fedden 2010: 465), where 'give' is analyzed as a minimal root *i-* (*u-* in 3rd person) followed by an indirect object suffix, e.g., *u-t-ec* [give-3SG.IO-INF] 'give to him/her'.[11] Following this analysis reciprocal giving in Amele looks like (41):

(41) Amele

age	*ceb*	*u-te-ce-b*	*u-te-ce-b*	*eig-a*
3PL	betelnut	give-3SG-DS-3SG	give-3SG-DS-3SG	3PL.SBJ-TODPST

'They give each other betelnut.' (Roberts 1987: 132)

We find, however, a generic verb that is suppletive with respect to person with the form *do-* in the third person singular. Consider example (42)[12]:

[11] In the free verb 'give', *i-* ~ *u-* does not occur in 2/3DU and 2/3PL, while it does show up when 'give' is attached to another verb. Compare (i) with (ii) and compare (iii) with (iv). Note that Reesink proposes incidental elision of /i/ in the free verb 'give' preceding /a/.

(i) *al-ec* (**i-al-ec*) 'to give to you/them (dual)'
(ii) *siw-i-al-ec* [share-give-2/3DU-INF] 'share for you/them (dual)'
(iii) *ad-ec* (**i-ad-ec*) 'to give to you/them (plural)'
(iv) *siw-i-ad-ec* [share-give-2/3PL-INF] 'share for you/them (plural)'

[12] In (42) the gloss 'do' for *do* is mine. Roberts only glosses it as 3SG. This verb is also used as a generic verb with Tok Pisin loans, for example:

(1) *wa* *pumpim* *do-g-a*
water(TP) pump(TP) do.3SG-2SG-IMP
'Pump the water!' (Roberts 1987: 312)

(42) Amele

oso *wen* *do-i-a*

someone hunger do.3SG-3SG.SBJ-TODPST

'Someone is hungry.' (Roberts 1987: 146)

Another reason why the analysis of the Amele zigzag reciprocal in (38) above as involving a morpheme 'give' is dubious is the fact that 'give' in Amele is *u*- in the third person. So even if one wanted to say that the morpheme *-i* in (38), which Roberts glosses as PRED, is really 'give' one faces the problem that it should be *u*- in the third person.

To sum up the discussion on zigzag reciprocals in Amele, I assume that the verb involved is not 'give', but rather a suppletive generic verb, whose form in the third person is *do*-. This makes (37) literally 'they$_{k+l}$ cut-he$_k$.does.him$_l$ cut-he$_l$.does.him$_k$ they$_{k+l}$.are', where k≠l, and (38) would be literally 'they$_{k+l}$ tobacco cut he$_k$.does.him$_l$ he$_l$.does.him$_k$ they$_{k+l}$.are', where k≠l.

The Mian and Amele zigzag reciprocals are very similar in structure. In such zigzag constructions a complex form of verb chaining is zigzagging between subevents, i.e., successive transitive verbs, each marked with a different subject marker, and agreeing with one actor in person and number, albeit in fossilized form, followed by an intransitive summary auxiliary agreeing with the whole set of reciprocants.

In the zigzag construction we have a situation where the entities which denote the subevents remain distinct phonological words, i.e., there are three distinct verbs, namely the two zigzag verbs and the auxiliary. This raises the question of how many verbs and how many clauses should these be analyzed as having.

This question is typologically relevant because languages differ in how much complexity, in terms of event structure, they allow to be accommodated in one clause. Reciprocals are an especially interesting case because they are complex event types which derive from the overlay of two propositions sharing the same predicate but with converse argument configurations (see for example Evans 2010: 6), e.g., in the English sentence *X and Y hit each other*, X and Y are simultaneously agent and patient. English does not mind organizing a reciprocal event in a single clause; it even lexicalizes them, e.g., *they meet/fight/marry* (König & Kokutani 2006). One argument position of a transitive verb is filled by a conjoined NP, a plural pronoun or a plural NP, referring to the full set of participants. The other argument position is filled by the bipartite reciprocal anaphor *each other*, while in other languages, e.g., in the Papuan language Golin (Chimbu) reciprocal situations have to be expressed with a biclausal description of the type NP_k *V-s* NP_l, NP_l *V-s* NP_k, where k≠l. Again consider the Mian zigzag construction, repeated from (33), where one man and one woman participate in the reciprocal event:

(43) *ī* *a-têm'-s-e*

3PL 3SG.M.O-see.PFV-DS.SEQ-3SG.M.SBJ

762 *wa-têm'-s-e* *bl-Ø-io=be*

763 3SG.F.O-see.PFV-DS.SEQ-3SG.M.SBJ exist-IPFV-2/3PL.AN.SBJ =DECL

764 'They (F+M) are glancing at each other.'

765

766 Semantically, we are clearly dealing with three subevents expressed by three
767 verbs which make up the larger reciprocal event. These subevents (abbreviated '*se*'
768 below) can be described as follows:

769

770	*se1:* F glances at M	First zigzag verb	(*a-têm'-s-e*)
771	*se2:* M glances at F	Second zigzag verb	(*wa-têm'-s-e*)
772	*se3:* F and M are doing this together	Auxiliary	(*bl-Ø-io=be*)

773

774 Mian, similarly to Amele, makes overt all the semantic components of a
775 reciprocal event. Each of the three subevents are expressed by one verb. The first two
776 subevents are mapped onto the transitive zigzag verbs with "the difference in agent
777 […] motivating the anomalous 'backward-looking switch-reference' in the second
778 conjoined verb" (Evans 2010: 33). That the whole complex event is a joint activity is
779 expressed by the third verb, which bears the plural subject suffix.[13] These languages
780 make the semantic structure of the reciprocal event obvious.

781 However, it is much less clear whether we are also dealing with three distinct
782 clauses. There are two arguments for assuming that there is only one clause.

[13] In this sense the Mian construction is bordering on collectivity or sociativity (cf. Nedjalkov 2007b: 33)

First, in Mian (as in Amele) subject agreement in zigzag-constructions is conventionalized and frozen, i.e., into third person singular *-b* in Amele and third person singular masculine *-e* in Mian. This seems to support the assumption that zigzag verbs do not constitute heads of their own clauses but are rather elements of a larger serial verb construction. See Evans (2008: 82-83) for a parallel argument for Amele.

Second, no material can intervene between the zigzag verbs. For example, they cannot be followed by the clitic *=a*, which marks verbs as medial in clause chaining constructions. Consider example (44):

(44) *ī* *a-têm'-s-e(*=a)*
3PL 3SG.M.O-see.PFV-DS.SEQ-3SG.M.SBJ(=MED)

wa-têm'-s-e *bl-Ø-io=be*
3SG.F.O-see.PFV-DS.SEQ-3SG.M.SBJ exist-IPFV-2/3PL.AN.SBJ=DECL
'They are touching each other.'

This is in contrast to example (45), which provides a biclausal description of two sequential events taking place between the participants:

(45) *ō* *a-têm'-s-o=a*
3SG.F 3SG.M.O-see.PFV-DS.SEQ-3SG.F.SBJ =MED

ē *wa-têm'-s-e=a*

3SG.M 3SG.F.O-see.PFV-DS.SEQ-3SG.M.SBJ =MED

'She glances at him and then he glances at her and then…'

To sum up, synchronically the Mian zigzag reciprocal unifies three events into a single clause. The two arguments for this analysis are, first, that the subject suffixes are frozen to the third person singular masculine regardless of the actual person, number and gender of the reciprocants and that, second, no material may come between the zigzag verbs in monoclausal reciprocal constructions.

In the following section I take a closer look at the semantics of the *sese*- and the zigzag construction.

4 The semantics of the *sese*- and the zigzag constructions

The *sese*-construction can be employed for a variety of reciprocal situations. It can be used for situations of strong reciprocity, where the reciprocal relation obtains between all members of the set of participants, which is typologically typical (Evans, Gaby, Levinson & Majid 2011), but it is also possible in cases in which the saturation of possible interrelations is relaxed, for example in melee, chaining or adjacent configurations. All of these are discussed in more detail below. Each type of reciprocal situation is illustrated with an example of the *sese*-construction, but the zigzag construction would also be possible in each case. The semantic restrictions of

either construction have to do with the number and gender of the reciprocants and whether the reciprocal subevents may occur simultaneously or can only occur sequentially. These issues are taken up at the end of this section.

In situations of strong reciprocity all possible interrelations are saturated as for example in the sentence *House of Commons etiquette requires legislators to address only the speaker of the House and refer to each other indirectly* (from Dalrymple, Kanazawa, Kim, Mchombo & Peters 1998: 168). A schematized version is given in Figure 1.

[Insert Figure 1 about here]

Example (46) is a description of a situation in which there are a number of people, all of whom shake everyone else's hand:

(46) *mâa'-biaan-ib=a*

stand_up.PFV-exist.IPFV.SS.SIM-2/3PL.AN.SBJ=MED

heitda-ˆb'-e-sese-bl-Ø-io=be

shake_hands-give.PFV-PL.AN.R-RECP-exist-IPFV-2/3PL.AN.SBJ=DECL

'While standing, they shake each other's hands.' [MPI clip 38]

It is not necessary for all possible interrelations to be saturated for the Mian reciprocal construction to be used, for example in melee configurations, where there

is at least one participant who is only the endpoint and at least one participant who is only the initiator of the action (Figure 2), for instance in *The hungry rats eat each other* (Evans 2008: 40).

[Insert Figure 2 about here]

On a less violent note, the following description can be used for a situation in which there are several giving events but the giving proceeded in a somewhat unstructured fashion so that there is at least one participant who has not given anything and at least one participant who has not received anything.

(47) *naka=i=a* *unáng=a=i*
man=PL.AN=and woman=and=PL.AN

toula-biaan-ib=a
sit_down.PFV-exist.IPFV.SS.SIM-2/3PL.AN.SBJ=MED

inaminamino *ol-ò-n-ib=a*
all_kinds_of_stuff PL.RESID.O-take.PFV-SEQ-2/3PL.AN.SBJ=MED

mak=i
other=PL.AN

o-Øˆ-yen-sese-bl-Ø-io=be

PL.RESID.O-give.PFV-PL.AN.R-RECP-exist-IPFV-2/3PL.AN.SBJ=DECL

'While men and women are sitting they take all sorts of things and give them to each other.' [MPI clip 21]

Chaining situations are another possibility (Lichtenberk 1985: 24), i.e., configurations in which participant A is in a certain relation to participant B, B to C, etc., so that the last participant is not initiator and the first participant is not endpoint of the action, for example *The pupils followed each other onto the stage*, where the first pupil is not following and the last one is not being followed (Figure 3).

[Insert Figure 3 about here]

An example of a reciprocal description of a chaining situation is (48). This description was given for a situation in which a number of people are standing in a row, hugging each other sequentially, whereby the first person is not hugged by anyone and the last person in the row is not hugging anyone.

(48) *ī* *mâa'-biaan-ib=a*

3PL stand_up.PFV-exist.IPFV.SS.SIM-2/3PL.AN.SBJ=MED

kwīng *hà'-ˆb'-e-sese-bl-Ø-io=be*

shoulder break.PFV-give.PFV-PL.AN.R-RECP-exist-IPFV-2/3PL.AN.SBJ=DECL

898 ‘While standing they are hugging each other.’ (Lit. are breaking each other’s
899 shoulders) [MPI clip 2]
900
901 Finally, adjacent configurations can be expressed as well, that is configurations in
902 which participants are adjacent to each other and A and B engage reciprocally, then
903 B and C, then C and D, etc., so that each participant is both initiator and endpoint in
904 any given reciprocal subevent (Figure 4).
905
906 [Insert Figure 4 about here]
907
908 An example of a reciprocal description of an adjacent situation is (49). This
909 description was given for a situation in which a number of people are hugging each
910 other pairwise, e.g., A and B embrace each other, then C and D, then E and F. If all
911 instances of embracing happened simultaneously the same description would be
912 possible.
913
914 (49) *tub temwât dl-à sâ’-sese-bl-Ø-io=be*[14]
915 chest across PL.AN.O-include.PFV-RECP-exist-IPFV-2/3PL.AN.SBJ=DECL
916 ‘They are embracing each other.’ (Lit. they are including each other across
917 the chest) [MPI clip 29]
918

[14] The verb form in this example is from the lexicalized tight serial verb construction *-à sâ’*, which means ‘involve, include’. The elements of this SVC do not appear to have an independent meaning synchronically but behave as two distinct phonological words with respect to tone assignment. The first verb has a HL tonal melody and the second one has a LHL melody.

Note that different verbs were used in (48) and (49), which is probably due to the different hugging style depicted in the clips. While (49) shows typical reciprocal hugging in which both participants are hugging, in (48) only one participant is hugging the other, who remains unresponsive.

Above I pointed out that both the *sese-* and the zigzag construction are subject to certain semantic restrictions regarding the number and gender of the reciprocants and whether they allow simultaneous reciprocal subevents as well as sequential ones. As the restrictions cross-cut the *sese-* vs. zigzag distinction, I list all attested subtypes in Table 3, together with a pertinent example in this paper.

[Insert Table 3 about here]

Let's first concentrate on the subtypes A to D, i.e., the *sese*-constructions. Subtypes A and B are interesting because they are the ones with an object affix in the singular. These are reserved for exactly two reciprocants of the same gender, as encoded in the object affix, and require the reciprocal subevents to be symmetrical, yet to proceed sequentially, i.e., each participant is both initiator and endpoint of the reciprocal action (X acts on Y and Y acts on X), and the respective subevents occur sequentially one after the other. An example of a description of such a situation is given in (50):

(50) *naka=i* *asú* *ke-n-ib=a*
man=PL.AN two do-SEQ-2/3PL.AN.SBJ=MED

mâa'-biaan-ib=a

stand_up.PFV-exist.IPFV.SS.SIM-2/3PL.AN.SBJ =MED

mak=e *kwīng*

other=3SG.M shoulder

hà'-ˆb'-a-sese-bl-Ø-io=be

break.PFV-give.PFV-3SG.M.R-RECP-exist-2/3PL.AN.SBJ=DECL

'There are two men standing hugging each other (where X hugs Y first and is then hugged by Y).' [MPI clip 58]

Reciprocal constructions in Mian show interesting cases of clashes between the morphology and the semantics. While the agents in Mian reciprocals are always collapsed in a plural subject suffix, the patients (or recipients) can be expressed iconically to a certain degree, as illustrated by subtypes A and B, where the object affix is in the singular, thus iconically expressing that the respective reciprocal actions are directed towards individuals of the same sex. However, the configurations for which A and B can be used are restricted to two participants. Note that this amounts to a constructional encoding of a dual although the language does not have dual agreements.

When there are more people involved in a reciprocal event, i.e., when two (or more participants) are acting on one (or more participants) in a single reciprocal

965 event or when there is more than one pair of reciprocants performing the same
966 reciprocal action within each pair, the object affix needs to be plural (subtype C).
967 The final subtype of the *sese*-construction is D, where there is no object affix on
968 the verb. In this case there are no semantic restrictions at all because there can be no
969 semantic clash of conflicting features due to the absence of object affixes.
970 Now we turn to the subtypes of the zigzag construction. Subtypes E and F are the
971 zigzag alternatives for A and B and the same restrictions obtain.
972 The subtype G has to be used when there are two reciprocants of opposite sex.
973 Consider example (51):
974
975 (51) *ī* *mikim=i* *a-têm'-s-e*
976 3PL siblings_of_opposite_sex=PL.AN 3SG.M.O-see.PFV-DS.SEQ-3SG.M.SBJ
977
978 *wa-têm'-s-e* *bl-Ø-io=be*
979 3SG.F.O-see.PFV-DS.SEQ-3SG.M.SBJ exist-IPFV-2/3PL.AN.SBJ=DECL
980 'Brother and sister are glancing at each other.' [MPI clip 46]
981
982 In this case a single verb inflected with *-sese* cannot be used because this would
983 invariably create a semantic clash that the language does not permit. If example (51)
984 had a single verb inflected with *-sese* and the affix cross-referencing the non-subject
985 reciprocant was singular masculine there would be a clash with the fact that one of
986 the subevents is directed towards a woman. If it was singular feminine a similar clash
987 would arise in that one of the subevents is directed towards a man. Finally, plural

non-subject affixes in Mian reciprocals are not allowed for just two reciprocants since any single reciprocal subevent will only ever be directed towards a single participant. However, when there is an additional participant of either sex one has to move away from the compositional expression of patients (or recipients) and use subtype C (or H).

Parallel to subtype C, subtype H has plural object affixes. The conditions of use are the same as for subtype C. As with the other subtypes with singular object affixes (i.e., A, B, E, and F) simultaneous reciprocity is excluded for subtype H as well.

The final subtype of the zigzag-construction is F, where there are no object affixes on the zigzag verbs. As with subtype D, there are no semantic restrictions.

Neither of the *sese-* nor the zigzag construction shows any restrictions with irreducibly symmetric verbs, which are known to show constructional restrictions in many languages (Dimitriadis 2008). A predicate is irreducibly symmetric "if (a) it expresses a binary relationship, but (b) its two arguments have necessary identical participation in any event described by the predicate" (Dimitriadis 2008: 378). An example of an irreducibly symmetric verb is *meet*. It is due to the lexical semantics of this verb that an event of A meeting B is also always an event of B meeting A. Here, either the *sese-* or the zigzag construction can be used, so either (52) or (53) are possible, even in the description of exactly two people meeting each other.

(52) *ī* *mî'-sese-bl-Ø-io=be*
3PL meet.PFV-RECP-exist-IPFV-2/3PL.AN.SBJ=DECL
'They (2 or more) met each other.'

(53) *ī* *mî'-s-e* *mî'-s-e*

3PL meet.PFV-DS.SEQ-3SG.M.SBJ meet.PFV-DS.SEQ-3SG.M.SBJ

bl-Ø-io=be

exist-IPFV-2/3PL.AN.SBJ=DECL

'They (2 or more) met each other.'

This is not restricted to verbs which do not index their object. An example of the zigzag construction with an irreducibly symmetric predicate *heitda* 'shake hands', which indexes the (recipient) object, is (54):

(54) *ī* *heitda-ˆb'-e-s-e*

3PL shake_hands-give.PFV-PL.AN.R-DS.SEQ-3SG.M.SBJ

heitda-ˆb'-e-s-e

shake_hands-give.PFV-PL.AN.R-DS.SEQ-3SG.M.SBJ

bl-Ø-io=be

exist-IPFV-2/3PL.AN.SBJ=DECL

'They shake hands with each other.'

The following section dealing with reciprocals in the imperfective rounds off the synchronic analysis of reciprocal constructions in Mian.

5 Reciprocals in the imperfective

The *sese*-construction and its zigzag variant, both of which were discussed in the preceding sections, cannot be used in the imperfective. We find the zigzag construction in the imperfective which is used for situations where the subevents are presented as temporally extended and (at least partially) simultaneous. An example is (55):

(55) *unáng=i* *asumâtna* *ke-n-ib=a*
woman=PL.AN three do-SEQ-2/3PL.AN.SBJ=MED

gokîm=i *hen-ye-b-e*
head_louse=PL.AN look_for.IPFV-PL.AN.R-DS.SIM-3SG.M.SBJ

hen-ye-b-e *bl-Ø-io=be*
look_for.IPFV-PL.AN.R-DS.SIM-3SG.M.SBJ exist-IPFV-2/3PL.AN.SBJ=DECL
'They are each looking for lice on the other.' [MPI clip 56]

We immediately see many parallels to the zigzag construction in the perfective. However, let's first focus on the small but crucial differences. The main difference is that while the zigzag construction in the perfective uses the suffix *-s* 'different subject sequential', the one in the imperfective uses the other different subject suffix *-b*, whose meaning is 'different subject simultaneous'. The fact that Mian apparently recycled both DS markers—and only those—back into reciprocal constructions strengthens the diachronic scenario I propose below, namely that reciprocals developed from a clause chaining construction in which verbs were inflected for DS.

The other difference between reciprocals in the perfective and the imperfective is that the former have the fused construction with a single reciprocal suffix *-sese* whereas there is no way of fusing the construction in (56) into a single verb with a suffix **-bebe*. Such forms do not exist.

(56) **(ī) hen-ye-bebe-bl-Ø-io=be*

3PL look_for.IPFV-PL.AN.R-RECP.IPFV-exist-IPFV-2/3PL.AN.SBJ=DECL

Intended: 'They are looking for lice on each other.'

While example (56) is ungrammatical, many features of the zigzag construction in the imperfective in (55) above look familiar. The whole reciprocal event is expressed by three verbs. The first two specify the type of action that is performed reciprocally. These verbs index their object, i.e., are transitive and the subject suffix is frozen to the third person singular masculine (*-e*). The verb *hen* 'be looking for' is an imperfective stem and can only be used in the imperfective. In contrast to the

perfective aspect where verbs have to be compounded with *-ûb'-* 'give (PFV)' in order to introduce a recipient object, there is no such compound in the imperfective. The recipient suffix is directly appended to the verb stem, e.g., *hen-ye-*... [look_for.IPFV-PL.AN.R-…]. Furthermore, we find the same forms of the existential verb as the third verb in the construction. The arguments to set this up as a type of serial verb construction within a single clause are the same: (i) the subject suffix only appears in the frozen form and (ii) there can be no intervening material between any of the three verbs that make up the zigzag construction.

To sum up, while we find many parallels between reciprocals in the perfective and the imperfective the latter do not show a fused reciprocal marker parallel to *-sese* in the perfective.

6 Historical scenario for the origin of the *sese*-construction

In this section I propose a historical scenario according to which the zigzag reciprocal in Mian has grammaticalized from a reanalysis of a complex serial verb construction, ultimately deriving form a biclausal description of the reciprocal situation. The *sese*-construction in turn is a fused form of the zigzag construction. In the following I discuss each step of the proposed development.

6.1 Biclausal description

Let's suppose that the zigzag construction has its diachronic origin in a biclausal description of the reciprocal situation, consisting of two medial clauses chained together, which express the bounded subevents making up the reciprocal situation. The predicate that expresses the reciprocal action is the same in both clauses but the argument positions are reversed, according to the template *NP_j V-s NP_k and then NP_k V-s NP_j*, where j≠k. Each participant is once encoded as the starting point and once as the endpoint of a reciprocal subevent. Consider example (57):

(57) *ē* *a-têm'-s-e=a*
3SG.M 3SG.M.O-see.PFV-DS.SEQ-3SG.M.SBJ=MED

mak=e *a-têm'-s-e=a*
other=SG.M 3SG.M.O-see.PFV-DS.SEQ-3SG.M.SBJ=MED
'he_j glances at him_k, the $other_k$ glances at him_j, and then …' (where j≠k)
OR 'he_j glances at him_m, the $other_k$ glances at him_m, and then …' (where j≠k≠m)

In the reciprocal interpretation of (57) there are two male referents and two sequential glancing events which are expressed in a clause chaining construction. Note that reciprocal semantics are not entailed in (57). A non-reciprocal reading is possible, i.e., a reading where there are three men and two of them (indexed as j and k) glance at the third (indexed as m).

6.2 The macro-event construction

The next step I suggest is a slight alteration of the biclausal structure in (57) into a structure that I call the 'macro-event construction'. It is used to describe a temporally extended macro-event inside which several identical or very similar bounded subevents, each with their own subject, can be discerned. The main differences to a biclausal description are that (a) the verbs denoting the subevents are no longer marked as medial verbs with *=a* and that (b) a new existential verb (*bl~bi*) enters into the construction. The existential verb has a subject suffix cross-referencing the whole set of participants in the complex event, as in (58). In the macro-event construction material can intervene between the verbs expressing the subevents. The conjunction *eka* 'and' between the two clauses describing the bounded subevents is optional.

(58) *ē* *a-têm'-s-e* *(eka)*
3SG.M 3SG.M.O-see.PFV-DS.SEQ-3SG.M.SBJ=MED (and)

mak=e *a-têm'-s-e*
other=SG.M 3SG.M.O-see.PFV-DS.SEQ-3SG.M.SBJ=MED

bl-Ø-io=be
exist-IPFV-2/3PL.AN.SBJ=DECL

1147 ‘he$_j$ glances at him$_k$, (and) the other$_k$ glances at him$_j$, and then …’ (where
1148 j≠k)
1149 OR ‘he$_j$ glances at him$_m$, (and) the other$_k$ glances at him$_m$, and then …’
1150 (where j≠k≠m)
1151

1152 As in the biclausal description in (57) above, reciprocal semantics are not entailed
1153 in the ‘macro-event construction’. A non-reciprocal reading is possible for (58) with
1154 three men and two of them (indexed as j and k) glancing at the third man (indexed as
1155 m).
1156 The macro-event construction is independently attested in the language in non-
1157 reciprocal situations. It is employed for temporally extended macro-events consisting
1158 of several bounded subevents, e.g., in (59) where a man tries to rescue his wife from
1159 drowning in a quickly rising tide of water. As in (58) above, the conjunction *eka*
1160 ‘and’ between the two clauses describing the bounded subevents is optional.
1161

1162 (59) *imak=e* *mengge-s-e* *(eka)*
1163 husband=SG.M pull.PFV-DS.SEQ-3SG.M.SBJ (and)
1164

1165 *aai=e* *mengge-s-e* *bi-n-ib=a*
1166 water=SG.N1 pull.PFV-DS.SEQ-3SG.N1.SBJ exist-SEQ-2/3PL.AN.SBJ=MED
1167 ‘the husband is pulling and the water is pulling (on the woman), they are
1168 (doing this) and then …’ [Flood]
1169

What is described in (59) is of course not a reciprocal action because the agents are the husband and the water and both are pulling on a single patient, his wife, the former to rescue her, the latter to drown her. But the example shows that we can set up the 'macro event' as a separate construction in Mian, independent of reciprocals.

6.3 Non-expression of overt nominals in reciprocal contexts

Mian is strongly zero-anaphoric. Overt arguments (NPs or free pronouns) are typically dropped in discourse, if they are retrievable from the context. A quantitative analysis of Mian texts shows that in narrative texts the percentage of overtly expressed nominals can be as low as 25%; even below 15% in some procedural texts, where the overt pronoun first singular pronoun *nē* referring to the speaker is consistently dropped. Therefore, example (58) above was presumably possible without the overt subject nominals, which yields a structure that looks very much like the zigzag construction.

(60) *a-têm'-s-e*
3SG.M.O-see.PFV-DS.SEQ-3SG.M.SBJ=MED

a-têm'-s-e *bl-Ø-io=be*
3SG.M.O-see.PFV-DS.SEQ-3SG.M.SBJ=MED exist-IPFV-2/3PL.AN.SBJ=DECL
'They are glancing at each other.'

I assume that not expressing overt subject nominals, resulting in (60), was more or less restricted to the expression of reciprocal situations. Speakers would have used an overt NP to facilitate referent identification, if (60) was said to describe a situation in which two men each glance at a third man. Due to the frequent use of structures like (60) with dropped nominal arguments for the expression of reciprocal semantics this construction became specialized as a dedicated reciprocal.

At this stage the subject suffix became conventionalized in the third person singular masculine (*-e*), while the object prefixes on the zigzag verbs retained their ability to indicate gender differences between the reciprocants, as in (61):

(61) *a-têm'-s-e*
3SG.M.O-see.PFV-DS.SEQ-3SG.M.SBJ=MED

wa-têm'-s-e *bl-Ø-io=be*
3SG.F.O-see.PFV-DS.SEQ-3SG.M.SBJ=MED exist-IPFV-2/3PL.AN.SBJ=DECL
'They (F+M) are glancing at each other.'

This is an example for a reciprocal situation between a female and a male participant. That (61) is a single construction can also be seen from the fact that any overt subject pronoun has to be in the plural. Any overt subject pronoun must show the same person and number as the existential verb *bi~bl*, which is inflected for subject, as in (62):

(62) *ī* *a-têm'-s-e*

3PL.AN 3SG.M.O-see.PFV-DS.SEQ-3SG.M.SBJ=MED

wa-têm'-s-e *bl-Ø-io=be*

3SG.F.O-see.PFV-DS.SEQ-3SG.M.SBJ=MED exist-IPFV-2/3PL.AN.SBJ=DECL

'They (M+F) are glancing at each other.'

This is the endpoint of the development from a biclausal description of a reciprocal situation to the zigzag-construction in (62). In the remainder of the historical section I provide some remarks on how the *sese*-construction fits into this picture.

6.4 Phonological reduction and reanalysis

The development from the zigzag construction (*V-s-e V-s-e*) to the *sese*-construction (*V-sese*) was possibly due to phonological reduction. The deleted material is struck through in (63), which otherwise is an exact repetition of (60) above:

(63) *a-têm'-s-e*

3SG.M.O-see.PFV-DS.SEQ-3SG.M.SBJ=MED

~~a-têm'~~-s-e *bl-Ø-io=be*

~~3SG.M.O-see.PFV~~-DS.SEQ-3SG.M.SBJ=MED exist-IPFV-2/3PL.AN.SBJ=DECL

'They are glancing at each other.'

Note that the DS suffix *-s* and the frozen subject suffix *-e*, which belong to the second erstwhile zigzag verb, are not deleted but now form part of the reciprocal suffix *-sese*. The result of this haplology-like reduction is illustrated in (64), where the segment sequence /sɛ sɛ / has been reanalyzed as the reciprocal suffix *-sese*. Note that (64) is hypothetical and synchronically unattested. The *sese*-construction undergoes univerbation (see 6.5 below).

(64) Hypothetical construction:

a-têm'-sese *bl-Ø-io=be*

3SG.M.O-see.PFV-RECP exist-IPFV-2/3PL.AN.SBJ=DECL

'They (M+M) are glancing at each other.'

What possibly happened in (63) is that the second verb stem plus its object prefix was deleted because it redundantly expressed what is already expressed in the first verb. There remains one issue with the last step, namely that the type of haplology-like phonological reduction which takes (63), a zigzag construction, as its input and yields (64), a single verb inflected with *-sese*, as its output is attested nowhere else in the language. Given that the similarity between *V-s-e V-s-e* and *V-sese* is striking however, I submit that the analysis proposed here provides the best available

explanation of the facts. An obvious first step towards a clearer picture would be to compare reciprocal constructions in neighboring languages.

6.5 Univerbation

The final step in the development of the *sese*-construction is univerbation of the verb bearing the suffix *-sese* with the existential verb, yielding (65):

(65) *a-têm'-sese-bl-Ø-io=be*
3SG.M.O-see.PFV-RECP-exist-IPFV-2/3PL.AN.SBJ=DECL
'They (M+M) are glancing at each other.'

In contemporary Mian the whole verb complex in (65) forms a single phonological word with respect to tone assignment and the initial /b/ in the existential verb is not prenasalized, which is would be in isolation.

7 Conclusion

Mian has two related monosemous constructions for the description of reciprocal situations, the zigzag construction and the possibility of inflecting a verb with the reciprocal suffix *-sese*, where the form of this suffix is the result of a fusion of the

zigzag type. Both of these are complex and typologically unusual in that they employ a verb-marking strategy yet require both reciprocant argument positions to be filled and verbs to remain transitive. In each case the existential verb indexes all reciprocants with a plural subject suffix and marks the whole complex event as a joint activity.

While the zigzag type of reciprocal construction has also been reported in other TNG languages, such as Amele and Hua, the fused type is so far only attested in Mian. The *sese*-construction is restricted to perfective aspect, while the zigzag construction has a perfective variant with the DS suffix *-s* 'DS, sequential' and an imperfective variant with the DS suffix *-b* 'DS, simultaneous'. In each case, the S/R meaning marked on the first zigzag verb is interpreted with respect to the second zigzag verb and vice versa.

The important features of the zigzag construction are that there are three subevents integrated into a single clause. The first two are expressed by the zigzag verbs, each of which is inflected for DS, and the third is expressed by an existential verb, which is always inflected for a plural subject. The subject is indicated on both zigzag verbs by a conventionalized subject suffix of the form *-e*, which is the third person singular masculine.

The zigzag verbs express the respective reciprocal subevents within the larger event described by the whole clause. The second zigzag verb describes the same event but with converse argument configurations. The zigzag construction has to be used for sequential reciprocity between two participants who differ in biological sex.

The zigzag construction can be derived diachronically from a biclausal description involving a clause chain in which both verbs are marked for different subject following. I showed that this is a plausible development because the S/R marking from the biclausal description is still in operation in the zigzag construction, albeit in a circular fashion. The zigzag type has been fused into the *sese*-construction, in which the second sequence /sɛ/ is a remnant of the second zigzag verb, namely the DS suffix followed by the conventionalized subject suffix.

Reciprocal constructions are interesting cross-linguistically because they have complex events and show a wide range of different encoding strategies in the languages of the world. This study provides an in-depth analysis of the complex morphology and semantics of a typologically very interesting type of reciprocal construction, which has not yet been analyzed in detail in the existing literature on reciprocals. The study pushes back the limits of our knowledge of Papuan languages and contributes to the typology of reciprocal constructions.

Abbreviations

1 – first person, 2 – second person, 3 – third person, AN – animate, CP – classificatory prefix, DECL – declarative, DS – different subject, DU – dual, F – feminine, GPST – general past, HORT – hortative, HPST – hesternal past, IMP – imperative, INCL – inclusive, INF – infinitive, IO – indirect object, IPFV – imperfective, M –masculine, MED – medial verb, N1 – neuter 1, N2 – neuter 2, O – object, PFV – perfective, PL – plural, PRED – predicate marker, R – recipient, REAL – realis, RECP – reciprocal, SBJ –

subject, SEQ – sequential, SG – singular, SIM – simultaneous, SS – same subject, TODPAST – today past.

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Figure
Click here to download Figure: Reciprocal constructions in Mian FIGURES.docx

Figures - Reciprocals in Mian

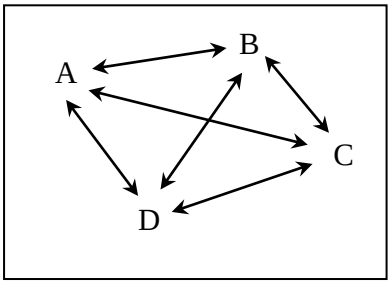

Figure 1. Strong reciprocity

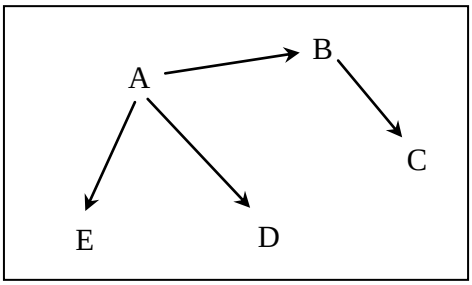

Figure 2. Melee configuration

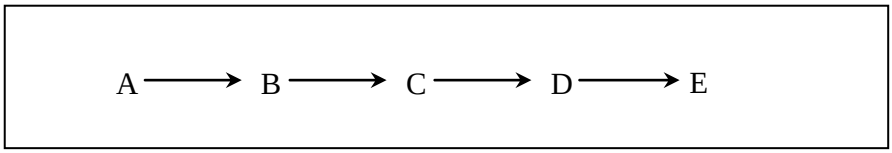

Figure 3. Chaining situation

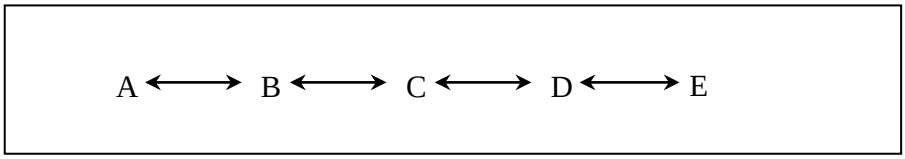

Figure 4. Adjacency

Tables - Reciprocals in Mian

Table 1. Classificatory prefixes (in the third person)

Person	Classes	Classificatory prefixes	
		Singular	Plural
3	M-class	*dob- ~ do-*	*dol- ~ dl- ~ do-*
	F-class	*om-*	
	Long object	*tob- ~ to-*	*tebel- ~ tebe-*
	Bundle-like object	*gol- ~ go-*	*gulel- ~ gule-*
	Covering object	*gam-*	*gemel- ~ geme-*
	Residue class	*ob- ~ o-*	*ol- ~ o-*

Table 2. The pronominal affixes on the verb (in the third person)

Gender	Subject		Object		Recipient (PFV)		Recipient (IPFV)	
	Sg	Pl	Sg	Pl	Sg	Pl	Sg	Pl
Masculine	*-e*	*-ib~-io*	*a-*	*y(a)-~i-*	*-a*	*-e*	*-ha*	*-ye*
Feminine	*-o*		*wa-*		*-o*		*-we*	

Table 3. Reciprocal subtypes in Mian

Subtype ID	Reciprocal	Object affix is	SEQ	SIM	Recipro-cants		Gender		Illustrated in examples
					2	3+	Mixed	Same	
A	*-sese*	SG.M	✓	×	✓	×	×	✓	(2)
B	*-sese*	SG.F	✓	×	✓	×	×	✓	(3)
C	*-sese*	PL	✓	✓	×	✓	✓	✓	(1)
D	*-sese*	absent	✓	✓	✓	✓	✓	✓	(30)
E	*-se … -se*	M.SG	✓	×	✓	×	×	✓	(5)
F	*-se … -se*	F.SG	✓	×	✓	×	×	✓	(6)
G	*-se … -se*	SG.F + SG.M	✓	×	✓	×	✓	×	(7)
H	*-se … -se*	PL	✓	✓	×	✓	✓	✓	(4)
I	*-se … -se*	absent	✓	✓	✓	✓	✓	✓	(35)