Reciprocal constructions in Mian¹

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.’

- 63 (3) (ī) *wa-nâ'-sese-bl-Ø-io=be*
 64 (3PL) 3SG.F.O-hit.PFV-RECP-exist-IPFV-2/3PL.AN.SBJ=DECL
 65 'They (two females) are hitting each other.'

66

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

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

75

- 76 (4) (ī) *i-nâ'-s-e* *i-nâ'-s-e*
 77 (3PL) PL.AN.O-hit.PFV-DS.SEQ-3SG.M.SBJ PL.AN.O-hit.PFV-DS.SEQ-3SG.M.SBJ
 78
 79 *bl-Ø-io=be*
 80 exist-IPFV-2/3PL.AN.SBJ=DECL
 81 'They (more than two) are hitting each other.'

82

- 83 (5) (ī) *a-nâ'-s-e*
 84 (3PL) 3SG.M.O-hit.PFV-DS.SEQ-3SG.M.SBJ

85

86 *a-nâ'-s-e*
 87 3SG.M.O-hit.PFV-DS.SEQ-3SG.M.SBJ
 88
 89 *bl-Ø-io=be*
 90 exist-IPFV-2/3PL.AN.SBJ=DECL
 91 ‘They (two males) are hitting each other.’
 92

93 (6) (*ī*) *wa-nâ'-s-e*
 94 (3PL) 3SG.F.O-hit.PFV-DS.SEQ-3SG.M.SBJ
 95
 96 *wa-nâ'-s-e*
 97 3SG.F.O-hit.PFV-DS.SEQ-3SG.M.SBJ
 98
 99 *bl-Ø-io=be*
 100 exist-IPFV-2/3PL.AN.SBJ=DECL
 101 ‘They (two females) are hitting each other.’
 102

103 This particular type of reciprocal construction has been called the ‘zigzag’ type by
 104 Evans (2008, 2010),³ and this is the term I will use as well. This construction is
 105 illustrated in examples (4) to (7). The reciprocal subevents of hitting appear in a
 106 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.

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

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

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

123

124 (7) (ī) *a-nâ’-s-e*

125 (3PL) 3SG.M.O-hit.PFV-DS.SEQ-3SG.M.SBJ

126

127 *wa-nâ’-s-e*

128 3SG.F.O-hit.PFV-DS.SEQ-3SG.M.SBJ

129

130 *bl-Ø-io=be*

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

132 ‘They (F+M) are hitting each other.’

133

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

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

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

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

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

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

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

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

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

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

198

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) $\bar{e}$ *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.’

222

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

229

230 (10) *naka=e unáng=o wa-têm’-Ø-e=be*

231 man=SG.M woman=SG.F 3SG.F.O-see.PFV-REAL-3SG.M.SBJ=DECL

232 ‘The man saw the woman.’

233

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

241

242 (11) *nē memâlo fút=e tob-ò-n-i=a*

243 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.

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

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

[Insert Table 1 about here]

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

(12) *nē naka=e éil=o*
 1SG man=SG.M pig=SG.F

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 *-b'* after a vowel (and *-t'* 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.

264 *om-ûb'-a-Ø-i-bio=be*

265 3SG.F_CL.O-give.PFV-3SG.M.R-REAL-1SG.SBJ-GPST=DECL

266 'I gave the sow to the man.'

267

268 In the perfective, lexical verbs are compounded with *-ûb'* 'give (PFV)' to

269 introduce a recipient object into the argument structure of the verb. The recipient

270 object is indexed by means of a suffix immediately following *-ûb'* 'give (PFV)'.

271 Note that *-ûb'* 'give (PFV)' does not have a classificatory prefix in this construction.

272 An example is (13):

273

274 (13) *kasak=e*

275 *kasak_ritual=SG.N1*

276

277 *ale-ˈb'-e-Ø-ib-bio=ta*

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

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

280

281 While subject and object affixes are independent of aspect the form of the suffix

282 indexing the recipient depends on aspect. In the imperfective the recipient suffixes

283 have slightly different forms and are appended to the verb stem directly. An example

284 is (14):

285

286 (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).

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

313

314 (15) a. *tóm=e* *belâ-s-e=ta*

315 stone=SG.N1 open.PFV-DS.SEQ-3SG.N1.SBJ=MED

316

317 b. *mín* *yē* *fiou* *fiou* *ga-b-e=to*

318 man there thwack thwack say.IPFV-DS.SIM-3SG.M.SBJ=MED

319 ‘the stone (gate) opened and the man was going thwack, thwack (i.e.,

320 hitting his adversaries who were trying to prevent him from leaving

321 through the opening)’ [Danenok and his brother]

322

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

330

331 (16) *ē* *bín=o* *we-s-e=a*

332 3SG.M floor=N2 sweep-DS.SEQ-3SG.M.SBJ=MED

333

334 *naka mak=e unín=o fu-n-e-bio=be*

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

336 ‘He swept the floor and then somebody else prepared food.’

337

338 (17) *ē bín=o we-b-e=a*

339 3SG.M floor=N2 sweep-DS.SIM-3SG.M.SBJ=MED

340

341 *naka mak=e unín=o fu-b-e=be*

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

343 ‘While he is sweeping the floor, somebody else is preparing food.’

344

345 The S/R suffixes *-s* and *-b*, both of which signal disjoint subject reference and

346 which are associated with perfective and imperfective aspect, respectively, play an

347 important role in the zigzag reciprocal construction and are the key to the diachronic

348 scenario which I propose in section 6. For a detailed description and analysis of the

349 Mian S/R system, see Fedden (2011: 421-470) and Fedden (2012).

350

351

352 **2 The *sese*-reciprocal construction**

353

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) $\bar{i}$ $i-n\hat{a}'-sese-bl-\emptyset-io=be$

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).

399 (20) *ī mak=i dim*
 400 3PL other=PL.AN on
 401
 402 *do-tamaa-sese-s-ib=a*
 403 PL.AN.O-step_on.PFV-RECP-DS.SEQ-2/3PL.AN.SBJ=MED
 404 ‘they trampled on one another and then someone else ...’ [Luke 12, 1]
 405

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

411
 412 (21) *naka=i=a unáng=a=i*
 413 man=PL.AN=and woman=and=PL.AN
 414
 415 *toula-biaan-ib=a*
 416 sit_down.PFV-exist.IPFV.SS.SIM-2/3PL.AN.SBJ=MED
 417
 418 *inaminamino ol-ò-n-ib=a*
 419 all_kinds_of_stuff PL.RESID.O-take.PFV-SEQ-2/3PL.AN.SBJ=MED
 420
 421 *mak=i*

422 other=PL.AN

423

424 *o-Ø'-yen-sese-bl-Ø-io=be*

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

426 ‘While men and women are sitting they take all sorts of things and give

427 them to each other.’ [MPI clip 21]

428

429 (22) *ī baa-ʔb'-e-sese-bl-Ø-io=be*

430 3PL talk.PFV-give.PFV-PL.AN.R-RECP-exist-IPFV-2/3PL.AN.SBJ=DECL

431 ‘They are talking to each other.’

432

433 (23) *ī mak=i memê=i klâ*

434 3PL other=PL.AN children(PL)=PL.AN very

435

436 *kimâa'-ʔb'-e-sese-bl-Ø-io=be*

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

438 ‘They are caring well for each other’s children.’

439

440 (24) *ī am as=o*

441 3PL house fire=PL.N1

442

443 *o-tanà-ʔb'-e-sese-bl-Ø-io=be*

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

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

446

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

450

451 (25) *nĩbo ya-têm’-sese-bi-Ø-obo=be*

452 1PL.INCL PL.AN.O-see.PFV-RECP-exist-IPFV-1PL.SBJ=DECL

453 ‘We (INCL) are throwing glances at each other.’

454

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

459

460 (26) *ĩ i-nâ’-sese-bi-n-ib-so=be*

461 3PL PL.AN.O-hit.PFV-RECP-exist-REAL-2/3PL.AN.SBJ-HPST=DECL

462 ‘Yesterday they were hitting each other.’

463

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

467

468 (27) *ē wen-bi-n-e-so=be*

469 3SG.M eat.IPFV-exist-REAL-3SG.M.SBJ-HPST=DECL

470 ‘Yesterday he was eating.’

471

472 When the set of reciprocants is larger than two all cross-referencing affixes

473 indexing the reciprocants have to be in the plural. In a reciprocal situation with only

474 two participants object affixes must appear in the singular though the subject suffix

475 remains plural, as in (28), contrasted with the ungrammatical utterance in (29):

476

477 (28) *unáng asú uláab=i* [...]]

478 woman two age_mate=PL.AN [...]]

479

480 *wéng=o o-biaa-ib=a*

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

482

483 *mele-ʔbʰ-o-sese-bl-Ø-io=be*

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

485 ‘While the two women of similar age [...] are talking they are touching each

486 other.’ [MPI clip 3]

487

488 (29) **unáng asú uláab=i*

489 woman two age_mate=PL.AN

490

491 *mele-ʔb'-e-sese-bl-Ø-io=be*

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

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

494

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

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

505

506 (30) *ī dowôn'-sese-bl-Ø-io=be*

507 3PL eat.PFV-RECP-exist-IPFV-2/3PL.AN.SBJ=DECL

508 'They eat each other.'

509

510 Verbs with the suffix *-sese* can be further inflected for various TAM or S/R
 511 categories, for example *-n* 'realis' in (31) or *-s* 'different subject sequential' in (32)
 512 [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.

513

514 (31) *īb sinwalo klâ*

515 2PL brothers properly

516

517 *go-ˈb'-e-sese-n-in=e!*

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

519 ‘You must love each other!’ [John 15, 12]

520

521 (32) *ī mak=i dim*

522 3PL other=PL.AN on

523

524 *do-tamaa-sese-s-ib=a*

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

526 ‘they trampled on one another and then...’ [Luke 12, 1]

527

528 Summarizing, there are four templates for the *sese*-construction. Template 1 is

529 used if a verb indexes its object with a pronominal or a classificatory prefix.

530 Template 2 is used for the verb *-ûb'* ‘give (PFV)’, which indexes the (recipient)531 object with a suffix. It is also employed for the zero root *-Ø^* ‘give (PFV)’, which

532 shows up in some of the examples in this article. (For more information on the zero

533 root, see Fedden 2010: 469-470). Template 3 is employed if a verb combines with -

534 *ûb'* ‘give (PFV)’, which indexes the (recipient) object with a suffix. The templates

535 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-∅-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-ʼbʼ-ʼo-s-e*

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

587

588 *mele-ʼbʼ-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 dowônʼ-s-e* *dowônʼ-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.

As in the *sese*-construction there is a final existential verb in the (animate) plural summarizing the reciprocal action as a whole and indexing the whole set of reciprocants. The existential verb has the aspectual function of expressing imperfectivity. As the subevents which are expressed in the zigzag verbs are perfective an additional verb introducing imperfectivity is necessary, if one wants to describe an on-going situation which consists of such bounded reciprocal subevents.

The zigzag construction is restricted to the third person. The following example (36) was rejected as ungrammatical:

(36) **nĩbo na-têm'-s-e*

1PL.INCL 1SG.O-see.PFV-DS.SEQ-3SG.M.SBJ

ka-têm'-s-e

2SG.O-see.PFV-DS.SEQ-3SG.M.SBJ

bi-Ø-obo=be

exist-IPFV-1PL.SBJ=DECL

Intended: 'We (INCL, i.e., you and me) are throwing glances at each other.'

The zigzag construction is formed according to the following four templates. Template 5 is used if a verb indexes its object with a pronominal or classificatory prefix. Template 6 is for *-ûb'* 'give (PFV)' (and for *-Ø'* '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- $V_{\text{stem}}-s-e$	PL.O- $V_{\text{stem}}-s-e$	exist-IPFV-PL.AN.SBJ=DECL
	b.	SG.O- $V_{\text{stem}}-s-e$	SG.O- $V_{\text{stem}}-s-e$	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		$V_{\text{stem}}-se$	$V_{\text{stem}}-se$	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

<i>age</i>	<i>qet-u-do-co-b</i>	<i>qet-u-do-co-b</i>	<i>eig-a</i>
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

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

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

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

(39) Amele

do-Ø-co-b

3SG-give-DS-3SG

‘He gives (to) him.’

If this analysis was correct then (38) would be literally ‘they_{k+1} tobacco cut he_k.gives.him_l he_l.gives.him_k they_{k+1}.are’, where $k \neq l$. The indices are meant to express the disjoint-subject meaning. Although a plausible analysis, it runs into problems because the prefix *do-* is not part of any of the Amele object paradigms, all of which are exclusively suffixal to root (Roberts 1987: 279; Roberts 1998: 3).

Roberts (1998: 20, 25-27) interprets the lexical stem of ‘give’ as suppletive with respect to the recipient. The form *ut-ec* ‘give to him/her’ is analyzed as follows:

699 (40) Amele

700 *ut-ec*

701 give.3SG.IO-INF

702 ‘give to him/her’

703

704 An alternative analysis of ‘give’ in Amele has been proposed by Reesink (pers.
705 comm., and discussed in Fedden 2010: 465), where ‘give’ is analyzed as a minimal
706 root *i-* (*u-* in 3rd person) followed by an indirect object suffix, e.g., *u-t-ec* [give-
707 3SG.IO-INF] ‘give to him/her’.¹¹ Following this analysis reciprocal giving in Amele
708 looks like (41):

709

710 (41) Amele

711 *age ceb u-te-ce-b u-te-ce-b eig-a*

712 3PL betelnut give-3SG-DS-3SG give-3SG-DS-3SG 3PL.SBJ-TODPST

713 ‘They give each other betelnut.’ (Roberts 1987: 132)

714

715 We find, however, a generic verb that is suppletive with respect to person with the
716 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)

717

718 (42) Amele

719 *oso wen do-i-a*

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

721 ‘Someone is hungry.’ (Roberts 1987: 146)

722

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

728 To sum up the discussion on zigzag reciprocals in Amele, I assume that the verb
 729 involved is not ‘give’, but rather a suppletive generic verb, whose form in the third
 730 person is *do-*. This makes (37) literally ‘they_{k+1} cut-he_k.does.him_l cut-he_l.does.him_k
 731 they_{k+1}.are’, where $k \neq l$, and (38) would be literally ‘they_{k+1} tobacco cut he_k.does.him_l
 732 he_l.does.him_k they_{k+1}.are’, where $k \neq l$.

733 The Mian and Amele zigzag reciprocals are very similar in structure. In such
 734 zigzag constructions a complex form of verb chaining is zigzagging between
 735 subevents, i.e., successive transitive verbs, each marked with a different subject
 736 marker, and agreeing with one actor in person and number, albeit in fossilized form,
 737 followed by an intransitive summary auxiliary agreeing with the whole set of
 738 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 $k \neq l$. Again consider the Mian zigzag construction, repeated from (33), where one man and one woman participate in the reciprocal event:

(43) $\bar{t}$ *a-têm'-s-e*

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

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) $\bar{t}$ *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) $\bar{o}$ *a-têm'-s-o=a*

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

806 *ē* *wa-tēm'-s-e=a*

807 3SG.M 3SG.F.O-see.PFV-DS.SEQ-3SG.M.SBJ =MED

808 ‘She glances at him and then he glances at her and then...’

809

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

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

817

818

819 **4 The semantics of the *sese*- and the zigzag constructions**

820

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

875 *o-Ø'-yen-sese-bl-Ø-io=be*

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

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

879

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

885

886 [Insert Figure 3 about here]

887

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

892

893 (48) *ī maa'-biaan-ib=a*

894 3PL stand_up.PFV-exist-IPFV.SS.SIM-2/3PL.AN.SBJ=MED

895

896 *kwīng hà'-b'-e-sese-bl-Ø-io=be*

897 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

942

943 *mâa'-biaan-ib=a*

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

945

946 *mak=e* *kwīng*

947 other=3SG.M shoulder

948

949 *hà'-`b'-a-sese-bl-Ø-io=be*

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

951 ‘There are two men standing hugging each other (where X hugs Y first and

952 is then hugged by Y).’ [MPI clip 58]

953

954 Reciprocal constructions in Mian show interesting cases of clashes between the

955 morphology and the semantics. While the agents in Mian reciprocals are always

956 collapsed in a plural subject suffix, the patients (or recipients) can be expressed

957 iconically to a certain degree, as illustrated by subtypes A and B, where the object

958 affix is in the singular, thus iconically expressing that the respective reciprocal

959 actions are directed towards individuals of the same sex. However, the configurations

960 for which A and B can be used are restricted to two participants. Note that this

961 amounts to a constructional encoding of a dual although the language does not have

962 dual agreements.

963 When there are more people involved in a reciprocal event, i.e., when two (or

964 more participants) are acting on one (or more participants) in a single reciprocal

event or when there is more than one pair of reciprocants performing the same reciprocal action within each pair, the object affix needs to be plural (subtype C).

The final subtype of the *sese*-construction is D, where there is no object affix on the verb. In this case there are no semantic restrictions at all because there can be no semantic clash of conflicting features due to the absence of object affixes.

Now we turn to the subtypes of the zigzag construction. Subtypes E and F are the zigzag alternatives for A and B and the same restrictions obtain.

The subtype G has to be used when there are two reciprocants of opposite sex. Consider example (51):

- (51) *ī mikim=i a-têm'-s-e*
 3PL siblings_of_opposite_sex=PL.AN 3SG.M.O-see.PFV-DS.SEQ-3SG.M.SBJ
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
 'Brother and sister are glancing at each other.' [MPI clip 46]

In this case a single verb inflected with *-sese* cannot be used because this would invariably create a semantic clash that the language does not permit. If example (51) had a single verb inflected with *-sese* and the affix cross-referencing the non-subject reciprocant was singular masculine there would be a clash with the fact that one of the subevents is directed towards a woman. If it was singular feminine a similar clash would arise in that one of the subevents is directed towards a man. Finally, plural

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

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

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

998 Neither of the *sese-* nor the zigzag construction shows any restrictions with
 999 irreducibly symmetric verbs, which are known to show constructional restrictions in
 1000 many languages (Dimitriadis 2008). A predicate is irreducibly symmetric “if (a) it
 1001 expresses a binary relationship, but (b) its two arguments have necessary identical
 1002 participation in any event described by the predicate” (Dimitriadis 2008: 378). An
 1003 example of an irreducibly symmetric verb is *meet*. It is due to the lexical semantics
 1004 of this verb that an event of A meeting B is also always an event of B meeting A.
 1005 Here, either the *sese-* or the zigzag construction can be used, so either (52) or (53)
 1006 are possible, even in the description of exactly two people meeting each other.

1007

1008 (52) $\bar{t}$ *mî'-sese-bl-Ø-io=be*

1009 3PL meet.PFV-RECP-exist-IPFV-2/3PL.AN.SBJ=DECL

1010 ‘They (2 or more) met each other.’

1011

1012 (53) $\bar{t}$ *mî'-s-e* *mî'-s-e*

1013 3PL meet.PFV-DS.SEQ-3SG.M.SBJ meet.PFV-DS.SEQ-3SG.M.SBJ

1014

1015 *bl-Ø-io=be*

1016 exist-IPFV-2/3PL.AN.SBJ=DECL

1017 'They (2 or more) met each other.'

1018

1019 This is not restricted to verbs which do not index their object. An example of the
 1020 zigzag construction with an irreducibly symmetric predicate *heitda* 'shake hands',
 1021 which indexes the (recipient) object, is (54):

1022

1023 (54) $\bar{t}$ *heitda-ˈb'-e-s-e*

1024 3PL shake_hands-give.PFV-PL.AN.R-DS.SEQ-3SG.M.SBJ

1025

1026 *heitda-ˈb'-e-s-e*

1027 shake_hands-give.PFV-PL.AN.R-DS.SEQ-3SG.M.SBJ

1028

1029 *bl-Ø-io=be*

1030 exist-IPFV-2/3PL.AN.SBJ=DECL

1031 'They shake hands with each other.'

1032

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]

1055 We immediately see many parallels to the zigzag construction in the perfective.
 1056 However, let's first focus on the small but crucial differences. The main difference is
 1057 that while the zigzag construction in the perfective uses the suffix *-s* 'different
 1058 subject sequential', the one in the imperfective uses the other different subject suffix
 1059 *-b*, whose meaning is 'different subject simultaneous'. The fact that Mian apparently
 1060 recycled both DS markers—and only those—back into reciprocal constructions
 1061 strengthens the diachronic scenario I propose below, namely that reciprocals
 1062 developed from a clause chaining construction in which verbs were inflected for DS.

1063 The other difference between reciprocals in the perfective and the imperfective is
 1064 that the former have the fused construction with a single reciprocal suffix *-sese*
 1065 whereas there is no way of fusing the construction in (56) into a single verb with a
 1066 suffix **-bebe*. Such forms do not exist.

1067

1068 (56) **(ī) hen-ye-bebe-bl-Ø-io=be*

1069 3PL look_for.IPFV-PL.AN.R-RECP.IPFV-exist-IPFV-2/3PL.AN.SBJ=DECL

1070 Intended: 'They are looking for lice on each other.'

1071

1072 While example (56) is ungrammatical, many features of the zigzag construction in
 1073 the imperfective in (55) above look familiar. The whole reciprocal event is expressed
 1074 by three verbs. The first two specify the type of action that is performed reciprocally.
 1075 These verbs index their object, i.e., are transitive and the subject suffix is frozen to
 1076 the third person singular masculine (*-e*). The verb *hen* 'be looking for' is an
 1077 imperfective stem and can only be used in the imperfective. In contrast to the

1078 perfective aspect where verbs have to be compounded with *-ûb* ‘give (PFV)’ in
 1079 order to introduce a recipient object, there is no such compound in the imperfective.
 1080 The recipient suffix is directly appended to the verb stem, e.g., *hen-ye-...*
 1081 [*look_for.IPFV-PL.AN.R-...*]. Furthermore, we find the same forms of the existential
 1082 verb as the third verb in the construction. The arguments to set this up as a type of
 1083 serial verb construction within a single clause are the same: (i) the subject suffix only
 1084 appears in the frozen form and (ii) there can be no intervening material between any
 1085 of the three verbs that make up the zigzag construction.

1086 To sum up, while we find many parallels between reciprocals in the perfective and
 1087 the imperfective the latter do not show a fused reciprocal marker parallel to *-sese* in
 1088 the perfective.

1089

1090

1091 **6 Historical scenario for the origin of the *sese*-construction**

1092

1093 In this section I propose a historical scenario according to which the zigzag
 1094 reciprocal in Mian has grammaticalized from a reanalysis of a complex serial verb
 1095 construction, ultimately deriving from a biclausal description of the reciprocal
 1096 situation. The *sese*-construction in turn is a fused form of the zigzag construction. In
 1097 the following I discuss each step of the proposed development.

1098

1099

1100 **6.1 Biclausal description**

1101

1102 Let's suppose that the zigzag construction has its diachronic origin in a biclausal
 1103 description of the reciprocal situation, consisting of two medial clauses chained
 1104 together, which express the bounded subevents making up the reciprocal situation.
 1105 The predicate that expresses the reciprocal action is the same in both clauses but the
 1106 argument positions are reversed, according to the template NP_j *V-s* NP_k and then NP_k
 1107 *V-s* NP_j , where $j \neq k$. Each participant is once encoded as the starting point and once as
 1108 the endpoint of a reciprocal subevent. Consider example (57):

1109

1110 (57) $\bar{e}$ *a-têm'-s-e=a*

1111 3SG.M 3SG.M.O-see.PFV-DS.SEQ-3SG.M.SBJ=MED

1112

1113 *mak=e* *a-têm'-s-e=a*

1114 other=SG.M 3SG.M.O-see.PFV-DS.SEQ-3SG.M.SBJ=MED

1115 'he_j glances at him_k, the other_k glances at him_j, and then ...' (where $j \neq k$)

1116 OR 'he_j glances at him_m, the other_k glances at him_m, and then ...' (where

1117 $j \neq k \neq m$)

1118

1119 In the reciprocal interpretation of (57) there are two male referents and two
 1120 sequential glancing events which are expressed in a clause chaining construction.
 1121 Note that reciprocal semantics are not entailed in (57). A non-reciprocal reading is
 1122 possible, i.e., a reading where there are three men and two of them (indexed as j and
 1123 k) glance at the third (indexed as m).

1124

1125

1126 6.2 The macro-event construction

1127

1128 The next step I suggest is a slight alteration of the biclausal structure in (57) into a
 1129 structure that I call the ‘macro-event construction’. It is used to describe a temporally
 1130 extended macro-event inside which several identical or very similar bounded
 1131 subevents, each with their own subject, can be discerned. The main differences to a
 1132 biclausal description are that (a) the verbs denoting the subevents are no longer
 1133 marked as medial verbs with *=a* and that (b) a new existential verb (*bl~bi*) enters into
 1134 the construction. The existential verb has a subject suffix cross-referencing the whole
 1135 set of participants in the complex event, as in (58). In the macro-event construction
 1136 material can intervene between the verbs expressing the subevents. The conjunction
 1137 *eka* ‘and’ between the two clauses describing the bounded subevents is optional.

1138

1139 (58) *ē* *a-têm’-s-e* (*eka*)

1140 3SG.M 3SG.M.O-see.PFV-DS.SEQ-3SG.M.SBJ=MED (and)

1141

1142 *mak=e* *a-têm’-s-e*

1143 other=SG.M 3SG.M.O-see.PFV-DS.SEQ-3SG.M.SBJ=MED

1144

1145 *bl-Ø-io=be*

1146 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

1170 What is described in (59) is of course not a reciprocal action because the agents
 1171 are the husband and the water and both are pulling on a single patient, his wife, the
 1172 former to rescue her, the latter to drown her. But the example shows that we can set
 1173 up the ‘macro event’ as a separate construction in Mian, independent of reciprocals.

1174

1175

1176 6.3 Non-expression of overt nominals in reciprocal contexts

1177

1178 Mian is strongly zero-anaphoric. Overt arguments (NPs or free pronouns) are
 1179 typically dropped in discourse, if they are retrievable from the context. A quantitative
 1180 analysis of Mian texts shows that in narrative texts the percentage of overtly
 1181 expressed nominals can be as low as 25%; even below 15% in some procedural texts,
 1182 where the overt pronoun first singular pronoun *nē* referring to the speaker is
 1183 consistently dropped. Therefore, example (58) above was presumably possible
 1184 without the overt subject nominals, which yields a structure that looks very much
 1185 like the zigzag construction.

1186

1187 (60) *a-tēm'-s-e*

1188 3SG.M.O-see.PFV-DS.SEQ-3SG.M.SBJ=MED

1189

1190 *a-tēm'-s-e*

bl-Ø-io=be

1191 3SG.M.O-see.PFV-DS.SEQ-3SG.M.SBJ=MED exist-IPFV-2/3PL.AN.SBJ=DECL

1192 ‘They are glancing at each other.’

1193

1194 I assume that not expressing overt subject nominals, resulting in (60), was more or
 1195 less restricted to the expression of reciprocal situations. Speakers would have used an
 1196 overt NP to facilitate referent identification, if (60) was said to describe a situation in
 1197 which two men each glance at a third man. Due to the frequent use of structures like
 1198 (60) with dropped nominal arguments for the expression of reciprocal semantics this
 1199 construction became specialized as a dedicated reciprocal.

1200 At this stage the subject suffix became conventionalized in the third person
 1201 singular masculine (-e), while the object prefixes on the zigzag verbs retained their
 1202 ability to indicate gender differences between the reciprocants, as in (61):

1203

1204 (61) *a-têm'-s-e*

1205 3SG.M.O-see.PFV-DS.SEQ-3SG.M.SBJ=MED

1206

1207 *wa-têm'-s-e**bl-Ø-io=be*

1208 3SG.F.O-see.PFV-DS.SEQ-3SG.M.SBJ=MED exist-IPFV-2/3PL.AN.SBJ=DECL

1209 'They (F+M) are glancing at each other.'

1210

1211 This is an example for a reciprocal situation between a female and a male
 1212 participant. That (61) is a single construction can also be seen from the fact that any
 1213 overt subject pronoun has to be in the plural. Any overt subject pronoun must show
 1214 the same person and number as the existential verb *bi-bl*, which is inflected for
 1215 subject, as in (62):

1216

1217 (62) $\bar{t}$ *a-têm'-s-e*

1218 3PL.AN 3SG.M.O-see.PFV-DS.SEQ-3SG.M.SBJ=MED

1219

1220 *wa-têm'-s-e* *bl-Ø-io=be*

1221 3SG.F.O-see.PFV-DS.SEQ-3SG.M.SBJ=MED exist-IPFV-2/3PL.AN.SBJ=DECL

1222 'They (M+F) are glancing at each other.'

1223

1224 This is the endpoint of the development from a biclausal description of a
 1225 reciprocal situation to the zigzag-construction in (62). In the remainder of the
 1226 historical section I provide some remarks on how the *sese*-construction fits into this
 1227 picture.

1228

1229

1230 6.4 Phonological reduction and reanalysis

1231

1232 The development from the zigzag construction (*V-s-e V-s-e*) to the *sese*-construction
 1233 (*V-sese*) was possibly due to phonological reduction. The deleted material is struck
 1234 through in (63), which otherwise is an exact repetition of (60) above:

1235

1236 (63) *a-têm'-s-e*

1237 3SG.M.O-see.PFV-DS.SEQ-3SG.M.SBJ=MED

1238

1239 ~~*a-têm'*~~-s-e *bl-Ø-io=be*
 1240 3SG.M.O-see.PFV-DS.SEQ-3SG.M.SBJ=MED exist-IPFV-2/3PL.AN.SBJ=DECL
 1241 ‘They are glancing at each other.’

1242

1243 Note that the DS suffix -s and the frozen subject suffix -e, which belong to the
 1244 second erstwhile zigzag verb, are not deleted but now form part of the reciprocal
 1245 suffix -sese. The result of this haplology-like reduction is illustrated in (64), where
 1246 the segment sequence /sɛ sɛ / has been reanalyzed as the reciprocal suffix -sese. Note
 1247 that (64) is hypothetical and synchronically unattested. The sese-construction
 1248 undergoes univerbation (see 6.5 below).

1249

1250 (64) Hypothetical construction:

1251 *a-têm'*-sese *bl-Ø-io=be*
 1252 3SG.M.O-see.PFV-RECP exist-IPFV-2/3PL.AN.SBJ=DECL
 1253 ‘They (M+M) are glancing at each other.’

1254

1255 What possibly happened in (63) is that the second verb stem plus its object prefix
 1256 was deleted because it redundantly expressed what is already expressed in the first
 1257 verb. There remains one issue with the last step, namely that the type of haplology-
 1258 like phonological reduction which takes (63), a zigzag construction, as its input and
 1259 yields (64), a single verb inflected with -sese, as its output is attested nowhere else in
 1260 the language. Given that the similarity between *V-s-e* *V-s-e* and *V-sese* is striking
 1261 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

1285 zigzag type. Both of these are complex and typologically unusual in that they employ
 1286 a verb-marking strategy yet require both reciprocant argument positions to be filled
 1287 and verbs to remain transitive. In each case the existential verb indexes all
 1288 reciprocants with a plural subject suffix and marks the whole complex event as a
 1289 joint activity.

1290 While the zigzag type of reciprocal construction has also been reported in other
 1291 TNG languages, such as Amele and Hua, the fused type is so far only attested in
 1292 Mian. The *sese*-construction is restricted to perfective aspect, while the zigzag
 1293 construction has a perfective variant with the DS suffix *-s* ‘DS, sequential’ and an
 1294 imperfective variant with the DS suffix *-b* ‘DS, simultaneous’. In each case, the S/R
 1295 meaning marked on the first zigzag verb is interpreted with respect to the second
 1296 zigzag verb and vice versa.

1297 The important features of the zigzag construction are that there are three
 1298 subevents integrated into a single clause. The first two are expressed by the zigzag
 1299 verbs, each of which is inflected for DS, and the third is expressed by an existential
 1300 verb, which is always inflected for a plural subject. The subject is indicated on both
 1301 zigzag verbs by a conventionalized subject suffix of the form *-e*, which is the third
 1302 person singular masculine.

1303 The zigzag verbs express the respective reciprocal subevents within the larger
 1304 event described by the whole clause. The second zigzag verb describes the same
 1305 event but with converse argument configurations. The zigzag construction has to be
 1306 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 –

1330 subject, SEQ – sequential, SG – singular, SIM – simultaneous, SS – same subject,
 1331 TODPAST – today past.

1332

1333

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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	<i>dob-</i> ~ <i>do-</i>	<i>dol-</i> ~ <i>dl-</i> ~ <i>do-</i>
	F-class	<i>om-</i>	
	Long object	<i>tob-</i> ~ <i>to-</i>	<i>tebel-</i> ~ <i>tebe-</i>
	Bundle-like object	<i>gol-</i> ~ <i>go-</i>	<i>gulel-</i> ~ <i>gule-</i>
	Covering object	<i>gam-</i>	<i>gemel-</i> ~ <i>geme-</i>
	Residue class	<i>ob-</i> ~ <i>o-</i>	<i>ol-</i> ~ <i>o-</i>

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	<i>-e</i>	<i>-ib~-io</i>	<i>a-</i>	<i>y(a)-~i-</i>	<i>-a</i>	<i>-e</i>	<i>-ha</i>	<i>-ye</i>
Feminine	<i>-o</i>		<i>wa-</i>		<i>-o</i>		<i>-we</i>	

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	<i>-sese</i>	SG.M	✓	✗	✓	✗	✗	✓	(2)
B	<i>-sese</i>	SG.F	✓	✗	✓	✗	✗	✓	(3)
C	<i>-sese</i>	PL	✓	✓	✗	✓	✓	✓	(1)
D	<i>-sese</i>	absent	✓	✓	✓	✓	✓	✓	(30)
E	<i>-se ... -se</i>	M.SG	✓	✗	✓	✗	✗	✓	(5)
F	<i>-se ... -se</i>	F.SG	✓	✗	✓	✗	✗	✓	(6)
G	<i>-se ... -se</i>	SG.F + SG.M	✓	✗	✓	✗	✓	✗	(7)
H	<i>-se ... -se</i>	PL	✓	✓	✗	✓	✓	✓	(4)
I	<i>-se ... -se</i>	absent	✓	✓	✓	✓	✓	✓	(35)