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## Mermaid construction in Irabu Ryukyuan

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## Mermaid construction in Irabu Ryukyuan

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### 1. Introduction

Tsunoda (this volume-a) proposes that the prototype of the mermaid construction (hereafter, MMC) has the following three properties.

- (a) It has the structure shown in (1).
- (b) The subject of the 'Clause' and the 'Noun' are not coreferential.
- (c) The 'Clause' can be used as a sentence by itself.

- (1) Prototype of the mermaid construction ('MMC'):  
 Clause    Noun    Copula.

Irabu Ryukyuan (Irabu henceforth) has three types of the MMC: the word-type, the clitic type, and the affix type.

(a) Word-type MMC

The 'Noun' slot is occupied by a noun which is an independent word, e.g. *kutu* 'fact' and *munu* 'thing'. The predicate of the 'Clause' is in an adnominal form. The MMC with *kutu* expresses (i) a deontic modal meaning 'should; be supposed to', or (ii) anticipated future 'will'; while that with the noun *munu* expresses a causal meaning 'because'.

(b) Clitic-type MMC

The 'Noun' slot is occupied by an enclitic, e.g. (i) =*su(u)* 'man, thing', which denotes a tag-question-like meaning or an evidential modal meaning ('It seems'), and (ii) =*paz*, which has an epistemic modal meaning 'maybe'. These enclitics are attached to the predicate verb of the 'Clause', which is in an adnominal form.

(c) Affix-type MMC

The 'Noun' slot is occupied by the verbal inflectional suffix *-kutu*, which attaches to the stem of the predicate verb of the 'Clause'. The suffix *-kutu* is a grammaticalized form of the noun *kutu* 'fact', and has the same range of meanings as that of the MMC with the noun *kutu*. The inflected verb form may further be followed by the copula verb, demonstrating that it still occupies the 'Noun' slot even when it is now part of the verb morphologically.

The word type conforms to the prototype of the MMC; it has all of the three properties listed above. The clitic type and the affix type do not conform to the prototype. For example, the 'Noun' slot is not occupied by a noun. Nonetheless, the affix type serves as an interesting example of grammaticalization associated with the MMC.

Thus, Irabu demonstrates all three possibilities with regard to the grammaticalization path of the 'Noun' slot: independent word, enclitic and suffix. Note in particular the following grammaticalization path:

*kutu* 'fact' (noun) =>  
*kutu* 'should; be supposed to; will' (noun) in the word-type MMC=>  
*-kutu* 'should; be supposed to; will' (verbal inflectional suffix) in the affix-type MMC

Grammaticalization of a noun into a verbal inflectional suffix appears to be uncommon crosslinguistically.

## 2. Initial illustration

As an initial illustration, three examples are given. The ‘Noun’ slot is occupied by a noun in (2), by an enclitic in (3), and by a suffix in (4). The ‘Noun’ slot is indicated with square brackets.

- (2) *kai=ga=du*      *sac=n*      *idi-r*      [*kutu*].  
3SG=NOM=FOC first=DAT go.out-ADN.NPST should  
‘S/he should go first.’
- (3) *kai=ga=du*      *sac=n*      *idi-r[=paz]*.  
3SG=NOM=FOC first=DAT go.out-ADN.NPST=maybe  
‘S/he may go first.’
- (4) *kai=ga=du*      *sac=n*      *idi[-kutu]*.  
3SG=NOM=FOC first=DAT go.out-should  
‘S/he should go first.’

## 3. Profile of the language

### 3.1 The language and its speakers

Irabu is a northwest variety of the Miyako Ryukyuan language, which belongs to the Southern Ryukyuan group of the Ryukyuan branch of the Japonic language family. All Ryukyuan languages are in an imminent danger of extinction. The number of Irabu speakers is estimated to be approximately 2,500 (Shimoji 2008). There is one detailed reference grammar of Irabu (Shimoji 2008). Like most other Ryukyuan languages, Irabu has no written tradition. The data used in this study is thus based on the spoken language.

Irabu has five sub-varieties, i.e. Irabu, Nakachi, Kuninaka, Nagahama, and Sawada. Our focus is on Nagahama. To the best of my knowledge, there is no major dialectal difference with regard to the types of the MMC and the relevant features of each type, except for one point: the affix-type MMC does not seem to be attested in the Irabu and Nakachi sub-varieties.

### 3.2 Phonology

Irabu has five vowel phonemes /a, i, u, e, o/, and eighteen consonant phonemes /p, t, k, b, d, g, f, v, s, (h), c [ts], z [dz], m, n, ʒ [z], r, w, j/. The phoneme /ʒ/ will be written as *z* in practical orthography.

A basic understanding of the word-level prosody of Irabu is essential in examining the grammaticalization of the elements of the MMC, which will be dealt with in Section 5.

Irabu has no lexical accent. The word-level prosody is characterized by a foot-based alternating rhythm of tone features (/H/ vs. /L/). The domain in which foot building and tone assignment occur is defined as a phonological word. A phonological word is generally a morphosyntactic

word plus a whole number of clitics (see Shimoji 2009 for detail).

Foot building is based on the moraic structure. In Irabu, any light syllable is monomoraic, whereas a coda (as in /r/ of *par* ‘needle’), a geminated onset (as in the first /f/ of *ffa* ‘child’), the second component of a long vowel/consonant or a diphthong, and a syllabic consonant (e.g. /m/ of *m.ta* ‘mud’) have one mora each. Thus, a monosyllabic word *ssair* ‘get to be known’ (CCVVC) has four morae.

A foot is bimoraic or trimoraic. A phonological word must have at least one foot. If a monomoraic morpheme occurs as a phonological word, then it undergoes obligatory lengthening, as in *r-* ‘enter’ (root) > *rr* ‘enter’ (non-past adnominal). Within a phonological word, two or three adjacent moras form a foot. Binary footing is default, and ternary footing is marked. Footing proceeds from left to right exhaustively in each phonological word. Ternary footing occurs in either of the following two cases. First, if the default binary footing results in one stray mora finally, the stray is integrated as part of the preceding binary foot, as in *tunuka* ‘egg’ > (tunuka) and *banckira* ‘guava’ > (ban)(ckira). Second, a polymoraic morpheme (or allomorph) always commences a foot, and this may give rise to a stray on the part of the host to which the morpheme is attached. The stray is avoided by ternary footing, as noted above: *uttu* ‘younger sibling’ + *-gama* (diminutive) > uttu(gama) > (ut)tu(gama) > (uttu)(gama); *banckira* ‘guava’ + *-nagi* (approximative) > (ban)(cki)ra(nagi) > (ban)(ckira)(nagi).

On the basis of the pre-existing foot structure generated by the above-mentioned rule, tone is assigned by a rhythmic rule. The rhythmic rule states that (i) word-initial foot is always assigned /H/ tone, (ii) word-final foot is always toneless (/L/), and (iii) the other feet within a phonological word have an alternate rhythm of /H/ while satisfying (i) and (ii). Thus, (ban)(ckira)(nagi) ‘guava, etc.’ is assigned the tonal pattern of (H)(L)(L) rather than (H)(L)(H), the latter of which would violate (ii). On the other hand, (ban)(ckira)(nagi)(mai) ‘guava, etc., too’ (where the clitic =*mai* ‘too’ is further attached) is assigned the tonal pattern of (H)(L)(H)(L), with the first and third feet bearing /H/ tone to satisfy (iii).

### 3.3 Morphosyntax

Irabu is a verb-final language with SV/AOV being the most common and unmarked word order. In a noun phrase, the modifiers (e.g. adjective and adnominal clause (‘AC’)) precede the head noun. Irabu has a largely agglutinating morphology, but there is some fusion in the verbal inflectional morphology. Most affixes and clitics are suffixes and enclitics. Irabu has a dependent-marking system.

Nouns do not inflect. Case is indicated by a case enclitic. Irabu has the nominative-accusative case system. Both A and O arguments are marked. The nominative case is marked by the enclitic =*nu* or =*ga*. (The choice is based on the animacy/definiteness of the NP to which the clitic is attached; see Shimoji 2008). The accusative case is indicated by the enclitic =*Cu* or =*Ca* (/C/ is morphophonologically determined). Whereas =*Cu* is an

unmarked choice for O arguments, =*Ca* only occurs in clause-chaining constructions, and correlates with low transitivity (Shimoji 2008).

The inflectional morphology of verbs is characterized by marking of (i) syntactic dependency (i.e. whether the verb heads an independent clause) and (ii) finiteness (tense-mood marking). Verbs have the following forms.

- (a) Independent forms, which inflect for tense and/or mood.
- (b) Adnominal dependent forms, which are tensed.
- (c) Adverbial dependent forms (or converbs):  
tensed ones and tenseless ones.

Independent forms can occur as the predicate of independent sentences. They comprise (i) irrealis forms, such as the intentional (e.g. *mii-di* ‘will look’) and the optative (e.g. *mii-baa* ‘want to look’), which express future-oriented modal meanings (with no overt marking of tense) and (ii) realis forms, which express the speaker’s perceived certainty (with an overt marking of tense). Adnominal forms are mark for tense only. They can be used as the predicate of adnominal clauses (cf. 4.2.1). In addition, they can occur as the predicate of independent sentences. Unlike most other Miyako Ryukyuan dialects, such as Hirara, independent realis forms and adnominal forms are formally distinct in Irabu, with the former additionally carrying the realis mood affix *-m*. See Table 1.

Table 1. Inflection of the independent realis and adnominal forms (with the sample root *mii-* ‘look’)

	Non-past	Past
Independent realis (Root-TENSE-MOOD)	<i>mii-r-m</i>	<i>mii-ta-m</i>
Adnominal (Root-TENSE)	<i>mii-r</i>	<i>mii-tar</i>

There are two major conjugation classes: Class 1 and Class 2. They are phonologically determined. If a stem ends in /i/, then it is a Class 1 verb. The root *mii-* ‘look’ in Table 1, for example, is a Class 1 verb. Otherwise, the stem belongs to Class 2 (or one of other minor conjugation classes which I do not mention in this chapter). One crucial difference between the two classes is that, for non-past adnominal inflection, Class 1 verbs take *-r* (e.g. *mii-r* ‘look’), whereas Class 2 verbs take none (or zero form, e.g. *jum* ‘read’).

A Class 2 verb stem may be changed into a Class 1 stem by attaching a derivational affix ending in /i/. Thus, if a Class 2 verb stem *jum-* ‘read’ is followed by the passive-potential affix *-rai*, for example, the derived stem *jum-ai* (where /r/ is deleted) is a Class 1 stem, and thus carries *-r* for non-past adnominal inflection (*jum-ai-r* ‘be read’, not \**jum-ai*).

### 3.4 Topic and focus

Irabu has a rich inventory of topic and focus markers. They are all clitics that phonologically attach to the last word of the host phrase. There is a distributional constraint on topic and focus markers which is relevant to the main body of this chapter. That is, embedded subordinate clauses (i.e. adverbial and adnominal clauses) cannot contain a topic marker or a focus marker. If a clause contains either of them, then it is not embedded.

There are two topic markers: *=ba(a)* and *=a*. *=ba(a)* only co-occurs with a direct object argument. *=a* is used in all the other environments. Basically, they follow a case clitic. However, the nominative case (*=ga/=nu*) is replaced by the topic marker *=a*. For example, in (5), the subject argument *jarabi* 'child' is not case-marked, for the nominative case is replaced by the topic marker *=a*.

- (5) *jarabi=a*            *miz=zu=du*            *num-tar.*  
       child=TOP        water=ACC=FOC        drink-PST  
       'The child drank water.'

The object topic *=ba(a)* simply follows the accusative case marker. If the object argument *miz* 'water' in (5) (which is focus-marked) is topic-marked, we will obtain:

- (6) *jarabi=a*            *miz=zu=baa*            *num-tar.*  
       child=TOP        water=ACC=TOP        drink-PST  
       'The child drank water.'

There are three focus markers, the choice of which is sensitive to the type of speech act in which the focus marker occurs: *=du* (statement), *=ru* (Yes-No question), and *=ga* (information question). In (7), which is a statement, the subject NP is focus-marked by *=du*.

- (7) *jarabi=nu=du*            *miz=zu*            *num-tar.*  
       child=NOM=FOC        water=ACC        drink-PST  
       'A child (e.g. as opposed to an adult) drank water.'

If this sentence is turned into a Yes-No question, we obtain the following, with the focus marker replaced by *=ru*.

- (8) *jarabi=nu=ru*            *miz=zu*            *num-tar?*  
       child=NOM=FOC        water=ACC        drink-PST  
       'Did a child (as opposed to an adult) drink water?'

On the other hand, if (7) is turned into an information question in which the subject NP is questioned, the resultant sentence is the following, in which the focus marker is replaced by *=ga*.

- (9) *taru=nu=ga miz=zu num-tar?*  
 who=NOM=FOC water=ACC drink-PST  
 ‘Who drank water?’

#### 4. Types of clauses and sentences

##### 4.1 Verbal-predicate and nominal-predicate clauses

There are two major types of clauses: verbal-predicate clauses (4.1.1) and nominal-predicate clauses (4.1.2).

##### 4.1.1 Verbal-predicate clauses

The predicate of verbal-predicate clauses consists of a main verb and optionally an auxiliary verb. When it consists of a main verb alone, the main verb is inflected, either in an independent form, e.g. (10), or an adnominal form, e.g. (41).

- (10) *kanu pztu=nu budur-tar.*  
 that person=NOM dance-PST  
 ‘That person danced.’

When the predicate consists of a main verb and an auxiliary verb, the main verb must be inflected as the medial form (a tenseless adverbial dependent verb), and the tense-mood marking is taken over by the auxiliary verb. As shown in (11), focus marking may occur on the main verb, but some auxiliaries do not allow focus marking on the main verb, as shown in (12).

- (11) *kanu pztu=nu budur-i-i=du u-tar.*  
 that person=NOM dance-THM-MED=FOC PROG-PST  
 ‘That person danced.’  
 (12) *kanu pztu=nu budur-i-i fii-ta-m.*  
 that person=NOM dance-THM-MED PROG-PST-RLS  
 ‘That person danced for me.’

##### 4.1.2 Nominal-predicate clauses

The predicate of nominal-predicate clauses consists of the predicate NP and the copula verb. The copula verb is not obligatory; see (13).

- (13) *kanu pžtu=u sinsii.*  
 that person=TOP teacher  
 ‘That person is a teacher.’

The copula verb indicates predicate categories (tense, mood, polarity, etc.), which cannot be indicated by the predicate NP. Thus, the copula is required only if an overt marking of tense, mood, polarity, etc., is necessary, e.g. (14) (tense) and (15) (polarity).



- (14) *kanu pztu=nu=du sinsii a-tar.*  
 that person=NOM=FOC teacher COP-PST  
 'That person was a teacher.'
- (15) *kanu pztu=u sinsii=ja ar-an.*  
 that person=TOP teacher=TOP COP-NEG.NPST  
 'That person isn't a teacher.'

We have seen nominal-predicate clauses and verbal-predicate clauses. Adjectival predication takes two forms.

(a) Stative verb (e.g. *taka-ka-tar* (high-VLZ-PST) 'was high'), which is a subtype of the verb, and thus follows the predication pattern discussed in 4.1.1.

(b) Dummy compound nominal (e.g. *taka-munu* (high-NMLZ) 'high', e.g. (39), where the head stem *munu* is a dummy noun that does not have a substantive or referential meaning), which is a subtype of the noun, and thus follows the predication pattern discussed in 4.1.2.

#### 4.2 Adnominal and adverbial clauses

##### 4.2.1 Adnominal clauses

The adnominal clause construction ('AC') in Irabu is a diachronic source of a variety of grammaticalized constructions including the MMC. An AC precedes the head noun. It does not employ a relative pronoun or a resumptive pronoun. The predicate verb of an AC must be in an adnominal form. (Adnominal forms are tensed; cf. Section 3.) The subject occurs in the nominative case. In the relevant examples below, the AC is indicated by an underline.

- (16) *vva=ga jurav-tar pztu*  
 2SG=NOM call-ADN.PST man=FOC  
 'the man you called'

Irabu has two kinds of ACs: internal ACs and external ACs. (See Teramura (1969) and Tsunoda (this volume-a, 7.2) for a discussion of these two types of AC.) Roughly speaking, in internal ACs, the head noun corresponds to an argument or an adjunct of the AC. In contrast, in external ACs, the head noun is, so to speak, added from outside the underlying clause. It does not correspond to an argument or an adjunct of the AC. In the formation of internal ACs, the 'gap' strategy (Keenan 1985) marks the position relativised on.

##### [1] Internal ACs

Any position on Keenan and Comrie's (1977) accessibility hierarchy can be relativised on, except for the object of comparison. Examples include (17) (subject; to be precise, intransitive subject), (18) (subject; to be precise, transitive subject), (16) (direct object), (19) (indirect object), (20) (oblique object), and (21) (possessor).

- (17) kuu-t-tar pztu=u=baa z-zadi.  
 come-NEG-ADN.PST man=ACC=TOP scold-INT  
 ‘[I] have to scold those men who did not come.’
- (18) jaa=ju muc-i-ur pztu=u daiz.  
 house=ACC have-THM-PROG.ADN.NPST person=ACC great  
 ‘People who have their own houses are quite something.’
- (19) kuri=a vva=ga iravc=cu naraas-tar  
 3SG=TOP 2SG=NOM Irabu=ACC teach-PST  
pztu=dara.  
 man=EMP  
 ‘This [guy] is the man to whom you taught Irabu a lot.’
- (20) munu=u jaf-Ø konro=mai  
 thing=ACC burn-NPST grill=even  
njaa-t-ta-iba...  
 not.exist-NEG-PST-CVB.CSL  
 ‘Because there was no grill with which [one] burns things...’
- (21) nau=ti=ga az-tar=gagara, unu,  
 what=QT=FOC say-PST=I.wonder INTJ  
ffa=nu jamatu+jumi=a s-i-ur-Ø  
 child=NOM mainland.Japan+wife=ACC2 do-THM-PROG-NPST  
sjuu...  
 old.man  
 How can I say, well, [I’m talking about] the old man whose child is  
 the wife of a Japanese mainlander...’

## [2] External ACs

An NP that cannot be seen as an argument or an adjunct of the AC can establish a modifying relationship with the AC, where pragmatic inference determines how the AC narrows down the reference without the head noun playing any role in the AC.

- (22) hai, kuri=a mmja stabutu=nu  
 Hey 3SG=TOP well bed.fellow=NOM  
ur-Ø kui=dooi=tii.  
 exist-NPST voice=EMP=QT  
 ‘Hey, this (voice of her that is heard over telephone) sounds like a  
 voice which is heard when her bedfellow is at her place.’ [i.e. This  
 voice sounds so upset that this probably indicates that her  
 bedfellow is at her place now.]

The external AC has a main-clause-like syntax, i.e. it is a full-fledged clause with no gap occurring within the clause. As will be noted in 5.2.3.4, sentences that contain an AC (they are bi-clausal) were reanalyzed as mono-clausal and resulted in the MMC. The existence of the main-clause-like (i.e. external) AC is definitely a relevant factor for an AC to develop into the MMC in Irabu.

#### 4.2.2 Adverbial clauses

Some adverbial subordinate clauses take the form of AC structure in which the head noun of the NP is a time noun denoting a temporal relation (e.g. *tukja* ‘time’, *atu* ‘after’, *mai* ‘before’, etc.). For example, in (23), the underlined clause functions as a time adverbial clause, even though, strictly speaking, it is an NP carrying an AC.

- (23) *sjensuu=nu* *cuu-f* *nar-Ø*  
 war=NOM strong-AVLZ become.ADN.NPST  
*tukja=n=na* *taiwan=kai=ja*  
 time=DAT=TOP Taiwan=ALL=TOP  
*ik-ah-a-t-ta-m=mu?*  
 go-CAUS-THM-NEG-PST-RLS=Q  
 ‘When the war became severe, (didn’t the government) make  
 (people) move toTaiwan?’

Note that the underlined temporal adverbial clause ending in the time noun *tukja* carries the dative clitic =*n*, for it is syntactically an NP functioning as a peripheral argument of the sentence.

Many temporal adverbial clause structures that developed from the AC structure show grammaticalization on the part of the (former) head noun of the NP. In (23), even though the noun *tukja* is typically followed by the dative enclitic, it may often be absent. This shows that the noun *tukja* has been denominalized.

- (24) *sjensuu=nu* *cuu-f* *nar=kja=a*  
 war=NOM strong-AVLZ become.ADN.NPST=time=TOP  
*taiwan=kai=ja* *ik-ah-a-t-ta-m=mu?*  
 Taiwan=ALL=TOP go-CAUS-THM-NEG-PST-RLS=Q  
 ‘When the war became severe, (didn’t the government) make  
 (people) move toTaiwan?’

The verb of the former AC, i.e. *nar* ‘become’, is still in an adnominal form, a feature that inherits from the source structure.

Furthermore, there is the clitic =*kja* ‘when’, which is a reduced form of the noun *tukja* ‘time’ and which never carries the dative clitic. Here, denominalization has proceeded one step further.

## 5. Mermaid construction

### 5.1 Introductory notes

Following Tsunoda (this volume-a; also see (1) above), the structure of the MMC in Irabu is schematized as follows.

- (25) (Subject) (Object) (Circumstance) Verb      Noun (Copula)  
first part ('Clause')                                  second part

The constituents in brackets are not always present; they may be absent under certain conditions. As mentioned in 4.1.2, the use of the copula verb is not obligatory in Irabu. Hence, an MMC may end in the ‘Noun’ component, without the copula verb.

As summarised in Table 2, Irabu has three types of the MMC in terms of the morphological and phonological status of the element that fills the ‘Noun’ slot. Each of the three types of the MMC will be examined in 5.2 to 5.4, noting how the ‘Noun’ in each type is different in terms of the morphological and phonological independence and the ways in which the MMC and ACs are differentiated.

Table 2. Three types of the MMC in Irabu

	Morphological independence of 'Noun'	Phonological independence of 'Noun'
Word-type MMC	+	±
Clitic-type MMC	+	-
Affix-type MMC	-	-

The word *kutu* may be followed by the copula verb where necessary. For example, it may be followed by the copula verb when negated, e.g. (28), or in past tense, e.g. (29).

- (28) *vva=a*      *z-zai-r*      *kutu*  
 2SG=TOP    scold-PASS-ADN.NPST    be.supposed.to  
*ar-a-n.*  
 COP-THM-NEG.NPST  
 'You are not supposed to be scolded.'
- (29) *vva=a*      *z-zai-r*      *kutu*  
 2SG=TOP    scold-PASS-ADN.NPST    be.supposed.to  
*a-tar=ri.*  
 COP-PST=eh  
 'You'd have been scolded, would you?'

The predicate of the 'Clause' can be negated, e.g.:

- (30) *vva=a*      *z-zai-n*      *kutu.*  
 2SG=TOP    scold-PASS-NEG.ADN.NPST    be.supposed.to  
 'You are supposed not to be scolded.'

In (30), the negative operator is within the scope of the modal operator, whereas in (28) the modal operator is within the scope of the negative operator.

### 5.2.2 Munu 'thing'

When used outside the MMC, the noun *munu* means 'thing', e.g. (20). The MMC with the noun *munu* denotes a causal meaning, roughly translated as 'because' in English (but see the discussion below).

- (31) A: *kai=mai*    *if=dara=i.*  
 3SG=too    go.NPST=EMP=eh  
 'He's gonna come (with us), eh?'
- B: *gui!*  
 come.on  
*jamatu=kara*      *hikooki=sii*  
 mainland=ABL      airplane=INS  
*c-ci-u-r*      *munu.*  
 come-THM-PROG-ADN.NPST      because  
 'Com'on! (He) came from the mainland Japan by airplane.  
 (So he can't come with us.)'

Unlike the MMC with *kutu*, the MMC with *munu* never contains the copula.

Despite the fact that the MMC with *munu* has a causal meaning, it does not require a clause that serves as the effect clause. The effect is only inferred from the causal statement. Thus, the MMC with *munu* is distinct

from a causal adverbial clause such as one ending in *-(i)ba* ‘because’, which is (in principle) followed by the effect clause. The *munu* MMC is a sentence-terminating, main-clause construction. It is not an incomplete, or insubordinated (Evans 2007), bi-clausal construction.

### 5.2.3 Structural characteristics of the word-type MMC

5.2.3.1 ‘Copula’. According to my research (elicitation and text-search), the noun *kutu* ‘fact’ attracts copula support where necessary (5.2.1). In contrast, the noun *munu* never attracts copula support, and it always occurs sentence-finally. This ‘edge-only’ distributional character is very much like that of speech-act particles, such as the question particle *=Cu* (e.g. (23)) and the tag particle *=i* ‘eh?’ (e.g. (31-A)). This shows that *munu* used in the MMC may be regarded as a sentence-final particle (‘SFP’). (This analysis is shown in (37).) In contrast, *kutu* ‘fact’ may be said to retain a nominal feature in that it attracts copula support. In this regard, the noun *munu* is more denominalized than *kutu* when they are used in the MMC.

5.2.3.2. *Subject of the ‘Clause’*. In indendent sentences, the subject is generally marked by the nominative case, e.g. (10) to (12) and (14). However, when the verb has the passive-potential suffix, the subject may occur in the dative case, e.g. (32). The same applies to the MMC. When the verb has the passive-potential suffix, the subject occurs in the dative case, e.g. (33).

- (32) *vva=n=na nau=mai as-irai-n.*  
 2SG=DAT=TOP what=too do-PASS-NPST  
 ‘You cannot do do anything.’
- (33) *vva=n=na nau=mai as-irai-n*  
 father=DAT=TOP what=too do-PASS-ADN.NPST  
*kutu.*  
 be.supposed.to  
 ‘You will not be able to do anything.’

5.2.3.3 *Dependency of the ‘Noun’*. In the word-type MMC, the ‘Noun’ slot is filled by an independent word. The morphological independence of the ‘Noun’ is evidenced by the following two facts.

First, the form filling this slot may occur as a free noun in other environments, e.g. *munu* ‘thing’ in (20). Thus, the forms *kutu* ‘fact’ and *munu* ‘thing’ are productively used as nouns.

Second, the preceding verb occurs as a fully inflected word form. In (26) and (31-B), for example, the verb ends in the non-past adnominal affix *-r*, demonstrating that there is a morphosyntactic word boundary between the verb and the ‘Noun’.

As just seen, there are two pieces of evidence for the morphological independence of the ‘Noun’. In contrast, its phonological independence is ambiguous. The prosodic boundary (i.e. phonological-word boundary) is not

always drawn between the verb and the ‘Noun’. Consider the following example, where the verb is *bizismirair* ‘be made to sit’ and the ‘Noun’ is *kutu*.

- (34) *ai=nu siitu-mmi=a mmja bizi-smi-rai-r*  
 that=GEN pupil-PL=TOP well sit-CAUS-PASS-ADN.NPST  
*kutu=dara.*  
 should=EMP  
 ‘That sort of pupil should be made to sit (as a punishment).’
- (35) *bizi-smi-rai-r kutu=dara*  
 (bizi)(smi)(rair) (kutu)(dara)
- a. H L L# H L#  
 b. H L H L L#

The second line in (35) indicates foot building, and the third one and the fourth one assignment. Both assignment patterns (a and b) are possible, even though the a pattern is the more common according to production tests devised for five native consultants of Irabu; all were in favour of the a pattern, one actually pronounced the b pattern, and three reported that they accept the b pattern. In the a pattern, there is a phonological-word boundary (indicated by ‘#’) between the verb and the ‘Noun’, for a sequence of two L tones indicates the termination of a phonological word. In the b pattern, then, the phonological word boundary comes at sentence-final position, with the verb and ‘Noun’ treated as part of a single phonological word. That is, there are two contradicting pieces of evidence regarding the phonological independence of the ‘N’.

5.2.3.4 *Word-type MMC and ACs*. It seems certain that the MMC developed from the AC construction as its source structure. Compare:

- (36) Source structure: ACs
- |   |                      |
|---|----------------------|
| <u>(Subject) (Object) (Circumstance) Verb</u> | <u>Noun (Copula)</u> |
| first part (‘Clause’)                         | second part          |
| AC  | Head                 |
- (37) Word-type MMC
- |   |                      |
|---|----------------------|
| <u>(Subject) (Object) (Circumstance) Verb</u> | <u>Noun (Copula)</u> |
| first part (‘Clause’)                         | second part          |
|   | SFP                  |

However, it is possible to distinguish between the two constructions. This is because the MMC is a mono-clausal construction in which the ‘Clause’ is not an embedded AC and the ‘Noun’ is no longer a head noun carrying an AC. This conclusion can be drawn from two facts: [1] the ‘Clause’ in the MMC behaves differently from a usual AC in terms of topic and focus marking within it, and [2] the ‘Clause’ is not embedded.

[1] Topic marking and focus marking

Consider (5), (6), (13) and (15). They are all independent sentences, and

they are all mono-clausal. As these examples show, topic markers can occur in independent sentences. In contrast, topic markers cannot occur in ACs (cf. 4.2.1). Now, in what is presented by ‘Clause’ in (37), topic markers can occur. For example, in (33), the dative subject is topic-marked. It might be argued that this sentence is a bi-clausal copular construction in which the subject of the sentence is *vva*, the predicate of the sentence is absent (an ellipsed copula), and *asirain* is the predicate of the ‘AC’ which modifies the head noun *kutu*. This would be schematized as [vva=n=na [[nau=mai asirain]kutu](COP)]. If this were the case, then it would not be justifiable to say that the topic marking on the subject occurs within the MMC. However, in my view the structure is [vva=n=na nau=mai asirain kutu], where the dative-marked subject belongs to the predicate *asirain*. This is because the dative marking on the subject is always motivated by the potential affix of the predicate verb. In other words, the subject *vva* and the predicate *asirain* must be in the same clause. (33) shows that, in terms of topic marking, the ‘Clause’ of the MMC behaves unlike ACs, but like mono-clausal independent sentences, since the ‘Clause’ allows topic marking within it.

Likewise, the ‘Clause’ allows focus marking. Consider (5), (7) to (9), for example. They are all independent sentences, and they are all mono-clausal. As they show, focus markers can occur in independent sentences that are mono-clausal. In contrast, in ACs (cf. 4.2.1), focus markers cannot occur. Now, in what is presented by ‘Clause’ in (37), focus markers can occur, e.g.:

- (38) *uri=u=du*                      *fau*                      *kutu=dara*.  
           that=NOM=FOC              eat.ADN.NPST    will=EMP  
           ‘(We) are supposed to eat that.’

This shows that, in terms of focus marking, too, the ‘Clause’ of the MMC behaves unlike ACs, but like mono-clausal independent sentences.

It should be noted, however, that focus marking in the word-type MMC is not frequently observed in natural discourse, even though native speakers judges them absolutely grammatical. This suggests that the MMC is not completely reanalysed as mono-clausal in the synchronic system of Irabu.

## [2] Non-embeddedness of the ‘Clause’

The ‘Clause’ in the MMC differs from an AC in that it is not embedded. That is, it is not subordinated to the NP structure. This observation is supported by the fact that the ‘Noun’ is no longer analyzed as the head noun, and that there is no reason to assume the NP structure in the MMC. Let us illustrate this step by step. Whereas a noun preceded by an AC can function as an argument, e.g. (17) (object) and (18) (subject), the ‘Noun’ in the MMC cannot function as an argument. Neither *kutu* nor *munu* is used as an argument. In fact, *munu* functions like a sentence-final particle, as was noted in Section 5.2.2.

Since the ‘Noun’ is never used as an argument, it is impossible to claim that it is the head noun of an NP. It is also noted that the ‘Noun’ cannot be modified by other adnominal modifiers, such as an adjective



*sabicc-sabic=nu* ‘be lonely’, even though this would semantically be possible. Thus, these synchronic facts show that the ‘Noun’ is not the head noun of an NP anymore. It is therefore impossible to postulate the NP structure. In (39) below, for example, the underlined part (i.e. the ‘Clause’ of the MMC) cannot be analyzed as embedded in the modifier slot of the ‘NP’ whose head is *kutu*, since such an NP cannot be claimed to exist.

- (39) *zau-butu=u* *tumi-r* . *kutu=dooi*.  
 good-husband=ACC look.for-ADN.NPST should=EMP  
 ‘(You) should find a good husband, OK?’

The most appropriate analysis for the MMC like (39) is that the ‘Clause’ is reanalyzed as a main clause, to which the ‘Noun’, which is now reanalyzed as a sentence-final particle, simply juxtaposes as a particle, and the structure is mono-clausal.

The situation here is substantially different from that in what may be called a genuine NP structure whose head is a formal noun (e.g. in (40) below, where the AC is indicated by an underline):

- (40) *zau-butu=u* *tumi-r* *kutu=u*  
 good-husband=ACC look.for-ADN.NPST fact=TOP  
*muckas-munu*.  
 difficult-ALZ  
 ‘To find a good husband is difficult.’

Note that even though this example may look like the *kutu* MMC in (39), it involves a usual NP, in which the underlined AC is followed by the head noun *kutu* ‘fact’, with the entire construction being used as a subject NP. In this example, *kutu* functions as a clause-nominalizer (or a complementizer). Note also that the underlined AC never allows topic or focus marking.

5.2.3.5 *Can the ‘Clause’ be used as a sentence by its self?* As seen in Section 1, one of the three properties of the prototype of the MMC is the following: (c) The ‘Clause’ can be used as a sentence by itself. The ‘Clause’ of the word-type MMC possesses this property. Its predicate has to be in an adnominal form (5.2). Adnominal clauses can be used as the predicate of independent sentences (3.3, 4.1.1). Therefore, for example, the ‘Clause’ of (38) can stand on its own as an independent sentence:

- (41) *uku-kazi=nu=du* *ff*.  
 big-wind=NOM=FOC come.ADN.NPST  
 ‘A typhoon come/will come.’

### 5.3 Clitic-type MMC

#### 5.3.1 An overview

In the clitic-type MMC, the ‘Noun’ slot is filled by a clitic. A clitic is

integrated into the host word to which it is phonologically attached. In the MMC, the host is the predicate verb of the ‘Clause’. The phonological integration established between the verb and the ‘Noun’ will be examined in detail in the sections below.

Like Standard Japanese (Tsunoda, this volume-b, 7.8 to 7.10), there are a variety of clitics that occur in the ‘Noun’ slot of the MMC in Irabu. In this section, I shall examine only two forms: *=paz* ‘maybe’ and *=su(u)* ‘tag-question; guess (‘It seems’). I have selected *=paz* because the MMC involving *=paz* is a typical example of the clitic-type MMC in Irabu. I have chosen *=su(u)* because the MMC involving *=su(u)* does not have its corresponding construction in Standard Japanese.

The two major generalizations for the word-type MMC apply to the clitic-type MMC as well. First, the ‘Clause’ is not an AC, i.e. the entire sentence is reanalyzed as mono-clausal. Second, the ‘Noun’ is reanalyzed as a sentence-final particle, and there is no evidence that it heads an NP as will be expected of ordinary nouns.

In what follows, the focus is on how the clitic-type MMC differs from the word-type MMC. In particular, the following two aspects will be examined in detail: (i) the degree of ‘denominalization’ on the part of the ‘Noun’ component, and (ii) phonological dependency established between the ‘Verb’ and the ‘Noun’.

### 5.3.2 *=paz*

The clitic *=paz* denotes an epistemic modal meaning ranging from a weak guess (‘maybe’) to a somewhat stronger guess based on the speaker’s certainty (‘must be’). It may attach to a verbal predicate, e.g. (42), and a nominal predicate, e.g. (43). It functions as a sentence-final modal particle. The predicate verb of the ‘Clause’ is generally in an adnominal form (although there are exceptions). Examples follow.

- (42) *kari=a*                      *pzsara=kara*                      *t-tar=paz*.  
       3SG=TOP                      Hirara=ABL                      come-ADN.PST=maybe  
       ‘He may have come from Hirara.’
- (43) *kari=a*                      *sinsii=paz*.  
       3SG=TOP                      teacher=maybe  
       ‘He may be a teacher.’

The clitic *=paz* shows a higher degree of denominalization than *kutu* ‘fact’ and *munu* ‘thing’ used in the word-type MMC. We shall look at various aspects of the denominalization of *=paz*.

[1] Unlike *kutu* and *munu*, there is no independent noun *paz* in Irabu. Its nominal origin is only indirectly traced and its nominal feature is only weakly justified. There are two kinds of evidence for the noun origin of *=paz*.

(a) Historical-comparative evidence. The cognate form *=hazu* in Standard Japanese was once used as a noun denoting ‘arrowhead’ (Tsunoda, this volume-b, 5.4.3-[2]).

(b) Language-internal evidence

(b-1) The clitic =*paz* attracts copula support, like the noun *kutu* ‘fact’ (5.2.1).

- (44) *kari=a*      *pzsara=kara*      *t-tar=paz=du*  
3SG=TOP    Hirara=ABL    come-ADN.PST=maybe=FOC  
*a-tar.*  
COP-PST  
‘It was probable that he had come from Hirara.’

It should be emphasized, however, that the copula support is not usually encountered in natural discourse. The above example was constructed by the the present writer. It was judged as grammatical by two consultants, even though they would not normally use such an expression.

(b-2) The clitic =*paz* mostly requires the preceding verb to be in an adnominal form. This shows that =*paz* was the head noun that carried an AC.

[2] Even though the verb to which the clitic =*paz* attaches is in most cases in an adnominal form, there are important exceptions to this generalization. That is, in natural discourse we do encounter cases where the preceding verb is in an independent form (not an adnominal form). In (45), the verb form *azzattam* is an independent form, inflecting for tense and mood.

- (45) *s-sa-n.*                      *az-za-t-ta-m=paz.*  
know-THM-NEG.NPST    say-THM-NEG-PST-RLS=maybe  
‘(I) don’t know. (He) may have not said (that).’

Recall that in the word-type MMC and also ACs, the predicate verb must always be in an adnominal form. In this regard, then, the MMC with =*paz* shows a higher degree of denominalization than the word-type MMC and also ACs, for the preceding verb does not have to be in an adnominal form.

[3] The clitic =*paz* never allows modification by an adnominal word like the demonstrative *unu* ‘that’ or other expressions that would occur in an ordinary NP. It is interestingly to note that, while the adverbial *ai* ‘that way’ can directly precedes the clitic =*paz* (i.e. *ai=paz* ‘may be that way’), the adnominal expression made from *ai* (i.e. *ai=nu* ‘that sort of’; =*nu* marks the genitive case) never modifies =*paz*. This is in sharp contrast with nouns, which are never preceded by *ai* directly, and always require it to be turned into *ai=nu*. Likewise, in (43) the clitic =*paz* directly follows the noun *sinsii* ‘teacher’, since it simply attaches to a nominal predicate. If the clitic =*paz* were a noun, then this kind of juxtaposition would never occur, and the noun *sinsii* would take the genitive form *sinsii=nu* (teacher=GEN). This shows that the clitic =*paz* no longer behaves as a noun, only functioning as a sentence-final particle.

[4] There is also a conspicuous difference between *kutu* and *munu* in the word-type MMC and =*paz* in the clitic-type MMC with regard to the

phonological dependency of the 'Noun' component. That is, while the 'Noun' in the word-type MMC and the predicate verb of the 'Clause' may or may not form a single phonological word (cf. 5.2.3.3), the clitic =*paz* is always phonologically integrated into the host, forming a single phonological word with the verb, as shown below.

A sequence of two L-toned feet, which indicates a phonological-word boundary (cf. 3.2), may or may not occur in the verb of the 'Clause' of the word-type MMC; see (46) and (47). In contrast, it never occurs in that of the clitic-type MMC; see (48). This indicates that phonologically the clitic =*paz* is integrated into the host, forming a single phonological word with the verb.

(46) Word-type MMC

<i>aca</i>	<i>kanukja=u=baa</i>	<i>ugunaar-as</i>
tomorrow	3PL=ACC=TOP	gather-CAUS.ADN.NPST
<i>kutu=dooi.</i>		
will=EMP		

'(Someone) will make them get together tomorrow.'

(47) (ugu)(naa)(ras) (kutu)(dooi)

H	L	L #	H	L
H	L	H	L	L#

(48) Clitic-type MMC

<i>aca</i>	<i>kanukja=u=baa</i>
tomorrow	3PL=ACC=TOP
<i>ugunaar-as=paz=dooi.</i>	
gather-CAUS.ADN.NPST=maybe=EMP	
(ugu)(naa)(ras)(paz)(dooi)	
H L H L L #	

'(Someone) may make them get together tomorrow.'

To sum up, =*paz* was a noun etymologically but it has been denominialized in phonologically, morphologically and syntactically.

We now examine whether the 'Clause' of this MMC can be used as a sentence by itself. As seen above, the predicate of the 'Clause' is generally in an adnominal form, and exceptionally in an independent form. An adnominal form can be used as the predicate of independent sentences (cf. 3.3, 4.1.1), and the 'Clause' whose predicate is in an adnominal form can stand on its own as a sentence. Thus, compare (44) with (49). When the predicate of the 'Clause' is in an independent form, naturally the 'Clause' can be used as a sentence by itself. Compare (45) with (50).

(49) *kari=a* *pzsara=kara* *t-tar.*  
 3SG=TOP Hirara=ABL come-ADN.PST  
 'He came from Hirara.'

(50) *az-za-t-ta-m.*  
 say-THM-NEG-PST-RLS  
 '(He) did not say (that).'

### 5.3.3 =su(u)

Another clitic that is used in the clitic-type MMC is =su(u). Etymologically it was a noun which meant ‘person; thing’. Its original form is not known for certain. In Modern Irabu, it is not an independent word, but an enclitic. It has an allomorph =ru(u), which occurs when preceded by a word that ends in /r/. The vowel in brackets occurs as free variation. This clitic is usually used as a non-content noun or non-lexical noun, and it always carries an AC. In the following example, the clitic =ruu carries an AC (which is underlined), and the entire NP consisting of the AC and the head noun =ruu functions as a subject argument marked by the nominative case =nu. The verb that precedes =su(u) has to be in an adnominal form.

- (51) *jaa=ju            muc-i-ur=ruu=nu=du*  
       house=ACC have-THM-PROG.ADN.NPST=person=NOM=FOC  
       *mas.*  
       better  
       ‘A person who has his own house is better.’

In the above example, the clitic functions as an agent nominal. It may also function like a complementizer (glossed ‘CMP’), like *that* in English:

- (52) *vva=ga            jaa=ju*  
       2SG=NOM    house=ACC  
       *muc-i-ur=ruu=ju=ba*  
       have-THM-PROG.ADN.NPST=CMP=ACC=TOP  
       *s-sa-t-tar.*  
       know-THM-NEG-NPST  
       ‘(I) didn’t know that you have your own house.’

The clitic =su(u) in the MMC functions as a sentence-final particle, denoting a tag-question-like meaning, as in (53), or an evidential meaning (‘It seems’), as in (54).

- (53) *vva=mai            az-tar=ruu=da.*  
       2SG=too            say-ADN.PST=I.think=TAG  
       ‘You also said (so), didn’t you?’
- (54) *pztu=nu            jaa=nu            sui-ja-gama=n*  
       person=GEN    house=GEN    balcony-DIM=DAT  
       *ik-i-i,*                            *mmna    par-ri-i*  
       go-THM-MED                    all    leave-THM-MED  
       *uk-i-ar=ruu.*  
       put-THM-RSL.ADN.NPST=it.seems  
       ‘It seemed that (they) had gone to the balcony of someone’s house,  
       and had all entered (under the balcony).’

When this MMC functions like a tag-question, the clitic =su(u) usually occurs as a sequence of =su(u) + =da, e.g. (53). The meaning of the

morpheme *=da* is still unknown, for it always occurs with *=su(u)*. One might thus want to analyze the two forms as constituting a single morpheme *=su(u)da*, which denotes a tag question. However, there do exist cases where *=su(u)* is used without *=da*; see (54).

My current analysis treats *=su(u)* as a separate morpheme that designates speaker's guess or evidentiality ('It seems', etc.), and it is *=da* that designates a tag question. As far as distributional features are concerned, the formative *=da* always occurs sentence-finally. In Irabu, sequences of two sentence-final particles are quite common, and when an edge-only particle (i.e. *=da* in this case) and another particle co-occur successively, the final particle is likely to be a speech-act oriented, discourse marker whereas the one to its left is likely to be a modal marker.

When *=su(u)* is used without *=da*, as in (54), *=su(u)* denotes a speaker's guess roughly translated as 'It seems'. However, this kind of isolated use of *=su(u)* is highly limited in natural discourse. According to the existing data, the clitic *=su(u)* denotes a guess based on visual or auditory evidence that is available to the speaker. If this sketchy description is adequate, *=su(u)* contrasts with other epistemic expressions that denote a simple guess (like *=paz* 'maybe'), which do not specify the source and type of the information that enables the guess. In this respect, it may be more appropriate to say that the clitic *=su(u)* in the MMC denotes an evidential meaning that specifies visual or auditory evidence.

The clitic *=su(u)* is closer to a noun on the denominalization scale than is the clitic *=paz*. When used in the MMC, the clitic *=su(u)* always requires the preceding verb to be in an adnominal form. This is not surprising, since the source structure of the *=su(u)* MMC (e.g. (51)) still exists, with the clitic *=su(u)* functioning as the head of an NP. Probably the only feature that shows a certain degree of denominalization is that the clitic *=su(u)* is never followed by the copula verb when used in an MMC. Note that the other clitic *=paz* does allow copula support.

On the other hand, the phonological dependency of *=su(u)* is conspicuous. First, as is the case with *=paz*, it forms a single phonological word with the preceding verb. Second, it has the mono-moraic allomorph *=su*, which violates the minimality constraint in Irabu (cf. 3.2): a phonological word must have at least one foot (bimoraic or trimoraic). Third, the clitic *=su(u)* alternates its initial segment (/s/ > /r/) as a morpho-phonological alternation, which only occurs within a phonological word. The second and third characteristics are not found in *=paz*.

That is, syntactically *=su(u)* is less denominalized than *=paz*. However, phonologically *=su(u)* is more denominalized than *=paz*.

We now examine whether the 'Clause' of this MMC can be used as a sentence by itself. As seen above, the predicate verb of the 'Clause' is in an adnominal form. An adnominal form can be used as the predicate of independent sentences (cf. 3.3, 4.1.1), and the 'Clause' whose predicate is in an adnominal form can stand on its own as a sentence. Thus, compare (53) with:

- (55) *vva=mai az-tar.*  
 2SG=too say-ADN.PST  
 'You also said (so).'

In the clitic-type MMC, topic marking is possible, e.g. (42). Focus marking, too, is possible, e.g. (3).

#### 5.4 Affix-type MMC

##### 5.4.1 An overview

In the affix-type MMC, the 'Noun' slot is filled by the suffix *-kutu*. Etymologically it is a noun which means 'fact'. The noun *kutu* 'fact' can occur in the 'Noun' slot of the MMC (5.2.1), and the MMC expresses (i) a deontic modal meaning 'should; be supposed to', e.g. (57), or (ii) anticipated future 'will', e.g. (59). The MMC with the suffix *-kutu* expresses the same meaning: (i) a deontic modal meaning 'should; be supposed to', e.g. (56), or (ii) anticipated future 'will', e.g. (61). However, the structural difference between the word-type and affix-type MMCs is conspicuous. In the latter, the form *kutu* is an inflectional affix used with verbs, e.g.:

- (56) *kanukja=nkai=ja* *aca* *fii-kutu.*  
 3PL=ALL=TOP tomorrow give-be.supposed.to  
 Clause Noun  
 'I am supposed to give (it) to them tomorrow.'

Here, *fii-kutu* is a single verb consisting of the stem *fii-* 'give' and the inflectional affix *-kutu*. This structure developed from the following word-type MMC, in which the predicate of the 'Clause' is the non-past adnominal verb *fii-r* 'give' and the 'Noun' slot is occupied by the noun *kutu* 'fact'.

- (57) *kanukja=nkai=ja* *aca* *fii-r* *kutu.*  
 3PL=ALL=TOP tomorrow give-ADN.NPST be.supposed.to  
 Clause Noun  
 'I am supposed to give (it) to them tomorrow.'

Note that in the affix-type MMC, the non-past inflectional affix *-r* of the adnominal verb *fii-r* is replaced by what was the noun *kutu* previously. Diachronically speaking, morphological fusion occurred so that the non-past affix *-r* was lost and the noun *kutu* came to fill the inflection slot, and *kutu* came to be reanalyzed as a new inflectional affix. (In the MMC with the noun *kutu*, the predicate of the 'Clause' is in the non-past adnominal form (5.2.1).)

Interestingly, the affix *-kutu* still retains its former status as a noun. As is the case with the word-type MMC containing the noun *kutu* (cf. 5.2.1, 5.2.3.1), the affix *-kutu* allows the copula verb to follow.

- (58) *kanukja=nkai=ja aca fii-kutu*  
 3PL=ALL=TOP tomorrow give-be.supposed.to  
*ar-a-n.*  
 COP-THM-NEG  
 'I am not supposed to give (it) to them tomorrow.'

In the suffix-type MMC, topic marking is possible, e.g. (58). Focus marking, too, is possible, e.g. (4).

#### 5.4.2 Morphological dependency

It is obvious that the 'Noun' of the affix-type MMC is morphologically dependent; it occurs within a morphosyntactic word, i.e. as an inflectional affix by replacing the original inflectional affix *-r*.

As is often the case in grammaticalization phenomena, however, the fused morphology as noted above is not regular or stable. First, it occurs only in Class 1 verbs (*mii-* 'look', *idi-* 'come out', *nkai-* 'bring (someone)', *fii-* 'give', *nii-* 'boil', *nci-* 'put', etc.), which all end in *-r* for non-past adnominal inflection. As noted in 3.3, Class 1 verbs may be derived from Class 2 verbs (e.g. *jum-* 'read') by attaching the passive-potential affix *-rai* (e.g. *jum* 'read' → *jum-ai*). Such derived Class 1 verbs may also undergo this fused morphology: *jumair kutu* → *jumai-kutu* 'be supposed to be read'. Second, Class 1 verbs do not always show the fused morphology, and they often occur in the non-fused form (i.e. with the original inflectional affix *-r*). That is, the source structure like (57) (word-type MMC) and its grammaticalized structure like (56) (affix-type MMC) are co-existent in Irabu.

With respect to Class 2 verbs (such as *fau-* 'eat', *tur-* 'take', *jum-* 'read', *kug-* 'paddle', etc.), the non-past meaning is denoted by a stem alone (or, they have a zero non-past affix). Thus, we cannot say whether what we are looking at is, say, *jum kutu* (*jum-Ø kutu*) or *jum-kutu*, since the original inflectional affix is not 'replaced'. Hence, we cannot say that Class 2 verbs instantiate the affix-type MMC in which *kutu* functions as an inflectional affix. No useful test is forthcoming that will confirm this. Therefore I tentatively treat every instance of a Class 2 verb as the 'Noun' of the word-type MMC.

We now examine whether the 'Clause' of the MMC can be used as a sentence by itself. As noted above, the suffix *-kutu* is added to the stem of a verb. In the case of Class 2 verbs, the stem by itself can be used as the non-past form. That is, the 'Clause' can stand on its own as a sentence. In the case of Class 1 verbs, the stem by itself cannot be used as an independent form, and the 'Clause' by itself cannot be used as a sentence.

#### 5.4.3 Phonological dependency

As noted in earlier sections, one striking fact about the affix-type MMC is that the 'Noun' component (i.e. the affix *-kutu*) is morphologically integrated into the preceding verb, although this only applies to Class 1 verbs unequivocally. Moreover, prosodic evidence shows that the two



components constitute a single phonological word; there is no prosodic (phonological-word) boundary between the preceding verb (Class 1 verb stem) and the ‘Noun’ (-*kutu*). Consider the following pair of examples. (59) is a repetition of (34) (word-type MMC). (61) is an instance of the affix-type MMC, with the inflectional affix of (59) is replaced by the affix -*kutu*.

- (59) *ai=nu siitu-mmi=a mmja bizi-smi-rai-r*  
 that=GEN pupil-PL=TOP well sit-CAUS-PASS-ADN.NPST  
*kutu=dara.*  
 should=EMP  
 ‘That sort of pupil should/will be made to sit (as a punishment).’
- (60) *bizi-smi-rai-r kutu=dara*  
 (bizi)(smi)(rair) (kutu)(dara)  
 a. H L L# H L#  
 b. H L H L L#
- (61) *ai=nu siitu-mmi=a mmja*  
 that=GEN pupil-PL=TOP well  
*bizi-smi-rai- -kutu=dara.*  
 sit-CAUS-PASS- -will=EMP  
 ‘That sort of pupil should/will be made to sit (as a punishment).’
- (62) (bizi)(smi)(rair) (kutu)(dara)  
 \*a. H L L# H L#  
 b. H L H L L#

As indicated by the asterisk on (62a), it is impossible for a phonological-word boundary to be drawn between the verb and the ‘Noun’ in the affix-type MMC. Thus, in the affix-type MMC, the ‘Noun’ component is both morphologically and phonologically dependent.

In 5.4.2, I noted that it is impossible to argue that Class 2 verbs may instantiate the affix-type MMC given that the original inflectional affix is zero in the first place. When the phonological criterion as discussed in this section is applied, it becomes clear that the ‘Noun’ *kutu* and the preceding verb (a Class 2 verb) are not always treated as a single phonological word. That is, they behave like the verb of the ‘Clause’ and ‘Noun’ in the word-type MMC, where the two components may or may not be separate phonological words (see (35)).

### 5.5 Meanings of the MMC

We saw the meanings of the three types of the MMC, from 5.2 to 5.4. They can be summarized as in Table 3. Where possible, the etymology of the ‘Noun’, too, is shown.

Table 3. Meanings of the MMC

etymology	meaning outside MMC	meaning of the MMC
	<i>kutu</i> 'fact'	(a) deontic: 'should; be supposed to'
	<i>munu</i> 'thing'	(b) anticipated future: 'will'
		causal: 'because'
(cf. Japanese <i>hazu</i> 'arrowhead')	= <i>paz</i>	epistemic: guess ('may be' or 'must be')
'person, thing'	= <i>su(u)</i>	(a) tag question
		(b) epistemic ('I think') or evidential; ( 'It seems': visual/auditory evidence)
<i>kutu</i> 'fact'	- <i>kutu</i>	(a) deontic: 'should; be supposed to'
		(b) anticipated future ('will')

### 5.6 Comparison with the MMC with other constructions

In 5.2 to 5.4, we compared the MMC (or the 'Clause' of the MMC) with independent sentences and ACs. The result can be summarized as in Table 4. The columns list constructions that are compared, while the rows list the features/criteria used for this comparison. Not every point in this comparison was discussed or exemplified above. The plus sign indicates 'possible', and the minus sign 'not possible'.

Table 4. Comparison of the MMC with other constructions

	predicate verb form	occurrence of copula	topic marking	focus marking
independent sentence	independent, adnominal	+	+	+
MMC: <i>kutu</i>	adnominal	+	+	+
MMC: <i>munu</i>	adnominal	-	+	+
MMC: = <i>paz</i>	adnominal, independent	+	+	+
MMC: = <i>su(u)</i>	adnominal	-	+	+
MMC: - <i>kutu</i>	stem	+	+	+
AC	adnominal	+	-	-

The first two features/criteria pertain to the predicate of these constructions, while the other three concern their syntax.

[1] The predicate

(a) Verb form

The predicate may be in an independent form or an adnominal form in independent sentences, and it is consistently an adnominal form in ACs. In the 'Clause' of the MMC, it is generally in an adnominal form — except for the MMC with *=paz* (adnominal and independent) and the MMC with *-kutu* (stem). That is, in terms of the form of the predicate, the 'Clause' of the MMC generally behaves like ACs. However, the MMC with *=paz* behaves more like independent sentences.

(b) The occurrence of the copula verb

Among independent sentences, nominal-predicate sentences may contain the copula verb, though not always obligatorily. The same applies to the MMC with *kutu*, the MMC with *=paz*, and the MMC with *-kutu*. Also, this applies when an AC followed by the head noun constitutes a predicate NP. The MMC with *munu* and the MMC with *=su(u)* MMC are exceptions; the 'Noun' is not followed by the copula and functions as a sentence-final particle. Therefore, *munu* and *=su(u)* are less noun-like than *kutu*, *=paz*, and *-kutu* in terms of syntactic distribution and copula support.

[2] Syntax

(c) Topic marking

Among the construction types listed in Table 4, topic marking is possible in all of them — except for ACs. That is, in this respect, the 'Clause' of MMC behaves like independent sentences, and unlike ACs.

(d) Focus marking

What was stated above regarding topic marking applies to focus marking.

In sum, the MMC as a whole resembles neither independent sentences nor ACs with respect to the morphological and syntactic characteristics of the predicate. However, in terms of topic marking and focus marking, i.e. in terms of syntax, the MMC behaves like independent sentences. That is, in these syntactic respects, the MMC is mono-clausal, not bi-clausal. The MMC does not contain an (embedded) AC.

## 6. Summary and concluding remarks

The present paper has shown that Irabu three types of the MMC: the word-type, the clitic-type, and the affix-type MMC. Most instances have a modal meaning: deontic, epistemic, or evidential, while the *munu* MMC has a causal meaning.

In terms of the predicate of the 'Clause', the MMC as a whole resembles neither independent sentences nor ACs. However, regarding topic marking and focus marking, which are syntactic criteria, the MMC behaves like independent sentences, and unlike ACs, and it is mono-clausal, not bi-clausal.

The three types of MMC exhibit different stages of grammaticalization,

in which the word-type MMC is clearly the source structure from which the affix-type MMC has developed:

independent word => enclitic => suffix.

Perhaps the most striking fact about this process is that a noun (*kutu* ‘thing’) has become a verbal inflectional suffix (*-kutu* (i) deontic ‘should; be supposed to’, (ii) anticipated future). The co-existence of a grammaticalized structure together with its non-grammaticalised source structure is common crosslinguistically. However, the grammaticalization of a noun to a verbal inflectional suffix is definitely uncommon. A cursory examination of the relevant literature, such as Heine, Claudi and Hünemeyer (1991), Hopper and Traugott (2003) and Lehmann (1995), indicates that no such instance seems to have been reported previously.

It needs to be emphasized here that this crosslinguistically uncommon grammaticalization phenomenon seems rather common in Ryukyuan in general. For example, in Shuri (Okinawa Ryukyuan), the formal noun *kutu* ‘thing’ is used as a converbal suffix denoting the causal relation (Shimoji 2012). Yuwan (Amami Ryukyuan) has a formal noun *si* (note that it corresponds to =*su(u)* in Irabu; Section 5.3.3), which stands as a clitic when used in an NP with an adnominal word, whereas it stands as an affix when used in an NP with an adnominal clause (Niinaga 2011). The Ryukyuan data presented here indicate one possible source structure that feeds the crosslinguistically uncommon grammaticalization (from a noun to a verbal inflectional affix): in Ryukyuan, this structure commonly developed from the AC structure, with the head noun of an NP being grammaticalized to become an inflectional affix of the predicate verb of the AC that precedes the head noun. The affix-type MMC in Irabu is one resulting construction of this grammaticalization phenomenon.

## Abbreviations

ABL - ablative; AC - adnominal clause; ACC - accusative; ACC2 - accusative (non-canonical); ADN - adnominal; ALL - allative; ALZ - adjectivalizer; AVLZ - adverbializer; CAUS - causative; CMP - complementizer; COP - copula; CSL - causal; CVB - converb; DAT - dative; DIM - diminutive; EMP - emphasis; FOC - focus; GEN - genitive; H - high; INT - intentional; INTJ - interjection; L - low; MED - medial verb; MMC - mermaid construction; NEG - negation; NOM - nominative; NPST - non-past; PASS - passive-potential; PL - plural; PROG - progressive; PST - past; QT - ; RSL - resultative; SG - singular; THM - thematic vowel; TOP - topic; 2 - second person; 3 - third person

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