

*A syntactic description of Yonaguni Ryukyuan: with a special focus on alignment and case-marking**

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1. Introduction

This paper aims to examine the alignment and case-marking system of Yonaguni Ryukyuan, a Southern Ryukyuan language spoken on the Yonaguni Island, Okinawa, Japan. I will first give an overview of the current alignment system of Yonaguni based on Shimoji (2015), where it is shown that the Yonaguni alignment system exhibits a split between the nominative-accusative pattern on the one hand (the case marker =*nga* for S/A and unmarked for P) and the Agentive (a.k.a. ‘split intransitive’, ‘active-stative’, etc.) pattern on the other (= *nga* for A and agentive S (S_A) only). After presenting the current system, I will set out to describe the older system that was observed about forty years ago by examining the text material which were recorded in the 1970’s (Iwase et.al. 1983). I will demonstrate that the older system had a more elaborate Agentive system in which the two markers (= *nga* and = *nu*) were used depending on the degree of agentivity of the subject NP. Thus, the subject marker = *nga* occurred with a wide range of subjects including the agent prototype (A), whereas = *nu* only occurred with a subset of S whose agentivity is lower than that for = *nga*.

By comparing the two systems, I will discuss the issue of how the current alignment system developed in Yonaguni, presenting the hypothesis about the two observed diachronic changes. On the one hand, the NOM-ACC pattern became widespread over time in Yonaguni. On the other, the Agentive system became simplified with the loss of the case marker = *nu*. The two diachronic changes are argued to be attributed to the spreading of = *nga*, which was once restricted to marking a prototypical agent (A and a restricted set of S_A) and came to be used for less agentive Ss, kicking out = *nu* from the system entirely.

2. Preliminaries

2.1 Inventory of phonemes and practical orthography

The inventory of consonant phonemes is listed in Table 1, where the practical orthography of each phoneme is represented in round brackets. Unless otherwise noted, the practical orthography will be used in this paper. The stops and affricates have a three-way phonemic contrast largely based on VOT, i.e. voiceless non-aspirated (often with a slight glottalisation), voiceless aspirated and voiced. Thus *ta* [t^(ʔ)a(:)] ‘tongue’, *tha* [t^ha(:)] ‘rice paddy’ and *da* [da(:)] ‘house’ contrast phonemically. The contrast in aspiration is

* The present study was supported by a JSPS Grant, Number 22720161.

neutralised word-medially, resulting in the reduced two-way contrast between the voiced series and the non-aspirated voiceless series. Thus, in *ttumuti* [t⁽²⁾umu t⁽²⁾i], for example, the neutralised medial sound, which is a non-aspirated voiceless [t⁽²⁾] is represented by a single letter (rather than the double letter which represents a non-neutralised, phonemically unaspirated sound) in this paper.

Table 1: Consonants

	Labial	Dental	Palatal	Velar	Glottal
Lenis stops		/t ^h / (<i>th</i>)		/k ^h / (<i>kh</i>)	
Fortis stops/affricates	/p ^ʔ / (<i>pp</i>)	/t ^ʔ / (<i>tt</i>)	/c ^ʔ / (<i>cc</i>)	/k ^ʔ / (<i>kk</i>)	
Voiced stops	/b/ (<i>b</i>)	/d/ (<i>d</i>)		/g/ (<i>g</i>)	
Nasals	/m/ (<i>m</i>)	/n/ (<i>n</i>)		/ŋ/ (<i>ŋ</i>)	
Voiceless fricatives		/s/ (<i>s</i>)			/h/ (<i>h</i>)
Tap		/ɾ/ (<i>r</i>)			
Approximants	/w/ (<i>w</i>)		/j/ (<i>j</i>)		

Yonaguni has three vowels *a*, *i* and *u*, and there is no length contrast. Monomoraic words tend to be pronounced long.

2.2 Constituent order

Yonaguni is a head-final language where a clause canonically ends in the predicate and a noun phrase canonically ends in the head noun. It is difficult to give a generalisation about the relative order of core arguments, even though it is possible to state that the subject of either an intransitive or transitive clause tends to come clause-initially. It is very rare for all the core arguments of a clause to actually occur, since contextually recoverable arguments are often left unstated. This makes it difficult to determine the basic word order of a clause.

The minimal noun phrase consists of the head noun alone. In an internally complex NP, the head may optionally be preceded by a modifier (a genitive NP, an adnominal word or an adnominal clause). The adjectival modification is made through the adnominal clause of which the head predicate is the adjective.

An NP may carry a role marker(s) when it functions as an argument, or a copula verb when it functions as a predicate. The whole constituent consisting of an NP and its extension (role markers/copula verb) is called an extended NP.

3. Previous works on the Yonaguni alignment system

It has traditionally been claimed that Yonaguni displays the nominative-accusative (NOM-ACC) alignment system, where the subject (S/A) is coded identically as nominative through the nominative case marker =*nga* whereas the direct object (P) is distinctly identified by being left unmarked. Most previous works refer to the Yonaguni system as NOM-ACC (Hirayama and Nakamoto 1964, Takahashi 1997, Izuyama 2012, Yamada, Pellard and Shimoji 2013).

However, it has also been noted in the literature that S arguments are not regularly marked by =*nga*, as illustrated in the following set of examples. Whereas the A arguments (in (1) to (4) below) are regularly marked by =*nga*, the S arguments (in (5) to (11)) are either marked by =*nga* or left unmarked. Crucially, there are some S arguments (in (9) to (11)) which never get marked or for which the acceptability is conspicuously lower than for the other examples.

- (1) *agami=nga anbidungu dandasi minun.*
 child=SBJ toy break.INF PRF
 “The/a child broke the/a toy.” [transitive]
- (2) *agami=nga inu ni butan.*
 child=SBJ dog look.at PROG.PST
 “The/a child was looking at the/a dog.” [transitive]
- (3) *asa=nga ata sagi itatjan.*
 old.man=SBJ carelessly sake spill.PRF
 “The/an old man carelessly spilt sake.” [transitive]
- (4) *khadi=nga khi=nu ida uigasi bun.*
 wind=SBJ tree=GEN branch shake.INF PROG.PRES
 “The wind is shaking the/a branch of the/a tree.” [transitive]
- (5) *agami(=nga) khaguri butan.*
 child=SBJ hide.INF PROG.PST
 “The/a child hid.” [intransitive]
- (6) *agami(=nga) khi=gara utitan.*
 child=SBJ tree=ABL drop.PST
 “The/a child dropped from a tree” [intransitive]
- (7) *di(=nga) uiti butan.*
 ground=SBJ move.INF PROG.PST
 “The ground was shaking” [intransitive]

- (8) *hana(=nga)* *satun.*
 flower(=SBJ) bloom.PRF
 “The/a flower has bloomed.” [intransitive]
- (9) *khi(?=nga)* *atan.*
 tree=SBJ be.PST
 “There was a tree” [intransitive]
- (10) *ttu(*=nga)* *nni* *bun*
 person=SBJ die.INF RES.PRES
 “The/a person is dead.” [intransitive]
- (11) *saban(*=nga)* *barun*
 bowl=SBJ break.PRF
 “The/a bowl broke” [intransitive]

Based on the variability in S marking, Hirayama and Nakamoto (1964: 802) state that “the nominative particle may be left unstated in some examples”, and the examples they list all involve S arguments (e.g. *din an* ‘money exists (i.e. I have money)’, *khi khari* ‘a/the tree blasts’, *khadi tti=du buru* ‘the wind is blowing’, etc.). Importantly, this variability in subject marking is not observed for A arguments, which are regularly marked by *=nga* except when they are topicalised. Yamada, Pellard and Shimoji (2013) point out that ‘S (and P) arguments are usually unmarked’, implying that S is unmarked by default. They nevertheless assume the NOM-ACC alignment system, acknowledging that “the exact conditions that determine when the nominative marker is used and when it is not are still unclear”.

It is therefore a central issue whether the absence of the case-marking in S simply comes from an omission of the nominative case marker (as assumed by the NOM-ACC analysis) in S arguments, or whether it is an indication that S and A are *not* identically coded, thus requiring a different analysis than the NOM-ACC analysis. According to the traditional NOM-ACC analysis, the subject marking in all the above examples should be underlyingly *=nga*, with the assumption that the subject marker may be deleted for some reason in S but not in A. However, this ‘nominative deletion’ analysis is not empirically supported, given that some S arguments like (10) and (11) are never marked and therefore cannot be taken to be underlyingly nominative. There must be a principle whereby the subject marking is blocked in a certain type of S arguments.

In Shimoji (2015) I argued that the Yonaguni system exhibits a split between the NOM-ACC pattern (*=nga* for A/S) and the Agentive pattern (*=nga* for A/S_A and not for P/S_P), depending on several factors such as clause type, NP type and focus. According to this analysis, the variability in S marking is precisely found in the Agentive pattern, in which an agent-like argument, whether it be A or S, is allowed to be marked by the

agentive marker =*nga*. Thus, whereas A (a prototypical agent by definition) is always marked by =*nga*, the possibility for S to be marked by =*nga* is determined by how much it is close to the agent prototype. For example, those verbs which require an agentive subject like *khagurun* ‘hid’ may trigger the =*nga* marking whereas other verbs like *barun* ‘(sth) broke’ do not (e.g. *saban*(*=*nga*) *barun* ‘the bowl broke’).

4. Alignment in Yonaguni: the current system

This section gives an overview of the alignment system of contemporary Yonaguni largely based on Shimoji (2015).

4.1 The Agentive system

Unlike the NOM-ACC analysis, the suggested new analysis does not treat the absence of =*nga* in S as a deletion of nominative but as the default choice for a core argument; it regards the subject marking as a signal of a semantically marked status of the NP. According to this analysis, the subject marking is motivated by the marking of the semantic role ‘agent’ or agent-like roles rather than of the syntactic role of S or A. That is, the higher the agentivity of a core argument (whether it be A or S), the more likely it is to receive the agentive marking (i.e. =*nga*).

The suggested Agentive case system predicts that the subject with no agentivity is never case-marked, since there is no motivation for the case-marking at all. This prediction is justified by the attested examples of the S arguments that are never marked (as in (10) and (11)), all of which are clearly non-agentive. Other examples of this latter type include the following, most of which are what are called ‘unaccusative’ predicates, those with no agentivity (see Shimoji 2015 for the full list of the verbs).

(12) *agami=nu thi(*=nga) hanari.*
 child=GEN hand(*=SBJ) get.apart.PST
 “The hand of the/a child got apart (from its mother’s hand).”

(13) *khuruma(*=nga) nun.*
 car(*=SBJ) get.fixed.PRF
 “The car got fixed.”

(14) *cci(*=nga) khatamai=du butaru=do.*
 blood(*=SBJ) get.hard.INF=FOC PROG.PST=SFP
 “Blood had got hard.”

(15) *min(*=nga) muri=du buru.*
 water(*=SBJ) leak.INF=FOC PROG.PRES
 “Water is leaking.”

As mentioned above, A is always marked by *=nga*, as demonstrated in (1) to (4) above, whereas agentive S arguments are either marked by *=nga* or unmarked. This difference in the optionality of *=nga* comes from a cross-linguistic and well-motivated tendency for S to be left unmarked: since it is the sole argument of a clause, there is no need to case-mark S to distinguish it from the other argument as in the case of A, which needs to be distinguished from P. Thus, the principle of economy leads the overt case-marking of S to be blocked or less preferred. On the other hand, in the Agentive system there is a clear motivation for S to be overtly case-marked, if the S is perceived to be agentive. Thus, there are two competing motivations for the case-marking in Yonaguni: on the one hand, the semantic principle of agentive marking forces the agentive S (and A) to be overtly case-marked; on the other, the principle of economy suppresses the overt case-marking, keeping case-marking minimal. Thus, Shimoji (2015) suggested the analysis that in the A marking the semantic principle overrides the principle of economy, resulting in the regular marking of A, whereas the S arguments that show variability in case-marking are explained by the competing motivations for overt case-marking (by the semantic principle) and against it (by the principle of economy).

4.2 Method for measuring agentivity

In the functional-typological literature, agentivity is regarded as a scalar rather than either-or notion, measured by a clustering of various properties such as volitionality, animacy, lexical aspect, etc. (Lakoff 1977, Hopper and Thompson 1980, Foley and Van Valin 1984, Dowty 1991, Primus 1999, Croft 1991, 2001, Næss 2007 etc). Largely following these works, I hypothesised that in Yonaguni the following five properties contribute to the prototype of agentivity: Volitionality, Animacy, Control (with an ability to instigate and control an event), Stability and Unaffectedness, each of which is a property of the participant coded as a subject. The agent prototype is a volitional (therefore human) controller of an action. The agent prototype is stable during the action in the sense that it never changes over time through the denoted event, whereas the patient changes incrementally through the action if the action is telic. The agent prototype is also never affected by the action.

Stability is crucially related to the aspectual notion of telicity. The agent prototype, unlike the patient, is not involved in, but independently controls, the action which he initiated. Thus in (1), for example, the agent *agami* ‘child’ is stable during the action of breaking a toy in the sense that he is not subject to any change due to the denoted action. In (11), by contrast, the subject *saban* ‘bowl’ is not a prototypical agent since it lacks (in addition to Volitionality, Animacy and Control) Stability, as it is involved in a telic event and is subject to the change of state (the state of not being broken to broken).

Stability is crucially related to Unaffectedness, but they are logically independent.

Unaffectedness refers to the possibility for a participant of an event to be affected in some way. The difference between the two becomes obvious when dealing with the so-called effected vs. affected entities (see Hopper 1985). In an event that involves an affected entity (e.g. the event of something being broken, as in (11)), the entity is obviously subject to the change of state, thus instable in terms of Stability. By contrast, in an event that involves an effected entity (e.g. the event of something coming into existence through the event, as in (8)), the entity is subject to the change of state (i.e. from non-existence to existence), but is never affected by the event, since the entity is not existent during the action.

4.3 Results

Based on the assumption that agentivity is determined by a clustering of the five properties mentioned above, Shimoji (2015) examined 85 verbal predicate sentences and the case-marking of their arguments by measuring the agentivity of each sentence. The agentivity of each sentence was measured by assigning the values of 1 or 0 for each property. For example, (1) has 1 for each of the five properties, with the value of the agentivity being 5, whereas (11) has 0 for each and thus 0 in total. In (6), the sole participant of the event, i.e. *agami* ‘child’ is a non-volitional human (0 for Volitionality, 1 for Animacy); it is not seen as a controller of the event (rather it is involved in the event), thus having the value of 0 for Control. The event is a telic event that changes the state of the child (thus 0 for Stability) and affects it (0 for Unaffectedness). The agentivity value for (6) is thus 1 in total. This way intransitive sentences vary widely with respect to the agentivity value, ranging from 0 to 5.

The average agentivity value for all the transitive sentences (N = 23) was 4.39, whereas that for S (N = 62) was 1.5. All transitive sentences require the agentive marking on A. On the other hand, the S marking was shown to be correlated to the agentivity value of the sentence in which it occurs, as summarised in (16).

(16) Agentivity value and the S marking (based on the data presented in Shimoji 2015)

<i>=nga</i>		<i>=nga/unmarked</i>		unmarked
3.8	>	2.23	>	0.27

There were 5 intransitive sentences which require *=nga* to be marked for their S arguments, and the average value of agentivity for them was 3.8. There were 31 intransitive sentences which may allow *=nga* to be marked for their S arguments, and the average value of agentivity for them was 2.23. There were 26 intransitive sentences which do not allow *=nga* to be marked for their S arguments, and the average value of agentivity for them was 0.27. Thus, it was shown that the more agentivity a sentence has, the more

likely it is to allow the agentive marking on its subject argument.

Table 2 summarises the correlation between the two subject marking strategies for S arguments (=nga or unmarked 'UM') and the average agentivity value (5pt to 0pt). '=nga only' means that the tokens under this category only opt for the =nga marking for S. Likewise, 'UM only' means that the tokens under this category only opt for the S being left unmarked. The categories '=nga (UM)' and '(=nga)UM' indicate that =nga or UM is preferred respectively. As is clear from the table, as the agentivity value increases the preference for =nga also increases (100% for 5pt, 67% for 4pt, 33% for 3pt, 14% for 2pt, 10% for 1pt, 0% for 0pt). The most crucial fact is that those subjects with no agentivity (0pt) never allow the marking with =nga, verifying the analysis that =nga is semantically motivated, i.e. by the semantic marking of perceived agentivity.

Table 2. Subject marking and agentivity values

		5pt	4pt	3pt	2pt	1pt	0pt
=nga preferred	=nga only	2	2	0	0	1	0
	=nga (UM)	1	4	1	1	1	0
Unmarked preferred	(=nga)UM	0	3	2	6	12	0
	UM only	0	0	0	0	7	19
	Total	3	9	3	7	21	19

4.4 Typological characteristics of the Yonaguni Agentive system

The essential feature of the Agentive system is that the alignment pattern is semantically based (Dixon 1994; 'semantic alignment' in Donohue's 2008 terms), i.e. the coding of an argument is based on its semantic role (e.g. whether it is (like) an agent), not on its syntactic role (whether it is S, A or P). In respect of having a semantic-based alignment, the Agentive system in Yonaguni is typologically similar to what is variously referred to as 'split intransitive', 'stative-active', etc. (Merlan 1985, Mithun 1991, Dixon 1994), in which the agentive core arguments (A and agentive S, or S_A) are identically coded and patientive S are treated differently from A/S_A. What constitutes agentivity differs in individual languages (volitionality, dynamicity, telicity, etc.; see Mithun 1991 and Arkadiev 2008 in detail). In semantic alignment the category 'S' is heterogeneous, since the semantic role of S varies widely depending on the meaning of the predicate (from agent to patient). Thus, semantic alignment is in sharp contrast to more common alignment systems like the NOM-ACC and ERG-ABS, or syntactic alignment systems, where the intransitive subject of any semantic role is homogeneously treated as a syntactic category S (hence S/A as nominative or S/P as absolutive).

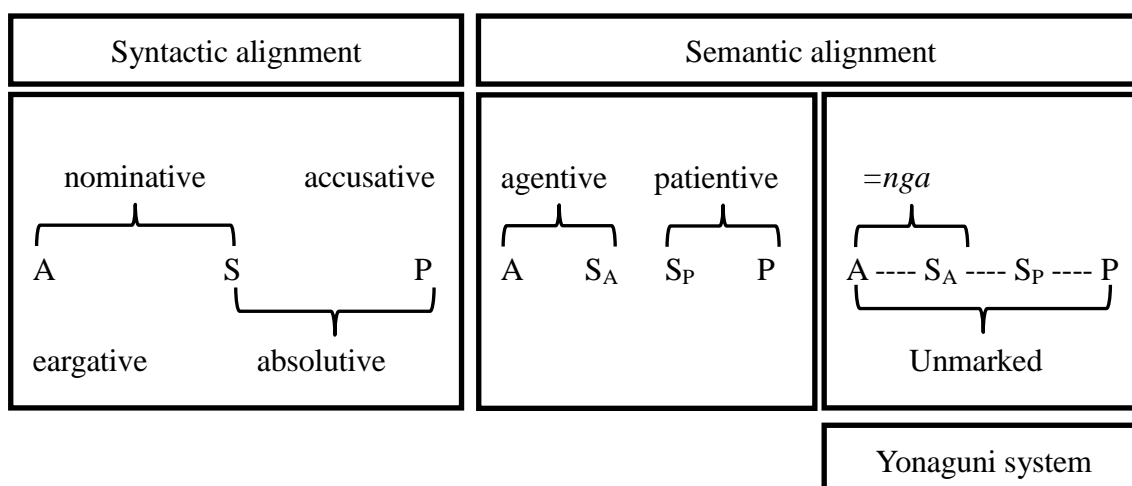


Figure 1. Typology of alignment systems and the Yonaguni system

The Agentive system in Yonaguni nevertheless differs from the well-known semantic alignment systems in two major ways. First, as I argued in Section 4.2, the Agentive system is based on the measurement of agentivity by a cluster of several features, and there is a continuum between the prototypical agent (A) to the least agentive argument (P), with a range of S arguments being situated in the middle, as indicated as broken lines in Figure 1. Thus, unlike the well-known semantic alignment systems, it is impossible to divide the S category into two discrete types (S_A and S_P) based on a simple criterion such as volitionality, as illustrated in the semantic alignment system of Manipuri (Bhat and Ningonba 2007).

(17) *əy-nə tebəl-də theŋŋi.*

I-ERG table-LOC touched

‘I touched the table (volitionally)’ [S_A : +volitional]

(18) *əy tebəl-də theŋŋi.*

I table-LOC touched

‘I touched the table (involuntarily)’ [S_P : -volitional]

In Yonaguni, volitionality is just one feature that constitutes agentivity, and a lack of this feature does not automatically lead to the blocking of *=nga*. The motivation for the agentive marking in Yonaguni is for the subject argument to exhibit agentivity in some way or another with respect to the five suggested features (Volitionality, Animacy, Control, Stability and Unaffectedness). Thus, in (19), where volitionality is lacking, the agentive marking is possible since the subject is an animate, controlling entity of an action denoted by the predicate, with stability and unaffectedness.

(19) *hatu=nga thubi hjun.*

dove=SBJ fly.INF go.PRF

“The dove flew away.” [-volitional, +animate, +control, +stable, +unaffected]

This more-or-less view on agentivity is essential when explaining the distribution of =*nga* on subjects which would otherwise be treated as non-agentive in the discrete view on agentivity. In (20), for example, the subject *hana* ‘flower’ is considered to have very little if any agentivity since it occurs with the involuntary change-of-state verb *sati bun* ‘has bloomed’ (-volitional, -animate, -control, -stable). However, the subject is nevertheless like a prototypical agent in just one respect: it is unaffected by the action, since it is an effected rather than affected entity.

(20) *hana(=nga) sati bun=do.*

flower(=SBJ) bloom.INF RES.PRES=SFP

“The flower has bloomed.” [-volitional, -animate, -control, -stable, +unaffected]

As shown in Table 2 above, there are 21 examples whose agentivity value is 1pt, of which only 7 opt for the unmarked subject. Even though most prefer unmarked to =*nga*, they may take =*nga* since they are agentive in respect of one feature of the five.

The second difference between the Agentive system in Yonaguni and the well-known semantic alignment systems is that in Yonaguni the agentive marking is optional, allowing the agentive arguments to be left unmarked without entailing any semantic change. That is, the absence of A/S_A marking does not entail that the NP is treated as patientive. Rather, the absence of such a marking is simply the *default*, over which the overt agentive marking occurs. In (5), for example, the absence of =*nga* does not lead to the absence of agentivity on the part of *agami* ‘child’. In other words, the presence or absence of the agentive marker should be described in terms of a marked-unmarked relation, not a privative opposition (= *nga* as agentive vs. zero as patientive) as often found in split intransitive systems (Dixon 1994). In short, Yonaguni does not have the equipollent contrast between A/S_A and P/S_P. Even though P is unmarked and S_P is also unmarked, this does not mean that they are identically coded (zero-marked), but that the marked choice (agentive marking) does not occur here.

4.5 *The split in alignment*

Like most other languages, the alignment system in Yonaguni shows a split depending on various factors, so that the above-mentioned Agentive pattern is not universally observed in all syntactic contexts. In fact, it occurs only in a restricted environment: it occurs in a main clause where the arguments are non-focused, non-topicalised full NPs (rather than

- (25) *[hana=nga sati buru] duguru.*
 flower=SBJ bloom.INF PROG.PRES place
 “the place where the/a flower has bloomed.” [intransitive]
- (26) *[khi=nga ataru] duguru*
 tree=SBJ be.PST place
 “the place where there was a tree” [intransitive; non-agentive]
- (27) *[ttu=nga nni buru] duguru*
 person=SBJ die.INF RES.PRES place
 “the place where a person is dead.” [intransitive; non-agentive]
- (28) *[saban=nga baritaru] duguru*
 bowl=SBJ break.PST place
 “the place where a bowl broke” [intransitive; non-agentive]

4.5.2 Pronominal subject

Pronominal arguments also display the NOM-ACC pattern, where the pronominal S/A are marked by *=nga* and the pronominal P is left unmarked. Again, the agentivity in intransitive predicates is irrelevant in case-marking.

- (29) *khari=nga khu dandasi minun.*
 3SG.DST=SBJ 3SG.PRX break.INF PRF
 “S/he broke this.” [transitive]
- (30) *khari=nga khu ni butan.*
 3SG.DST=SBJ 3SG.PRX look.at PROG.PST
 “S/he was looking at this.” [transitive]
- (31) *khari=nga ata sagi itatjan.*
 3SG.DST=SBJ carelessly sake spill.PRF
 “S/he carelessly spilt sake.” [transitive]
- (32) *u=nga khu uigasi bun.*
 3SG.MES=SBJ 3SG.PRX shake.INF PROG.PRES
 “It (i.e. the wind) is shaking this (the/a branch of the/a tree).” [transitive]
- (33) *khari=nga khaguri butan.*
 3SG.DST=SBJ hide.INF PROG.PST
 “S/he hid.” [intransitive]
- (34) *khari=nga khi=gara utitan.*
 3SG.DST=SBJ tree=ABL drop.PST
 “S/he dropped from a tree.” [intransitive]
- (35) *u=nga uiti butan.*

- 3SG.MES=SBJ move.INF PROG.PST
 “It (i.e. the ground) was shaking.” [intransitive]
- (36) *u=nga satun.*
 3SG.MES=SBJ bloom.PRF
 “It (i.e. the flower) has bloomed.” [intransitive]
- (37) *u=nga atan.*
 3SG.MES=NOM be.PST
 “There was a tree.” [intransitive]
- (38) *khari=nga nni bun*
 3SG.DST=NOM die.INF RES.PRES
 “S/he is dead.” [intransitive]
- (39) *u=nga barun*
 3SG.MES=NOM break.PRF
 “It broke.” [intransitive]

4.5.3 *Focused subject*

Focus marking adds the possibility for the S to be marked by *=nga*, thus inducing the NOM-ACC pattern to hold. But unlike the two environments discussed above, focus marking does not obligatorily induce S to be regularly marked by *=nga*, which indicates that the NOM-ACC pattern here is just a strong tendency but not the iron-clad norm.

Roughly speaking, in cases where *=nga* is optional in the SF context, focus marking on the S leads to the obligatory *=nga* marking. This is exemplified in (40), where (40a) is a repeated example of (7) and the subject is focused in (40b).

- (40) a. *di(=nga) uiti butaru.*
 ground(=SBJ) move PROG.PST
 “The ground was shaking.” [SF context]
- b. *di=nga=du uiti butaru.*
 ground=SBJ=FOC move PROG.PST
 “(It was) the ground (that) was shaking.” [focused S]

In cases where *=nga* is (mostly) unacceptable in the SF context, focus marking allows the S to be optionally marked by *=nga*, as illustrated in (41) to (43).

- (41) a. *khi(?=nga) atan.*
 tree(?=SBJ) exist.PST
 “There was a tree.”

- b. *khi(=nga)=du* *ataru.*
 tree(=SBJ)=FOC exist.PST
 “(It was) a tree (that) was there.”
- (42) a. *ttu(*=nga)* *nni* *bun.*
 person(*=SBJ) die.INF RES.PRES
 “A person is dead.”
- b. *ttu(=nga)=du* *nni* *buru.*
 person(=SBJ) die.INF RES.PRES
 “(It is) a person (that) is dead.”
- (43) a. *saban(*=nga)* *barun.*
 bowl(*=SBJ) break.PRF
 “The/a bowl broke.”
- b. *saban(=nga)=du* *baru.*
 bowl(=SBJ)=FOC break.PRF
 “(It was) the/a bowl (that) broke.”

5. Alignment in Yonaguni: the older system

As mentioned in the sections above, Modern Yonaguni (MY) exhibits a split between the NOM-ACC pattern (=nga for A/S) and the Agentive pattern (=nga for the agentive arguments), depending on several factors such as clause type, NP type and focus. In the sections below I examine the alignment system of the Yonaguni language that was spoken about forty years ago, or Early Modern Yonaguni (EMY). The data comes from Iwase et.al. (1983), which is a collection of texts recorded and transcribed during the period from 1976 to 1978. I used twelve of the texts (Numbers 1 to 12) as the database for the following survey.

5.1 Case markers for subject

It is one of the salient features in the case-marking system of MY that it lacks a dyadic opposition of overt case markers in subject marking, i.e. the opposition between the GA series and NU series (e.g. =ga and =nu in Irabu Ryukyuan; Shimoji 2008) as found in most Ryukyuan languages (Uchima 1984; Shimoji 2010). Rather, as discussed in the sections above, MY only has =nga for the S/A marking. Diachronically speaking, =nu has been lost in MY, and it is probably an innovation on the part of proto-Yonaguni rather than a retention from proto-Macro-Yaeyama, which must have had the two subject markers as a retention from proto-Ryukyuan.

According to the text-count (Table 3), it is clear that EMY had =nu and it was still productively used, against the general agreement in previous works that =nu was almost absent in EMY. Hirayama and Nakamoto (1964: 156) mention that =nu ‘hardly occurs’ as a

subject marker, and Takahashi (1992: 875) refers to the conspicuous infrequency of this form. Table 3 clearly shows that the observations in previous works hold true only for transitive subjects (A), not for intransitive subjects (S). For the S marking, even though *=nga* accounts for the majority (N = 55/91; **60%**), the frequency of *=nu* (N = 16/91; **18%**) is far from being regarded as an exception, and the frequency is roughly the same as that for unmarked S (N = 19/91; **21%**).

Table 3. Subject marking and their frequencies in EMY

	<i>=nga</i>	<i>=nu</i>	<i>=ba</i>	Unmarked	Total
Tokens (marking A)	24	1	0	2	27
Tokens (marking S)	55	16	1	19	91
Total	79	17	1	21	118

As in the case of MY, A arguments are in most cases marked by *=nga*, without respect to the syntactic context in which they occur (i.e. whether they occur in SF contexts, adnominal clauses, etc.). Among the attested 27 examples in which A argument occurred, *=nga* occurred with 24 of them, accounting for the overwhelming majority. However, there was one example in which *=nu* occurred with A.

(44) *aru ttu=nu=du unu hanasi ttiti...*
 some person=SBJ=FOC that story hear.CVB
 “A person heard the story, and...”

There were also two examples where the A argument occurred as an unmarked noun. It is noted that they are both pronominal.

(45) *nda ningin=nu agami harami buru kutu*
 2SG human=GEN child get.pregnant PROG.PRES fact
 “the fact that you are expecting a human baby”

(46) *binga=nu agami=du anu harami burujungara...*
 male=GEN child=FOC 1SG get.pregnant PROG.CSL
 “because I am expecting a baby boy”

It is of interest for A to be marked by *=nu* or to be even left unmarked, but three examples are too few to make a meaningful generalization. One thing to be noted, however, is that in (45) and (46) the meaning of the predicate makes it clear which NP should be interpreted as A and which NP should be interpreted as P. This might allow the overt

case-marking for A to be dispensed. That is, the principle of economy might be working here.

5.2 Animacy and case-marking

The fact that A is almost always marked by *=nga* leads to two possible analyses: animacy-based analysis and agentivity-based analysis. On the one hand, it could be argued that animacy determines the use of *=nga* and *=nu*, with the assumption that human nouns (pronouns, proper names, etc.) take *=nga*, and that A is usually a human noun. This animacy-sensitive case alternation is actually widespread in Ryukyuan, and it is often suggested that the GA series attach to human subjects (especially pronouns and proper names) whereas the NU series attach to others including inanimates (Uchima 1984). In Irabu (Shimoji 2008), for example, a set of nouns (pronouns, proper names, and certain types of human nouns like address terms, etc.) take *=ga* whereas the other set take *=nu*, whether or not the subject is S or A.

However, in EMY the animacy-based analysis is not useful in explaining the distribution of *=nga*, *=nu*, *=ba* and unmarked NPs. That is, it is impossible to state that *=nga* is restricted to animate subjects. Both *=nga* and *=nu* occur with a range of subjects, animate or inanimate, as shown in Table 4.

Table 4. Case markers and Animacy Hierarchy

	Total	Pronouns			Animate nouns			Inanimate
		1 st	2 nd	3 rd	Proper name	Human	Animal	
<i>=nga</i> (A)	24	4	2	0	1	15	1	1
<i>=nga</i> (S)	55	4	3	0	5	28	5	10
<i>=nu</i> (A)	1	0	0	0	0	1	0	0
<i>=nu</i> (S)	16	0	0	0	2	7	2	5
<i>=ba</i> (S)	1	0	0	0	0	0	0	1
UM (A)	2	1	1	0	0	0	0	0
UM (S)	19	4	0	0	0	2	1	12
Total	118	13	6	0	8	53	9	29

The distributions of *=nga* and *=nu* cannot be effectively explained in terms of animacy, but they are more precisely explained in terms of whether the subject is A or S. That is, while *=nga* occurs both in A and S, *=nu* concentrates in S. This supports the other analysis, i.e. agentivity-based analysis, which predicts that agents may be either A or S whereas non-agentive arguments may be restricted to a certain subtype of S.

In what follows I argue that EMY had an alignment system similar to that of MY, showing a split between the NOM-ACC pattern on the one hand and the Agentive pattern on the other. This analysis naturally explains the distributions of *=nga* and *=nu*, and it also accommodates the distributional pattern of those subject NPs which are unmarked. That is, as will be demonstrated in the sections below, the agentivity value becomes lower in order of *=nga*, *=nu*, *=ba* and unmarked. The fact that *=nu* occurs mostly with S comes from the fact that the prototypical agents are always marked by *=nga* and A almost always require *=nga*. Another fact that *=nu* may occur both with animate and inanimate Ss is explained by assuming the Agentive system where inanimate subjects may receive *=nu* when they are judged to be agentive in some respects.

5.3 *NOM-ACC pattern*

Just as in the case of MY, the NOM-ACC pattern obtains if the subject occurs in an adnominal clause. There are seven examples where the S arguments occur in adnominal clauses. They are all marked by *=nga* except for one example where the S is left unmarked.

(47) *minburu susaru nudindimunu*
head be.strong excellent.person
“the excellent person whose head is strong (i.e. who is smart)”

Given the fact that A arguments mostly take *=nga* in any syntactic context, it is possible to state that S/A are marked by *=nga* in adnominal clauses, displaying the NOM-ACC pattern.

It is noted that in EMY the adnominal clause is the only syntactic contexts in which the NOM-ACC pattern clearly holds. It is impossible to state that the NOM-ACC pattern holds if the subject is pronominal or is focused.

5.4 *Pronominal subjects*

There were 15 examples where the A/S are pronominal (all 1st person or 2nd) and occur in non-adnominal clauses. They did not uniformly take *=nga*. Whereas *=nga* is used both for S and A, S and A are not always marked by *=nga*, with the possibility that S is left unmarked. That is, it is necessary to refer to the distinction between S and A when predicting the case-marking for subject. This indicates that S/A are not simply grouped together as ‘nominative’ but there must be a mechanism whereby *=nga* is blocked for S and not for A. I argue that the Agentivity system is working here. Table 5 shows the numbers of A arguments and S arguments in terms of their coding patterns and the average agentivity value for each coding pattern in brackets. For example, there are 6

Table 6. Focused subjects and Animacy Hierarchy

	Total	Pronouns			Animate nouns			Inanimate
		1 st	2 nd	3 rd	Proper name	Human	Animal	
=nga: A	4	0	0	0	0	3	0	1
=nga: S	13	0	0	0	1	4	4	4
=nu: A	1	0	0	0	0	1	0	0
=nu: S	11	0	0	0	2	4	2	3
UM: A	0	0	0	0	0	0	0	0
UM: S	2	0	0	0	0	0	0	2
Total	31	0	0	0	3	12	6	10

Table 7 sorts out the attested examples in terms of agentivity values, with the numbers in brackets indicating the average agentivity value for each coding strategy (=nga, =nu, =ba or unmarked). By assuming the Agentive system here, the prediction can be made that the higher the agentivity the more likely it is for the subject to receive =nga over =nu, =ba and unmarked. Thus, my conclusion is that the Agentive pattern is observed in the focused subjects in EMY.

Table 7. Focused S/A

	=nga	=nu	=ba	Unmarked	Total
Tokens (Agentivity value): A	4 (4.3)	1 (4)	0	0	5
Tokens (Agentivity value): S	13 (3.1)	11 (2.9)	0	2 (2)	26
Total	17	12	0	2	31

Before leaving this section, it is noted that the majority of the attested examples of =nu occur with the focused subjects, especially focused S (11 of the 17 occurrences of =nu in the text). At this stage, it is impossible for the present author to give a clear explanation for this biased tendency for =nu to occur with focused S. A further research is necessary to uncover the biased preference that =nu shows for focused subjects in EMY.

5.6 S marking in the other contexts

In the other contexts than the ones examined above, i.e. in cases where a non-focused full NP subject occurs in a clause other than an adnominal clause, the Agentive pattern seems to hold. This context includes the SF context, i.e. the context in which the entire clause is in the focus domain. So, Like MY, EMY exhibits the Agentive alignment pattern in the SF context. The SF context typically occurs in a simple sentence, but it was hard to find a simple sentence in the text database, so I collectively dealt with all the non-embedded

clauses where the subject is a non-focused full NP, including co-subordinate converbal clauses. There were 48 such intransitive clauses in total.

Table 8 summarises the numbers of *=nga*, *=nu*, *=ba* and unmarked NPs that occurred with S and their agentivity values. Just as in the case of MY, there is a clear correlation between *=nga* and high agentivity on the one hand and unmarked and low agentivity on the other, which supports the view that the Agentive alignment holds true in the system in EMY. Furthermore, *=nu* comes in between in terms of the agentivity value, indicating that EMY had a more elaborate Agentive system.

Table 8. An overview of S marking and agentivity: SF context

	<i>=nga</i>	<i>=nu</i>	<i>=ba</i>	Unmarked
Agentivity value (average)	3.5	2.4	2	1.5
Total	30	5	1	12

Table 9 shows the distributions of the attested examples for each coding strategy in terms of the agentivity values (0pt to 5pt). The examination of the overt case marking by *=nga*, *=nu* or *=ba* reveals that there is no example where the agentivity value is 0, which confirms the argument that the overt case marking in this language is motivated by the presence of agentivity, with the unmarked NPs being the default state of affairs (Section 4.4). The argument that the unmarked NP is the default is further confirmed by the distribution of the unmarked NPs, which range from 4 to 0, i.e. irrespective of the agentivity value.

Table 9. A detailed analysis of S marking and agentivity: SF context

Value	5pt	4pt	3pt	2pt	1pt	0pt	Total
<i>=nga</i>	7	9	8	3	3	0	30
<i>=nu</i>	0	1	2	1	1	0	5
<i>=ba</i>	0	0	0	1	0	0	1
Unmarked	0	2	0	2	6	2	12
Total	7	12	10	7	10	2	48

Tables 10 and 11 list the examples where S occurs with *=nga* and *=nu* respectively.

Table 10. S marking with =nga in SF context

	Example	Translation	S B J	V O L	A N M	C N T	U N F	S A T B	A G T V
1	[dingwi=nu kii]=nga miimutu muibutangadu,	There were three [Dingwi trees], and...	nga	0	0	0	1	0	1
2	[sangaiisuba=ndi ndiwaru bucci]=nga waru=ndi	There was [a soldier called Sangaiisuba].	nga	0	1	0	1	1	3
3	[batimin]=nga ndiru	[water] outwells.	nga	0	0	0	1	0	2
4	[unu ttu=nu sikih]=nga an.	There is [a stone monument of his]	nga	0	0	0	1	1	2
5	[ppasaguamiti]=nga aiti	There is [a narrow road], and...	nga	0	0	0	1	1	2
6	[agamitinta]=nga khaa=nu suba=ni aniburutaa	[Children] were playing near the river, so...	nga	1	1	1	1	1	5
7	[minun]=nga hatagii=nki unti hui=ndi iti	[A woman] went to the field to get potatoes, and...	nga	1	1	1	1	0	4
8	[ccima]=nga duaigun doo.	An island is approaching.	nga	0	0	1	1	1	3
9	[ububuci]=nga watan=di.	There was [a big soldier].	nga	0	1	0	1	1	3
10	[saaka=ndi ndi waaru ttu]=nga watan=di	There was [a man called Saaka].	nga	0	1	0	1	1	3
11	[miruku]=nga waranunki nataru jushi	[Miruku] (person name) disappeared, so...	nga	1	1	1	1	0	4
12	[miruku]=nga nindi	[Miruku] went to sleep, and...	nga	1	1	0	1	0	3
13	[mituda]=nga khurasi butan=di	[A couple] lived (somewhere).	nga	1	1	1	1	1	5
14	[arudi]=nga bariti	[The master] got tired, and...	nga	0	1	0	0	0	1
15	[dabuci]=nga ttui thunditi	[A soldier] came out alone. and...	nga	1	1	1	1	0	4
16	[buci]=nga niki khun=su=tu	(At the same time when) the soldier started attacking...	nga	1	1	1	1	1	5
17	[wa=nu nuci]=nga nindi burja	While [the master of the pig] was sleeping...	nga	1	1	0	1	0	3
18	[ttu]=nga ugiranuta	Before [a man] wakes up...	nga	1	1	1	1	0	4
19	[minunga]=nga haisi	[The woman] came in, and...	nga	1	1	1	1	0	4
20	[minunga]=nga thundi hingasi	[The woman] went out, then...	nga	1	1	1	1	0	4
21	[abu]=nga ndi wataba	[The old woman] spoke, so...	nga	1	1	1	1	1	5
22	[abu]=nga ndi watarunni	As [the old woman] spoke...	nga	1	1	1	1	1	5
23	[unu minunga]=nga mudui sitaba	[The woman] came back, so...	nga	1	1	1	1	0	4
24	[i]=nga niitaba	[rice] boiled, so...	nga	0	0	0	1	0	1
25	[ija]=nga haru=gara khaisi warun=su	[The father] came back from the field, and...	nga	1	1	1	1	1	5
26	[thun]=nga ninduba	[The wife] went to sleep, so...	nga	1	1	0	1	0	3
27	[thun]=nga nida=nki haisi	[The wife] went into the bed, and ...	nga	1	1	1	1	0	4
28	[umi buru huga=nu majuducinta]=nga ... ndi ndutasi	[the fellow cats which were there] said "...", and...	nga	1	1	1	1	1	5
29	nkaci, [aragu mari abjaru minungaagami]=nga butan=di	Once upon a time there was [a very beautiful girl].	nga	0	1	0	1	1	3
30	[binga]=nga nida=nki haisi ninditi	[the man] came into the bed, and ...	nga	1	1	1	1	0	4

Table 11. S marking with =nu in SF context

	Example	Translation	S B J	V O L	A N M	C N T	U A T F	S A T B	A G T V
1	[buci]=nu bun=su=ja.	Oh, there is [a soldier].	nu	0	1	0	1	1	3
2	[buci]=nu bun=su=ja.	Oh, there is [a soldier].	nu	0	1	0	1	1	3
3	[munu]=nu hai khuni=du butaba	[Someone] came in, so...	nu	1	1	1	1	0	4
4	[tuci]=nu ccingiriti	[The year] passed, and...	nu	0	0	0	1	0	1
5	[tuci]=nu itingasija	[The year] has gone, then...	nu	0	0	0	1	0	1

Even though the number of examples for =nu is much smaller than that for =nga, the average of the agentivity values for the five attested examples (average value = 2.4) indicates that =nu tend to occur with an S with a lower agentivity than =nga. It is noted that in two of the five examples the agentivity value is 1 (40%), which is in sharp contrast to the case of =nga, where such examples account for only 10%.

Table 12 is a list of examples where S is left unmarked. All but one in the 12 attested examples involve non-volitional actions. The absence of Volition entails the absence of Animacy and also strongly correlates to the absence of Control, thus resulting in the reduction of the total value for agentivity.

Table 12. S without any overt marker in SF context

	Example	Translation	S B J	V O L	A N M	C N T	U A T F	S A T B	A G T V
1	[ttuhaimunuta] sihinna=ndi	Lest [the cannibals] come to us,	0	1	1	1	1	0	4
2	[hanasi] kimaiti	[The discussion] has been reached, and...	0	0	0	0	1	0	1
3	[tidan] nnaritaba	[The sun] appeared, so...	0	0	0	0	1	0	1
4	[tidan] nnarirun=doo	[The sun] appeared.	0	0	0	0	1	0	1
5	[nuti] muirarirun=di	[The life] can be saved.	0	0	0	0	0	0	0
6	[ccima] nkihyun	[The island] is about to go (i.e. sink).	0	0	0	0	0	0	0
7	[ccuunan] aaritataidu butaba	[The white wave] got wild, so...	0	0	0	0	0	1	1
8	[uci] duci atan=di.	There were four [breasts].	0	0	0	0	1	1	2
9	[agami] nmariruba	If [a child] is born...	0	0	1	0	1	0	2
10	[du] agiranuta	Before [the night] ends...	0	0	0	0	1	0	1
11	[itibanmita] naguta	Until [the first cock] crows...	0	0	1	1	1	1	4
12	[du] agaranuta	Before [the night] ends...	0	0	0	0	1	0	1

The following is the only example which demonstrates the use of =ba. Previous works such as Izuyama (2012) and Shimoji (2015) also list the use of =ba for S marking, and the examples they list are “it rains”, which indicates that =ba as a marker of S is not

productive in EMY and in MY, only occurring with a specific construction “it rains”.

- (51) *ami=ba huicidiki...*
 rain=SBJ keep.falling.INF
 “It kept raining, and...”

6. Conclusion

The present paper discussed the alignment system of Yonaguni by dealing with two synchronic systems, i.e. the current system (MY) and the system which used to be observed about forty years ago (EMY).

The examination of the database has shown that EMY had an alignment system similar to that of MY, in that both show a split between the NOM-ACC and the Agentive patterns. However, the two synchronic systems differ in two major respects. First, whereas the NOM-ACC pattern is widespread in MY, it is only found in adnominal clauses in EMY. Second, whereas the Agentive system of MY is a dyadic system in which *=nga* is the only overt marker, EMY probably had a more elaborate Agentive system in which two (or three if we take into account the unproductive *=ba*) overt case markers, together with the possibility of no marking, indicate different degrees of agentivity.

Table 13. MY and EMY: summary

	Main clause			Adnominal clause
	SF context	Focused subject	Pronominal subject	
EMY	Agentive	Agentive	Agentive	NOM-ACC
MY	Agentive	NOM-ACC?	NOM-ACC	NOM-ACC

The comparison of the two systems allows us to depict two diachronic pathways. On the one hand, it can be said that the NOM-ACC pattern became widespread over time in Yonaguni. On the other, the Agentive system became simplified with the loss of (*=ba* and) the case marker *=nu*, which is thought to have been used when the agentivity was lower than cases where *=nga* was used. The total number of *=nu* was much smaller than that of *=nga* in the database, which indicates that *=nu* was going to disappear at the time of EMY.

The two diachronic changes can be coherently explained by assuming that there was a spreading of *=nga*. According to this scenario, the case marker *=nga*, which was (and still is) the marker for the prototypical agent, came to spread over to non-prototypical subjects (less agentive Ss), kicking out *=nu* from the system entirely. This will eventually result in the situation where A and S, irrespective of their agentivity, is identically coded by *=nga*.

This explains why the NOM-ACC pattern is becoming widespread and the Agentive pattern is becoming marginal. The current state of affairs in Yonaguni is probably a transitional stage where both systems (the NOM-ACC and Agentive systems) are observed in the synchronic system.

The fact that =*nu* has been completely lost in Yonaguni has been a mystery in Ryukyuan linguistics, given the fact that most Ryukyuan languages have both GA series and NU series for subject marking (Uchima 1984). Similarly, it was also a mystery why most of the other Macro-Yaeyama languages have the NU series alone. The key for the answer is to assume a system in a proto-Macro Yaeyama which is similar to what I proposed for EMY, where the GA series was the marker for the prototypical agent (thus usually A and S_A) and the NU series was a more general and widespread marker that may cover less agentive Ss. In the Agentive system where both series exist, the spreading of the GA series results in the loss of the NU series and we get a new system where the S/A is identically coded by a single marker (GA), a situation actually attested in MY. Another diachronic change may be expected as well, whereby the NU series, as a general and widespread marker that covers a wider range of subjects than the GA series in terms of agentivity, kicks the GA series out of the system, and, via a partial Agentive system, eventually results in the NOM-ACC pattern where the NU series is regularly used for S/A. This latter change is probably what we are actually looking at in other Macro-Yaeyama languages, where the NU series is pervasive and the Agentive system is reported to exist marginally (see Nakagawa, Lau and Takubo 2013 for the Shiraho system and Miyara 1995 for the Ishigaki system).

Given that there are many studies that report a similar system for both Northern Ryukyuan (Matsumoto 1983 for Kikai of Amami Ryukyuan; Miyagi 2014 for Classical Shuri Ryukyuan) and Southern Ryukyuan (as mentioned above), it is quite likely that the Agentive system existed in proto-Ryukyuan and what we observe in EMY is a retention from the proto-system. In Classical Shuri, the GA series was restricted to agentive arguments (A and S_A) while the NU series had no restriction with respect to agentivity (Miyagi 2014), suggesting that the NU series was quite widespread in the Agentive system.

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