

OBJECT VOICE AND NOMINALIZATION IN RUKAI*

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One suffix in Rukai is argued in this paper to be a voice morpheme, forming a third kind of voice (Object voice) in addition to the traditionally identified active and passive. Constructions formed by Object voice morpheme display alternations on case and argument structure. They differ from passive constructions in that they select only one thematic role to promote, and they choose a different set of aspectual markers from other voice constructions. It is also suggested that with this suffix event nominals can be formed via a reduction of argument structure in Object voice. The specific suffix acts as a hinge in forming Object voice and nominalization, whose determination must be made on the basis of syntax.

1. INTRODUCTION

Rukai is a Formosan language spoken in the southern part of Taiwan. It is analyzed by Li (1973) to have a dichotomic voice system that distinguishes active and passive; this analysis has been adopted by later works (Chen 1999; Kuo 1979; Li 1977, 1997a,b; Starosta 1988, 1995; Zeitoun 2000, among others). In this paper I suggest that Rukai has a third kind of voice formation, which has been confused with nominalization. I will argue that Object voice should be identified and the suffix *-ane* acts as a hinge in forming voice and/or nominalized constructions. The determination of voice and/or nominalization must be made on the basis of syntactic realization.

1.1. Preliminaries

Rukai has six dialects, each of which exhibits linguistic diversity in aspects of phonology, morphology and syntax (Li, 1977). The analysis presented in this paper is based on data of the Kucapungan variety, of the Budai dialect.

Rukai is a predicate-initial language. DPs are case-marked for three relations, Nominative, Accusative and Genitive/Oblique, by three morphological forms *ka*, *ku* and *ki*. Consider the table in (1).

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(1)

Case	Nominative	Accusative	Genitive/Oblique
	ka [+def] ku [±def]	ku [-def] ki [±def]	ki

Rukai Case System (cf. Tsuchida 1992; Li 1996, 1997a)

Note that some forms have overlapping functions in marking different cases; for example, *ku* marks Nominative or Accusative, and *ki* marks Accusative or Oblique. Besides, all case markers carry semantic information of definiteness and specificity as well as animacy and NP types, which are only marked roughly as [def] feature in the table in (1). Since DPs are generally marked for case, they can undergo scrambling in a sentence.

Consider the examples in the following. Active voice is formed with zero morpheme (2a) and passive with prefix *ki-* (2b).¹ By contrast, Object voice is formed with suffix *-ane*, glossed as OV (Object Voice) (2c). I will argue in following sections that examples like (2c) are constructions of OV formation which show alternation on voice, case and argument structure.

- (2) a. wa-kane ku babuy ka cumay. (active)
 IMPFV-eat ACC boar NOM bear²
 'The bear ate a boar.'
- b. **ki**-a-kane ki cumay ka babuy. (passive)
 PASS-IMPFV-eat OBL bear NOM boar
 'The boar was eaten by a bear.'
- c. ta-kane-**ane** ki cumay ka babuy. (Object voice)
 PFV-eat-OV GEN bear NOM boar
 'A bear ate the boar.'

Compared to what we see in (2c), there are instances of *-ane* that are considerably nominal, as in (3). The construction formed by *-ane* in (3a), as shown bracketed, has a reduced argument structure. The internal argument of the transitive verb *kane* 'eat' is realized not in the syntax and only vaguely in the semantics. On the other hand, the intransitive verb *katuas* 'leave' in (3b) forms a derived nominal with *-ane*.

¹Note that the prefix *wa-* in (2a) has received different treatments in the literature. It is analyzed as tense marker (Li, 1973) or a composite element of voice (*w-*) and tense/aspect/mood morpheme (*-a*) (Zeitoun et al. 1996; Chen 1999). I follow Sung (2005)'s analysis by treating active voice as being formed with zero morphology. For independent reasons, I consider the verbal prefixes such as *wa-* and *ma-* (example (3b)) as aspectual markers (Chen 2005).

²The abbreviations used in this paper include: 1, first person; 2, second person; 3, third person; ACC, accusative; ASP, aspect; CAUS, causative; DEM, demonstrative; DET, determiner; FUT, future; GEN, genitive; IMPFV, imperfective; NEG, negative; NOM, nominative; OBL, oblique; OV, object voice; PASS, passive; PFV, perfective; PL, plural; RED, reduplication; REFX, reflexive. The Rukai orthographic system is based on Li (1991).

(3) Event nominals

- a. wa-Del-aku ku [ta-kane-**ane** ki cumay].
 IMPFV-see-1NOM ACC PFV-eat-NOMZ GEN bear
 (i) 'I saw that a bear ate.' (lit. I saw a bear's eating.)
 (ii) '?I saw what a bear ate.'
- b. ma-ulai-nga ku [ta-katuas-**ane**-li].
 IMPFV-be a while-PFV NOM PFV-leave-NOMZ-1 GEN
 'It's been a while since I left.' (lit. My leaving has been a while.)

I argue that in these cases *-ane* is used to derive nominals from verbs, resulting in elements that can be case-marked and be used as arguments or complement clauses. These derived forms denote simple events and pattern in line with Grimshaw's (1990) theory of derived nominals. I will briefly discuss these derived nominals in section 3, and *-ane* is glossed as NOMZ for reasons provided there.

The suffix *-ane* is also used in lexical nominalization, in which case the derived forms are simple nouns and do not have argument structure (4). Lexical nominalization will not be considered in this paper.

(4) Lexical nominalization

ta-apeapec-**ane** 'bedroom' > apece 'sleep'

Previously, the suffix *-ane* is analyzed uniformly as a nominalizer for cases of OV, event nominals and lexical nominalization by Chen (2002). He proposes that *-ane* derives nouns from verbs, which show nominal features in case-marking and in properties of being used as grammatical arguments. As will be suggested later, this analysis can be revised to account for the characteristics of the Object voice.

This paper is organized as follows. Section 2 is the analysis of OV constructions. Section 3 is a brief discussion of event nominals. And section 4 concludes this paper.

2. OBJECT VOICE

In this section I examine the OV formation of Rukai, which I argue exhibits characteristics of object voice constructions as described for other Austronesian languages such as Kavalan (Chang, 1997) and Tagalog (Kroeger, 1993). I will evaluate the applicative analysis and show how Rukai OV differs from it. Also, I will compare OV with passive voice and show how these two differ.

The formation of OV is a morphosyntactic process. Consider example (2c), repeated as (5). The suffix *-ane* is attached to the verb stem *kane* 'eat', which in turn triggers case alternation among

the arguments. The internal argument *babuy* 'boar' is marked in Nominative, while the external argument is marked in Genitive. As mentioned before, the marker *ki* can mark either Genitive or Oblique; however, such confusion can be explained by (6), in which the case shows up as Genitive in pronominal forms.

- (5) ta-kane-ane ki cumay ka babuy.
 PFV-eat-OV GEN bear NOM boar
 'A bear ate the boar.'
- (6) a. ta-kane-ane-ini ka babuy.
 PFV-eat-OV-3GEN NOM boar
 b. *ta-kane-ane iniane ka babuy.
 PFV-eat-OV 3OBL NOM boar
 'He ate the boar.'

Interrogatives can be useful as a test for OV. Since Rukai only allows subjective interrogative to be a predicate in a cleft, the interrogative must be the subject of the verb, which in turn would trigger voice agreement. Contrast (7a-c). When an interrogative is an internal object, the verb must undergo voice change, either passivizes (7b) or becomes OV (7c), in order to make the interrogative the subject of it.

- (7) a. *manemane ku wa-kane-su? (active)
 what NOM IMPFV-eat-2NOM
 'What did you eat?'
 b. manemane ku ki-a-kane musuane? (passive)
 what NOM PASS-IMPFV-eat 2OBL
 'What was eaten by you?'
 c. manemane ku a-kane-ane-su luasane? (OV)
 what NOM ASP-eat-OV-2GEN later
 'What are you going to eat later?'

2.1. Is *-ane* an Applicative morpheme?

Since *-ane* triggers a change of voice and argument structure, one possibility is for us to analyze it as an applicative morpheme. An applicative morpheme is said to relate an additional argument, whose thematic role is usually benefactive, to a verb being applied (See Baker 1988a,b, 1996; Bresnan and Moshi 1990; Marantz 1984, 1993). According to Baker (1996), an applicative morpheme attaches to a verb and adds a new nominal which expresses a thematic role that is otherwise oblique or non-existent. By contrasting (8a) and (8b), it can be seen that the applicative morpheme

Λ in (8b) shows such property.

- (8) Mohawk (Baker 1996,427: 70a-b)
- a. Wa-ha-natar-a-kwétar-e'. (simple transitive)
fact-MsS-bread-Ø-cut-PUNC
'He cut the bread.'
- b. Wa-hake-natar-a-kwétar- Λ ' (applicative)
fact-MsS/1sO-bread-Ø-cut-ben-PUNC
'He cut the bread for me.'

The morpheme *-ane* in Rukai patterns with the definition of applicative in Pylkkanen (2000), with which it relates the internal argument (i.e. theme/patient) to the verb and the external argument (i.e. agent). Generally speaking, an added argument is a benefactive or a goal in the traditional notion. However, *-ane* in Rukai only relates the direct object to the denotation of the event meant by the verb, not a benefactive argument. For example, in (9b), *-ane* relates the theme, which is *babuy* 'boar', to the event of eating denoted by *kane* 'eat'. As such *-ane* relates objects to the verbs and does not seem to introduce additional nominals.

- (9) ta-kane-ane ki cumay ka babuy.
PFV-eat-OV GEN bear NOM boar
- a. 'A bear ate the boar.'
- b. \neq 'A bear ate for the boar.'

However, in quite a few examples *-ane* is found to be related to a location object. They exhibit properties of non-agent voice constructions in other Austronesian languages. Such examples occur in elicited data and have never been reported.

- (10) ta-pi-kay.kay-ane-li ki sabiki ka cukuy.
PFV-CAUS-exist.RED-OV-1GEN OBL betel nut NOM table
I put betel nuts on the table.

While the merit of analyzing *-ane* as an applicative morpheme requires more investigation, I will tentatively treat constructions formed by *-ane* as instances of Object voice and will leave examples like (10) for further research.

2.2. Differential aspectual marking

Based on the available data, it is found that different sets of aspectual markers are used in active/passive voice and OV respectively. In this subsection I will show the different morphemes that are selected and will discuss how they are interpreted in OV. First, I will provide an introduction of some aspectual markers used in active and passive voice that are relevant to our discussion. However, it should be noted that the discussion is rather preliminary and more details are needed for further research.

In active voice constructions, *wa-* and *-a-* are used to express imperfective aspect, or generic aspect (Neutral viewpoint, in Smith (1997)'s term). Events expressed with these markers either include an initial point, or do not have endpoints, if not expressed in the syntax (e.g. temporal adverbs). Contrast (11a-c).

- (11) a. **wa**-kane ku babuy ka cumay. (imperfective interpretation)
 IMPFV-eat ACC boar NOM bear
 'The bear ate a boar.'
- b. ku takaumaumas, **wa**-kane-ta ki kange. (generic interpretation)
 DET human IMPFV-eat-1PL.NOM ACC fish
 'As human beings, we eat fish.'
- c. tu-**a**-sinaLeLeme ki lavavalake ka Cegaw. (imperfective interpretation)
 -IMPFV-tease ACC child NOM
 'Cegaw teased a child.'

The infix *-a-* is used in passive voice, expressing imperfective or generic aspect, as shown in (12a-b).

- (12) a. ki-**a**-kane ki cumay ka babuy. (imperfective)
 PASS-IMPFV-eat OBL bear NOM boar
 'The boar was eaten by a bear.'
- b. amani-ta kuDa ki-**a**-kalase. (generic)
 REFX-1PL.NOM DEM PASS-IMPFV-dislike
 'It's us who are disliked.'

In OV, prefix *ta-* is used to express generic or perfective aspect. Events denoted by *ta*-marked verbs, as in (13), can express those that happened in the past, and are evaluated as a whole with both endpoints (ref. Smith 1997, p.81).

- (13) **ta**-kane-ane ki cumay ka babuy.
 PFV-eat-OV GEN bear NOM boar
 'A bear ate the boar.'

Future is also expressed differently in these voice constructions. The future marker *Li-* is used in both active and passive (14a-b), but it is prefix *a-* that is used in OV to express futurity (14c).

- (14) a. **Li**-kane ku babuy ka cumay. (active)
 FUT-eat ACC boar NOM bear
 'The bear will eat a boar.'
 b. **Li**-ki-kane ki cumay ka babuy. (passive)
 FUT-PASS-eat OBL bear NOM boar
 'The boar will be eaten by a bear.'
 c. **a**-kane-ane ki cumay ka babuy. (OV)
 ASP-eat-OV GEN bear NOM boar
 'A bear will eat the boar.'

Semantically, OV-derived constructions have temporal features of activity (ref. Smith 1997). They undergo reduplication to express habituality but not progressive. They do not take past tense or perfective marker. While I will not address the detail here, it should be noted that events expressed with OV seem to take time, as shown in the contrast between (13) and (14c), but in a different way from active and passive voice.

2.3. Comparison of passive and Object voice

A more detailed survey shows that the attachment of *-ane* to a verb changes the valency of it, as illustrated in (15).

- (15) a. wa-bay ku Laimay ki lalake-ini ka tiatina.
 IMPFV-give ACC clothes OBL child-3GEN NOM mother
 'The mother gave clothes to her child.'
 b. ta-baz-ane ka Laimay ki tiatina ki lalake-ini.
 PFV-give-OV NOM clothes GEN mother OBL child-3GEN
 'A/the mother gave the clothes to her child.'

Example (15a) is an active sentence, in which the agent *tiatina* 'mother' in the sentential-final position is the subject, marked in Nominative. The theme *laimai* 'clothes' is marked Accusative, and the goal *lalake* 'child' is Oblique. By contrast, (15b) as an OV counterpart of (15a) shows

a different picture of case marking. The theme is promoted as the sentential subject, marked in Nominative, whereas the agent is demoted as a Genitive-marked argument. We see clear evidence that in OV constructions there is promotion and demotion among the arguments with respect to case marking, and this is what we have seen in passive constructions.

In spite of their showing certain similarity, OV and passive differ systematically in several syntactic respects. First, passive and OV select different thematic roles to promote. In passives, both theme and goal can be passivized and promoted as sentential subjects. In OV constructions, only the theme or the patient, but not the goal, are found to be promoted. Contrast (16) and (17).

(16) Passive

- a. ki-a-bay ki tiatina ki lalake-ini ka Laimay.
 PASS-IMPFV-give OBL mother OBL child-3GEN NOM clothes
 'The clothes were given by the mother to her child.'
- b. ki-a-bay ki tiatina-ini ku Laimay ka lalake.
 PASS-IMPFV-give OBL mother-3GEN ACC clothes NOM child
 'The child was given clothes by his mother.'

(17) OV

- a. ta-baz-ane ki tiatina ki lalake-ini ka Laimay.
 PFV-give-OV GEN mother OBL child-3GEN NOM clothes
 'A mother gave the clothes to her child.'
- b. *ta-baz-ane ku/ki Laimay ki tiatina-ini ka lalake.
 PFV-give-OV ACC/OBL clothes GEN mother-3GEN NOM child
 'His mother gave clothes to the child.'

A goal cannot be promoted as the sentential subject in OV (17b). For a goal to be promoted as a grammatical subject, it must undergo *ki*-passivization as in (16b).

Secondly, demoted agents are marked differently in these two constructions. In passives, demoted agents are marked in Oblique, which can be optional (18).

- (18) a. ki-a-bay (nakuane) ki Cegaw ka Laimay.
 PASS-IMPFV-give 1OBL OBL NOM clothes
- b. *ki-a-bay-li ki Cegaw ka Laimay.
 PASS-IMPFV-give-1GEN OBL NOM clothes
 'The clothes were given to Cegaw (by me).'

In OV, the case marking of the agent is Genitive (17a), and this is also shown on the pronouns. Exemplified in (19), the bound pronoun (in this example the first person singular genitive form *-li*) is the agent argument, demoted and marked Genitive (19a), but not Oblique (19b). Additionally, this demoted argument is not found to be optional.

- (19) a. ta-baz-ane-li ki lalake ka Laimay.
 PFV-give-OV-1GEN OBL child NOM clothes
 b. *ta-baz-ane nakuane ki lalake ka Laimay.
 PFV-give-OV 1OBL OBL child NOM clothes
 'I gave the clothes to the child.'

Unlike passive in (18), OV (e.g. (19)) triggers different change on case marking.

Thirdly, Passive and OV are incompatible with each other (20a-b). One suggestion is that they are both voice constructions.

- (20) a. *ta-ki-baz-ane ku Laimay ki tiatina ka lalake-ini.
 PFV-PASS-give-OV ACC clothes GEN mother NOM child-3GEN
 b. *ki-a-baz-ane ku Laimay ki tiatina ka lalake-ini.
 PASS-IMPV-give-OV ACC clothes GEN mother NOM child-3GEN
 'The child was given clothes by the mother.'

Based on the above facts, the formation of passive and OV can be simplified as follows,

- (21) Passive
 a. PASS-ASP-Vroot Theme_{NOM} Goal_{OBL} Agent_{OBL}
 b. PASS-ASP-Vroot Theme_{ACC} Goal_{NOM} Agent_{OBL}
 (Vroot=verb root)

- (22) Object voice
 ASP-Vroot-OV Agent_{GEN} Goal_{OBL} Theme_{NOM}

where (21) shows that in passive a theme and a goal can be passivized, while (22) shows that OV applies only to the theme.

The grammatical characteristics examined in this section have shown that *ane*-constructions have properties of a voice construction, which include the change of valency, argument promotion and argument demotion. Also, it has been shown that OV is not compatible with other voice construc-

tions.

In the next section, I examine the (in)compatibility of OV with two intransitive environments, unaccusative and unergative, and show that OV can occur with unergative constructions.

2.4. Object voice and intransitive verbs

Unaccusative verbs in Rukai only subcategorize for one argument, which usually has a theme role and is the grammatical subject. Since unaccusative verbs cannot assign Accusative case and only assign one Θ -role to the internal argument, we find no additional object in unaccusative constructions. Because there is no object to promote, unaccusative constructions are incompatible with OV, as exemplified in (23).

- (23) *ta-kabuku-ane ki Asiame ka lacenge.
 PFV-rot-OV GEN NOM vegetable
 (lit. Asiame has rotten the vegetables.)

Unergative verbs like *nimayai* 'talk; say' can take the OV marker *-ane*. In (24), *-ane* attaches to the verb, and its subject is *lalake* 'child', which has a theme role. The agent role is assigned to an implicit argument.

- (24) wa-kela kuini nimayai-ane ka lalake.
 IMPFV-come this talk-OV NOM child
 'The child (people) talked about came.'

I have shown the properties of passive and object voice from the perspectives of thematic relations, case marking, and occurrence in intransitive environments. The thematic relations within a passive construction basically show that the passive is symmetric, because a theme/patient and a goal can undergo passivization. However, in OV, only theme/patient can be promoted as subjects in double-object constructions.

3. NOMINALIZATION

As have been shown in the previous section, the external argument in OV is demoted with respect to its case marking. It is either realized as a genitive pronoun or as a genitive-marked argument. In this section I will argue briefly the suffix *-ane* creates event nominals on the basis of a reduced argument structure of OV. I show also in the following that the resulting nominals have verbal properties in that they are inflected for aspect (Chen, 2005), as we have seen for OV in section 2.2.

My analysis is based on the theory of event nominalization proposed by Grimshaw (1990). In her analysis, result nominals and nouns that denote simple events are argued to have no argument structure. More specifically, we should pay attention to two crucial points that (i) only event nominals have argument structure, whereas result nominals do not, and (ii) nominalization is a process that involves argument suppression and (case) realization.

The difference of OV and event nominals can be determined in terms of what syntactic environments they occur and of what syntactic realization the arguments are. On one hand, an OV construction occurs as a full sentence, with an OV-marked verb as the matrix predicate, taking internal and external arguments as required by its argument structure. Consider (25). The theme/patient is the subject and is nominative-marked in OV (25).

(25) Object voice

ta-kane-ane ki cumay ka babuy.
 PFV-eat-OV GEN bear NOM boar
 'A bear ate the boar.'

On the other hand, both OV and event nominals can be used as arguments or complement clauses in a sentence. But contrast (26a-b).

- (26) a. wa-Del-aku ku [ta-kane-ane ki cumay ki babuy]. (OV)³
 IMPFV-see-1NOM COMP PFV-eat-OV GEN bear ACC/OBL boar
 'I saw that a bear ate a boar.'
- b. wa-Del-aku ku [ta-kane-ane ki cumay]. (event nominal)
 IMPFV-see-1NOM ACC PFV-eat-NOMZ GEN bear
 'I saw that a bear ate.' (lit. I saw a bear's eating.)

In (26a) the OV construction is the complement of *Dele* 'see', being introduced by case marker *ku*, which is used as a complementizer here. In (26b) the event nominals, with the internal argument absent, is also used as the complement of *Dele*. Besides a semantic distinction, these two sentences differ only in how their argument structure is realized. Note that event nominals are marked for aspect.

More examples of event nominals are as follow

- (27) a. kay-nay ma-rimu.rimuru ku ta-pulaul-ane ki la-taruDauDan.
 NEG-1PL.NOM IMPFV-forget.RED OBL PFV-teach-NOMZ GEN PL-elder

³The non-nominative case marking of the internal argument *babuy* 'boar' seems to suggest that this sentence is an ECM construction; that is, *babuy* gets case from the matrix verb. Further investigation is needed.

- 'We shall not forget that/what the elders taught.'
- b. alaiyasi murikai-su, Li-tara-kiLala-su ku ta-iy(a)-ane-li.
 if want-2NOM FUT-can-hear-2NOM OBL PFV-say-NOMZ-1GEN
 'If you want to, you can hear me say.'

Event nominals themselves have an argument structure because they select arguments. As examples in (26b) and (27) show, the external argument is marked in genitive, in the same way as it is marked in OV. It is arguably evident that the suffix *-ane* in Rukai acts as a hinge of OV formation and nominalization in Rukai, and what decides on either one of them is primarily the syntax.

4. CONCLUSION

In this paper I present an analysis to show that Rukai has a three-way voice system. In addition to active and passive voice, as have been described in previous analyses, Rukai has Object voice constructions, in which alternations are found with respect to voice, case and argument structure.

The distinction between Object voice and nominalization is also made, on the basis of what they have in common and how they differ in constructing argument structure.

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