Nominalization in Tsou

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It is well known that languages such as English exhibit at least two types of nominals: gerundive nominals and derived nominals. Chomsky (1970) argues that the distinction of these two types lies mainly on their internal structure. While the internal structure of derived nominals is nominal, the gerundive is verbal. Any study of nominalizations has to consider the two types of nominals. The goal of this paper is thus twofold: (1) to explore the status of these two types of nominals in Tsou, one of which displays nominal properties, while the other displays verbal properties; and (2) to distinguish nominalization from internal headed relativization in Tsou.

Key words: Tsou, nominalization, relative clause, internal head relative clause, relativization

1. Introduction

It is well known that languages such as English exhibit at least two types of nominals, i.e., gerundive nominals and derived nominals. For example:

(1) a. John’s criticizing Mary (gerundive nominal)
   b. John’s criticism of Mary (derived nominal)

In (1a), John’s criticizing Mary is a gerundive nominal, and in (1b), John’s criticism of Mary is a derived nominal.
Mary is a derived nominal. Both of these nominals have the distribution of noun phrases and both take a genitive subject, such as John’s. However, they differ in that a gerundive is formed much more freely than a derived nominal. The semantic interpretation of a gerundive is also much more straightforward than that of a derived nominal with regard to its verbal counterparts. By comparison with the derived nominal, the internal structure of a gerundive is verbal, rather than nominal, because it can take an accusative argument. Chomsky (1970) argued that the distinction between these two types lies mainly in their internal structure: while the internal structure of a derived nominal is nominal, that of a gerundive is verbal. I believe that any study on nominalization has to consider these two types of nominals and account for them.

This paper examines nominalization in Tsou, an Austronesian language spoken by approximately four thousand people in southern Taiwan, especially in the area of Ali Mountain. The goal of this paper is twofold, namely to explore the status of these two types of nominals in Tsou, and secondly to distinguish nominalization from relativization.

2. Nominalization

2.1 Nominalized construction without hia

In Tsou, there are two types of nominalization, one displaying lexical properties, and the other exhibiting syntactic properties. Let us examine the first type of nominalization. Example (2a) is a simple sentence:

(2) a. m-o [cohimu] 'o suika.
   AV-Rea sweet Nom watermelon
   ‘The watermelon is sweet.’

Its word order is typically predicate-initial and subject-final: mo cohimu represents the portion of the predicate, in which mo is an auxiliary expressing Tense/Mood/Voice and 'o suika is the subject. It can be nominalized as in (2b):

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1 The abbreviations used here are as follows: AV: agent voice, Gen: Genitive case marker, Irr: irrealis, Nom: nominative case marker, Obl: oblique case marker, Perf: Perfective, PV: Patient Voice, Rea: realis, 3SA: 3rd person singular agreement morpheme.
Nominalization in Tsou

[Type I: nominalized construction without *hia*]

b. m-o notaico 'e [NP [N cohu mu-si/-ta] to/ta]
   watermelon
   ‘The sweet portion of the watermelon is central.’

The meaning of ‘sweet’ in (2a) is arbitrarily changed into ‘the sweet portion’ in (2b). Furthermore, the derived nominal always occupies an NP position and thus can also appear as a topic in sentence-initial position, as in (2c):

c. 'e [NP [N cohu mu-si/-ta] to/ta suika]
   Top sweet-3S[–vis][+vis] Gen[–vis]/[+vis] watermelon
   m-o notaico.
   AV-Rea central (AV)
   ‘The sweet portion of the watermelon is central.’

In terms of morphology, the predicate *cohu* ‘sweet’ in (2a) is suffixed by *-si* or *-ta*, yielding the form *cohu-si* or *cohu-ta* in (2b). Note that in (2a) the subject *suika* ‘watermelon’ is marked by the nominative case marker ’o, while in (2b) it is replaced by the genitive case marker to or ta. There is an agreement relation between the genitive marker to/ta and the suffix *-si/-ta*. The invisible suffix *-si* agrees with invisible genitive to, and the visible suffix *-ta* agrees with genitive ta. Moreover, in simple sentences, such as (3a), the subject pronoun *-ko* must be cliticized to the sentence initial inflectional element, but it will become a genitive *-su* in the nominalized sentence in (3b), yielding *bangkake-su*:

(3) a. m-i-ko(-cu) (na'n-o) bangkake.
   AV-Rea-you-perf very-AV tall
   ‘You are tall.’ (You’ve been very tall.)

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2 As noted by a reviewer, the pronouns or agreement morphemes in Tsou are always affixed to the auxiliary verbs, which usually occur in sentence initial position. However, it is still a mystery why the agreement relation takes place in the process of lexical nominalization. I will leave this for future research.
[Type I: nominalized construction without *hia*]

b. te *yɛɛɛɛ*hi ta phingi 'o [NP(*na'n-o) bangkake-su(*-cu)].
Irr. grow Obl door Nom very-A V tall-your-perf
‘Your height will reach the height of the door.’

As can be seen in the examples, the change of meaning from ‘tall’ in (3a) to ‘height’ in (3b) is arbitrary. In fact, a comparison of (3a) and (3b) shows that the Type I nominalization is rather lexical. Unlike the simple sentence of (3a), in which the verbal predicate *bangkake* can optionally be suffixed with the aspect clitic -cu, or modified by a degree adverbial such as *na'no*, the nominalized sentence in (3b) can have neither the aspectual suffix -cu nor the degree adverbial *na'no*.

Note that only stative predicates can be nominalized in this way, and that activity predicates cannot. Compare the grammaticality of (4a) and (4b):

(4) a. m-i-ta cocv-o 'e pasuya.
AV-Rea-3SA laugh-A V Nom Pasuya
‘Pasuya laughs.’

b. *m-o au mtu u mnu 'e [NP [N cocv-o-si] to pasuya].
AV-Rea real-A V good(A V) Nom laugh-A V-3S A Gen Pasuya
Intended meaning: ‘Pasuya’s laughing is really good.’

2.2 Nominalized *hia* construction

By contrast, both stative and activity predicates can undergo the second type of nominalization. For instance, a stative predicate like *bangkake* in (5a) can be nominalized into *hia* *bangkake* in (5b):

(3) a. = (5) a. m-i-ko(-cu) (na'n-o) bangkake.
AV-Rea-you-perf very-A V tall
‘You are tall.’ (You’ve been very tall.)

b. te *yɛɛɛɛ*hi ta phingi 'o [NP hia-su bangkake]s.
Irr. grow Obl door Nom HIA-your high
‘The degree of your growing tall will reach the height of the door.’

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3 The lexical category of *hia* is still uncertain, though it looks like a nominalizer. Here I tentatively gloss it as HIA.
An activity predicate like *cocvo* in (6a) can also be nominalized into *hia cocvo* in (6b):

(4) a. m-i-ta cocv-o 'e pasuya.
   AV-Rea-3SA laugh-AV Nom Pasuya
   ‘Pasuya laughs.’

[Type II: nominalized *hia* construction]

b. m-o aŭmtu ummu 'o [NP (*m-i-ta) hia(-si/-ta)]
   AV-Rea real(AV) good(AV) Nom AV-Rea-3SA HIA-3SA[-vis]/[+vis]
   cocv-o to/ta pasuya.
   laugh-AV Gen[–vis]/[+vis] Pasuya
   ‘The manner of Pasuya’s smiling is really good.’

A comparison of (5b) to (6b) shows that this type of nominalization contains a nominalizer *hia*, which takes the place of sentential auxiliary elements expressing Tense/Mood and Voice like *mi-*, *mo*, etc. As a matter of fact, *hia* cannot co-occur with these auxiliary elements. However, *hia* can optionally have attached the agreement morphemes -si or -ta, whose visibility features are checked with the genitive marker to or ta. *Hia* can also take a genitive suffix, as in (5b), or a genitive NP, as in (6b), but not a nominative subject.

The following examples, from (7) to (12), show that the second type of nominalization is obviously syntactic. For one thing, the nominalized predicates can have the perfective aspect marker -cu attached, or the progressive aspect suffix -n’a; see examples (7) and (8):4

(7) m-o yućhwi ta phingi 'o [NP hia-su-cu bangkake].
   AV-Rea grow Obl door Nom HIA-your-perf high
   ‘Your having been so tall (is an indication that you) will reach the height of the door.’

(8) m-o aŭmtu ummu 'o [NP hia-ta-n’a] cocv-o
   AV-Rea real(AV) good(AV) Nom HIA-3SA-Prog laugh-AV
   ta pasuya.
   Gen Pasuya
   ‘The manner of Pasuya’s being smiling is really good.’

Next, this type of nominal can be modified by a degree adverbial like *na’no*, as in (9), or a frequency adverbial such as *aasvum*, as in (10):

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4 The notion of ‘progressive’ and ‘perfective’ aspects was first identified by Zeitoun (1992:51-56).
(9) te ye.lu'hi ta phungi 'o [NP hia-su na'n-o bangkake].
Irr. grow Obl door Nom HIA-your very-AV high
‘The degree of your being very tall will reach that of the door.’

(10) m-o au.ntu umnu 'o [[NP hia aasvu-u cocv-o
AV-Rea real(AV) good(AV) Nom HIA usually-AV laugh-AV
ta pasuya].
Gen Pasuya
‘The manner of Pasuya’s usually smiling is really good.’

Moreover, as shown in (11a), this type of nominal may take an accusative argument, similar to its simple sentence counterpart in (11a):

(11) a. m-i-ta eaeazoy-u to yangui 'e pasuya.
AV-Rea-3S criticize-AV Obl Yangui Nom Pasuya
‘Pasuya criticized Yangui.’

[Type II: nominalized hia construction]

b. o'a m-o emzo 'e [NP hia-si eaeazoy-u to yangui
not AV-Rea correct(AV) Nom HIA-3S criticize-AV Obl Yangui
to pasuya].
Gen Pasuya
(a) ‘The way of Pasuya’s criticizing Yangui is not correct.’
(b) ‘Pasuya’s criticizing Yangui is not good.’

Though the predicate eaeazoyu is nominalized, it retains its ability to assign accusative case. The main difference between (11a) and (11b) lies in the fact that in (11a) the subject marked by the nominative case marker 'e is marked by the genitive case marker to in (11b), and that the auxiliary expressing tense or mood such as mi- is now replaced by hia.

Semantically, this construction yields two various interpretations, either ‘The way of Pasuya’s criticizing Yangui’ or ‘Pasuya’s criticizing Yangui’. In either case, hia has been grammaticalized as a nominalizer. When hia retains its semantic weight, it expresses ‘the degree of’ or ‘the manner of’. But when hia is stripped of its semantic weight, it serves sorely as a nominalizer, which turns the nominalized predicate into a gerundive nominal.

So far, we have looked at an example such as (11) in the form of Agent Voice. Let us examine an example of Non-Agent Voice. As shown below, the simple sentence of (12a) can be nominalized into (12b):
Nominalization in Tsou

(12) a. i-si eaeazoy-a to pasuya 'e yangui.
    NAV.Rea-3SA criticize-PV Obl Pasuya Nom Yangui
    ‘Yangui is criticized by Pasuya.’

    [Type II: nominalized hia construction]
    b. o'a m-o emzo 'e [NP hia eaeazoy-a to yangui
    not AV-Rea correct(AV) Nom HIA criticize-PV Gen Yangui
    (to pasuya)].
    Obl Pasuya
    (a) ‘The way of Yangui’s being criticized (by Pasuya) is not correct.’
    (b) ‘Yangui’s being criticized (by Pasuya) is not correct.’

Note that the Agent Pasuya here is marked by oblique case, and tends to be omitted.

2.3 Generalization

Table (13) summarizes the observations made so far:

<table>
<thead>
<tr>
<th>Properties</th>
<th>Type I Nominalization without <em>hia</em></th>
<th>Type II Nominalized <em>hia</em> construction</th>
</tr>
</thead>
<tbody>
<tr>
<td>contains a nominalizer</td>
<td>×</td>
<td>√ (<em>hia</em>)</td>
</tr>
<tr>
<td>occupies an NP position</td>
<td>√</td>
<td>√</td>
</tr>
<tr>
<td>can be topicalized</td>
<td>√</td>
<td>√</td>
</tr>
<tr>
<td>contains a genitive subject (pronom or NP)</td>
<td>√</td>
<td>√</td>
</tr>
<tr>
<td>may co-occur with Tense/Mood</td>
<td>×</td>
<td>×</td>
</tr>
<tr>
<td>may allow Agreement</td>
<td>√</td>
<td>√</td>
</tr>
<tr>
<td>may co-occur with Aspect</td>
<td>×</td>
<td>√</td>
</tr>
<tr>
<td>may be modified by an adverbial</td>
<td>×</td>
<td>√</td>
</tr>
<tr>
<td>can take an accusative argument</td>
<td>×</td>
<td>√</td>
</tr>
</tbody>
</table>

Table (13) reveals that both types of nominal can occur in NP position and take a genitive subject. However, only Type II nominals can co-occur with Aspect and adverbials, and take an accusative argument. These facts also show that Type I nominals undergo lexical nominalization while Type II nominals undergo syntactic nominalization. This generalization can be further supported by the productivity and the idiosyncratic character of the relation between the nominals and its associated predicate.
Type II nominals are more productive. Almost all predicates, both individual-level and stage-level predicates as well as activity verbs can have their counterpart-nominalized construction. Type I nominals, on the other hand, are restricted to individual-level predicates, as shown in (14)-(16):  

**Individual level predicate**

(14) a. **cohu**
   
   ‘sweet’

b. **cohu**-si
   
   ‘the sweet portion/sweetness’

c. **hia-si cohu**
   
   ‘the degree of sweetness’

**Stage level predicate**

(15) a. **kaebu**
   
   ‘happy’

b. * **kaebu**-si
   
   c. **hia-si kaebu**
   
   ‘the degree of happiness’

(16) a. **cocvo**
   
   ‘laugh’

b. * **cocvo**-si
   
   c. **hia-si cocvo**
   
   ‘the manner of laughing/the degree of laughing/laughter’

In (14), **cohu** ‘sweet’ is an individual-level predicate. Both Type I nominals of **cohu**-si and Type II nominals of **hia-si cohu** are allowed. But as shown in (15) and (16), the stage-level predicates may only be allowed for Type II nominals. That is, while **kaebu**-si or **cocvo**-si would be grammatically ill formed, **hia-si kaebu** or **hia-si cocvo** would be correct.

Furthermore, the semantic relation between Type I nominals and their related predicates is less regular, but that of Type II is rather regular. Compare (17)-(20):

(17) a. **mac’i**
   
   ‘sour’

b. **mac’i**-si
   
   ‘yeast’

c. **hia-si mac’i**
   
   ‘the degree of sourness’

(18) a. **umm**
   
   ‘good’

b. **umm**-si
   
   ‘the good portion’

c. **hia-si umm**
   
   ‘the degree of goodness’

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5 Carlson (1977) noted that predicates can be classified as belonging to two natural classes, which he dubbed individual-level vs. stage-level, and proposed an account for this distinction.

6 Note that the occurrence of the Type I nominals is not very productive in the lexicon. Not all the individual-level predicates can have a counterpart in the Type I nominals.
Nominalization in Tsou

(19) a. mafe ‘delicious’
b. mafe-si ‘the quality of deliciousness’
c. hia-si mafe ‘the degree of deliciousness’

(20) a. au mtu ‘real’
b. au mtu-si ‘the truth’
c. hia-si mtu ‘the degree of reality’

The following table summarizes the discussion regarding Types I and II:

(21)

<table>
<thead>
<tr>
<th></th>
<th>Type I Nominalization without hia</th>
<th>Type II Nominalized hia construction</th>
</tr>
</thead>
<tbody>
<tr>
<td>formation type</td>
<td>lexical</td>
<td>syntactic</td>
</tr>
<tr>
<td>productivity</td>
<td>× (only individual predicate)</td>
<td>∨</td>
</tr>
<tr>
<td>semantic relation</td>
<td>idiosyncratic</td>
<td>regular</td>
</tr>
</tbody>
</table>

The various bits of evidence provided in the foregoing discussion support a lexical analysis for Type I nominalizations without hia, and a syntactic derivation for Type II nominalized hia constructions:

(22) • lexical analysis for Type I nominalization without hia
     • syntactic analysis for Type II nominalized hia construction

3. Relativization

In addition to these two types of nominalization, Tsou has yet another type of construction that should be distinguished from Type II nominalized hia constructions. For comparison, the two sentences in (23) illustrate ordinary sentences: while (23a) is in Agent Voice, (23b) is in Non-Agent Voice. Meanwhile, sentences in (24) are illustrated as Type II nominalized hia constructions introduced earlier. The examples in (25) are the target hia constructions to be examined in greater detail in this section.

(23) a. m-i-ta cociv-o to yangui 'e pasuya.
    AV-Rea-3S A laugh-AV Obl Yangui Nom Pasuya
    ‘Pasuya smiles at Yangui.’
b. i-ta cociv-i to pasuya 'e yangui.
    AV.Rea-3S A laugh-PV Obl Pasuya Nom Yangui
    ‘Yangui is laughed at by Pasuya.’
Melody Ya-yin Chang

[Type II: nominalized *hia* construction]

(24) a. m-o o'ha ümmê 'o [(*m-i-ta) hia cocv-o
   AV-Rea not good(AV) Nom AV-Rea-3S_A HIA laugh-AV
to yangui to pasuya].
   Obl Yangui Gen Pasuya
   (a) ‘The manner of Pasuya’s smiling at Yangui is not good.’
   (b) ‘Pasuya’s smiling at Yangui is not good.’

b. m-o o'ha ümmê 'o [(*i-ta) hia cocv-i
   AV-Rea not good(AV) Nom NAV.Rea-3S_A HIA laugh-PV
to yangui (to pasuya)].
   Gen Yangui Obl Pasuya
   (a) ‘The manner of Yangui’s being laughed at (by Pasuya) is not good.’
   (b) ‘Yangui’s being laughed at (by Pasuya) is not good.’

[Type III: internal-head relative clause]

(25) a. m-o o'ha ümmê 'o [(m-i-ta) [hia] cocv-o
   AV-Rea not good(AV) Nom AV-Rea-3S_A HIA laugh-AV
to yangui 'e pasuya].
   Obl Yangui Nom Pasuya
   ‘The manner in which Pasuya smiles at Yangui is not good.’

b. m-o o'ha ümmê 'o [(i-ta) [hia] cocv-i
   AV-Rea not good(AV) Nom NAV.Rea-3S_A HIA laugh-PV
to pasuya 'e yangui].
   Obl Pasuya Nom Yangui
   ‘The manner in which Yangui is laughed by Pasuya is not good.’

At first glance, both constructions in (25) and (26) contain *hia*. However, in (25) the clause is a finite, and contains a Tense/Mood/Voice auxiliary *mi*- or *i*-; and a nominative subject. It is obvious that *hia* here no longer serves as a nominalizer. In fact, there is no nominalization involved in this construction.

By further looking at the ordinary sentences in (25) and (26), we can infer—from the position of *kaebu* ‘happily’ and *ezua* ‘deliberately’—that the *hia* in (25) occurs in-situ in its surface form, and thus serves as the internal head of a relative clause.\(^7\)

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\(^7\) Words like *kaebu* ‘happily’ or *ezua* ‘deliberately’ can serve either as a stative main predicate or an adverbial modifying the activity main predicate. Obviously, in the sentences of (26), they are the latter.
Nominalization in Tsou

(26) a. m-i-ta [kaebu] cocuv-o to yangui 'e pasuya.
   AV-Rea-3S A happily(AV) laugh-AV Obl Yangui Nom Pasuya
   ‘Pasuya happily smile at Yangui.’

b. i-ta [ezua] cocuv-i to pasuya 'e yangui.
   NAV.Rea-3S A deliberately(NAV) laugh-PV Obl Pasuya Nom Yangui
   ‘Yangui is deliberately laughed by Pasuya.’

So if we wanted to relativize the manner in which Pasuya smiles at Yangui, we would
use the internal-head hia relative clause as in (25a) mi-ta hia cocvo to yangui 'e pasuya;
or if we wanted to relativize the manner in which Yangui is laughed at by Pasuya, we
would say it as in (25b), i-ta hia cocvi to pasuya 'e yangui. This type of hia construction
as illustrated in (25) is referred to as Type III: internal-head relative clause. Examples
(27) through (29) are further relevant examples:

(27) na [NP[Rec i-si [kua] tiun-a to pasuya ta mo'o]]
   Nom NAF.Rea-3S A reason hit-PF Obl Pasuya Nom Mo'o
   ‘the reason why Pasuya was hit by Mo'o’

(28) 'o [NP[Rec te-ta [hia] uh-ta tfuya ta pasuya]]
   Nom Irr-3S A means go-Obl Tfuya Nom Pasuya
   ‘the means by which Pasuya will go to Tfuya’

(29) na [NP[Rec m-i-ta [hia] tiun-u to mo'o 'e pasuya]]
   Nom AF-Rea-3S A manner hit-AF Obl Mo'o Nom Pasuya
   ‘the manner in which Pasuya hit Mo'o’

Table (30) provides a comparison between these two types of hia construction:

(30)

<table>
<thead>
<tr>
<th>Properties</th>
<th>Type II Nominalized hia construction</th>
<th>Type III Internal-head Relative Clause</th>
</tr>
</thead>
<tbody>
<tr>
<td>• occupies an NP position</td>
<td>√</td>
<td>√</td>
</tr>
<tr>
<td>• can be topicalized</td>
<td>√</td>
<td>√</td>
</tr>
<tr>
<td>• syntactic formation</td>
<td>nominalization</td>
<td>relativization</td>
</tr>
<tr>
<td>• function of hia</td>
<td>nominalizer</td>
<td>internal-head</td>
</tr>
<tr>
<td>• case marking of subject</td>
<td>genitive</td>
<td>nominative</td>
</tr>
<tr>
<td>• may co-occur with Tense/Mood</td>
<td>×</td>
<td>√ (optional)</td>
</tr>
</tbody>
</table>
As we can see from table (30), both occur in an NP position. The Type II construction is a nominalized clause, but the Type III is a relative clause. Although hia may appear in both constructions, it functions differently: in Type II, hia serves as a nominalizer; in Type III, hia is an internal head. The case marking of the Subject is also different. In Type II, it is marked as genitive, but in Type III, it is nominative. Finally, Type III can occur with Tense/Mood or Voice auxiliary, as in any ordinary sentence.

4. Conclusion

Table (31) is a summary of this article.

<table>
<thead>
<tr>
<th>(31)</th>
<th>Type I Nominalization without hia</th>
<th>Type II Nominalized hia construction</th>
<th>Type III Internal-head Relative Clause</th>
</tr>
</thead>
<tbody>
<tr>
<td>• occupies an NP position</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>• formation type</td>
<td>lexical</td>
<td>syntactic</td>
<td>syntactic</td>
</tr>
<tr>
<td>• syntactic formation</td>
<td>----</td>
<td>nominalization</td>
<td>relativization</td>
</tr>
<tr>
<td>• function of hia</td>
<td>----</td>
<td>nominalizer</td>
<td>internal-head</td>
</tr>
</tbody>
</table>

Above all, the three types of constructions are differentiated in Tsou. The Type I construction is a lexical nominal, without any syntactic operation. However, both Types II and III involve a syntactic operation. While Type II concerns a process of nominalization, Type III involves relativization. Both Types II and III contain hia, but its functions are different: hia functions as a nominalizer in Type II, but as an internal head of relative clause in Type III.
References


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一般而言，名物化結構至少分成派生名物化結構 (derived nominals) 和動名詞組 (gerundives) 兩種。杭士基 (Chomsky) 於 1970 的文章中更進一步指
出這兩種結構的差異主要在於其內部結構的不同：名物化的內部結構是名詞性 (nominal)；而動名詞組是動詞性 (verbal)。任何欲從事名物化的研究，都
必須加以考慮這兩種性質的名物化結構。因此，本文寫作的目的有二：其一，
本文探究鄒語的這兩種名物化結構。正如所預期的，鄒語的第一種名物化結
構顯示名詞性的內部結構，而另一種卻呈現了動詞性的特質。其二，本文更
進一步的把鄒語中看似相近的在位關係子句 (internal head relative clause) 與
名物化結構區分開來。

關鍵詞：鄒語，名物化，關係子句，在位關係子句，hia- 結構