

VERBAL INFLECTION VERSUS DEVERBAL NOMINALISATION IN PAN: THE EVIDENCE FROM TSOU

Stanley Starosta

1. INTRODUCTION

In a paper presented at the Third International Conference on Austronesian Linguistics in Bali in 1981, Starosta, Pawley, and Reid (hereafter SPR) proposed a scenario for the evolution of Philippine-type clause structure in which, at a stage ancestral to Philippine and certain other languages, PAN equative sentences with nominalised NP predicates were reinterpreted as verbal sentences. However, the question has been raised by Shelly Harrison (personal communication) as to how far this process had already gone at the stage SPR reconstruct as Proto-Austronesian, and how much of the preexisting verbal syntax, as opposed to SPR's competing nominalised constructions, we are able to reconstruct for PAN.

Part of the answer to this question is suggested by the syntax of the Tsouic languages of Taiwan, and in particular in the structure of Tsou itself. Tsouic languages form a very high order subgroup of the Austronesian language family, possibly a primary subgroup, yet Tsou does not have the very strong nominal orientation which SPR reconstructed for PAN. Of the five derivational affixes they considered to be crucial in the evolution of Philippine-type focus constructions, *mu-/um-, *-en, *ni-/in-, *-ana, and *iSi-, Tsou has clear reflexes of only two, *mu-/um- and *-ana, with only *mu-/um- involved in verbal constructions.¹ In place of the ubiquitous nominalised attribute and nominalised predicate constructions of the Atayalic and Paiwanic languages of Formosa, Tsou complex NP constructions are composed of a head relator noun and a sentential attribute which is unmistakably verbal in its syntactic properties.

Based on a comparison of Tsou and the other Formosan languages, it turns out to be possible to reconstruct the stages that led to the modern Tsou focus system, but only if we either

1. revise the SPR view of the nature of PAN clause structure,
2. show that the PAN noun-derived focus marking system could plausibly have been lost in Tsou while being retained in the other Tsouic languages, or
3. revise current assumptions about the way that Tsou subgroups with the other Tsouic languages, Saaroa and Kananavu, and with Atayalic to the north and Rukai to the south.

Andrew Pawley and Lois Carrington, eds *Austronesian linguistics at the 15th Pacific Science Congress*, 281-312. *Pacific Linguistics*, C-88, 1985.

© Stanley Starosta

2. THE TROUBLE WITH TSOU

Starosta, Pawley, and Reid posited a PAN system in which nominalised equational constructions had to some undetermined extent been reinterpreted as verbal constructions in main clauses by analogy with a preexisting verbal focus system involving focus affixes *-a and *-i². Since Tsou verbal constructions reflect only one of these presumed nominal affixes, *mu-/um-, and otherwise employ the supposedly earlier *-a and *-i for Object Focus and Locative Focus, SPR are presented with a problem. Whether Tsouic is a primary PAN subgroup, as proposed by Harvey (Figure 1) and Reid (Figure 2), or a primary branch of Proto-Southern Formosan (i.e. non-Atayalic), as proposed by Tsuchida (Figure 3), it should reflect the denominal verbal focus affixes in verbal constructions, since all its sisters and cousins do. (Actually, the situation in Rukai is quite similar to that in Tsou, but I will not consider it further in this paper.)

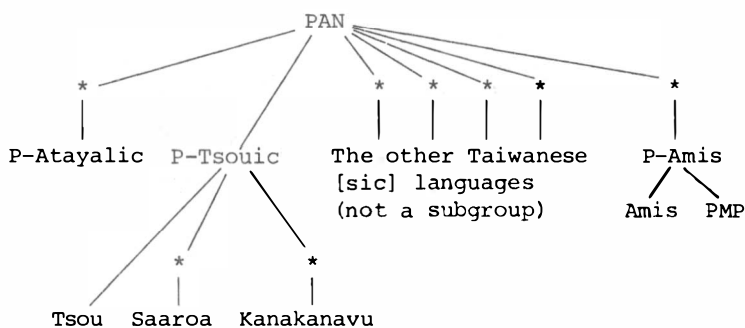


Figure 1 (based on Harvey 1979:98, 104)

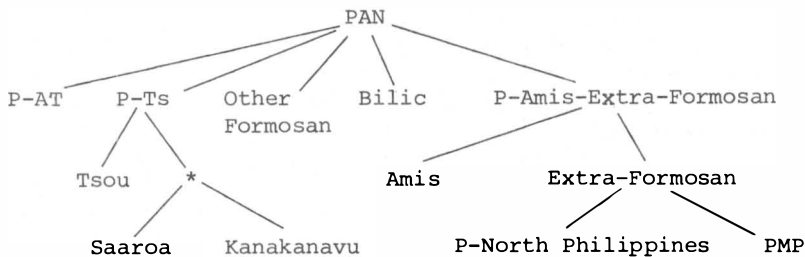


Figure 2 (based on Reid 1981:15)

There are three basic options open to us in accounting for the Tsou situation. Assume that either

1. the use of originally nominal affixes in verbal clauses was independently innovated in all languages but Tsou (cf. the asterisks in Figures 1, 2 and 3), or
2. Tsou originally had the same set of affixes but lost them, or
3. the subclassification trees are wrong, and Tsou itself is a primary subgroup, with all the other languages allocated to different subgroups or forming a single subgroup (Figure 4):

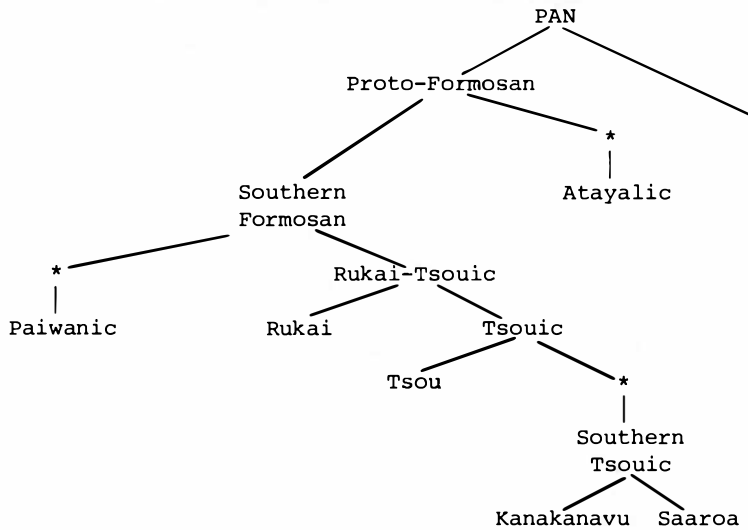


Figure 3 (based on Tsuchida 1976:13, 15)

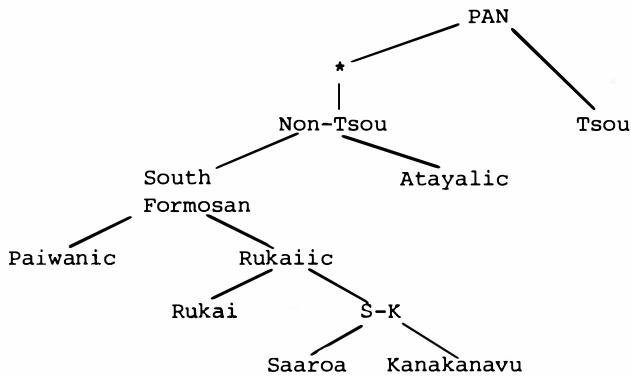


Figure 4

Option 1 is not a very attractive one. While the reinterpretation of nominals as verbs is itself not at all an implausible change, as SPR tried to show³, it would still be surprising to have exactly the same process happening independently in exactly the same way in so many different branches, at the points indicated by the asterisks in the family tree diagrams shown as figures 1, 2, and 3.

Option 3 is counterindicated by the comparative studies which have been done so far, since none of these put Atayalic together with Paiwanic as opposed to Tsou.

In terms of economy and plausibility, then, it would be desirable to work toward the second alternative. That is, it would be nice if SPR could assume that the ancestors of Tsou did have the denominal verbal affixes in question

and then show how Tsou could have lost them (cf. Wolff 1973:74). That is what I propose to attempt in the main body of this paper.

3. AUX CLUTCHING

According to SPR, the innovating verbal focus affixes in PAN itself were only present in main clauses, with the original *-a and *-i focus affixes preserved in subordinate clauses. This is of course the situation preserved to varying degrees in Austronesian languages such as Seediq (Asai 1953:28) and Samar Leyte (Wolff 1973:87), and is in fact the situation SPR reconstructed for the ancestor of many of the Oceanic languages. Moreover, SPR claimed that auxiliary verbs were syntactically the highest verbs of their respective clauses in PAN, as they are in the modern languages (cf. Ross 1969, Starosta 1977), so that when an auxiliary cooccurred with another verb, the second verb would have been syntactically a subordinate verb, and thus have occurred with the earlier subordinate clause focus affix set.

An example from English may help to illustrate this point. From the point of view of Ross's 'Auxiliaries as main verbs' analysis, the highest verb in an English sentence such as John must leave for Parramatta soon is not leave but must, so that the bracketing would be:

(_S John must (_S leave for Parramatta soon))

where must is the highest tensed finite verb of the sentence, and leave is the infinitival head of the embedded complement of must. Assuming this kind of analysis and the SPR account of PAN clause structure, then, all non-auxiliary verbs cooccurring with auxiliary verbs would have been syntactically subordinate, and thus would have appeared with the *-a and *-i focus affixes.

Given these two features of PAN syntax, we could in principle explain the development of the Tsou system in terms of a single innovation if we could somehow motivate the requirement that every sentence contain an auxiliary verb. I will refer to such a development as 'Aux clutching'. Aspect-marking auxiliary verbs must have been common in PAN, since they are also very frequent in Atayalic as well as Tsou, and it is in fact a striking feature of Tsou syntax that almost every verbal sentence in connected discourse contains an initial aspect-marking auxiliary verb (Tung's 'beginners'; Tung 1964:88-89). This auxiliary verb is frequently followed by a clitic pronoun (Tung's 'post-beginners' of the /si/ group; Tung 1964:89), and these clitic pronouns occur *only* immediately after auxiliary verbs.⁴ These clitics are unusual in terms of Formosan languages in the requirement that they coreference actors rather than subjects (cf. Tung 1964: 100, 107-109).⁵ In the following section, I will attempt to show why and how 'Aux clutching' transpired in Tsou as a new mechanism for marking aspect, mood, and pronominal actors.

3.1 Actor-referencing clitic pronouns

It is possible in each of the Tsouic languages to distinguish a set of independent pronouns as well as a Nominative and a non-Nominative clitic set (Tsuchida 1976:38, 68, 98; Mei 1982:209), though in Tsou itself the latter distinction in the clitic system is clear only in the third person singular (Tsuchida 1976:97). As usual in Formosan languages and elsewhere, the case

form of the clitic is crucial in determining coreference: Nominative clitics coreference the grammatical subject in the next clause down, and non-nominative clitics coreference non-Nominative actants in the embedded clause. This situation is illustrated in figures 5, 7, and 9. Illustrative Tsou examples are given after each of the schematic tree diagrams. Bracketed numbers refer to sentence numbers in my field notes:

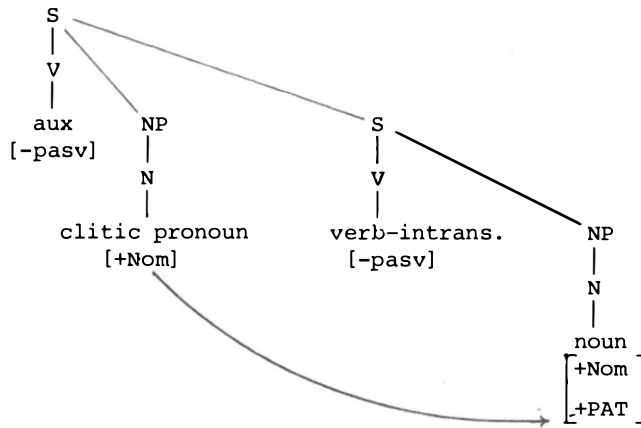


Figure 5 Intransitive clause: schematic

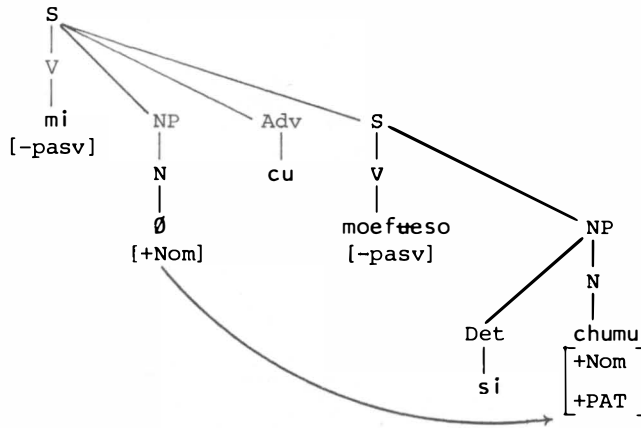


Figure 6 Intransitive clause

(Note that, by the lexibase Patient Centrality hypothesis, every intransitive verb has a Patient subject; cf. Bruce 1983.) More examples:

- (1) mi cu moefueso si chumu [C25]
 1 2 3 4 5
The water has already boiled.
 4 5 1 2 3

- (2) mo na?no ~~umnt~~ si oko [C39]
 1 2 3 4 5
The child is very good.
 4 5 1 2 3
- (3) mo eo ne ~~f~~er~~nt~~ o mameoi [C36]
 1 2 3 4 5 6
The old man is in the mountains.
 5 6- -6 1- -2 2-3 4
- (4) te ko n?a uh ne oeonatmopst [C161]
 1 2 3 4 5 6
(You will now) go to school!
 2 1 3 4 5 6
- (5) mo ~~m~~uch~~~~ mai tan?e [C23]
 1 2 3 4
It rained today.
 1-2 3-4
- (6) mi ?o s~~t~~?no [C19]
 1 2 3
I got angry.
 2 1-3 -3
- (7) mi ?o oef~~t~~?t [C27]
 1 2 3
I fell down.
 2 1-3 -3

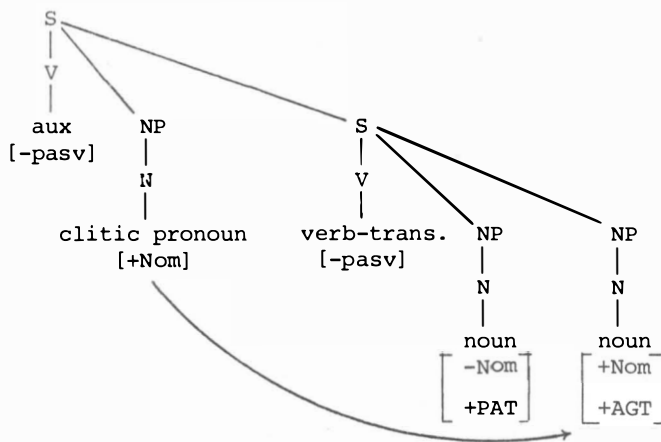


Figure 7 Transitive active clause: schematic

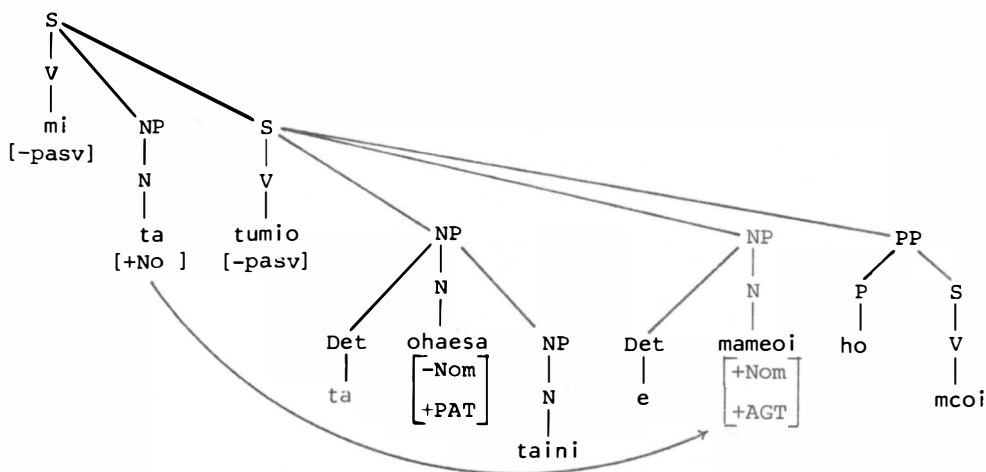


Figure 8 Transitive active clause

- (8) mi ta tumio ta ohaesa taini e mameoi ho mcoi [C22.3]
 1 2 3 4 5 6 7 8 9 10
The old man died for his younger brother;
The old man benefited this younger brother to die.
 7 8- -8 3 6 5- -5 9 10
- (9) mio eobako to fkoi o mameoi [C45]
 1 2 3 4 5 6
The old man hit/killed a snake.
 5 6- -6 2 3 4
- (10) mo pei?i ta chumu si mamespiŋi [C86]
 1 2 3 4 5 6
The woman boiled (cooked) water.
 5 6 2 - 1 4
- (11) mi ?o bon to simeo [C13]
 1 2 3 4 5
I ate the fat meat.
 2 1-3 4 5- -5
- (12) mo ?u cu mofi to peisu to mamespiŋi [C155]
 1 2 3 4 5 6 7 8
I gave the woman the money.
 2 1-3 7 8 5 6

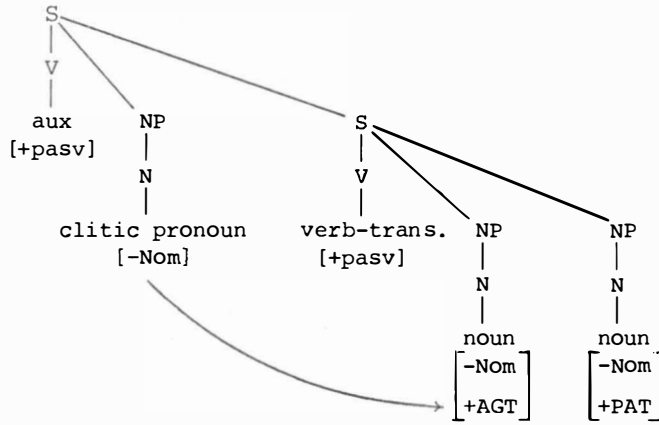


Figure 9 Transitive passive clause: schematic

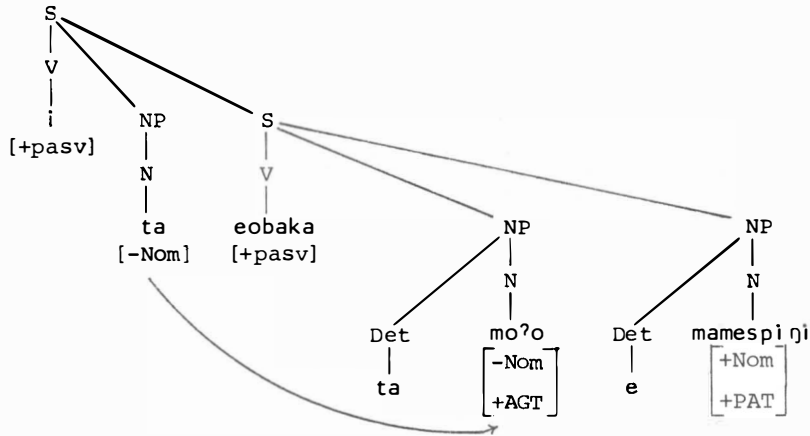


Figure 10 Transitive passive clause

(13) i ta eobaka ta mo'o e mamespiŋi [C153]
 1 2 3 4 5 6 7
The woman was hit by Moe.
 6 7 1-3 -3 4 2-5

(14) i ta tufkuneni ta pööeöo ta oko e mameoi [C8.2]
 1 2 3 4 5 6 7 8 9
The child washed the old man's pants for him;
The old man was washed pants for by the child.
 8 9- -9 1 3- 5 -3 6 2-7

(15) i'o mameoi i si fii to mo goen o oko ne hucma [C1]
 1 2 3 4 5 6 7 8 9 10 11 12
Yesterday the old man gave the child five dollars;
The old man, the child was given five dollars by him yesterday.
 1 2- -2 9 10 3 5 7-8- -8 4 11-12

- (16) i'e oko i ta eobakneni ta ab'u e mameoi [C41]
 1 2 3 4 5 6 7 8 9
This child beat the dog for the old man;
The child, the old man was beaten the dog for by him.
 1 2 8 9- -9 3 5- 6 7 -5 4- -4
- (17) a os 'o cohivi a te uh ne fuen+ si mameoi [C41]
 1 2 3 4 5 6 7 8 9 10 11
I know the old man will go to the mountain.
 3 4 10 11- -11 6 7 8- -8 9
- (18) io i si pei'i ta vcon-si ci naaveu na'no mafe [C59]
 1 2 3 4 5 6 7 8 9 10 11
The food which his wife cooks is very delicious.
 8 9 1 7 6 4 10 11
- (19) i si cu poa-moefueso ta mamespiŋi si chumu [C87]
 1 2 3 4 5 6 7 8 9
The woman made the water boil;
The water was made to boil by the woman.
 8 9 1 4 5 6 7-2
- (20) i si poa-moeai to si'ŋi ta amoo-si o oko-si [C121]
 1 2 3 4 5 6 7 8 9 10 11 12
The father had his children make a broom;
 7 8-2 3 12 11 4 5 6
His children were caused to make a broom by their father.
 12 11 1 3 4 5 6 9 8-2
- (21) i si poa-mofia ta mameoi to peisu o oko-su [C105]
 1 2 3 4 5 6 7 8 9 10 11
The old man told your child to bring the money;
 5 6-2-6 3 11 10 4 7 8
Your child was caused to give the money by the old man.
 11 10 1 3 4 7 8 5 6- 2-6
- (22) i si poa-bon+ ta mameoi to fou o ino-si [C126]
 1 2 3 4 5 6 7 8 9 10 11
The old man had his mother eat meat;
 5 6-2-6 3- 11 10 -4 8
His mother was caused to eat the meat by the old man.
 11 10 1 3 4 7 8 5 6-2-6
- (23) i si poa-an-eni ta mameoi ta maaea si simeo [C129]
 1 2 3 4 5 6 7 8 9 10 11
The Japanese had the old man eat fat meat;
 8 9-2 3 6 7- -7 4 11- -11
The fat meat was caused to be eaten by the old man by the Japanese.
 10 11- -11 1 3 5 4 6 7- -7 8 9
- (24) os 'o s+?nova e mamespiŋi [C80.1]
 1 2 3 4 5
I hate/got mad at this woman;
The woman was gotten angry at by me.
 4 5 1 3- -3- -3 2
- (25) os 'o fii ta peisu e mamespiŋi [C157]
 1 2 3 4 5 6 7
The woman was given the money by me.
 6 7 1 3 4 5 2

- (26) te to nʔa eobaka o fkoi [C162]
 1 2 3 4 5 6
Let's go beat the snake;
The snake will now be beaten by us.
 5 6 1 3 4- -4 2
- (27) os ʔo eobakneni ta fatu si kaapana [C47]
 1 2 3 4 5 6 7
I strike the bamboo against the stone;
The bamboo is struck against the stone by me.
 6 7 1 3- -3 4 5 2
- (28) te ko nʔa poa-fae-neni to amoo-su to mameoi o peisu [C96]
 1 2 3 4 5 6 7 8 9 10 11 12 13
Tell your father to give the money to the old man;
 4 9 8 5 12 13 10 11- -11
The money will now be had given to the old man by you.
 12 13 1 3 6 4 5 10 11- -11 2
 (Literal passive glosses will be omitted for the remaining imperative examples)
- (29) te ko nʔa poa-eobako to avʔu o moʔo [C111]
 1 2 3 4 5 6 7 8 9
(You will now) tell Moe to beat the dog.
 2 1 3 4 9 5 6 7
- (30) te ko nʔa poa-moeai no siʔŋi o oko-su [C119]
 1 2 3 4 5 6 7 8 9 10
(You will now) tell your child to make a broom.
 2 1 3 4 10 9 5 6 7
- (31) te ko nʔa poa-mofi to mameoi to peisu o amoo-su [C97]
 1 2 3 4 5 6 7 8 9 10 11 12
(You will now) tell your father to give the money to the old man.
 2 1 3 4 12 11 5 8 9 6 7- -7
- (32) to ko nʔa poa-mofia to peisu o oko-su [C104]
 1 2 3 4 5 6 7 8 9 10
(You will now) tell your child to bring/give the money.
 2 1 3 4 10 9 5 6 7
- (33) i si poa-faeni-neni ta oko to amoo-si to mameoi o peisu [C99]
 1 2 3 4 5 6 7 8 9 10 11 12 13 14
The father made his child give money to the old man;
The money was had given to the old man by the child.
 13 14 1 3 4 5 11 12- -12 6 2-7
- (34) te ko nʔa poa-eobak-neni to moʔo o avʔu [C115]
 1 2 3 4 5 6 7 8 9 10
(You will now) tell Moe to beat the dog.
 2 1 3 4 8 5 9 10
- (35) te ko nʔa poa-an-eni ta maaea si simeo [C128]
 1 2 3 4 5 6 7 8 9 10
(You will now) give that fat meat to the Japanese to eat.
 2 1 3 4 9 10- -10 7 8 5

- (36) i si poa-eobak-neni ta oko to mo'o o av'u [C118.2]
 1 2 3 4 5 6 7 8 9 10 11
Moe had the child hit the dog;
The dog was caused by Moe to be hit.
 10 11 1 3 8 9-2 5 4
- (37) te ko n'a eomia tan'e ho teai si sapiei [C61.4]
 1 2 3 4 5 6 7 8 9
(You will now) use this to repair the shoes.
 2 1 3 4 5 6 7 8 9
- (38) te ko n'a eomia tan'e ho mooeai (ta) sapiei [C61.4]
 1 2 3 4 5 6 7 8 9
(You will now) use this to make (the) shoes.
 2 1 3 4 5 6 7 8 9

Note that a subclass of Tsou aspect-marking auxiliaries may be marked for passive,⁶ and that auxiliary verbs are subject to the Tsou requirement that embedded verbs agree in passivity with the matrix verb.

The factor that crucially distinguishes Tsou from its sisters in terms of clitic coreference behaviour is that Tsou clitics can only coreference the 'actor' of the lower clause (cf. Tung 1964:100, 107-109), where 'actor' is used in the Role and Reference sense (cf. Foley 1976: Abstract, p.2, and Harvey 1979:39).⁷ That is, Tsou does not allow clauses in which the clitic pronoun coreferences the Patient of a transitive clause, even though the case form is the same:

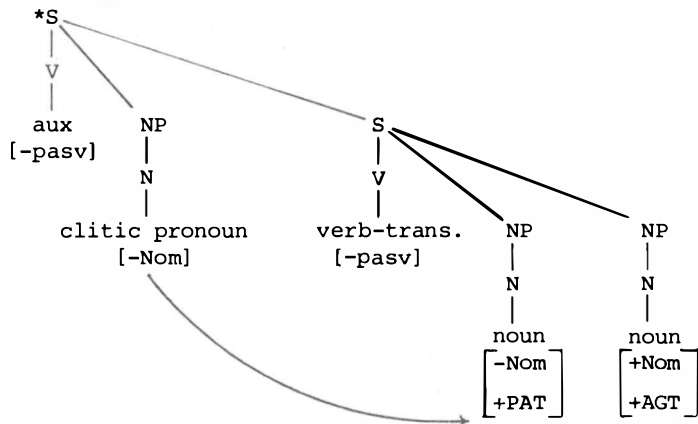


Figure 11 Transitive active clause, Patient clitic

The structure above should be well-formed if clitic coreference operated purely in accordance with case form, since both the clitic and the Patient NP are [-Nom].

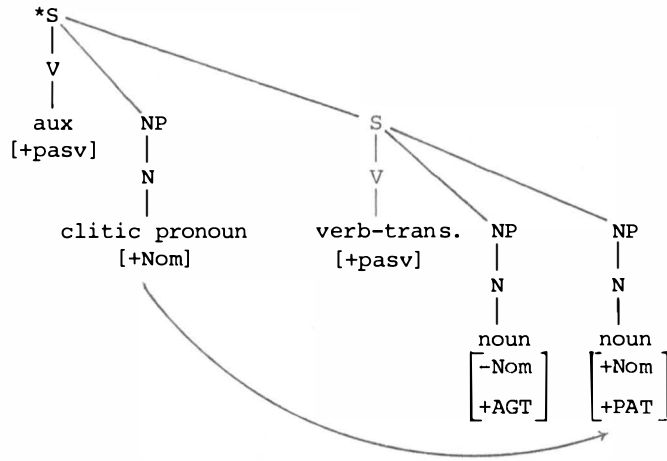


Figure 12 Transitive passive clause, Patient clitic

Again, this structure should be acceptable if clitic coreferencing depended on case form, since the clitic and the Patient share the feature [+Nom]. However, this structure too is impossible in Tsou.

This does not mean, however, that Patients can never be pronominalised. Rather, it simply means that they cannot be pronominalised by means of clitic pronouns. Instead, a separate class of syntactically independent pronouns must be used. This is illustrated in Figures 13 and 15:

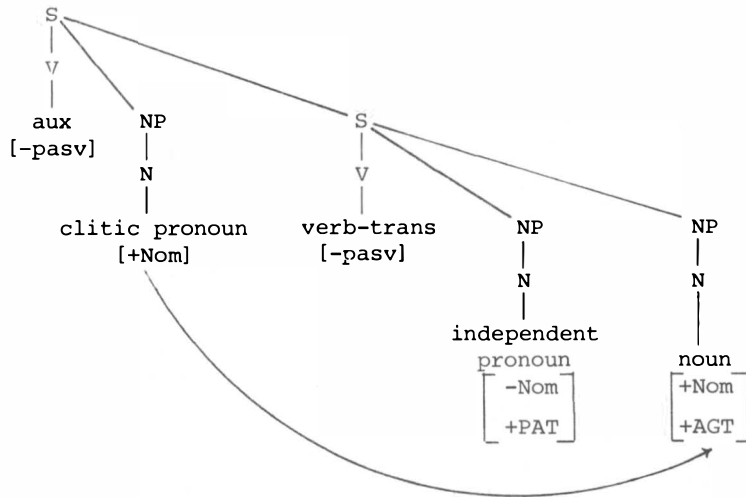


Figure 13 Transitive active clause: schematic

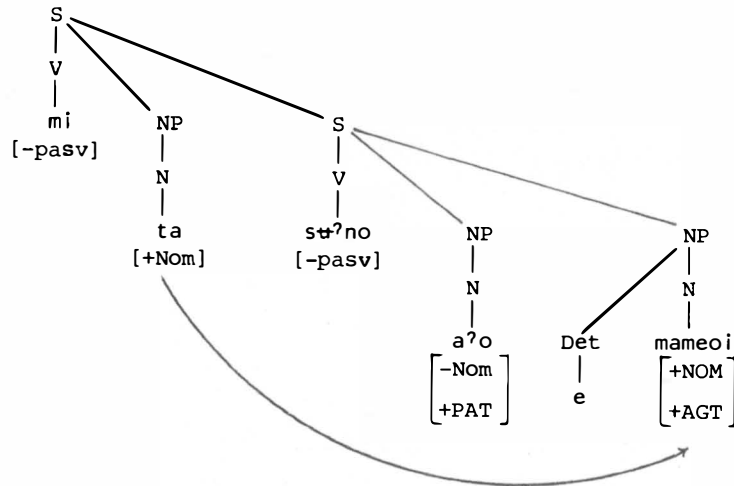


Figure 14 Transitive active clause

- (39) mi ta sɬʔno aʔo e mameoi [C18.11]
 1 2 3 4 5 6
The old man got angry at me.
 5 6-2-6 1-3- -3- -3 4
- (40) mi ta eobako hinʔi [C148.2]
 1 2 3 4
He (visible) hit them (visible).
 2 1-3 4
- (40) *mi si eobako hinʔi [C148.2]
 [-Nom]
- (41) mio eobako suu [C158]
 1 2 3
They (invisible) hit you.
 1-2 3
- (42) mi ʔo eobako suu [C138]
 1 2 3 4
I hit you.
 2 1-3 4
- (43) mi ko eobako aʔo [C136]
 1 2 3 4
You hit me.
 2 1-3 4
- (44) mi ko eobako taini [C140]
 1 2 3 4
You hit him (visible).
 2 1-3 4
- (45) mo hinʔi eobako suu [C158.1]
 1 2 3 4
They (visible) hit you.
 2 1-3 4

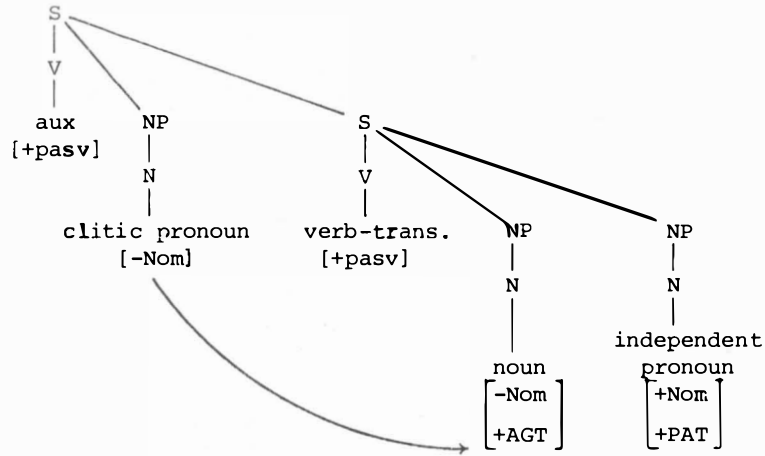


Figure 15 Transitive passive clause: schematic

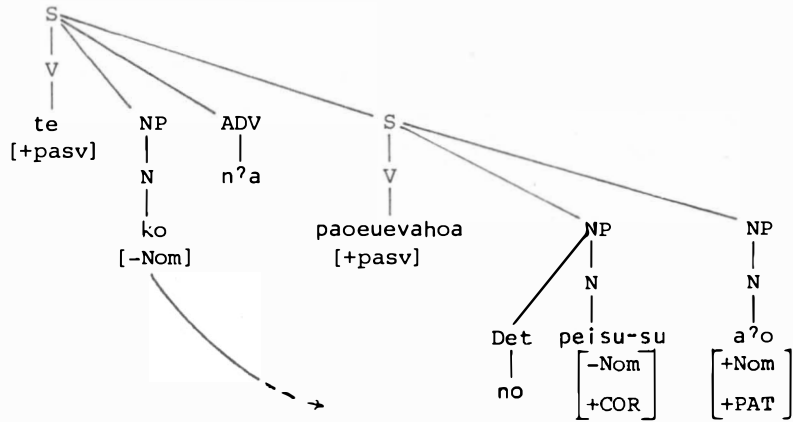


Figure 16 Transitive passive clause

- (46) te ko n?a poa-euevaho(a) no peisu-su a?o [C107]
 1 2 3 4 5 6 7 8 9
Lend your money to me;
I will now be caused to borrow your money by you.
 9 1 3 4 5 8 7 2
- (47) i si eobaka ta?e suu [C141]
 1 2 3 4 5
You were hit by him.
 5 1 3 2-4
- (48) os ?o eobaka taini [C141]
 1 2 3 4
He (close by) was hit by me.
 4 1 3 2

- (49) os ʔo eobaka tonoi [C141]
 1 2 3 4
He (yonder) was hit by me.
 4 1 3 2
- (50) os ko eobaka na aʔo [C137]
 1 2 3 4 5
I was hit by you.
 5 1 3 2
- (51) o ʔu eobaka mu [C147]
 1 2 3 4
You (pl) were hit by me.
 4 1 3 2
- (52) i he eobaka (na) aʔto [C163]
 1 2 3 4 5
We (inclusive) were hit by them. (no information content)
 5 1 3 2
- (53) i mu eobaka aʔo [C151.6]
 1 2 3 4
I was hit by you (plural).
 4 1 3 2
- (54) i si poa-euevaho(a) ta oko to peisu-si aʔo [C109]
 1 2 3 4 5 6 7 8 9 10
*The child had his money lent to me; the child lent his money to me;
 I was caused to borrow his money by the child.*
 10 1 3 4 9 8 5 6-2
- (55) i si pao-euevah-neni aʔo ta oko o peisu-si [C108]
 1 2 3 4 5 6 7 8 9 10 11
*The child lent his money to me;
 His money was caused to be borrowed by me by the child.*
 11 10 1 3 5 4 6 7 8-2

What we have, then, is a system in which clitic pronouns coreference actors, and independent pronouns specialise in representing (transitive and intransitive) Patients. The question naturally arises, then, as to what happens in intransitive sentences with pronoun subjects, since according to lexicase theory, the subject of such sentences would be simultaneously actor and Patient.

We have seen already in Figure 5 that the clitic pronoun can coreference the intransitive subject, which is as it should be, since the intransitive subject is considered an actor. However, if independent pronouns represent Patients, we might rather expect that the subject of an intransitive clause, in its capacity as Patient, should be represented as an independent pronoun. That is, the lexicase Patient Centrality hypothesis suggests that in an intransitive sentence, the single actant could be represented simultaneously by an independent pronoun by virtue of being a grammatical Patient and by a clitic pronoun by virtue of its being an actor, and in fact such sentences are found (Tung 1964:109); e.g.:

- (56) mi ʔo sɬʔno aʔo [C20]
 1 2 3 4
I got angry.
 2,4 1-3 3

This sentence is of course redundant, in the same way that a Spanish sentence with a subject pronoun is redundant: the person and number of the subject is already marked on the (head) verb, which in Tsou is the auxiliary. As in Spanish, though, I think (56) above must also carry an emphatic reading that would not be present if the a^ʔo were absent, as it is in the following example:

(57) mi ʔo s^ʔno [C19]
 1 2 3
I got angry.
 2 1-3 3

These examples can be analysed in a lexicase framework as shown in Figures 17 and 18 respectively:

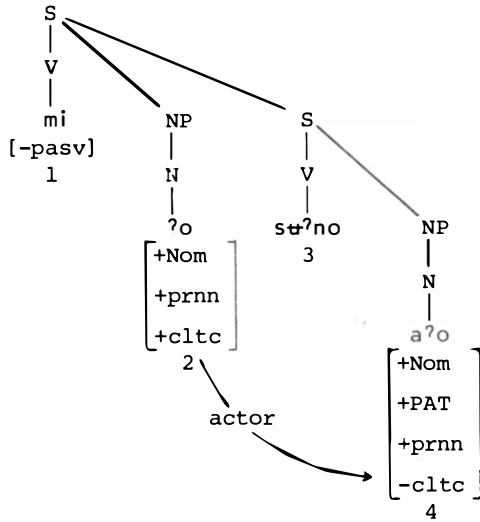


Figure 17 Intransitive clause with coreferential clitic and independent pronoun

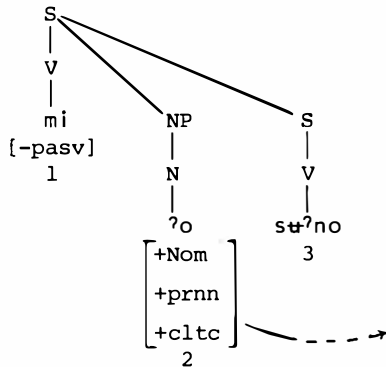


Figure 18 Intransitive clause with coreferential clitic and no independent pronoun

It follows that structures with independent pronoun agents are not grammatical, as illustrated in Figures 19 and 20, identical to Figures 7 and 9 except for the presence of independent Agent pronouns:

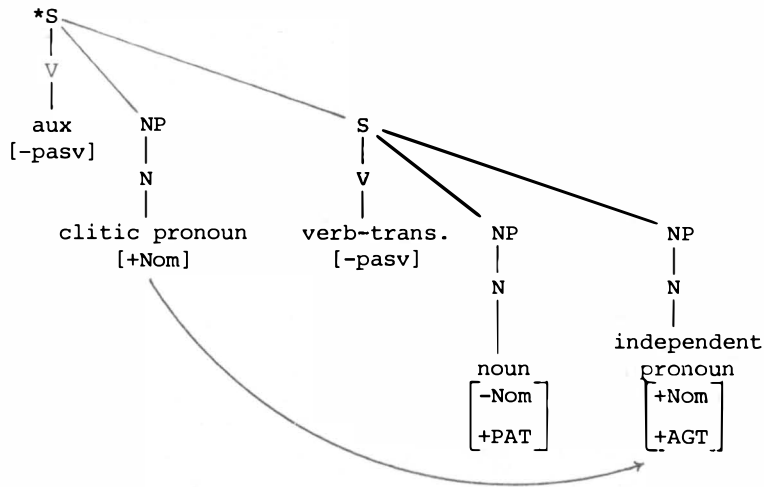


Figure 19 Transitive active clause

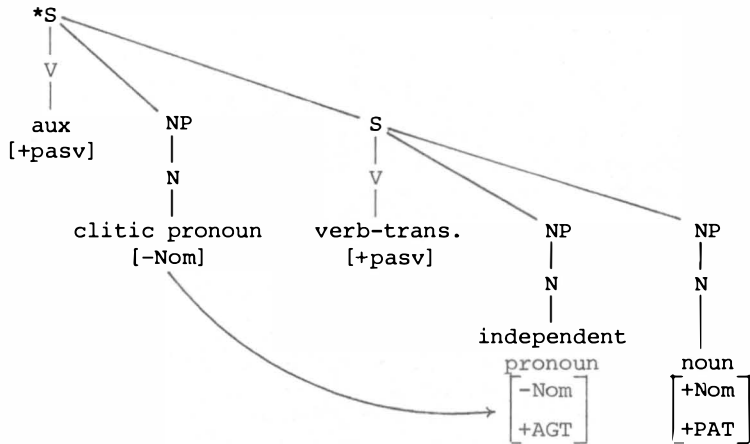


Figure 20 Transitive passive clause

The absence of structures in Tsou like the ones represented in Figures 19 and 20 shows that we can't account for the facts simply as a matter of redundancy avoidance. The structures represented by Figure 17 and Figure 19 are both redundant, but the one represented by Figure 17 is grammatically well-formed and the one represented by Figure 19 is not. This conclusion follows if we assume the correctness of

1. the lexibase hypothesis that every clause has a Patient, and
2. the claim that Tsou independent pronouns are never marked for Agent.

This specialisation of clitics to actors and other pronouns to Patients must be a Tsou innovation,⁹ since Nominative clitic pronouns in Saaroa, Kanakanavu, and Rukai, for example, may coreference lower-clause Patients, of transitive verbs, as shown by examples 58-62:

- (58) taru-cuvuŋ-ani +aku Saaroa (Tsuchida 1976:80)
 1 2 3 4
Come and see me!
 1-2- -1-2 4
- (59) tia-kasu itarə-n Kanakanavu (Mei 1972:213)
 1 2 3
I'll wait for you.
 1 3- -3 2
- (60) vua-(a)u-kani-kia piratiʔiŋi tia kaŋ-a Kanakanavu (Mei 1972:213)
 1 2 3 4 5 6 7
Give me a little of the food.
 1-2 4 5- -5 6-7
- (61) ki-a-baə-ako sa ʔulay Rukai (R9.4)
 1 2 3 4 5 6
I was given to the child.
 4 1-2 3 1 5- -5 6
- (62) ay-ki-θiŋal-su sa umas Rukai (Li 1973:196)
 1 2 3 4 5 6
You will be discovered by a man.
 4 1 2 3 5 6

The -ani in the Saaroa example is a Locative Focus imperative suffix and +aku is a Nominative clitic pronoun, as are the -kasu and -kia in Kanakanavu and the -ako and -su in Rukai. Both Saaroa and Rukai are subgrouped with Tsou as members of the Rukai-Tsouic subgroup, according to Tsuchida, and since both of them behave like the other Formosan languages I have surveyed in this respect, it must be Tsou itself that made the change.

3.2 Clitics, auxiliary verbs, and the loss of finite verbal focus affixes

The effect of this actor-clitic requirement, which was then a purely Tsou innovation and did not affect its sister Rukai-Tsouic languages, is to make an auxiliary obligatory (that is, to make the verb clutch its Aux) whenever the speaker wants to pronominalise an (animate) actor. This includes zero pronominalisation, since it seems that whenever a full Agent or Patient NP actant is missing from a clause in Tsou, an auxiliary must be present as the head verb of the next clause up. With such an auxiliary even the absence of a clitic pronoun is significant, since it unambiguously represents a third person invisible actor in the next clause down, as in (Tung 1964:98): mi cə bəŋu to fʔue (*He*) *baked a sweet potato*, where the auxiliary mi is not followed by any clitic pronoun, and no overt expression corresponds to the implied invisible actor. (bəŋu = *baked*, fʔue = *sweet potato*, cu = *completion*). The nature of discourse is of course such that actors are frequently not represented by full NP's, and as a result, almost every sentence in natural discourse which involves an inanimate actor is preceded by an auxiliary.

The consequences of the appearance of Aux axing in Tsou are quite significant for the thesis of this paper. What we have in effect is a situation in which every non-auxiliary transitive verb which takes an animate actor is embedded under an auxiliary verb, and therefore only takes the dependent set of focus affixes.⁹ Recall that the newly derived finite verbal focus affixes *-en, *ni-/in-, *-ana, and *iSi- initially appeared only in main clauses, so if most transitive clauses have auxiliary verbs, these affixes will no longer appear in most main or subordinate clauses. As the frequency of such affixed verbs decreases, the language increasingly comes to rely on auxiliary verbs to express aspect, and this in turn helps to spread the obligatory auxiliary requirement to intransitive clauses as well. The result is the loss of the main clause set of focus affixes.

Note, however, that *mu-/um- was not included in the list of focus affixes mentioned in the last paragraph. This is because reflexes of *mu-/um- are not lost in Tsou, and in fact are very productive. Thus we must assume that either

1. these affixes had been innovated into the dependent verb paradigm prior to Aux clutching, or
2. they were perhaps never nominal to begin with and did not participate in the main-clause reanalysis proposed in SPR. This latter possibility may in fact turn out to be the correct one, since the evidence for the nominal origins of *mu-/um- has always been somewhat weaker than that for the other focus affixes. This would mean that examples of reflexes of *mu-/um- used as agentive nominalising affixes in modern languages were more recent formations constructed by analogy with the other focus affixes.

4. THE FATE OF DEVERBAL NOMINALISATION IN TSOU

The other problem with Tsou syntax as compared to the system reconstructed for PAN is the prominence and productivity of lexically nominalised constructions in PAN as reconstructed in SPR and the total absence of such constructions in Tsou. PAN and many of its daughters in Formosa and the Philippines make heavy use of the original main-clause focus affixes in nominalised equational constructions in emphatic cleft sentences, content interrogatives, and relative clauses, but Tsou doesn't. In place of the usual equational construction, Tsou has a quite different nominalisation strategy.

Nominalisation among the Paiwanic (non-Tsouic and non-Atayalic) Formosan languages is a process of deriving lexical nouns from verbs by means of the affixes just mentioned. These derived nouns are then used in noun phrases with a range of attributes comparable to the set with which their verbal counterparts can occur. In Tsou, however, one looks in vain for such constructions. What one finds instead in the usual places where nominalisations are expected (relative clauses, cleft equational sentences, and content interrogatives) are constructions composed of one of the case-marking elements, especially na, followed by a modifying clause which is clearly verbal in all syntactic and morphological respects, including the presence of aspect-marking auxiliary verbs. Atayalic, the third major grouping of Formosan languages, exhibits both kinds of constructions, with the deverbal nominalisation strategy stronger in the Sediq subgroup (which is spoken in an area which happens to be adjacent to two Paiwanic languages, Amis and Bunun) and the case-marker-plus-clause strategy stronger in Atayal proper (which has no Paiwanic neighbours except possibly Saisiyat).

Examples of the case-marker-plus-clause strategy of nominalisation for the various functions mentioned above are given below from Tsou:¹⁰

Noun phrases in normal sentential functions

- (63) mo mafe~~est~~ NP [o_S [os ?o eobaka]] (C49)
 1 2 3 4 5 6
The place I hit was very slippery; literally,
What was hit by me is very slippery.
 3 4 6 5- -5 2- -2
- (64) te ko n'a poateaineni NP [o_S [mo kuzo] to ca?h~~+~~] (C124)
 1 2 3 4 5 6 7 8 9
Tell him to repair that broken chair!; literally
You will just repair the is-bad one which is a chair.
 2 1 3 4 5- 6 7 -5 8 9
- (65) NP [i?o_S [te si ana ta oko] ci fou] na?no mafe (C68)
 1 2 3 4 5 6 7 8 9 10
The meat that the child wants to eat is very delicious;
That which will be eaten by the child which is meat, it is very
 1- -1 2 4- -4 5- -5 6-3 7 8 10- 9
delicious.
 -10

Content interrogatives

- (66) NP [sia] NP [na+_S [m-o+ m~~+~~ fr~~+~~?s~~+~~]] Tsuchida 1976:102
 1 2 3 4
Who is the one who covered?
 1 2- -2- -2 3-4
- (67) NP [cuma] NP [na+_S [+ko fr~~+~~?s-a]] Tsuchida 1976:102
 1 2 3 4 5
What is the one which was covered by you?
 1 2- -2- -2 5 4 3
- (68) NP [cuma] NP [na+_S [+ko fr~~+~~?s-eni]] Tsuchida 1976:103
 1 2 3 4 5
What is the one which was covered with by you?
 1 2- -2- -2 5- 4 -5 3
What did you cover with? What did you use for a cover?

Cleft equational constructions

- (69) NP [ina_S [i si seoisi] no teese] Tung 1964:80
 1 2 3 4 5 6
 ma NP [ina_S [la as~~+~~no~~+~~ noepoh~~+~~ ho la fei~~+~~na] ci kuhku]
 7 8 9 10 11 12 13 14 15 16
So, what was fastened with the rope was just the creature
 7 1 1-4 4 5 6 8
with whom she had always been together all the night, which
 9 10 11 -11 14 15
was a wildcat.

- (70) NP [io_S [o ho la ahoza aiti] ci oa eatatan'e] si armu Tung 1964:78
 1 2 3 4 5 6 7 8 9 10 11
The Dutch were the first non-natives to be seen.
 10 11 1 5 8 9 6- -6
- (71) ...NP [ie nia ŋohoo] NP [e_S [i to opcoza]] Tung 1964:78
 1 2 3 4 5 6 7
 ... *it is Ngohoo who was killed by us.*
 1 3 4 5 7 6- -6
- (72) ...NP [ic'o] NP [na_S [oh to ei'mi]] Tung 1964:81
 1 2 3 4 5
 ... *that is where we live*
 1 2 4 3-5
- (73) ...NP [ina_S [ho la rainca honte]] Tung 1964:81
 1 2 3 4 5
 NP [ina_S [moso nana la muro uh to taivaŋ]]
 6 7 8 9 10 11 12 13
 ... *it was one named Honte who came to Taiwan first.*
 1 4 5 6 11 13 10

Although it is possible for Tsou equational sentences to occur with initial auxiliary verbs, the cleft equationals normally don't, presumably because the auxiliary verbs inside the nominalised clauses carry all the necessary specifications about aspect.

The constructions exemplified above are problematic from a theoretical point of view: if Tsou case-marking 'particles' are Determiners rather than nouns, what can we make of constructions such as o os 'o eobaka *the place I hit* in example 63, which functions syntactically as a subject Noun Phrase but whose two immediate constituents are (i) a supposed Det and (ii) a clearly verbal clause, complete with auxiliary verb and clitic pronoun?

In a transformational framework, of course, one is free to create a dummy head noun and then delete it (Figure 21 below), or to create a new node such as Schachter's NOM (Schachter 1976:206) to serve as the head of the construction (Figure 22), or even to just allow Noun Phrases with no nominal heads at all (Figures 23-25; cf. e.g. Horn 1975:338 and Baker 1978:143ff. for examples of the latter), possibly inserting the determiner by means of a transformation:

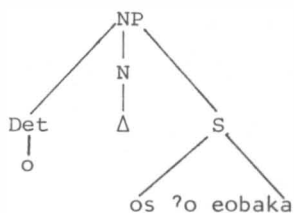


Figure 21

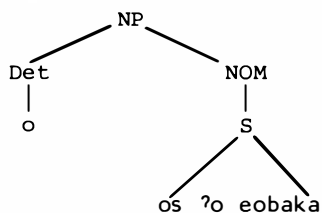


Figure 22

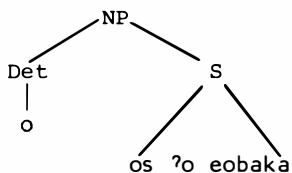


Figure 23

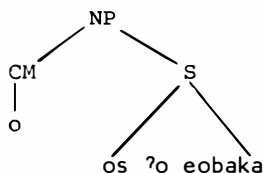


Figure 24

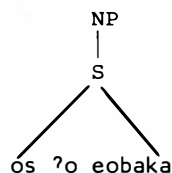


Figure 25

Within the tight constraints proposed by lexicase, though, all of these analyses and many others possible within transformational frameworks and other frameworks of comparable power are ruled out; a Noun phrase must by definition have a lexical noun as its head, and since it is not possible in lexicase to just create one as needed and later delete it, the 'Determiner' is the only plausible candidate. That is, if the 'Determiner' is the lexical head of a noun phrase, then it is by definition a noun.

Accordingly, I would like to propose here that these constructions are themselves relative clauses, and that the initial case-marking elements, in these examples at least, are syntactically nouns which function as the heads of the NP as a whole. That is, they are relator nouns, nouns with minimal semantic content which function as the syntactic head of a construction and carry syntactic or semantic features characterizing the Noun Phrase as a whole (cf. Starosta 1982).¹¹ The following example illustrates this analysis:¹²

- (74) *Tell me where your parents are;* Tung 1964:62
Tell that which it is occupied by them of your parents.
 1 2- -2 4-8 3 6 5--5-7 9 11 1

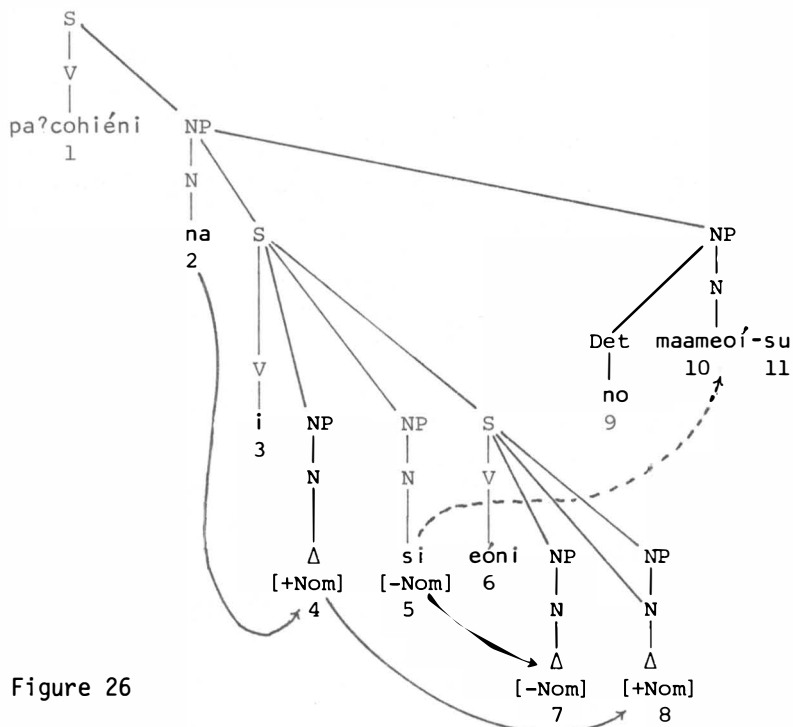


Figure 26

The curved lines indicate coreference; the [+Nom] Δ's represent the implied (location) subject of *eóni be located, occupy*, and the [-Nom] *si* and Δ designate the occupier, that is, the parents.¹³ As usual, the implied but missing element of a relative clause (always the subject in Tsou) is coreferential with the head noun of the NP, in this case *na*.¹⁴ Thus *na* is a kind of pronoun interpreted as the thing being located, the whereabouts being requested. The *no maameoísu* constituent is a possessive attribute of the head *na*. Since *na* refers to the whereabouts, *no maameoísu* specifies whose whereabouts it is that are under consideration. Marking actors grammatically as possessors is of course common in nominalisations in many languages, including English. Further examples:

- (75) *the boys covered up with the pot;* Tung 1964:434-435
 1 8 2-4- -4 5- -5 6
the ones which were covered by it, the pot which were small ones
 1- -1 4- -4 5- 3 -5 6 7- 7 8- -8

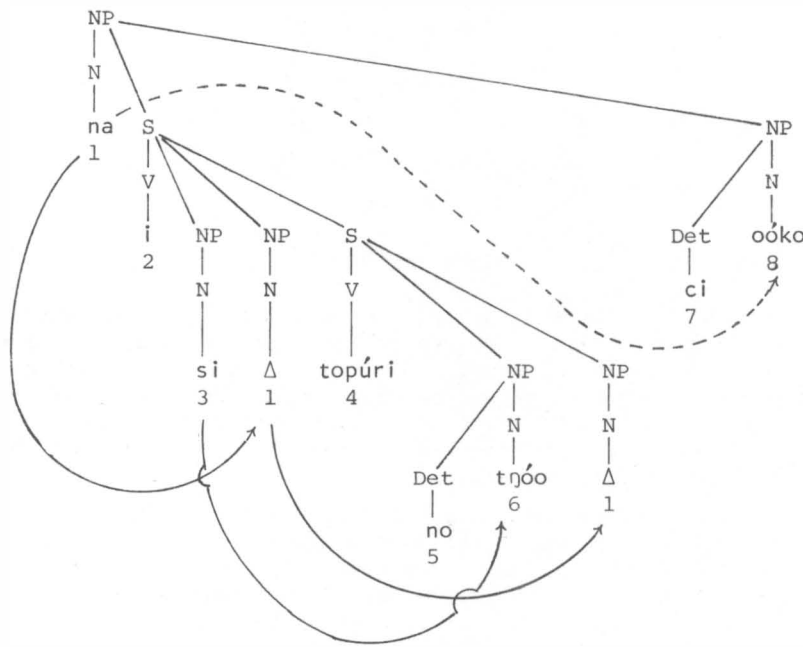


Figure 27

In this structure, *ci* is the appositional determiner, in effect a Philippine-like ligature, so that *oóko* is interpreted as in apposition to *na* rather than as a restrictive modifier of *it*.

- (76) *the boys covered up with the pot;* Tung 1964:434-435
 1 8 2-4- -4 5- -5 6
the small ones which were the ones that were covered
 1 8- -8 7- -7- -7 4- -4
by it, the pot
 5- 3 -5 6

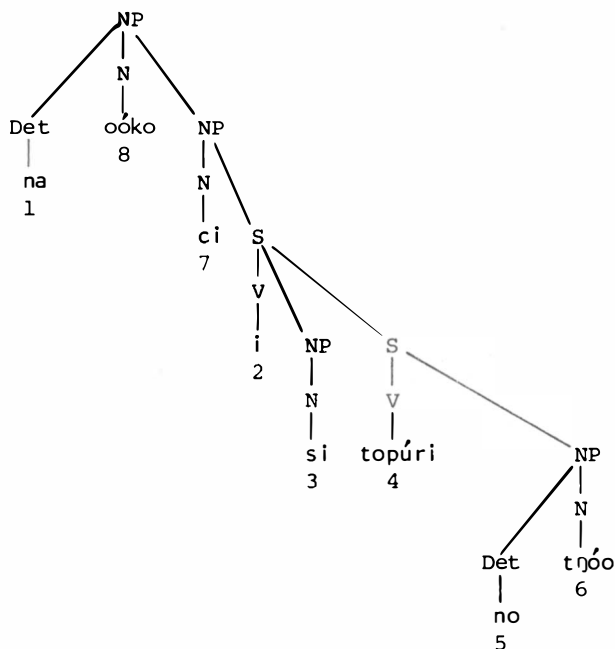


Figure 28

As can be seen from the tree diagrams, case marking 'particles' are thus not given a unitary analysis here; they are determiners when preceding lexical nouns, and nouns when preceding clauses. This can be taken to reflect their historical development: they must have originally been nouns – relator nouns or demonstrative pronouns – which served as derivational sources for the modern Tsou determiners while at the same time being retained as nouns in nominalisation constructions I am discussing here.

In effect, then, it almost appears as if Tsou has been a party to a conspiracy to eliminate all traces of the PAN denominal verbal focus affixes *-en, *ni-/in-, *-ana, and *iSi-. In order to accomplish this, it had to carry out two separate and unrelated processes. One of them was Aux-clutching, described above, which eliminated the verbal uses of these affixes by dropping all verbal affixes which were limited to main clauses. The second was the extension of a preexisting relator-noun relative clause nominalising strategy to the extent that it totally replaced lexical nominalisation involving this set of elements in their traditional positions in relative clauses, cleft equational sentences, and content interrogatives. These relator noun relative clause constructions are functionally equivalent to the deverbal noun constructions that SPR reconstructed for PAN, and so were able to replace these nouns in all positions, including cleft equationals.

Suspicious though it may seem, it is a fact that Tsou does have an auxiliary system and a nominalising strategy which are different in kind from those of the Paiwanic languages and different in degree from those of the Atayalic languages. At least the extension of these systems would seem to be an innovation in Tsou, and taken together, they have the effect of carrying out this cover-up.

The first innovation can be plausibly accounted for in terms of the Aux-clutching hypothesis proposed in this paper, but unfortunately I have no very good explanation to offer as to why the second substitution took place. In verbal main clauses, the originally denominal focus affixes were lost because of Aux-clutching, which was in turn motivated by the need for the presence of an auxiliary verb to express aspect and pronominal actors.

However, there seems to be no reason why this requirement would have affected equational sentences. That is, even if they underwent Aux-clutching when other intransitive clauses did, this shouldn't have resulted in the loss of the original derived noun forms, since equational clauses (unlike verbal clauses) presumably did not have distinct configurations when occurring in subordinate position. Thus it seems that they should have been retained in their original form in normal predicative and in relative clause constructions. The fact that such forms are not reflected in Tsou, then, leaves us with two questions to answer:

1. Why did the relator noun relative strategy get extended at the expense of the *-en, *ni-/-in-, *-ana, and *iSi- affixes in their nominalising functions, and
2. if this affix set originally functioned to derive nouns from verbs in pre-Tsou, why have no lexicalised fossils of the old nominalising process survived, as they have in various Oceanic languages under similar circumstances?

We might try resolving these difficulties by returning to the Pawley-Reid hypothesis (Pawley and Reid 1979) that *-en etc. did not begin as nominal affixes, but rather functioned originally as passive markers. Their loss would then be completely accounted for by Aux-clutching, and the absence of fossils would be accounted for. But then

1. how do we account for the specialisation of these forms to finite clauses in the first place? SPR does this in terms of the reanalysis of nominalised constructions, but we would be abandoning that explanation. And
2. what about the evidence from subgrouping? Once again, we are brought back to the paradox originally outlined in section 2.0: if the focus affixes were purely verbal in PAN, then either all the non-Tsouic languages form a subgroup which jointly innovated the nominal uses for these affixes, or there were independent parallel innovations in Atayalic, Paiwanic, Southern Tsouic, and possibly Rukai.¹⁵

5. CONCLUSION

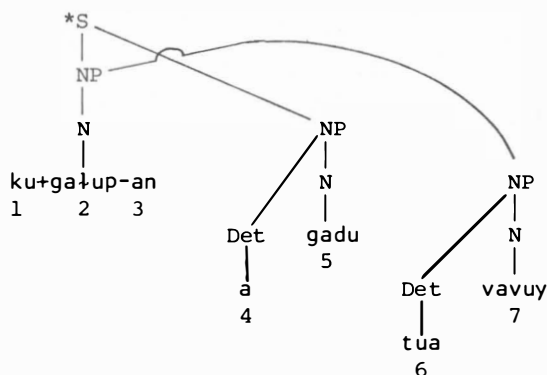
Aux-clutching then provides an explanation for the loss of denominal verbal focus affixes in Tsou, but there is no good reason why these same affixes in their nominal functions should have been lost without a trace.¹⁶ Unless such traces can be found, it may yet become necessary to seriously consider the radical hypothesis that there are only two primary subgroups among Formosan languages, Tsou and all the rest, as shown in Figure 4 above. The similarities between Tsou on the one hand and Rukai, Kanakanavu, and Saaroa on the other might then be accounted for in terms of areal influence and loans, which would help to account for the totally unrealistic phonemic inventory Tsuchida reconstructs for the supposed common parent of these four languages. That would mean that the PAN system reconstructed in SPR really applied to Proto-non-Tsou, that the nominal constructions as assumed in the earlier Pawley-Reid, Wolff, and Foley

reconstructions, and that Tsou itself reflects an earlier stage in which the 'focus affixes' being considered in this paper marked only finite verbs, and in which relative clauses were verbal clauses serving as attributes to relational nouns. In spite of the obvious problems with this approach, I think that future comparative lexical studies of Tsouic and Rukai will have to give it some serious attention.

NOTES

1. It is possible that the -n- of the Instrumental/Benefactive focus suffix -(n)eni is related to *-en. This affix is a Tsou innovation, and could be the result of the fusion of the Object Focus *-en with a following proximate demonstrative eni corresponding to the non-subject Agent. Alternatively, this -n- could be related to the genitive *ni, which is otherwise unattested in Tsou, again fused with eni.
2. It has been suggested that non-actor Focus constructions in such languages as Paiwan are *still* nominalised (Ferrell 1971:8), but this conclusion is based purely on the fact that such constructions mark agents with the Genitive case marker (cf. Egerod 1966:346 re Atayal). This reasoning however breaks down (for Paiwan at least) when confronted with facts about word order, since a sentence such as the following (Ferrell 1972:121)

ku+gaɬup-an a gadu tua vavuy
 1 2 3 4 5 6 7
I hunt boar on the mountain.
 1 2 7 3 4 5



in which the Nominative actant a gadu *the mountain* intervenes between the head word of the predicate and some other nuclear actants cannot be given a binary nominalised equational analysis.

3. cf. Young 1983 and references cited therein for a similar hypothesis regarding Proto-Indo-European.

4. Raleigh Ferrell (1972:126-127) gives examples of Tsou sentences which lack initial aspect auxiliaries and which contain clitic pronouns attached to main verbs. He notes that the 'preverbs have been stripped away for simplicity', a process which seems to have entailed his reattaching the associated clitic pronouns in the position in which one might otherwise expect to find them in other Formosan languages. I have not myself encountered any such sentences in my field work, and both Tung (1964:89) and Tsuchida (1976:97) explicitly deny that such constructions are possible in Tsou.
5. Note that this is not typologically anomalous, since what seems to be the same system appears in Tongan, Samoan and probably Mae and East Uvean (cf. Clark 1973:590). Mulder and Schwartz (1981:242) provide similar examples from Achenese, where the clitic pronoun refers to the actor in both an active sentence and its passive counterpart:

Drɔn nɪ̄ -pajoh bɔh -mamplam
 you 2sg eat fruit mango
 You eat the mango.

Bɔh -mamplam nɪ̄ -pajoh le-drɔn
 fruit mango 2sg eat by you
 The mango is eaten by you.

This looks like a good candidate for an aux-axing analysis operating on a basic Tsou-like clitic system.

6. The active non-focus forms *mo*, *mi*, *moso* (*miso*), *moh*, and *mio* (Tung's 'm-beginners'; Tung 1964:88) have an initial *m-*, which surely reflects PAN actor Focus **mu-*, while their passive counterparts, *i*, *o*, *os* (*is*), and (Tung's 'minus-m beginners'; Tung 1964:89), lack this element. The contrast between active and passive auxiliary verbs also appears elsewhere, as for example in the Atayal active perfective modal *nial*, derived from *uaial go*, e.g. (Egerod 1966:352):

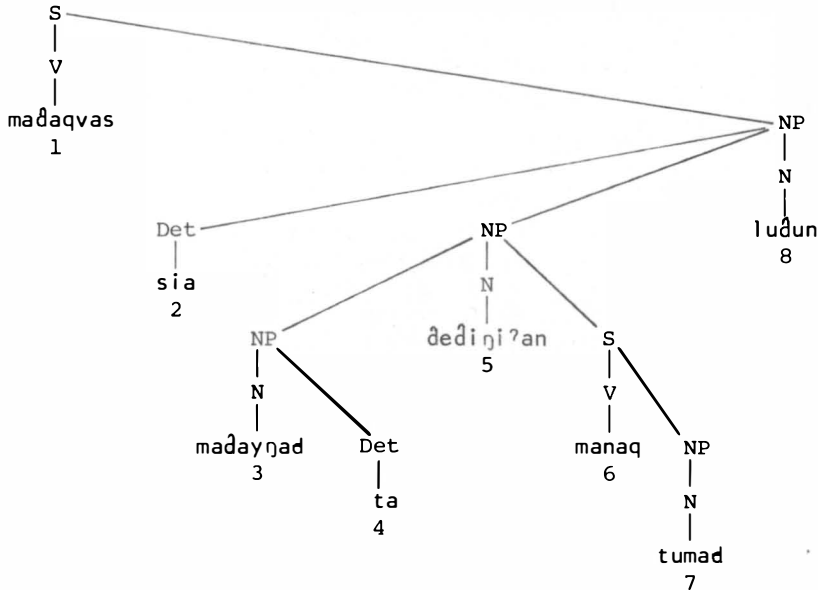
squ₁liq₂ nial₃ muah₄ km₄ut₄ itan₅
 1 2 3 4 5
 People have come to kill us.
 1 2 3 4 5

and the Amis denominal instrumental verbs, which can only appear in the passive (Chen 1985:6.2.3).

I think the Tsou non-future auxiliaries are related to the verb *go* which appears in various Formosan languages in auxiliary verb and motion verb uses. cf. Atayal *mosa?* ~ *usa?* *future action or event*, *ual* *past action or event* vs. *usa?* *to go* (Egerod 1965:271), Seediq *waada gone; perfective*, Saaroa *mia-* *to pass by* (Tsuchida 1976:76), etc. cf. also Palauan *mo go*, *be going to*, *m₁la*, *m₁le* *past* (Josephs 1975:129-131, 174-175, 272-275). A form *ta* is used in Amis (Chen 1982:281), Saisiyat, and Rukai with the same motion verb and auxiliary functions, especially in first person inclusive imperatives, and this is presumably related to the future auxiliary *te* (Tsou) and *tia* (Kanakanavu) and similar forms in some Oceanic languages.

7. 'Actor' can be defined in the lexibase framework being employed in this paper as the grammatical Patient of an intransitive clause or the Agent of a transitive clause. There is no single lexibase case relation to label this concept, which is also central to Fillmore's Subject Choice Hierarchy as well as to the distinction between accusative and ergative syntax. This notion is partly reflected in the man on the street's understanding of the word 'agent' and in the notions 'logical subject' in Chomskyan grammar and 'initial I' in relational grammar which are based on this same pre-theoretical concept.
8. It is interesting, though, that in Paiwan (Ferrell 1972:121-122), passives (my term, not Ferrell's; cf. Starosta 1974:363-364) exhibit a construction that could be seen as the result of a similar innovation: AF verbs apparently take only independent nominative pronouns, but passives all begin with a proclitic pronoun preceding a denominally affixed main verb. Based on Ferrell's examples, it seems that these clitics are always coreferential with the actor of the sentence, and thus could be seen as the result of 'Aux-Axing' (Starosta, Pawley and Reid 1981) applying in passive sentences to a Tsou-like clitic system.
9. If the denominal affixes in PAN were limited to transitive verbs in main clauses, then this requirement may also have applied to Locative Focus motion verbs such as *to go* as well as ordinary transitive verbs, if LF verbs were derived transitives as proposed in SPR.
10. In all the subsequent examples, the trees and bracketings are mine. I have also modified some of Tung's and Tsuchida's glosses in the Tsou examples to more directly reflect the syntactic structures, and I have replaced all instances of Tsuchida's /ə/ in the Tsou examples with Tung's more appropriate /ʔ/. Stress marks have mostly been omitted, since it is essentially phonologically predictable.
11. The development of relator relative clauses in Tsou is not totally unprecedented in Formosan languages. In Bunun, for example, we find that to compensate for the absence of a productive Locative Focus form, a deverbal noun *dediŋiʔan* 'place of happening' can be used to head a noun phrase containing a relative clause in non-Locative focus, e.g.

madaqvas sia maʔayŋad ta dediŋiʔan manaq tumad ludun [B35.1]
 1 2 3 4 5 6 7 8
The mountain where the man shot the bear is very high;
The mountain, the man's place to shoot the bear, is high.
 2 8 4 3 5 6 7 1



12. I think that the yang relative clauses of Bahasa Indonesia are probably to be analysed in a similar fashion.
13. The coreference should proceed from clause to clause, I think, if the Sisterhead Constraint is to be maintained in grammatically conditioned coreference relationships. That means that we must assume that the auxiliary clause, whose only overt actant is an accusative Agent, should be considered to also imply a dummy Nominative coreferencing both the Patient of the lower clause and the na head of the next higher construction.
14. One difficulty with this analysis concerns constructions such as Tsuchida's interrogative examples, given as examples 67 and 68 above and repeated here:

(67) NP [cuma] NP [na+ S [+ko fr+ʔs-a]] Tsuchida 1976:102
 1 2 3 4 5
What is the one which was covered by you?
 1 2- -2- -2 5 4 3

(68) NP [cuma] NP [na+ S [+ko fr+ʔs-eni]] Tsuchida 1976:103
 1 2 3 4 5
What is the one which was covered with by you?
 1 2- -2- -2 5- 4 -5 3
What did you cover with? What did you use for a cover?

If na+ in this sentence is analysed as a Determiner, what is it doing being followed by a clitic pronoun ko+? If na+ is a noun, of course, this is not in itself strange, since it is normal to have nouns followed by possessive clitic pronouns. Unfortunately, though, ko+ is the wrong kind of clitic: it occurs only with four of the sixteen auxiliary verb forms distinguished by Tung (1964:109-110), mi, os, te and tena, and never occurs with nouns otherwise to mark possession. These examples are the

- only ones of this kind I have found in Tsou, though, and are more likely the result of non-systematic elision of the auxiliary. Since the auxiliary is partly recoverable from the form of the clitic, its loss in this environment does not result in the loss of very much information.
15. Actually the situation in Rukai is quite similar to that in Tsou (cf. Li 1973). It will not be possible within the limits of this paper, though, to follow up the synchronic and diachronic implications of this fact.
 16. It has been suggested by Otto Chr. Dahl (personal communication) that I may simply be making too much of the noun-verb distinction, which as we know is frequently difficult to justify in certain constructions in many Austronesian languages. He points out (quite correctly, in my opinion) that such a distinction cannot be based purely on semantics, or even (in Malagasy, at least) on cooccurrence with pronominal suffixes. However, if we were to abolish it and lump the two categories into a single class, say, 'Contentive', it would still be necessary in an explicit (generative) grammar to account for the range of constructions in which members of this class occur. Supposing this could be done successfully without distinguishing nouns from verbs, we would still need to account for the different inventories of constructions in Tsou and the languages that are supposed to subgroup with it. I think that the end result would still be the same dilemma encountered with separate (though overlapping) classes of nouns and verbs.

BIBLIOGRAPHY

ASAI, Erin

- 1953 *The Sedik language of Formosa*. Kanazawa: Cercle linguistique de Kanazawa. Kanazawa University.

BAKER, Carl L.

- 1978 *Introduction to generative-transformational syntax*. Englewood Cliffs: Prentice-Hall.

BRUCE, Les

- forth- Serialisation: the interface of syntax and lexicon. *Papers in coming New Guinea linguistics No. 24*. PL, A-70.

CHEN, Teresa M.

- 1985 *Verbal constructions and verbal classification in Nataoran-Amis*. (Ph.D. dissertation, University of Hawaii, 1982; pagination from from the published version.) PL, C-85.

CLARK, Ross

- 1973 Transitivity and case in Eastern Oceanic languages. *Papers of the First International Conference on Comparative Austronesian Linguistics I: Oceanic*. *Oceanic Linguistics* 12/1-2:559-606.

EGEROD, Søren

1965 Verb inflection in Atayal. *Lingua* 15:251-282.

1966 Word order and word classes in Atayal. *Language* 42:346-369.

FERRELL, Raleigh

1971 Ergative, passive or focus-marking? Elicitation of verb syntax in Indonesian languages. *Colloques Internationaux du Centre National de la Recherche Scientifique, Sciences Humaines, Methodes d'Enquête et de Description des Langues sans Tradition Écrite*. 9pp.

1972 Verb systems in Formosan languages. In Jaqueline M.D. Thomas and Lucien Bernot, eds *Langues et techniques, nature et société*, I. 121-128. Paris: Klincksieck.

FOLEY, William

1976 Comparative syntax in Austronesian. Ph.D. dissertation, University of California, Berkeley.

HALIM, Amran, Lois CARRINGTON and S.A. WURM, eds

1982 *Papers from the Third International Conference on Austronesian Linguistics*. vol.2: *Tracking the travellers*. PL, C-75.

HARVEY, Mark David

1979 Subgroups in Austronesian. BA Honours subthesis, the Australian National University.

HORN, George M.

1975 On the nonsentential nature of the POSS-ING construction. *Linguistic Analysis* 1/4:333-387.

JOSEPHS, Lewis S.

1975 *Palauan reference grammar*. [PALI reference texts: Micronesia.] Honolulu: University Press of Hawaii.

LI, Paul Jen-kuei

1973 *Rukai structure*. (Academia Sinica special publications no. 64.) Taipei: Academia Sinica.

MEI, Kuang

1972 Pronouns and verb inflection in Kanakanavu. *Tsing Hua Journal of Chinese Studies* 14/1-2:207-232.

MULDER, Jean and Arthur SCHWARTZ

1981 On the subject of advancements in the Philippine languages. *Studies in Language* 5/2:227-268.

NAYLOR, Paz B., ed.

1979 *Austronesian studies: papers from the Second Eastern Conference on Austronesian Languages*. [Michigan Papers on South and Southeast Asia no.15] Ann Arbor: Center for South and Southeast Asian Studies, University of Michigan.

PAWLEY, Andrew K., and Lawrence A. REID

- 1979 The evolution of transitive constructions in Austronesian. In Naylor, ed. 1979:103-130.

REID, Lawrence A.

- 1982 The demise of Proto-Philippines. In Halim, Carrington and Wurm, eds 1982:201-216.

ROSS, John Robert

- 1967 Auxiliaries as main verbs. In W. Todd, ed. *Studies in philosophical linguistics*, Series one, pp.77-102. Carbondale, Illinois: Great Expectations Press.

SCHACHTER, Paul

- 1976 A non-transformational account of gerundive nominals in English. *Linguistic Inquiry* 7/2:205-241.

STAROSTA, Stanley

- 1974 Causative verbs in Formosan languages. *Papers of the First International Conference on Comparative Austronesian Linguistics II: Proto-Austronesian and Western Austronesian. Oceanic Linguistics* 13/1-2:279-370.
- 1977 Affix hobbling. *Working Papers in Linguistics, University of Hawaii* 9/1:61-158.
- 1982 Mandarin Chinese case marking: a localistic lexicase analysis. *Working Papers in Linguistics, University of Hawaii* 14/3:

STAROSTA, Stanley, Andrew K. PAWLEY and Lawrence A. REID

- 1982 The evolution of focus in Austronesian. In Halim, Carrington and Wurm, eds 1982:145-170.

TSUCHIDA, Shigeru

- 1976 *Reconstruction of Proto-Tsouic phonology*. (Monograph series no.5, Study of languages and cultures of Asia and Africa.) Institute for the study of languages and cultures of Asia and Africa. Tokyo: Tokyo Gaikokugo Daigaku.

TUNG, T'ung-ho

- 1964 *A descriptive study of the Tsou language, Formosa*. (Institute of History and Philology special publication no.48.) Taipei: Academia Sinica.

WOLFF, John U.

- 1973 Verbal inflection in Proto-Austronesian. In Andrew B. Gonzalez, ed. *Parangal kay Cecilio Lopez* (Essays in honor of Cecilio Lopez on his seventy-fifth birthday), 71-94. (*Philippine Journal of Linguistics special monograph issue no.4*.) Quezon City: Linguistic Society of the Philippines.
- 1979 Verbal morphology and verbal sentences in Proto-Austronesian. In Naylor, ed. 1979:153-168.

YOUNG, Susanne J.

- 1983 The medio-passive r-forms in Indo-European. Ph.D. dissertation, University of Hawaii at Manoa.