

- a) 3rd person to be treated differently from 1st or 2nd person,
 b) 1st and 2nd person rarely occurring together in preverbal position and
 c) 3rd person genitive pronouns functioning as an interim phase between 3rd person nominative and 1st or 2nd person.

The discussion will be based on my model for Atayal syntactic structure, which I will present in stages and explain at every stage – in this model declarative main clauses and to a certain extent subordinate clauses are treated, rules for verb movement are presented, and consequently a view of Finiteness slightly different from the standard theory is argued for.

2. The facts – Atayal verbal system

2.1 Word order

Until now, Atayal has been classified as ‘verb-initial’, with references as well to the fact that the unmarked noun in sentence-final position indicates the focus of the verb (see Huang 1988:16). In this paper I intend to show that Atayal has the canonical word order I-V-O-S, where by S I mean Topic, not necessarily the argument bearing the Agent-role (not even in the broader sense of ‘subject of an active transitive verb’, such as the subject in *She saw the cat*, as opposed to *The cat was seen by her*). However, this word order is not the only word order actually occurring, in fact it is not even particularly common. The reason why it still can be considered as basic is that the other word order configurations occurring can be attributed to other factors (such as noun-pronoun contrast). In other words, other things being equal (which they seldom are), the word order is as stated above.

2.2 Focus and θ -role

Being a conservative Austronesian language of the Northern (Formosan Philippines) type, Atayal verbal forms are specified for ‘focus’. This means that Atayal verbs are marked differently depending upon which thematic role the grammatical ‘subject’ of the sentence (i.e. the topic) bears. The thematic roles² concerned in Atayal are: ACTOR, PATIENT, LOCATION and

² The thematic roles mentioned here have slightly different names to their Western counterparts. This is for two reasons: 1) The terms used coincide with the terms occurring in the literature for the various foci, which makes the choice more convenient and 2) The thematic roles concerned here are more syntactic in nature than the traditional type: ACTOR = the subject of an active verb, PATIENT = the object of an active verb. The other two have their usual meanings. Thus it is possible that the term thematic role is misplaced in the context, but since the function (if not the nature) in any case is the same, I shall here use the term.

INSTRUMENTAL³. The system is in principle similar to voice in Indo-European languages, except that in the latter the distinction is only binary.

Likewise, there is no reason in Atayal to analyse PF as a development from a more basic AF construction, as one would tend to do with passive and active in Western languages. There is no obvious precedence for any of the foci – if anything, PF and LF tend to be more common than AF. But in themselves, the four foci are (synchronically, at any rate) equally basic.

I quote four examples (from the works of Egerod – in this case however quoted from Ferrell 1972) to mark the differences between the foci:

- 1 a) AF: qmalup saku? bziok rgiax
 AF-hunt I pig mountain
 ‘I am the one who hunts pig on the mountain’
- b) PF: qlupun maku? rgiax bziok
 PF-hunt I [+GEN] mountain pig
 ‘Pig is what I hunt on the mountain’
- c) LF: qlupan maku? bziok rgiax
 LF-hunt I [+GEN] pig mountain
 ‘The mountain is where I hunt pig’
- d) IF: sqalup maku? bziok lalau qani
 IF-hunt I [+GEN] pig knife this
 ‘This knife is that with which I hunt pig’

These examples contain one pronominal argument, it being rather unusual to construct sentences with only nominal arguments. Ferrell does, however, quote one example, in AF, whereby it becomes evident that the subject position in fact is sentence-final – where the subject is nominal:

- 2 qmalup bziok rgiax squliq
 AF-hunt pig mountain people
 ‘People hunt pig on the mountain’

There also exist examples with some nominal argument in initial position – this is however a case of topicalisation, whereby an argument is lifted out of the structure and inserted in SPECCP. This sort of construction is confined to full NPs, i.e. nouns or strong pronouns, and is practically always marked by the special topic particle *gaʔ*, ‘as for...’. I shall not deal with them further in this paper.

³ The foci are termed Actor focus, Patient focus etc., abbreviated AF, PF, LF and IF. There is no fear of misunderstanding, since in this paper no allusion whatsoever will be made to either Phonetic Form or Logical Form.

2.3 Argument ordering

As we have seen, at d-structure the arguments in Atayal are ordered from left to right, with the most internal (direct object in AF) being closest to the verb, and the most external (subject or topic) being furthest away from the verb. I have found no examples in the various texts I have looked at which give any clue as to the internal ordering of LOCATION and INSTRUMENT. It is at any rate clear that they occur after the internal argument. The fact that these arguments appear to be equally basic causes problems when we attempt to describe the resulting structure in a grammatical tree.

At this stage it may be fruitful to compare data from other Austronesian languages of Formosa, notably the Paiwanic languages Bunun and Amis, which have a similar structure, but with clear cases of the AGENT being adjacent to the verb (no matter whether focussed or not). This can be illustrated with the following examples:

- 3 Amis: i lotok ko pipatayan ni Kacaw to fafoy
 mountain kill-LF PN boar
 'The mountain is where Kacaw kills the boar'
- Bunun: iskaun Balan is qaisiq ca ima
 eat-IF PN rice hand
 'It is with his hands that Balan eats rice'

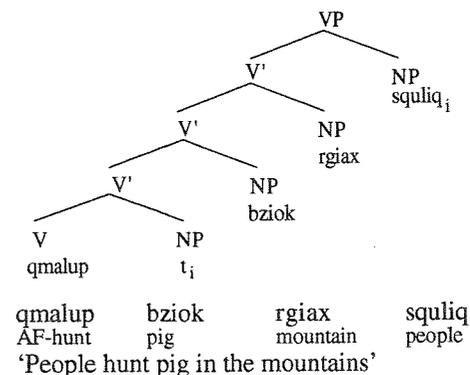
The sentences, quoted from Ferrell 1972, show no examples of unfocussed instruments, so we are no further on our way to find a common Austronesian instrument position relative to the locative. However, we can assume that at the deepest structure (before insertion of the verb) the AGENT is the most internal argument, followed by PATIENT and LOCATIVE/INSTRUMENTAL.

Since the arguments occur linearly between the verb and the grammatical subject, and adjunction within the case-licensing domain (i.e. IP – see section 3.4 for details) would be unacceptable, the only possibility can be adjunction within the verbal phrase. I propose that the structure with which we are dealing in this case is the one shown in (4).

This model reflects the actual situation in the language in a satisfactory fashion, and represents clearly the internal/external hierarchy between the various arguments. However, it does raise some formal questions.

One problem concerns the idea of adjunction in itself, which gives the impression that the possibilities of argument insertion are unlimited, which could hardly be the case. A greater number than three of four could not be

4 Argument structure



identified by the verb, and would have to be specially marked, and adjoined outside the verbal phrase. Moreover, I have found no examples of even four arguments together in the verbal phrase, presumably since such a construction might be considered as cumbersome.

Still, while bearing in mind these reservations, we can consider the phenomenon in question to be some kind of adjunction, unless we are prepared to replace the syntactic X'-model with some undefined type which would allow nodes such as X'''.

There is another, more serious, problem, with the above interpretation – how can the verb case-license more than one argument by the same means? Nominative case allocation is no problem, since that is performed by a lexically filled I-node (see section 3.4 for details) – but the various objective Cases required seem to have no eligible allocator. (It is not clear, however, to what extent case-marking is at all required.) Of course, the problem is the same with ditransitive verbs in Western languages, and in these cases the structure has been interpreted as some type of 'double complement', but the Case problem has still not been given a satisfactory solution. However, the problem is not so great as it may be thought, since:

- 1) it is evidently very rare to have more than two internal arguments
- 2) it may be debated to what extent some of the nominals within the VP actually are arguments – 'hunting on the mountain', 'pig-hunting' or 'hunting with a spear' seem rather reminiscent of 'playing the piano', a phrase which often is considered a lexical unit rather than a verb with its object.

One might even raise the question whether or not Atayal verbs are at all transitive. One obvious indication that they may not be is the fact that there are no corresponding 'active' forms to the various types of 'passive' construction. It is my personal opinion that it is meaningless to speak of direct objects at all in Atayal, that the term subject-focus in itself implies that argument selection in Atayal only functions for the syntactic subject, and that all verbs in Atayal are syntactically intransitive, although allowing for other participants to appear unmarked in the clause. For further details see Holmer 1992.

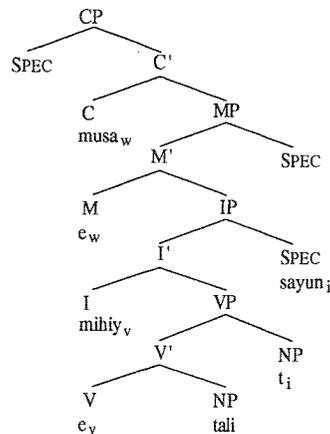
3 Atayal structure

3.1 The tree

The basic structure of an Atayal sentence can be illustrated by the following tree diagramme⁴ (by 'basic structure' I refer to a sentence with two nominal arguments, and with both a preverb and a semantic main verb – my reasons for this being that the s-structure in this type of sentence most closely resembles the d-structure):

- 5 musa mihiy tali sayun
 FUT AF-beat PN PN
 'Sayun will beat Tali' (H39b)⁵

6 Clause structure



⁴ The functional category M stipulated in this model is Modal, which is the level in which preverbs are generated. This is only clearly visible in subordinate clauses, where M-to-C movement is prevented by the presence of a subjunction in C.

⁵ The figures quoted here are the example numbers in Huang 1988.

The same structure holds in the unmarked case with a PF verb, the patient will then appear in SPECIP, and the 'internal argument' (i.e. the AGENT) in [NP,V']. Thus, in Atayal, *in the unmarked case*, and with nominal arguments, the argument structure is defined by verb focus and word order alone.

There does, however, exist the possibility of marking a nominal agent with Genitive Case (when the verb is in a focus other than AF), and in fact this construction is very common, but when this occurs the ordering rules for nominal arguments are invalidated:

- 7 a) bhiun sayun na? tali
 PFbeat PN +GEN PN
 'Tali beat Sayun'
- b) bhiun na? tali sayun
 PFbeat +GEN PN PN

This type of construction is more similar in structure to the specially marked agents in Indo-European passives *by...* or *von...*. I shall in this paper assume that, the second case above, i.e. where the *na?*-agent precedes the topic, has the same structure⁶ as shown in (6), whereas in the first case, the *na?*-agent has been right-adjoined to IP⁷.

3.2 Verb movement – full verb climbing

The above structure describes the situation when both a full verb and a preverb are present in the clause. (The situation in which the preverb is in M is illustrated in section 5 on subordinate clauses, since in this case C is filled by a subjunction.) If there is no preverb present, the full verb moves obligatorily up to C position. Evidence for this will be given in section 4.2 on pronoun shift, since with nominal arguments no structural change is visible.

What reasons there could be for this change is rather unclear, it is unlikely that it has any temporal significance, since the verbal morphology does not in fact change, at whatever level the verb may be found.

⁶ In this case the complement of V is not an NP but in fact a PP – this is obviously conditioned by I, although not obligatorily, and it is not clear how.

⁷ This is clear from sentences such as the following:

bhiyan tali na? sayun hira
hitLF PN GEN PN yesterday
'Sayun hit Tali yesterday'

In this example the concrete adverb, which normally adjoins to IP (evidently to the highest level of IP) follows the exposed agent.

Instead, I tentatively propose that the reason for verb movement to C is that C position must always be filled, for marking purposes.

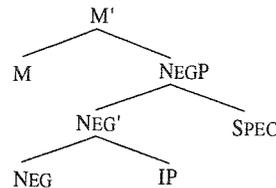
Atayal being a typical Topic-Comment language, with the Topic usually in SPECCP (I refer to the position of the topicalised Topic, i.e. one which is totally independent of Focus agreement – in other words a so-called ‘as for...’-topic), C position marks the beginning of the actual comment, and must therefore be filled.

3.3 Negative phrase

If, then, the clause contains a negation, it will appear preverbally, i.e. between the preverb and the main verb. There are three possible structural descriptions for such a position, namely:

- i) adjunction to MP or IP – a rather usual idea, which however would cause some problems, as will be shown below, and
- ii) the insertion of a new level, NEGP, between MP and IP:

8 Negation phrase



iii) The negation is lodged in M – no negation phrase is needed, since M-to-C movement is attested as far as the preverb is concerned. However, treating M as the basic position for a negation would entail two problems:

a) How does one explain that the negation is generated in a node containing a preverb (or its trace, depending on when one expects the negation to be generated, before or after the movement of the preverb to C)?

b) Admittedly, I have no examples to date of subordinate clauses with both a preverb and a negation, but it seems rather odd to imagine that such a situation should be structurally impossible, which it would be if the negation were conflicting with the modal for the M node.

For these reasons, and others which will become apparent further on as we discuss verb movement, alternative ii) seems to be the best of the above descriptions. In fact, there even appears to be independent evidence supporting this view, although the data is very restricted to date – see section 4.2.2 on pronoun shift (3rd person).

According to this model, a negation would appear in NEG, except in cases where the preverb is deleted. In such a case the field is open for negation movement to C, a movement which then becomes obligatory. Thus, when the clause contains a negation but no preverb, the negation will occupy C position, taking precedence over the verb in this case.

This type of movement seems to indicate that the negation is a head, since head-to-head movement does seem rather more likely than adjunct-to-head movement. Since the only free head position in the structure is M, where the preverb itself is generated, I therefore assume that the negation phrase is only inserted when necessary.

Thus, there are four types of elements which have the features required for filling the C node: subordinations, preverbs, negations and full verbs. What the feature is that they share is unclear, but it appears to be related to some type of finiteness, similar to that occurring in C position in Nordic and Germanic languages.

3.4 Atayal finiteness

3.4.1 INFL and case

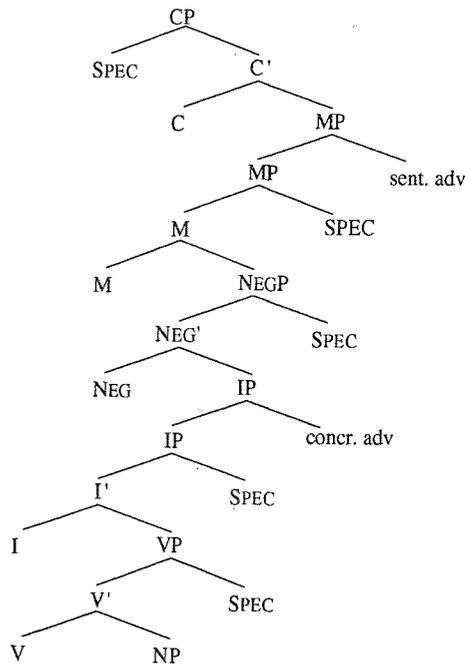
When examining where in the structure nominative case is allocated to the grammatical subject, we notice that there is apparently no reason to assume obligatory movement from SPECIP upwards to SPECMP – in section 4.2.2 on pronoun shift we in fact see reasons to assume that such movement can take place as an extra voluntary transformation, in which case we cannot speak about syntactical rules governing it. A structural description of the reasoning leading to this conclusion is given on the following page.

We find ourselves in a situation where the lowest position in the clause for a full NP subject is in fact in SPECIP. Obviously, then, it is at this level where Case is allocated – and the case allocator must be the I node, functioning by Spec-Head agreement.

What feature in I actually Case-marks the subject is unclear – in some examples we have overt tense, in others not. We could possibly consider Focus to be a ϕ -feature of I, but since Focus determines the argument structure of the VP, it is more likely that Focus is base-generated in V. (I am indebted to Barbara Gawrońska for this valuable suggestion.) This is corroborated by the fact that different focus forms often have semantic overtones which cannot be explained by pure morphology.

The following tree illustrates the structure of a clause which contains both a sentence adverb and a concrete adverb, as well as a negation phrase.

9 Negated clause



1. As evident from the order of verbal elements, MP is above NEGP. Pronoun shift (3rd person) apparently takes place to SPECNEGP (since it only occurs in negated clauses, see section 4.2.2).

2. Thus, pronoun shift is below MP.

3. Pronoun shift brings the pronoun above (rightwards of) a concrete adverb. Therefore the adverb is between SPECNEGP and SPECIP, i.e. adjoined to IP.

4. Full NP subjects may be either right or left of the concrete adverb – i.e. in SPECIP or in SPECNEGP.

5. Case allocation obviously occurs in the lowest position in which one can find the full NP subject – a cased noun can move upwards after case allocation, never downwards.

6. Therefore Case is allocated in SPECIP.

7. Case is allocated by spec-head agreement with I, since there is no adjacency with any other possible licenser.

3.4.2 Finiteness and case allocation

Phonetically realised finiteness in European languages is assumed to imply the ability to allocate Case, in fact, finiteness is usually defined as the feature carried by the node which allocates Case. This definition causes certain problems in Atayal, for the following reasons: If Case allocation is the criterion for Finiteness, then Finiteness must be lodged in I. However, the node which always is filled, no matter what type of clause is concerned, is the C node. The I node is emptied in any clause which exhibits full verb climbing. It would seem reasonable to assume that the finiteness node must always be filled in a finite sentence – therefore I stipulate that finiteness, more or less as we know it in Western European languages, is lodged in C.

3.4.3. Abstract and concrete finiteness

This results in the postulation of two types of finiteness, lodged in two different nodes in the clause:

I-finiteness allocates Case and contains aspectual, modal and temporal information.

C-finiteness is obligatorily filled by an element having verbal characteristics – full verbs, preverbs and negations.

I-finiteness appears at a deeper stage in the clause, is obligatorily filled at a certain point (when case is allocated), but may be emptied again by full verb climbing.

As can be seen, both types of Finiteness are somewhat reminiscent of Western finiteness, which appears to combine some or all of these characteristics into one node. It does seem as if Finiteness in itself is no clear term which defines what is necessary in a sentence – the term is perfectly suitable for English, with all aspects of finiteness centred in one node, I, whereas for languages in general one should speak of different levels of finiteness, which may or may not occur in the same node. We have, among others, the clear example of Swedish, where tense is lodged in I and 'Finiteness' in C – with no explanation as to what this finiteness is, other than that it is an obligatorily filled 'verbal' node, filled by a tensed verb in a main clause, and a subjunction in a subordinate clause – and that it case-licenses the subject.

The following might be a tentative alternative to the current idea of finiteness as one feature:

	'Finiteness'	Atayal	English	Swedish
10	Tense	I	I	I
	Case license	I	I	C
	Abstract ⁸	C	I	C
	Subjunction ⁹	C	C	C

There are certainly more possibilities as concerns what features 'finiteness' could contain. This is a matter for further study. But it is rather clear that finiteness as we know it is not necessarily *one* phenomenon, separate from tense, but a group of several features, of which Tense has earned a separate status by virtue of occurring in a different position than the others in German and Swedish.

4. The pronoun problem

4.1 The pronouns

As mentioned above, the question of word order in Atayal is still very much a question, the difference in results being connected to whether one considers the 'normal' argument position to be that occupied by nouns or pronouns. Egerod 1966 claims that the more basic structure is reflected by the pronouns, and in fact even terms nouns in Atayal 'quasi-pronouns'. His reasons for this are clear: the pronouns are in fact the elements which occur in the sentence core (or 'nuclear construct'), and the nouns certainly do behave as if they were more or less afterthoughts (or sometimes topicalised/left-dislocated).

However, as I intend to show, this analysis, despite being descriptively the most natural, fails to encompass some generalisations concerning a) word order and b) the clitical nature of weak pronouns.

At this point a few words should be said about the nature of the Atayal pronominal system. There are four series of pronouns: Nominative, Genitive, Locative and Nominalised/Free Nominative¹⁰. Egerod and Huang have slightly different interpretations of the status of the 3rd person pronoun – a difference, which, according to a personal communication with Egerod, depends on a dialectal difference between the sources. Historically it is a simple matter to derive Egerod's interpretation from Huang's, so I

⁸ By abstract I mean the node which obligatorily is filled by a verbal element in a finite clause – what it actually implies is semantically difficult to define, some type of link between the clause and its referent (cf. Swedish subjunctions appear here, and in fact do link their clause, the SC, to its referent, the MC).

⁹ See section 5 on Atayal subordinate clauses

¹⁰ The term Nominalised occurs in Egerod's works; Huang uses the term Free Nominative.

shall, in this paper, treat Huang's interpretation as more basic. (Moreover, Egerod's interpretation is in any case less problematic, as far as the status of the 3rd person pronoun is concerned, and in fact leaves nothing to be explained.)

The difference between Egerod's and Huang's interpretations is that Egerod does not have any gaps in the Nominative column, these positions being filled by the corresponding Free Nominative forms *hia?* and *hga?*. Huang claims to have found evidence that the 3rd person nominative pronouns can not, in fact, occur in the same positions (see section 4.2.2) in the sentence as the other weak nominatives, thereby indicating that the former actually are free nominatives.

11	WEAK		STRONG	
	Nominative	Genitive	Free Nominative	Locative
1S	saku?/ku?	maku?/mu?	kuzinj	knan
2S	su?	su?	isu?	sunan
3S	–	nia?	hia?	hian
1P inclusive	ta?	ta?	ita?	itan
1P exclusive	sami	mian	sami	sminan
2P	simu?	mamu	simu	smunan
3P	–	nha?	hga?	hgan
1SINGAGENT=>2SINGPATIENT			misu?	

Derivation of weak nominative pronouns from free nominatives is not particularly unique phenomenon, as can clearly be seen from the 1st person plural exclusive or 2nd person plural.

4.2 Pronoun shift

4.2.1 1st and 2nd person

If we, as in section 3, assume that full nouns reflect the d-structure NP-positions in an Atayal sentence, the problem remains to account for structures such as the following:

12	a)	niux	saku?	mkwas
		PROGR	I	AFsing
		'I am singing' (H5a)		
	b)	*niux	mkwas	saku?
		PROGR	AFsing	I (H5b)

What has happened here is obviously some type of pronoun shift upwards in the structure – for some reason, pronouns are required to move to some position leftwards of IP. A reasonable assumption in this case

appears to be cliticisation to whatever element is occupying the C node. Apparently, it makes no difference if this position is occupied by a preverb, a negation or a full verb – they all share the features which can allow pronoun cliticisation.

- 13 a) ual saku? ini phqanji hira
 PRET I NEG AF-walk yesterday
 C C-clit NEG I (ADJUNC)
 'I did not walk yesterday' (H93b)
- b) ini saku? kaki gjasal hira
 PRET I AF-exist house yesterday
 C C-clit I (NP,V') (ADJUNC)
 'I wasn't at home yesterday' (H82a)
- c) musa maku? bhiiyun tali suhan
 FUT I[+GEN] PF-beat PN tomorrow
 C C-clit I SPECIP (ADJUNC)
 'I shall beat Tali tomorrow' (H65a)
- d) bhiiyun su? hia?
 PFbeat you[+GEN] he
 C C-clit SPECIP
 'You will beat him' (H64a)

4.2.2 3rd person nominative

However, Huang points out that this only concerns 1st and 2nd person pronouns – 3rd person nominative pronouns behave in this respect as if they were nouns, i.e. they are not shifted to preverbal position:

- 14 a) niux mkwas hia?
 PROG AFsing 3S
 'He is singing' (H5d)
- b) *niux hia? mkwas
 PROG 3S AFsing (H5c)

The reasons for this will be examined in section 4.2.4. First, a look at what this would imply about Atayal structure.

When observing the position of a concrete adverb in the clause, I noticed that it usually was clause-final, i.e. after the subject-noun, but not always. This led me to assume adjunction to IP as the natural position for an adverb, where noun movement, for reasons still not really clear, is possible to a higher position, beyond the adverb. This movement which is possible for

nouns, occurring in three out of a sample of twenty suitable clauses¹¹, appears to be much more common for 3rd person pronouns, as long as the clause is negated (three out of a sample of five clauses – it should be noted in this context that in non-negated clauses, I have no examples of 3rd person pronoun movement).

However, I have found no examples where a sentence adverb was in any other position than clause-final, even in one case where the 3rd person pronoun obviously had moved past a temporal adverb.

- 15 a) jyux mkwas kryax hiya? wuzi
 PROG AFsing often he also
 'He is often singing' (H78c)
- b) iat maku? sbisun suhan hiya? wuzi
 NEG I[+GEN] accompanyPF tomorrow he also
 'I shall not accompany him tomorrow either' (H85)

This does look as if there are two adverb positions, one for concrete adverbs and one for sentence adverbs, and that the position clearly depends on the scope which the adverb has.

Admittedly, no theory can be built out of such a limited number of examples, but certainly there appears to be a statistic difference between the behaviour of nouns and 3rd person pronouns, which I intend to inspect more closely.

4.2.3 Double pronouns

If then both arguments (in a simple transitive sentence) are pronominal, we would expect either

- i) some kind of clitic cluster appearing cliticised to C, or
- ii) some kind of problem caused by clitic collision.

What actually occurs is exemplified by the sentences below:

- 16 a) niux saku? kialun
 PROG I PF-speak
 'You will speak to me' (H22c)
- b) musa misu? pman
 FUT I=>2 LF-wash
 'I am going to wash you' (H21a)

¹¹ by which I mean those clauses in Huang's annotated examples which contain an adverb and a nominal subject – thus this result can only point in a certain direction, and cannot be considered statistically reliable.

- c) niux saku? nia? pman
 PROGR I he[+GEN] LF-wash
 'He is washing me'¹² (H24a)
- d) musa su? nia? bhiyun
 FUT you he[+GEN] PF-beat
 'He is going to beat you' (H25a)

As can be seen, there appear to be restrictions as to the occurrence of pronominal arguments in cliticised positions. 1st and 2nd person pronouns scarcely ever co-occur in preverbal position, relations between the two being expressed by special pronouns such as *misu?*, or by simple nominative pronouns such as *saku?*.

There are, however, some cases, where two weak 1st or 2nd person pronouns appear before V-position. These occurrences are, in the words of Huang 1988, "very rare", and are basically of interest when tracing an earlier argument structure. They are at any rate not favoured constructions in modern Atayal (I refer in this case to the dialect described by Huang):

- 17 niux su? saku? kialun
 PROG you[+GEN] I PF-speak
 'You are talking to me.' (H22b)

The only pronoun which regularly does co-occur with any of the others is the 3rd person genitive pronoun marking the agent of a passive (non-AF) clause, and it invariably occurs after the 1st or 2nd person pronoun which functions as subject (examples 16c and 16d).

This could be taken to imply that the pronominal argument order is SUBJECT - AGENT, but a closer look at the appearance of the compound 1st person agent/2nd person patient pronoun *misu?* (probably a fusion of *maku?* and *su?*) seems to indicate that the order historically was the opposite: AGENT - SUBJECT. Moreover, the rare cases in which both a 1st and 2nd person pronoun occur in preverbal position also indicate the same order, see example 17 above.

At this stage one could speculate that the *saku?* in 16a in fact has the same background as *misu?*, namely as an AGENT-SUBJECT fusion, derived from *su? + saku? > ssaku? > saku?*. This is of course impossible to verify, but appears to be a plausible assumption, since it would explain how and why a

¹² The choice of sentences does not make the contrast very clear - however, I am forced to rely upon positive evidence. Neither shall I deal with the temporal differences expressed by the choice of PF or AF in this paper.

1st person patient by default should imply a 2nd person agent. Likewise it would show the same argument structure as do the other examples.

4.2.4 3rd person genitive

3rd person genitive (agentive) pronouns are thus moved to preverbal position, as are other true (or clitic) pronouns, but are still subject to various restrictions. If they occur in conjunction with a subject clitic (1st or 2nd person), they will always follow it. For reasons shown in section 4.2.3 above, we cannot regard this order as being due to a SUBJECT-AGENT argument structure, since the structure is subject-final, mirroring the appearance of the VP. Thus, the 3rd person pronoun can not be a clitic on a par with the 1st or 2nd person pronouns.

What we have, then, is a situation where the 1st and 2nd person pronouns of the weak series (nominative & genitive) can cliticise to C, whereas 3rd person pronouns can not (note that the only weak pronoun in the 3rd person is the Genitive). A possible answer is the historical one: if we consider Huang's view that there are no Nominative 3rd person pronouns, we could go even further and claim that there historically are *no weak 3rd person pronouns whatsoever*. Before examining possible reasons for this, we can take a look at what such a situation would entail.

If there originally were no weak 3rd person pronouns, then we have to somehow explain the existence of the genitive pronouns. The genitive 3rd person pronouns are *nia?* and *nha?* in singular and plural respectively. They are the only genitive pronouns with an initial *n* - and if this *n*- is removed, what remains is something suspiciously similar to the strong nominative form. I therefore propose that the genitive pronouns *nia?* and *nha?* are fusions of the genitive marker *na?* and the strong nominative pronouns *hia?* and *hga?*. There is certain evidence which may tally with this idea - *na?* cannot be used with weak pronouns, only with strong ones (which would explain why no corresponding fusions such as **naku?* have appeared¹³) - or nouns.

The conclusion to which we must arrive is that a 3rd person genitive pronoun is lodged at some lower level than C, i.e. is left-adjoined to IP (not to MP, as will be proven in section 5 on subordinate clause structure). Adjoining a pronoun to a phrase may seem to be an illicit movement, but there are clear reasons why it would be possible in this case. The form in itself, *nia?*, is historically a fusion of *na?* and *hia?*. The genitive marker

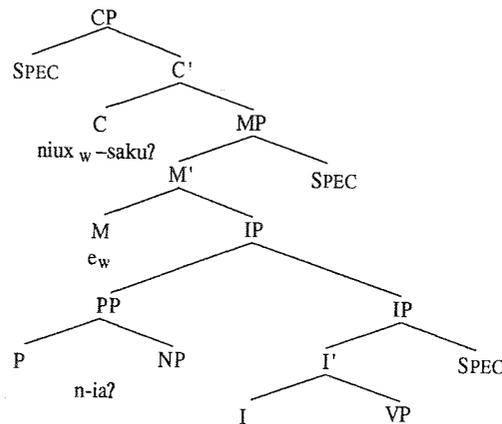
¹³ Which, however, does occur as the genitive strong pronoun in Sediq.

appears to function in general as a preposition, there being every reason to consider it as just that – in which case *nia?* is historically nothing other than a PP, and continues functioning syntactically as such.

This functions perfectly with the syntactic data from the language – naturally, this is only evident in cases where subject and agent pronouns coexist preverbally, but there is no reason to assume that the absence of a subject pronoun would imply any structural difference as far as the agent is concerned.

The resulting structure is illustrated below:

18 Genitive pronoun adjunction



As concerns the problem why the 3rd person nominative pronoun is a strong pronoun, we can suspect that it may at some point in time have been some sort of demonstrative pronoun. In fact we find clear evidence for this view if we look at the closely related neighbouring language Seediq, where the 3rd person singular pronoun (incidentally only existing in what Asai 1953 calls 'long form', i.e. the equivalent of a strong pronoun), *hiḏa*, is identical in form to the demonstrative pronoun 'that (invisible)'.

4.2.5 The clitics

We find then that the rules for cliticisation in Atayal are more or less as follows:

1. 1st and 2nd person pronouns of the weak type cliticise obligatorily to C (C always being phonetically filled).

2. Clitic clustering is normally disallowed in modern Atayal (although it obviously was permitted at some earlier stage in the language, given the evidence from the fused clitics – at that point the argument structure was AGENT-SUBJECT.)

3. The argument structure being essentially ergative (i.e. since the double argument pronouns never contain a nominative agent, only nominative patients), AF-marked verbs (i.e. *-m-* or *m-* marked verbs) are not used in these constructions. In the few cases where the verbs used are not non-AF marked (PF, LF or IF), they are verbal stems, or carry other prefixes or suffixes which are focus-neutral. In this context it is interesting to compare the situation in Sediq, where genitive/ergative agents co-occur with AF-marked verbs, cf. the first example in footnote 16. Sediq apparently regularly uses genitive case to mark pronominal agents, regardless of verbal focus.

4. 3rd person genitive pronouns are fused PP's and adjoin to IP.

The exceptional cases in which both 1st and 2nd person pronouns occur in preverbal position can be interpreted as a surviving clitic cluster. The reasons for this type of cluster to occur are difficult to guess, possibly it may be some type of archaism, or some way of avoiding ambiguity by stressing the agent. In any case, the constructions are essentially marginal, which implies that either explanation leads to circumstances which at any rate are not favoured, although to a certain extent grammatical¹⁴. The structure in this case is then probably a clitic cluster at level C (Unless we permit cliticisation to a trace – i.e. M. To test this would require a subordinate clause with this type of overt double argument construction, and with a preverb. Such a clause is hard to find and extremely difficult to elicit, even if I had an informant).

The fact that constructions with two weak pronominal arguments are unusual and unfavoured tallies well with the grammatical structure presented above, since there in fact is only one position open to weak pronouns, namely cliticisation to C. When a double argument structure is desired, the problem is preferably solved by using constructions requiring only one overt argument, such as those described above.

The reason, then, for Egerod's analysis being the most natural for the surface structure of the language is that Atayal is to a very great extent a

¹⁴ Not having any data of my own, nor access to an informant, I have no way of checking to what extent this construction is considered 'awkward' or 'strange' in the mind of a native speaker.

deictic language – constructions with pronouns are quite simply a) the most common; b) the most ‘central’; and c) the most stable as far as word order is concerned. This situation is however derived: constructions with pronominal arguments are in their entirety lodged in the functional areas of the sentence – and moreover, it should be remembered that the word order stability referred to in this case is not Case-linked, but connected with person.

5 Subordinate clauses in Atayal

5.1 Semantic SC's

I shall not deal with the semantic equivalent of European subordinate clauses in any detail in this paper, suffice it to say that the most common type of structure for linking clauses is as follows:

SUBORDINATE CLAUSE *ga?* / *lga?* MAIN CLAUSE

An example of this type of subordinate clause construction is given below:

- 19 a)

mita?	ta?	kia	lga?	pnbu?	ta?
AF-see	we	so	LGA	fall ill	we

‘If we see it, we shall get sick’
- b)

musa?	kmut	kmukan	ga?	ini?	ksiau pi
FUT	AF-cut	Chinese ¹⁵	GA	NEG	false PRT

‘If one succeeds in hunting a Chinese head, one has no falsehood’

The same type of construction is used for clause-initial topicalisation, not only of subjects, but in fact of all types of adverbials, objects, abbreviated clauses etc. Structurally, the subordinate clause in this case is little but a topicalised main clause. One cannot really call these constructions subordinate in the syntactic meaning of the word, since they are neither different from main clauses in any way, nor are they marked by any type of subjunction. (I do not consider the particle *ga?* to be a true subjunction, since its normal function of topicaliser can easily be seen in this context as well).

5.2 Syntactic SC's – subjunction *ana*

However, there are in fact constructions introduced by subjunctions, a case in point being the word for ‘if’ – *ana*. The subjunction occurs, as usually is

¹⁵ or any other people whose heads traditionally may be hunted.

the case in head-initial languages, in initial position in the subordinate clause (examples quoted from Egerod 1980, under the entry *ana*):¹⁶

- 20 a)

ana	maku?	kialun	ga?	ini?	snhi?
if	I [+GEN]	say-PF	GA	NEG	believe

‘Although I talked to him, he didn’t believe’
- b)

ana	niux	nha?	hlian
if	PROG	they[+GEN]	accuse-LF

‘Even if people accuse him...’
- c)

ana	simu niux	snhi?	iaba?	kaial	ga?
if	you PROG	believe	father	sky	GA

‘Even if you people believe in the Heavenly Father’

One interesting property of this subjunction is that it appears to share the feature of a finite verb, i.e. that it can occupy position C in the clause, as evident from the cliticisation of the pronoun. However, as clearly visible in examples 20b and 20c, the existence of the subjunction does not preclude the occurrence of an auxiliary verb. It is evident from sentences 20a and 20c that position C is occupied by the subjunction, since it is this position which attracts the clitic. In cases such as this we clearly see that the preverb is base-generated at some other level than C, namely M.

Likewise, SC structure gives us a clear indication that the 3rd person agentive PP *nha?* is adjoined to IP and not to MP, as evident from sentence 20b, where it occurs after the preverb.

6. The headedness problem

It will be noted from the above that Atayal structure is head-initial, with X' preceding SPECXP and X preceding its complement YP. This appears to hold for all levels of the syntax, except CP itself, as far as the relative order of SPEC'CP and C' is concerned, where the order appears to be head final.

¹⁶*ana* is in fact verbal in origin, which may explain its verbal properties, such as its ability to attract clitics and fill the C node. However, its properties are no stranger than those of Nordic or Germanic subjunctions, such as the Bavarian *wennst...* construction, on the contrary, they are rather similar. These properties are shared by subjunctions (and, as can be seen in the second example, main clause introductory articles) in the closely related language Sediq:

- | | | | | |
|-----|---------|----|---------|------|
| ado | namu | ka | sumino | yaku |
| if | you+GEN | GA | AF-wash | I |

‘If you wash me’
- | | | | | | |
|------|-------|-----|--------|----------|----------|
| nasi | my | ini | pakkai | nakka ky | myhoqqil |
| if | I+GEN | NEG | kill | just I | AF-die |

‘If I hadn’t killed it, I would have died’

My reasons for illustrating the structure with SPECCP preceding C' instead of following it is that an initial SPECCP has two functions which otherwise would have to be solved by adjunction, namely topic-insertion and adverbial subordinate-clause insertion (which appear to be more or less the same phenomenon, cf. section 5.1) – whereas a clause-final SPECCP would have no function whatsoever, not even as an alternative landing-site for nominal subjects which move upward through the structure.

It is difficult to see how this correlates with the idea of headedness, we might be forced to describe Atayal as an 'almost head-initial' language. The question is, however, if we can consider the relative positions of SPECCP and C' to be subject to headedness parameters. It may well be a principle of Universal Grammar (or of semantics) that the TOPIC position always is initial (no matter whether this position is obligatorily filled or not). If this were the case, the headedness parameters would start functioning from C' downwards.

Here it would be fruitful to make a comparison with other head-initial languages, to see if there is any evidence of SPECCP occurring in any other position than clause-initial. It should, however, be noted that specifier positions are not necessarily considered to take part in headedness parameters (see Travis 1984, section 2 on Chinese).

7. Summary and conclusion

The results of the reasoning conducted in this paper are recapitulated here:

1) Preverbal weak pronouns, whether nominative or genitive, are in actual fact clitics. This is apparent from the fact that they move leftwards in a structure where the only possible lodging point for free pronouns would be to the right of the sentence core. A weak pronoun cliticises obligatorily to a phonetically filled C node.

2) Clitic clustering is synchronically disallowed – reasons have however been presented for regarding this as a relatively new development.

3) The 3rd person genitive pronoun is a fusion of the genitive marker and a strong pronoun, and functions syntactically as a PP, left-adjoining to IP.

4) There is only one position available for preverbal weak pronouns, i.e. cliticised to C – in exceptional cases this is got around by semi-grammatical clitic clustering.

5) C position may be occupied by subjunctions, preverbs, negations and full verbs, in that order of priority. This order of priority is directly

related to the base-generated position in the clause, i.e. the higher up the base-generation, the higher the priority.

6) There is a possibility that 3rd person nominative pronouns, although usually functioning like nouns, have a different distribution in the clause, and are subject to other barriers than nouns, namely that they cannot go as far up as SPECMP, a movement which is open to nouns. Since this result is derived from positive evidence, it is not valid until tested with a native informant.

7) Atayal is head-initial at all levels from C' downwards. However, SPECCP is clause-initial, which may eventually turn out to be a cross-linguistic universal.

This paper has been largely confined to a descriptive study of Atayal structure within a Principle and Parameter framework, and certainly much is left to be desired as concerns the explanatory aspect. Likewise, the structures which are described are only absolutely basic declarative clauses, and of these hardly any are subordinate, there certainly are many possible structural variations to be discovered when the work is pursued at a more ambitious level.

However, the model in itself seems to rather neatly cover the basic structures in Atayal, and does in fact appear to render a P&P analysis compatible with Atayal grammar, given certain minor alterations. Thus I should like to claim that in making an explanatory study of Atayal, this paper (or its successors) may serve as a convenient basis.

Naturally, most of the structures illustrated in the above model should be tested with a greater number of clauses, and also against the intuition of an informant. Another interesting continuation which I envisage is attempting to adapt the model for the closely related Atayalic language Sediq, thus making a syntactic comparison between the two.

References

- Asai, Erin. 1953. *The Sedik language of Formosa*. Kanazawa.
 Egerod, Søren. 1965. 'Verb inflexion in Atayal'. *Lingua* 15, 251–282.
 Egerod, Søren. 1966. 'Word order and word classes in Atayal'. *Language* 42, 346–369.
 Egerod, Søren. 1980. *Atayal – English Dictionary*. Scandinavian Institute of Asian Studies Monograph Series no. 35. Malmö: Curzon Press.

- Ferrell, Raleigh. 1972. 'Verb systems in Formosan languages'. In J. Thomas and L. Bernot (eds), *Langues et Techniques, Nature et Société*, 121-128. Paris: Klincksieck.
- Holmer, Arthur. 1992. 'Thematic role, voice and focus in Austronesian'. Lund (unpublished paper).
- Huang, Lillian. 1988. *Atayal language analysis*. Report to the National Science Council NSC 77-0301-H003-14. Taipei.
- Travis, Lisa. 1984. *Parameters and effects of word order variation*, Ph.D. dissertation, MIT.
- ...in addition to a hitherto unpublished Seediq corpus kindly furnished by Temi Nawi of CARPRS, Puli, Taiwan, for which I am very grateful.

Intonation and Focus: A Reanalysis of Downdrift and Downstep in Igbo*

Clara I. Ikekeonwu

Introduction

The processes of downdrift and downstep are often discussed in linguistic literature on tonal languages like Igbo, Akan and some other African languages (Welmers 1973, Schachter & Fromkin 1968, Armstrong 1968, Clements 1979, Connell & Ladd 1990, Liberman et al. 1992). The downdrift is said to affect successive high tones when there are intervening low tones. For a sequence of HLH therefore, the second H is on a lower pitch level than the first, and this pattern spans the length of the utterance. Downdrift is often assumed to be automatic.

Downstep, on the other hand, does not have the type of 'definitive' characterisation (at least in the literature) as downdrift. It is, however, generally agreed to also involve a lowering of F_0 values within an utterance. Opinions vary with regards to the conditions that trigger the downstep. It is often said to occur for "no apparent reason" (Connell & Ladd 1990). Diachronically, the downstep is said to arise from the loss of an intervening low tone between two high tones through the process of downdrift (Schachter & Fromkin 1968, Hyman 1975). Sometimes in Igbo and even in Akan it is difficult to reconstruct these lost low tones.

Downstep has also been attributed to the results of morpho-syntactic rules (Nespor & Vogel 1986). While it is a fact that some grammatical motivation may be implicit in the occurrence of downstep, this does not appear from the investigation of Igbo here to be the compelling reason for its occurrence. In Igbo it is possible to have one out of two similar syntactic structures depicting downstep.

*This work was carried out at the University of Lund Phonetics Laboratory.