

TENSE SEQUENCE IN PROCEDURAL DISCOURSE

Lawrence A. Reid
Summer Institute of Linguistics

O. Introduction. One of the fallacies of some current grammatical theories is that the symbol which dominates all others is S. Given a grammar which adequately accounts for all sentences in a given language, it will still fall far short of an adequate account of the grammatical structure of that language unless it also accounts for the structures of which the sentences are a constituent part. Just as words relate to each other in various ways to form various types of phrases, so phrases relate to each other to form predications, and predications relate in various ways, some specifiable in terms of formal logic and others not, to form various types of statement. Statements likewise relate in various formal ways to form structures of higher level, or greater internal complexity, traditionally called paragraphs, and these join together by various formal means to form the structure which really dominates all structures, the discourse.

Language is not a haphazard concatenation of well formed sentences as could well be assumed from the emphases of some grammatical theories. It is possible in this generation to fall

into the same type of error as linguists in the last generation fell into. To them, writing a grammar meant giving a complete account of morphological structures, then adding a few syntactic rules of thumb to enable the user of the grammar to put sequences of words in the correct order. Today we have progressed beyond this to phrase structure grammars, which with some transformations, are supposed to give adequate accounts of the ways words form phrases and the various ways these phrases can be juggled to form acceptable sentences. Such grammars of course are supposed to give adequate accounts of morphological structures as well. We should never forget however that there is a world of structure still to be accounted for in language once such phrase structure grammars are completed. What is called for are not word structure grammars or phrase structure grammars, with or without transformations, but discourse structure grammars.

When a person begins to speak, he makes a series of choices which influence the structure of what he says not just in his first sentence but right through till the last sentence of his discourse. Some of these choices might be labelled as style choices but style choices are also linguistic, and need to be accounted for in an adequate linguistic description. Formerly it was fashionable to

relegate some problems into the field of semantics where they could be conveniently left since semantics, if it was a non-linguistic field, was outside of the realm of the legitimate investigation of the linguist, and if it really was a valid part of linguistic investigation it was such an undeveloped field that no one expected you to begin to account for these problems anyway. Let us not relegate problems of style to the same nether world of decreased linguistic responsibility. Elsewhere in this volume, Professor Ordoñez reviews some attempts that have been made in recent years to handle some problems of style with a linguistics model. In this paper I will discuss some problems of style from a tagmemics viewpoint.

1. Person and time orientation. One of the choices that is made at the beginning of a discourse is person orientation. This choice affects the semantic interpretation of pronouns throughout the discourse. For example, in narrative discourse, or the relating of past events either real, or fictional, person orientation is either first person, or third person depending on whether the narrator is speaking of himself or another. This does not mean that only first and third person personal pronouns occur.

In some languages, e. g. some Manobo dialects, second person pronouns occur, but because of the fact that the speaker is using the narrative genre, the second person pronouns are interpreted semantically as third person. In Manobo,¹ a storyteller may change personal reference from third to second within the same sentence. Second person will continue to be used through the paragraph as long as the character in the spotlight remains unchanged. Hazel Wrigglesworth (Summer Institute of Linguistics) has analyzed Manobo discourse and illustrates this feature from Manobo text material. An example follows in English translation:²

S 10 - 'When Ukap heard the words of his mother, you went downstairs to look for wood.'

S 11 - 'When you had gathered the sticks, Ukap, you carried them on your shoulders to return home.'

S 12 - 'Then you went up the ladder there.'

S 13 - 'When you arrived in the kitchen you dropped the wood.'

Since Manobos, listening to this tale would be aware that they are listening to narrative genre, the second person pronoun 'you' occurring in Sentence 10 and subsequently, would be given the identity 'Ukap', the chief character at this point in the story. In Sentence 11 the speaker reinforces the identity by using the vocative 'Ukap'.

A similar problem, relating to varying pronominal forms but the same semantic referent has been faced by James McCawley.³ In discussing the use, in Japanese, of honorific pronominal and verbal forms, he says, 'I believe that what is going on here is that the choice of pronouns and verbs is dependent on features attached to the entire discourse rather than to individual lexical items and that the politeness morpheme mas is attached by a transformation to the appropriate verbs if the relevant discourse features are present.'⁴ The only problem I find with this is that as far as I am aware the grammatical framework within which McCawley operates, T-G Grammar, does not postulate discourse as a superordinate node above sentence.

In addition to person orientation, a decision is made at the beginning of a discourse regarding time orientation. Certain types of discourse require that time be accomplished, or past; other types require that time be projected, or non-past. Of the former type, narrative discourse is an example. Narrative presents a sequence of events that have occurred. This does not mean however that all tense forms throughout a narrative discourse will necessarily be past. It does not mean that where non-past tense forms occur they will be interpreted semantically as past. Time

orientation, as also person orientation, is probably not language specific, but the actual tense forms which are allowed, or as some would put it, the actual surface structure representation of the tense forms is very much language specific.⁵ In Bontoc, for example past tense forms occur frequently at the beginning of Narrative discourse. Having established time orientation as past, the tendency is to revert to non-past forms for the body of the discourse with a return to past at the end of the discourse. One may compare this with a composer who writes a composition in a certain key. It is imperative if the composer wishes to establish that key that at least his first theme be presented in that key, then he is free to begin modulating into other keys but he must always return to the key of his first theme for his final cadence.

In Procedural discourse, on the other hand, time orientation is non-past or projected. In this genre is included instructions on how one should do something, or on how something is done. This type of discourse in Bontoc usually consists of brief recipe like instructions, normally no more than one long paragraph in length. In other languages Procedural discourse may be more extensive. For the remainder of this paper I will discuss this feature of time orientation in procedural discourse with reference to two languages:

Bontoc, as spoken in Guinaang, Bontoc, Mountain Province, and Kallahan, as spoken in the Amduntug area of Ifugao.⁶ Procedural discourse has been elicited from both these languages, but even though the languages are fairly closely related, they show contrasting ways of representing the time orientation by tense forms in the discourse.

3. Tense sequence in Bontoc procedural discourse. As stated above, the time orientation of procedural discourse is projected or non-past. In Bontoc, the actual tense forms are closely tied to the time orientation. In the sentence nuclei, that is, that part of each sentence which actually states the steps in the procedure, verbal activity is nearly always non-past. It is always non-past when a goal focus clause occurs. Even the sentence periphery is usually non-past. The sentence periphery in this type of discourse consists of that part of a sentence which restates or paraphrases or refers in some way to the nucleus of the preceding sentence in order to provide the formal linking device characteristic of this genre. This linking device reinforces the time sequence which is characteristic of paragraphs in procedural discourse. The lexical material contained in these links is referred to as the ground of the paragraph, whereas the new lexical material occurin

in the nuclei of the sentence is referred to as the figure of the paragraph.

Two brief Bontoc procedural discourses are presented in Appendix 1 to illustrate these points.⁷ In the free translation of the texts, parentheses enclose the sentence peripheries. Those parts of the sentences not in parentheses are free translations of the sentence nuclei.

The verbs occurring in the two Bontoc discourses are presented in Chart 1, to show the tense forms which occur (p is past tense, np is non-past tense). The numbers on the left of the chart correspond to the sentence numbers of the discourse. The chart is split by a vertical line to separate verbs occurring in the ground and those occurring in the figure of the paragraph.

It should be noted that only two past tense forms occur in Chart 1 and both are stative, or na- verbs. Both are in the second discourse. One occurs in the ground of sentence 4, and is preceded in the text by the time relator mo 'when', which in Bontoc can only be interpreted semantically as non-past. The other occurrence is in the figure of sentence 7, nagaeb 'made', which signals the completion of the various steps in making rice wine.

Chart 1. Tense sequence in Bontoc
Procedural Discourse.

	Ground	Figure
I 1.		patpaten (np) "cut"
2.	malpas (np) "finish" mapatpat (np) "cut"	iyali (np) "bring" baliwsen (np) "mill"
3.	mapno (np) "full"	alaen (np) "get" ipaey (np) "put" lotowen (np) "cook"
4.		ipaey (np) "put" pay-an (np) "put"
5.	malpas (np) "finish"	mainom (np) "drinkable"
II 1.		isap-ey (np) "dry in sun" bayowen (np) "pound"
2.	malpas (np) "finish" mabayo (np) "pound"	matap-an (np) "winnow"
3.	malpas (np) "finish" matap-an (np) "winnow"	lotowen (np) "cook"
4.	naloto (p) "cooked"	gowaden (np) "serve" pay-en (np) "put"
5.	mabaew (np) "cool"	bobodan (np) "yeast"
6.		pay-en (np) "put" ipatang (np) "shelve"
7.	malpas (np) "finish"	nagaeb (p) "made"
8.		makan (np) "edible"
9.		inlamsit (np) "sweet"
10.	malpas (np) "finish"	in-appakang (np) "sour"

Now all of this is fairly straightforward and relatively uninteresting. It is similar to the manner in which we express tense in procedural discourse in English. Material of interest however becomes apparent when we look at procedural discourse in Keley-i Kallahan.

4. Tense sequence in Keley-i Kallahan procedural discourse. In this language, unlike Bontoc, tense forms do not clearly reflect the time orientation of the discourse genre. Although time orientation is projected or non-past, a large number of tense forms appear as past.

For an example of Keley-i Kallahan discourse see Appendix 2. The verbs of this discourse are presented in Chart 2. A third column in Chart 2 indicates the goals of the verbal activities given in the predicates of each sentence. Where a goal is implied by the affixation on the verb but no overt form occurs (deletion) this is indicated by \emptyset .

Of the approximately forty seven verbs which occur in the figure of this two paragraph discourse, seventeen occur with past tense affixation. In the ground, that is those parts of the sentences which constitute grammatical links in the paragraphs, some twenty seven verbs occur, twenty four of them past.

Chart 2. Tense sequence in Keley-i
Kallahan Procedural Discourse.

	Ground	Figure	Goal
2.	nebukkul (p) "first"	an-um-ala (np) "get"	snails
3.	an-um-ala (np) "get" in-ali (p) "brought"	mehapul (np) "necessary" inhaeng (np) "cook" kanen (np) "eat"	∅ flesh
4.	kinan (p) "ate"	inha-pey (p) "dried in sun"	∅ ∅
5.	memag-ana (np) "dry"	mebellin (np) "possible" anmengiepul (np) "make lime"	
6.		an-um-ala (np) "get"	cane
7.		an-um-ala (np) "get" ihidum (np) "get" mutmutengen (np) "break"	cane ∅
8.		pinekpek (p) "break" amungen (np) "gather"	∅ ∅
9.	immala (p) "got"	ipaghek (np) "stick in ground" ihaad (np) "place"	wood ∅ cane
10.	inhaad (p) "placed"	iggawa (np) "put in center"	cane snails
11.	inggawa (p) "put in center"	inepuyan (p) "fired"	snails ∅
12.	inepuyan (p) "fired"	ellan (np) "get"	fan
14.		ineyabyabyab (p) "fanned" kamangpal (np) "become coals"	∅ cane

	Ground	Figure	Goal
15.	nagpal (p) "become coals"	nebudiha (p) "took out" negiheh (p) "burned" bimmelah (p) "white"	cane snails ∅ ∅
16.	bimmelah (p) "white"	e-kalen (np) "remove" al-en (np) "get"	snails fire snails
17.	inla (p) "gotten"	intalu (p) "placed"	snails ∅
18.	neilaan (p) "placed"	ilaw (np) "take"	dish ∅
20.	inhaad (p) "placed"	illa (np) "get" baywen (np) "pound"	∅ pestle ∅
21.	bineyu (p) "pounded" negibbuh (p) "finished"	inekud (p) "scooped"	lime
22.		mambalin (np) "possible"	
23.	inekud (p) "scooped"	intalu (p) "placed"	∅
24.		pinelut (p) "mixed"	∅
25.	pinelut (p) "mixed"	binebedan (p) "wrapped"	∅
26.	limmaw (p) "gone"	binukyatan (p) "opened"	∅
27.		meiepul (np) "usable as lime"	
28.		ellan (np) "gets"	leaf etc.
29.	intapi (p) "chewed"	ila (np) "gets"	lime

	Ground	Figure	Goal
30.		inhudu (p) "scooped"	∅
31.	negibbuh (p) "finished" inhudu (p) "scooped"	inwanwan (p) "shook" inhaad (np) "placed"	lime lime
32.		eppulan (np) "puts lime on"	leaf etc.
33.	negibbuh (p) "finished" inepulan (p) "put lime on"	tinaptaptap (p) "chewed"	leaf etc. leaf etc.
34.	tinaptaptap (p) "chewed"	elan (np) "gets" tabbakwan (np) "put tobacco with"	tobacco chew
35.	tinabbakwan (p) "put tobacco with"	inelupda (p) "spat"	chew
36.	negibbuh (p) "finished"	ippungguh (np) "put in purse"	lime- holder

Typically, past tense forms occurring in a ground do not indicate past time, but completion of the activity stated in the nucleus of the preceding sentence.

What are the criteria which determine whether past or non-past tense forms should occur with verbs in the figure or sentence nuclei?

The figure presents new lexical material, and must be understood as noncompleted in discourse of this genre. The ground merely repeats the lexical material of the preceding sentence (or in the case of 'skip-link' structures, it states the completion of an activity that is assumed but not actually stated.)

Since procedural discourse is often concerned with describing a set of activities performed in making or processing a particular object, we would expect to find that the majority of the sentences in the figure of this discourse type would be goal focus, that is, that the topic or subject of the sentences will express the goal of the activity. Of the nine verbs in the figure of the first Bontoc discourse, eight have goal focus affixation. The second Bontoc discourse has thirteen verbs in its figure, and eight of these are goal focus. The Kallahan discourse has thirty-five of forty-seven verbs in the figure showing goal focus affixation.

In procedural discourse there is usually one main goal through the discourse. This goal is the item upon which most of the activity is performed. The original goal changes its nature after each activity is performed upon it, but often, especially for purposes of deletion, item and processed item are considered the same. Thus in the Bontoc discourse on the making of sugarcane

wine, the only goal stated is in sentence 1, onas 'sugarcane'. In subsequent clauses it is deleted. But by the time the discourse is finished it has been through stages of growing cane, cut cane, sugarcane juice, unfermented juice or wine.

In the second Bontoc discourse on making rice beer, the major goal is red rice expressed in the first clause of sentence 1. It then goes through the stages of drying and pounding. The pounded rice is winnowed, and cooked. The cooked rice is put in a basket and yeast is added. The yeasted rice is then put in a pot, and finally the fermented brew developed. But in the discourse each new topic is deleted as expressing the item originally given in sentence 1.

The Kallahan text has as its major goals, snails and lime, the latter being developed by process from the former. Subsidiary goals, such as the flesh of the snails, cane, wood, a fan, lime container, a dish, a pestle, and the ingredients of a betel nut chew are also introduced.

Having taken note of these facts it is now possible to discuss the criteria which determine whether a past or present tense form will be used on the verbs which state the processes being performed on the various goals. In Kallahan present tense is used on a verb which has a change of lexical item for goal. Subsequent verbs

describing activities on the same goal have past tense affixation. For example, sentence 32 reintroduces the subsidiary goals of leaf, betel nut and bud, the ingredients of the betel chew. The activity, eppulan 'apply lime to' is non-past. Sentence 33 states that the man then chews the concoction. The goal is considered to be the same as in sentence 32, even though lime has now been applied; the verb 'to chew' is therefore given a past tense form. Sentence 34 introduces a new goal, 'tobacco'. The verb 'to get' is therefore non-past. Likewise the second clause in this sentence is non-past having as it does a new goal intapi 'betel nut chew'. Sentence 35 however is past because the activity--spitting--relates to the goal expressed in the preceding sentence, i. e. the betel nut chew.

This description does not however adequately account for some cases of past tense forms that occur, nor of some non-past tense forms that occur. Sentence 4, for example, has inha-pey a past tense form of 'to dry in the sun'. The goal of the preceding clause is the flesh of the snails which we have been told has been cooked and eaten. The goal of sentence 4 is not expressed, having been deleted. Normally we would refer to the preceding clause to find the item that has been deleted. Obviously the goal of sentence 4

is not the same as that expressed in the preceding clause. One cannot eat something and then put it in the sun to dry. The narrator of this procedure expects us to know that the major goal of this discourse is snails, in particular snail shells, and he therefore not only feels at liberty, grammatically, to delete reference to it in sentence 4, but also to give the tense of the verb as past.

We may say then that the goal of an activity may be deleted even though there is a different goal expressed in the preceding clause, as long as the deleted goal refers to the major goal of that part of the discourse. Such an activity may also (although not necessarily) be expressed in the past tense. Where the narrator may foresee that ambiguity might result in a situation such as this, he may restate the main goal, but still give the verb in the past tense. Notice for example sentence 12, where the man gets the fan, a new goal. Sentence 14 uses a past tense on the verb indicating what he does with the fan. The cane which is the fuel for the fire becomes coals, and then in sentence 15 the major goal, snails, is reintroduced. They are uncovered, preparatory to being taken out of the fire. But notice that the form is past tense, nebudihan.

I have said that the description given above failed to adequately account for some instances of non-past forms that occur. According to that description, in sentence 7, the verbs ihidum 'bring' and mutmutungen 'break' should be past tense because they are actions performed on a goal which was introduced in an earlier clause. The factor which is important however is a grammatical restriction on the occurrence of past tense forms following the sequence conjunction et. With reference to this Mrs. Hohulin states,⁸ 'The bases of the sequence sentence represent actions in chronological time sequence and are not permutable. Base 1 may have either past or non-past tense. Non-past tense occurs in Base 2, with one exception: when the sequence sentence occurs embedded in a Time Margin, past tense may occur in both bases.'

In sentence 7 therefore the verbs ihidum and mutmutungen are non-past because they occur following the sequence marker et, which in this position (i. e. not a Time Margin), places a restriction on the occurrence of past tense forms. In sentence 8 activities being performed on the cane are still being discussed. The first verb pinekpek 'break' is expected past tense. The second verb amungen 'gather' is non-past since it follows the conjunction et.

In summary then, I have tried to show that the choice of tense forms is dependent upon a time orientation feature which attaches not to the sentence but to the discourse. I have also tried to show that rules for the semantic interpretation of tense forms are language specific and that for an adequate description of a language such rules must somewhere be included in the grammar.

NOTES

1. This information is taken from Robert E. Longacre, Discourse, paragraph and sentence structure in selected Philippine languages, final report of Contract No. 0-8-062838-0391, U. S. Department of Health, Education and Welfare (Dec. 1968). Vol. 1, p. 4. Longacre's comments are based on an unpublished paper by Hazel Wrigglesworth on the discourse structure of Ilianen Manobo; this paper is in the files of the Summer Institute of Linguistics.
2. This example is from Text II of Miss Wrigglesworth's paper, ex. Longacre, op. cit.
3. James McCawley, 'The role of semantics in grammar.' Universals in Linguistic Theory. Holt, Rinehart and Winston, Inc., 1968. p. 124-169.

4. McCawley, op. cit. , p. 136.

5. Considerable time and energy has been expended by linguists in discussing the relative merits of the terms, aspect versus tense, in describing Philippine languages. The use of the term 'tense' in this paper, with commuting 'past' and 'non-past' forms is simply because I find it more convenient in talking about time orientation to discuss its manifestation in terms of tense. That these same forms also indicate aspect with commuting 'completive' and 'non-completive' forms is also true.

6. Richard Hohulin of the Summer Institute of Linguistics collected the Kallahan data here described. I am indebted to him for permission to use the materials and some features of the analysis described in his unpublished paper 'Paragraph structures in Keley-i Kallahan.'

7. For a fuller discussion of the structure of this and other Bontoc discourse types see my Discourse, paragraph and sentence structure in Bontoc. In press. Summer Institute of Linguistics Publications in Linguistics and Related Fields, University of Oklahoma Press.

8. Lou Hohulin, 'Sentence structure of Keley-i Kallahan.' Unpublished paper in the files of the Summer Institute of Linguistics.

Appendix 1.Bontoc Procedural Discourse 1.

Nan maammaan nan bayas.
the making the wine

(1) Engkami patpaten nan onas. (2) Malpas ay mapatpat,
go-we cut the cane finish link cut

iyalimis nan aaboyowan, sami baliwsen,
bring-we-to the cooking-place then-we mill

(3) Mapno nan baldi, alaenmi, ipaeymis nan sangdal,
fill the drum get-we put-we-in the vat

sami lotowen, (4) Ipaeymis nan dalay, pay-an sinan
then-we cook put-we-in the jar put of-the

gamo. (5) Malpas ay sinpolo ya limay algew,
berry finish link ten and five-att. day

mabalin ay mainom.
possible link drinkable

Free Translation.

1. We go to cut the sugarcane. 2. (When cutting is finished) we bring it to the cooking place, then we mill it. 3. (When the drum is full) we get it, and put it in the vat, and then we cook it. 4. We put it in the wine jar, and then add the fermenting berries. 5. (After fifteen days) it is drinkable.

Bontoc Procedural Discourse 2.

Nan maammaan nan tapey.
the making the rice beer

(1) Isap-eymi nan dayyong, samit bayowen sinan losong.
dry-we the red-rice then-we pound in-the mortar

(2) Malpas ay mabayo, matap-an. (3) Malpas ay
finish link pound winnow finish link

matap-an, lotowen sinan banga. (4) Mo naloto, gowaden,
winnow cook in-the pot when cooked serve

pay-en sinan ligao. (5) Mabaew, bobodan. (6) Pay-en
put in-the basket cool yeast put

sinán banga, ipatang. (7) Malpas nan doway algew,
in-the pot shelf finish the two-att. day

nagaeb. (9) Inlamsit. (10) Malpas nan limay algew,
made sweet finish the five-att. day

in-appakang.
sour

Free Translation.

1. We dry red rice, and then we pound it in the mortar. 2. (When
pounding is finished), it is winnowed. 3. (When winnowing is
finished), cook it in a pot. 4. (When it is cooked), serve it, and
put it in a winnowing basket. 5. (When it is cool), put yeast on it.
6. Put it in a pot, and place it on a shelf. 7. (After two days), it
is made. 8. The pulp is edible. 9. It is sweet. 10. (After five
days) it is sour.

Appendix 2.Keley-i Kallahan Procedural Discourse.

1. Huyan aya apul elawtu yad bebleymi. 2. Nebukkul
 this is lime custom-it at barrio-our first
- an-um-ala biin aggudung. 3. Hedin an-um-ala biin
 go-to-get women snails when go-to-get women
- aggudung et in-ali tud bebley, mehapul ni inhaeng
 snail and brought she-to barrio necessary cook
- da et kanen da lameh tu. 4. Hedin kinan da lameh
 they and eat they flesh its when ate they flesh
- tu, inha-pey da et memag-anan. 5. Hedin memag-anan
 it dry-in-sun they and dry when dry
- hu aggudung, mebellin hu lakin ni anmengiepul. 6. Pakkadek
 the snails can-be the men make-lime should
- an-um-ala hu laki ni paul human hu pengieppulan.
 go-get the men cane that used-to-make-lime
7. Hedin annemaul hu laki, an-um-alan paul et ihidum
 if cane-gathered the men go-get cane and bring
- tud bebley et mutumutungen tu. 8. Ya elaw ni
 he-to barrio and breaks he the custom
- kandan nemutung pinekpek et amungen tud puyek.
 call-they breaking broken and gather he-on ground
9. Immalan keyew et ipaghek tu et ihaad
 got wood and stick-in-ground he and place
- tudman paul. 10. Hedin inhaad tud paul, iggawa tu
 he-there cane when placed he cane middle he
- hu aggudung. 11. Hedin inggawa tu aggudung, ebuh inepuyan
 the snails when middle he snails then fired

- tu. 12. Hedin inepuyan tu, i ellan tu hu ittan elaw ni
 he when fired he get he the that custom
- panyabyab. 13. Kandan panyabyab da halidung.
 to-fan call-they to-fan they rainhat
14. Halidung hu panyabyab da ni apuy ma-lat
 rainhat the to-fan they fire so-that
- ineyabyabyab tu kenamung et ingganah kamangpal hu
 fanning he continuous and until become-coals the
- ittan pinekpek tun paul. 15. Hedin nagpal hu paul,
 that broken he cane when coals the cane
- nebudihan ittan aggudung ey negiheb et bimmelah law.
 uncovered those snails and burned and white now
16. Hedin bimmelah aggudung, dammutun e-kalen tu apuy
 when white snails can-be remove he fire
- et al-en tu ittan aggudung. 17. Hedin inla tu aggudung,
 and get he those snails when got he snails
- intalu tud duyu. 18. Ya duyu neilaan tun aggudung, et
 place he-in dish the dish placed he snails and
- ilaw tud lehung. 19. Ya elaw ni lehung humman kinapyan
 take he-to mortar the custom mortar that made
- keyew. 20. Et hedini i inhaad tud lehung, illa tu la-lu
 wood and when placed he-in mortar get he pestle
- et baywen tu. 21. Hedin bineyu tu hegibbuh, inekud
 and pounds he when pounded he finish scoop-out
- tu hu apul tep nekapya law hu aggudung ni apul.
 he the lime because made now the snails lime
22. Mambalin law human ni apul hu kanmin aggudung.
 can-be now that lime the call-we snails

23. Hedin inekud tu, intalu tud upak ni bewwa,
when scooped-out he placed he-in husk betelnut.
24. Pinelut tun danum, 25. Hedin pinelut tu danum,
mix he-with water when mixed he water
- ebuh binebedan tu ingganah umlaw ni hakkey ni olas et
then wrapped he until go one hour and
- han tu bukyati. 26. Hedin limmaw hakkey ni olas,
before he open when go one hour
- binukyatan tu. 27. Dammutun meiepul, 28. Ellan tu law
opened he can-be lime gets he now
- beyyen et ya bewwa et ya pudu. 29. Et hedin intapi
leaf and the betelnut and the bud and when chewed
- tu, ila tu apul. 30. Inhudu tud appulan, 31. Et hedin
he gets he lime scooped he-into lime-container and when
- negibbuh ni inhudu tud appulan, inwanwan tu apul
finished scooping he-into lime-container shook he lime
- et ihhaad tud bungut tu hu apul. 32. Eppulan tud bewwa
places he-in mouth his the lime put-lime he-on betel-nut
- et beyen et pudu. 33. Hedin negibbuh ni inepulan tu hu
and leaf and bud when finished put-lime he the
- bewwa et beyen. 34. Hedin negibbuh tinaptaptap tu, elan
betel-nut and leaf when finished chewed he gets
- tu tabako et tabbakwan tu hu intapi tu. 35. Hedin
he tobacco and puts-tobacco he the chew his when
- negibbuh ni tinabbakwan tu, inelupda tu hu intapi tu law
finish put-tobacco he spat he the chew his now
- et kakayagud hu bibil tun ang-ang-angen tep himmegay
and very-good the lip his look-at because red

tep madlang hu ngipen tu. 36. Hedin negibbuh, ippungguh
because red the teeth his when finished place-in-

tu hu appulan di puungguh tu.
purse he the lime-container in purse his

Translation of Kallahan text giving literal tense equivalents.

(Parentheses enclose sentence margins.)

1. This is the custom of making lime in our barrio. 2. First the women go to get snails. 3. (When a woman goes to get snails and has brought them to the barrio) it is necessary that they cook them and eat their flesh. 4. (When they have eaten the flesh) they put them in the sun to dry. 5. (When the snails are dry) the men can make lime. 6. The men should go to get cane that is used for making lime. 7. (If there is a cane gatherer) he goes to get cane, he brings it home to the barrio and breaks it. 8. This is the custom of what they call the breaking, he broke it and gathers it on the ground. 9. (Having gotten the wood) he sticks it in the ground and he places the cane there. 10. (When the cane has been placed) he puts the snails in the middle. 11. (When the snails have been put in the middle), he fired them. 12. (When he has fired them) he gets the things used for fanning. 13. They call what is used for fanning a rainhat. 14. A rainhat is what is used

for fanning, so he continuously fanned until the broken cane has become coals. 15. (When the cane has become coals) those snails are uncovered, and they are burned and are white. 16. (When the snails are white) he removes the fire and he gets those snails. 17. (When he has gotten those snails), he placed them in a dish. 18. (The dish, having had the snails placed in it) he takes it to the mortar. 19. The custom of the mortar, it is made of wood. 20. (When he has placed it in the mortar) he got the pestle and he pounds them. 21. (When he has finished pounding) he scooped out the lime, because the lime of the snail is made now. 22. What we call snails is now lime. 23. (When he has scooped it out) he placed it in a husk of betelnut tree. 24. He mixed water with it. 25. (When he has mixed water with it) he wrapped it, and does not open it for one hour. 26. (When one hour has passed) he opened it. 27. It can be used for lime. 28. He now gets the leaf, the betelnut and the bud. 29. (And when he has chewed it) he gets lime. 30. He scooped it into his lime container. 31. (And when he had finished scooping it into his lime container) then he shook the lime and places the lime in his mouth. 32. He put lime on the betel nut, leaf and bud. 33. (When he had finished putting lime on the betelnut, and

leaf) he keeps on chewing the betelnut, leaf and bud. 34. (When he has finished chewing) he gets tobacco, and puts tobacco with his betel chew. 35. (When he has finished putting tobacco with it) he spat his chew now, and his lips are very good to look at because they are red, and his teeth are red. 36. (When finished) he places his lime container in his purse.