

Nivkh Time Expressions (1)

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1. Introduction

All Languages have some types of time expressions. But it is not the case that every language has the same set of the types. It has its own particular set of time expressions. However, most languages share the following types:

(1) Time Expressions

- a. Time Indicators (abridged: TI) which represent time units of daily life or some time intervals, e.g. *today, soon, etc.*
- b. The so-called Tense which overtly marks when a verbally represented event occurs relative to the time point of speech. It can also mark the relative order of events each other.
- c. The so-called Aspect which thematizes a certain phase within the process of a verbally represented event. It revises the inherent process a verb represents, namely LA in (d) and makes up a new complex of the process.
- d. The so-called aktionsarten or, in my terminology, Lexical Aspect (abridged: LA) of verbal categories which represents how an event is going. Each language has its own particular set of types of LA.

Time Indicators like *now, today, winter, etc.* can be found in most languages. A language without any time indicator like *today* is hardly conceivable. But many languages lack, e.g. the word for winter, autumn etc., because they need not such words from the local and meteorological ground. Therefore, the possession of TI in general belongs to the universal features of languages, but what kinds of TI a language has belongs to the individual character of a particular language.

Tense is not an indispensable grammatical category of languages. It is only an optional category which many languages really lack. Therefore, languages can be typologically classified by means of the feature whether they possess Tense. Such a classification would bring about a simple binary opposition: tense-languages versus tenseless-languages. But the thing is more complicated. Some languages represent it morphologically by means of affixation, the other by some complex syntactic device. And some others distinguish the relative order of events with an adverb. If a language marks Tense obligatorily with a certain adverb, we can hardly classify the language into the tenseless group, for it can be estimated as grammaticalized in a certain degree. But if the marking occurs only optionally, we used to classify the language into the tenseless type. The adverbially tense-marked languages are, therefore, classified further into the subclasses: obligatorily or optionally marked

types. So, we have a variety of different marking of Tense, e.g. the morphological, syntactic and lexical (adverbial) marking. This formal types of marking is cross-classified with the semantic variety of marking: the distinction of past marking, future marking, or aorist, etc. and the optionality of making with various grade of its grammaticalization, etc. Therefore, we have to establish a multiple typology of tense forms and their functions, so that languages are classified by the criterions, first whether they possess it, second, what they marks and how. Tense belongs anyway typically to typological categories.

The so-called Aspect is a typological category, too. But it is more difficult to find languages without aspect than tenseless ones. In the history of many languages, aspect precedes tense and the latter has been derived from the former. At least from the historical point of view, Aspect seems to be more underlying than Tense. But from the semantic viewpoint, Aspect stands on a different dimension than Tense. Tense is concerned with the historical order of events relative to the time point of speech, but Aspect is not. It is confined within the process of an event and determines how an event occurs and is going on, namely, it begins, continues, finishes, and so on, but it is not concerned within other events which a speech mentions eventually. In some languages, the grammatical forms for Aspect are derived from verbs, but in some others it is represented with affixes attached to verbs. And there are languages, too, which represent both categories with the same form under different syntactic conditions, e.g. Mandarin Chinese *le*. Aspect is not necessarily supported by formal devices, it is definable merely by means of its semantic functions.

Languages represent things and events. Suppose that every language has verbs, then this category represents events, though the contrary is not true, for events are not always represented by verbs. Suppose again that the meaning of verbs corresponds to the verbally represented events substantially, then verbs have to represent various types of events. They represent events like a human act, a natural phenomenon, or the state and/or quality of things etc. So, the verb meanings can be classified according to the sorts of events so far as they are reflected in them in substance. We call these feature of verb meanings the aktionsarten or LA of verbs. However, most languages do not formally mark these types of the semantic classification of verbs in grammatical forms. But this does not say that languages have absolutely no formal support to indicate LA. On the contrary, in many languages, the differences of LA are indicated with affixes, and in the other it is implied indirectly by some morphological and syntactic restrictions on the possible concatenation of morphemes. In such cases, we can describe the LA by means of the morphosyntactic conditions.

Time expressions of languages represent events. Time Indicators (1a) indicates events themselves or when or how they occur. Tense (1b) combines events with the time point of speech and events each other. Aspect (1c) thematizes a certain phase of an event, and aktionsarten or LAs (1d) represent the processual types of events, if necessarily, with some other semantic feathers altogether.

For the appropriate description of time expressions, therefore, we have to show first what types of events do occur and how do they occur, too. For that purpose, it is reasonable to make use of a strong logical model for event types. We utilize the following model which was first developed in Stuttgart 1970's.

(2) Model for LA and Aspect

- a. An event occurs at a time t_1 and continues for a time being T and ends at a time t_2 .
- b. An event presupposes a situation before the occurrence of it and entails another situation after the end of it.
- c. An event is, therefore, the chain of three situations: presupposed situation (presit) - verbally represented situation (verbsit, abridged as sit) - entailed situation (postsit).
- d. Every situation touches densely with one another either with an open (*) or with a closed time interval (#). The closed interval belongs to the verbally represented situation and the open interval to the other situation.

Formally:

$$e: \exists t_1, t_2, T (t_1 \$ T \$ t_2) [\text{presit} \$ \vdash(T) \text{sit} \$ \text{postsit}]$$

where $\$ = \{ =, <, >, \leq, \geq \}$

Verbally:

- f. There are times t_1, t_2, T , such that: $t_1 \$ T \$ t_2$, for them the relation is applied:
[presit $\$$ sit occurs at T $\$$ postsit]

The relative order of events is also described by means of the following model:

(3) Model for Tense

Two events e_1 and e_2 are ordered such that

$$\exists t_1, t_2 [\vdash(t_1) e_1 \$ \vdash(t_2) e_2]$$

where $\$ = \{ =, <, >, \leq, \geq \}$

2. Time Expressions of the Language Nivkh

2.1. Types of Time Expression of Nivkh; an Outline

The time expressions of the language Nivkh have been hitherto investigated merely partially. We have some partial grammatical descriptions on verbal aspects and tense. Needless to say, such questions like what kinds of types Nivkh verbs have and how their types interact each other have not been even asked. We have to start, therefore, from getting an image what types of time

expressions the language Nivkh have. We will first collect some of time indicators from texts and field datas, and the grammatical devices for time indications from the grammatical descriptions hitherto made by Russian and Japanese grammarians in the last century. About tense and aspect of verbal expressions, we have relatively sufficient data to begin discussion. But about the lexical aspect of verbs we have only scanty descriptions. Panfilov 1965 mentioned about *protekaniya deistvia* (aktionsarten) of verb, but he seems to understand this notion not as an independent grammatical category, but he does not clearly distinguish it from morphological aspects. It was Galina Oaina who attempted to investigate this category for the first time. However, she restricted her grammatical description only to the so-called quality verbs (*kacestvennye glagoly*). Had she been able to work longer, she could have surely contributed more than her teacher (Panfilov) to her own native language.

Now, we will first sketch the types of time expressions of Nivkh.

I. Time Indicators

Nivkh has many types of Time Indicators which represent when and how a event occurs, e.g.

(4) Time Indicators of Nivkh

- a. [time adverbs]: *pət* (tomorrow), *naʃ* (now), *tʰək* (long tome)
- b. [nouns]: *tʰət* (morning), *parv* (evening), *urk* (night), *ku* (day and night)
- c. [verb phrases]: *nana ozdʰ* (just getting up), *anʰ malgodʰ* (many years)
- d. [compound words]: *tʰət-tʰət* (every day), *ləz anʰ* (last year), *tʰof tolf* (last summer), *nana ozdʰ* (just after getting up)

(from Puxta 1995/2003 (PU in the following), III-17, 4001- 4061)

II. Tense forms

Nivkh has been hitherto thought to have two Tense forms: non-marked finite form (aorist), i.e. - ϕ and the future form with the suffix *-nə-* which indicates the future occurrence of an event. Without this morpheme, verb forms are used for all the other occurrences of events, namely, for events in present as well as in past time. But the unmarked form can also represent a future event, if it is a matter of course that the event occurs in the future. The suffix *-nə-* is used, namely, mainly in a marked case if an event prescribed to occur in a future time. Compare the following sentences:

(5) Examples for Tense

- a. *nʰnanak* *pʰal dʰu-nə-dʰ-ra*, *ni pʰal latʰsku guku-nə-dʰ-ra*. (PU408)
myelder sister floor wet-FUT-FIN-AF I floor mat clean-FUT-FIN-AF
My elder sister wet the floor and I clean the floor mat.

b. *pitou urud^l smod^hyu bak p^hrəu urd^hyura* (PU516)

book-PL well love-PL only learn well-PL-AF

Whoever loves books well, they only learn well.

III Aspect forms

Panfilov 1965 (PA65, § 38 - § 44) distinguishes the following 4 types of morphological aspect forms:

(6) Aspect forms by Panfilov

(i) *-yət-/-kər- /-yər-* for conclusive, perfect or resultative aspect (abridged: CON) (Amur-Dialect, its corresponding Sakhalin-Dialect form: *-yar-/-xar-*), e.g.

a. *caj ərk muz -yət-t^l* (PA70)

Tea already become=cool-CON-FIN

Tea is already become cool.

b. *n^həŋ ər^htəər^htə mod^hra: cəŋ əyrəkən mu-yət-t^l*

we always grieved: you long-time-ago die-CON-FIN

We always grieved that you had died long time ago.

(ii) *-ivu-/-ivi-* for stative or durative aspect (abridged: DUR), e.g.

c. *coŋəŋər virot əyr p^hrə-ivu-d^l* (PA76)

fishing go-PART soon come-back-DUR-FIN

Having gone fishing, (he) was soon coming back.

(iii) affixation of *-t^hu-* or duplication of verb stem for iterative aspect (abridged: ITER), e.g.

d. *jurud^l* (read) vs. *juru-t^hu-d^l* (read many times)

əəqou-d^l (wash something) vs. *cəqou-t^hu-d^l* (do washing) (PA73)

e. *hə macala ŋəcki ŋəqrŋəqr t^hməŋan hə qan ŋəŋŋəŋ somrur*

this young-man mountain-top one-by-one step-over-PART this dog one-by-one let-off

huŋd^l-huŋd^l-d^l (PA73)

leave-behind-leave-behind-FIN

The young man, stepping over the mountain tops one-by-one, left a dog behind one-by-one.

(iv) affixation of *-xə*, duplication of verb stem, adverbial participle ending *-t*, *-r* and syntactic concatenation with *had^h* (exist) for conventional/habitual aspect (abridged: HAB), e.g.

f. *hə nivx q^hotr ləu-xə-d^h* (PA75)

this man bear hunt-HAB-FIN

He hunts bears.

g. *paluin has vxt^l-vaxt^l əgd^h* (PA75)

forest-in cloth tear-tear quick

In the forest clothes are raged quickly.

h. *n^əəm təfku t^hirkir lət^had^l-yu* (PA75)

we-by house-PL tree-with make-exist-FIN-PL (*lət^had^l < lətt^h + had^l*)

By us houses are made with log.

As for the function of aspectual morphemes, Gruzdeva 1998 (Ch.3.4.1.) mentioned that "aspect markers transform the original meaning of verbs", in the sense, that they play an additional semantic role to change the inherent lexical meaning of verbs into a complex time representation. To take an example of the morpheme *-xə*, the event represented by the inherent meaning of a verb V_i is changed into a conventional/habitual process, i.e. the event of the V_i into a conventional/habitual occurrence. Here remain yet some crucial problems, it is not clear how the inherent meaning of verbs "interacts" (in the sense of Gruzdeva) with aspectual markers, what conditions underlie the interaction, how they are related with other aspectual complexes and other relevant questions. In order to answer these questions, we have first to extract the relevant part of the inherent lexical meanings of verbs which goes into the interaction with aspect forms, and distinguish it from the substantially cognitive part of them which does not go into the merging process. Let us call the former the processual meaning and the latter the cognitive meaning of verbs. The former is LA of verbs and the latter the individual meaning of them. The distinction is well motivated because the former parts make types and the latter, on the contrary, language-particular lexical notions. However, we do not yet know exactly how many and what kinds of types of the inherent processual meaning Nivkh verbs have and how they interact with what aspect forms. We have to build up descriptions little by little. (Cf.: Kaneko 1995, new edition 2003 (in CD-form available) as a descriptive model)

IV Lexical Aspect of Verbs

The typology of LA of Nivkh verbs has not yet been seriously investigated. Panfilov 1965 mentions the lexical "protekanie dejstvia" of verbs in many places, especially in relation to its possible change when aspect forms are attached to them. He seems to understand "aspect" (vid) as the complex notions as follows (#39ff.):

(7) Panfilov's Notion of Aspect

- a. Aspect is the representation of the temporal and local features of process ("protekanie dejstvia") which verbs express as their inherent meaning.
- b. Aspect is "the grammatical category of non-syntactic word change". It is manifested

as the opposition of lexical units or verbal forms which are changed by means of some morphological procedures.

- c. Nivkh has 4 aspect forms: conclusive, iterative, conventional/habitual or durative aspect.
- d. Almost all verbs are aspectually neutral without any (morphological) aspect marker.
- e. But there are some pairs of verbs which have inherently with an aspectual opposition, e.g. *qmadʹ* (run) versus *kʰimmʹ* (run away), *janʰ/jajmadʹ* (look at) versus *indədʹ* (see).

As far as we can judge from (7) above, Panfilov 1965 understands the notion of aspect as such possible semantic oppositions in a certain temporal/processual meaning which are found between cognitively synonymous pairs of verbs. He does not assume that the inherent meaning of a word necessarily contains a certain temporal feature which determines the processual type of events it represents, even in case it does not make any aspectual opposition with another verb. In other words, he does not think of LA, i.e. an aktionsart in the inherent meaning of verbs. His understanding of "aspect (vid)" has, therefore, twofold fatal shortcomings: first, he overlooked the fact that every verb represents its own processual/temporal (eventually local) feature ("protekanie dejstvia") of events (see (7a)). Second, he trivializes the grammatical category of aspect into the lexical opposition among cognitively synonymous verb pairs. He assumes that the aspectual meaning of verbs can be represented only if the aspectual opposition is actualized overtly as a lexical pair. This idea of him goes back to the traditional linguistic description of Slavic grammarians who assert that the lexical meaning of (some classes of) verbs make an aspectual opposition (like perfective versus imperfective) within the lexical system of a (slavic) language. He was, too, infected by the "national" prejudice to look at Paleoasiatic languages from the traditional Slavic viewpoint.

2.2. Quality Verbs of Otaina (1978)

Galina Otaina attempted to show the semantic classification of Nivkh verbs. Clearly, she did not intend to mention the whole classes of Nivkh verbs, but confined only to the lexico-semantic class of verbs which she calls quality verbs (*kacestvennye glagoly*). She distinguished them from all the other non-quality ones. The latter classes is practically a gathering of various verbs which do not represent quality. She thinks of the following types of non-quality verbs (GO13):

(8) Otaina's Types of Quality Verbs

- a. verbs representing various actions, e.g. *nyzdʹ* (throw), *jazdʹ* (bite), *ɲattʹ* (measure),
- b. verbs representing states, e.g. *qʰodʹ* (sleep), *qodʹ* (hurt), *hurtʰivdʹ* (sit),
- c. verbs representing natural phenomena, e.g. *tidʹ* (thunder), *kydʹ* (fall (rain/snow)), *qʰadʹ* (retreat (water)).

All the other types of verbs are, according to her, the class of her quality verbs, which has three main semantic subclasses (GO 17-22):

(9) Otaina's Classification of Quality Verbs

- a. expressions for human features with two subgroups
 - a1: terms for physical features, e.g. *on^hvild^ʃ* (tall), *həjmd^ʃ* (old), *pizvurd^ʃ* (pretty)
 - a2: terms for modal and mental features, e.g. *q^hyzɲard^ʃ* (happy), *urd^ʃ* (good);
qannald^ʃ (unscrupulous), *osqavild^ʃ* (coward)
- b. expressions for material features with four subgroups
 - b1. color terms, e.g. *vəlvələd^ʃ* (black), *q^honud^ʃ* (white), *paylad^ʃ* (red)
 - b2. terms for size and forms, e.g. *verd^ʃ* (broad), *ɲalad^ʃ* (equal), *uld^ʃ* (high)
 - b3. other physical feature of things, e.g. *q^havud^ʃ* (hot), *meqad^ʃ* (strong), *naud^ʃ* (sufficient)
 - b4. terms for quality of foods, e.g. *nenid^ʃ* (sweet), *hord^ʃ* (tasty), *perd^ʃ* (salty)
- c. expressions for various features of animals with two subgroups
 - c1. color terms for fur, e.g. *pə:rd^ʃ* (red), *ə:rd^ʃ* (black)
 - c2. other physical terms, e.g. *ɲard^ʃ* (fat), *vesqard^ʃ* (powerful)

She gives a detailed description about the syntactic behavior of the quality verbs. Some of the syntactic features she described are useful to distinguish them from the non-quality verbs. We will here only summarize the relevant features of quality verbs:

(10) Morphosyntactic Features of Quality Verbs of Otaina

- a. Quality verbs have no imperative mood. They can combine neither with *-ja* for 2nd person singular, nor *-ee* for 2nd person plural. (GO83/84)
She mentions two exceptional usages:
 - (1) In some prohibitional usage, they can be affixed with *-ja* and *-ee*,
e.g. *t^ha həm-ja* (don't be old, *t^ha:* morpheme for prohibition), *t^ha um-ja* (don't be angry)
 - (2) The optative usage in 3rd person is possible:
e.g. *k^he pil-ɣəzo* (The net may be big, *ɣəzo:* optative suffix)
- b. Non-quality verbs in future form with suffix *-nə* have always "purely temporal meaning", but quality verbs are ambiguous, in the sense that they can have temporal and modal meaning, (GO67-69),
e.g. for non-quality verbs: *əmək k^hɜz-nə-d^ʃ* (Father will set nets.)
for quality verbs: *təf pil-nə-d^ʃ*: ((1) The house is going to be big.
(2) The house may be big.)

She mentions the aspectual behavior of quality verbs (#45-52) as follows,

- (a) With the aspect form *-yəta*, they mean that the inherent meaning is preserved. She calls this aspect *sokhranenie dejstvija* (preservation of situation). We mark this meaning with PSV.
- (b) With the auxiliary verb *hadʹ*, they mean a conventional/habitual occurrence of event. (*obychnostʹ dejstvija*) Note that the conventional/habitual aspect form *-xə* cannot be attached to quality verbs. We mark this meaning with HAB.
- (c) With the durative aspect form *have -ivu/-ivi*, they mean that the state comes about. (*stanovlenie dejstvija*). We mark this meaning with CAB(=COME-ABOUT)

To illustrate these combinations, she shows the following examples:

(11) Otaina's Aspect Types of Quality Verbs

a. preservation of quality:

co loqr-yəta -dʹ
fish frish-PRV-FIN
Fishes remain frish.

b. conventional/habitual events

tə əruχ ləχ ə:rti əʃkir^ha-dʹ (əʃkia-dʹ=əkirad^h+hadʹ)
this season weather always bad-HAB-FIN
In this season, the weather is always bad.

NB. She remarks that the iterative form with *-xə* is not possible for quality verbs and emphasizes that quality verbs are only possible to represent habitual acts with *hadʹ* and in the adverbial forms *-t/-r*, e.g. Marked by EMPH.

tɪlf cəχ mərke veur^hadʹ (> veu-r^h+hadʹ)
autumn water high deep-EMPH-FIN
In autumn water will be high and deep.

c. coming about of quality:

ləyigma ərk tarʒə-jvu -dʹ
dried salmon already dry-CAB-FIN
Salmon is already becoming dry.

Note that she asserts that quality verbs have different sort of combinational aspects from non-

quality verbs. The difference lies in four points:

- (i) They have neither conclusive/resultative (*zakoncennyj*) nor iterative (*mnogokratkij*) aspect, instead they have preservative (*sokhranenie*) and inchoative (*stanovlenie*) aspect.
- (ii) They make no conventional/habitual aspect with the suffix *-xə*, but they are possible to represent this aspect meaning with a construction: [adverbial form *-t/-r*, *-ŋan + hadʲ*].
- (iii) They make preservative form when they are combined with the aspectual form *-yəta*.
- (iv) The suffix *-iv(i)/-iv(u)* makes an inchoative aspect, though the same form makes a durative aspect with non-quality verbs.

In order to examine the interrelation of aspect forms and different verb classes, let us compare their different behavior of quality and non-quality verbs when they are connected with different aspect forms:

(12) Aspect Markers of Quality and Non-quality Verbs

	<i>aspect markers</i>	<i>quality verbs</i>	<i>non-quality verbs</i>
1*	<i>-yəta</i>	preservative	----
2**	<i>-yət</i>	----	conclusive/resultative
3	<i>-iv(i)/-iv(u)</i>	inchoative	durative
4	reduplication	----	iterative
	<i>-tʰu</i> **	----	iterative
5	<i>-xə</i>	----	conventional/habitual
	<i>+hadʲ</i>	conventional/habitual	conventional/habitual
	reduplication	conventional/habitual	conventional/habitual

*: Panfilov 1965 and **: Otaina 1975 do not mention these forms, respectively.

Let us pick up some relevant points in the table. First, Otaina did not mention Panfilov's aspect marker *-yət*. She dealt with the suffix *-yəta* exclusively, even without saying if this suffix has something to do with the conclusive *-yət*. Interesting is that Panfilov 1965, on the other hand, did not mention Otiana's marker *-yəta*, too. It is more interesting to find two examples he cited (PA72) which show quality verbs are suffixed by *-yət* (PA72).

(13) *-yət* to Quality Verbs (Panfilov's examples)

- a. *Tuʒ-yət caj amra qavrɔʲ.*
cold-become tea taste bad(?) [*qavrɔʲ = əkidʲ?*]
Cool tea has not good taste.
- b. *ur-yət-tʲ*
good-become [composita]

recover

So far, it is not yet clear to me whether Otaina's *-yəta* has something to do with Panfilov's *-yət*. At the moment, we let the problem open.

Second, Otaina's aspect markers *-iv(i)/-iv(u)* is mentioned by Panfilov 1965, too. But he says that it has different aspectual meaning, namely DURativation. This implies that this form brings about different meanings according as it are attached to different classes of verbs, quality and non-quality verbs. Here we have practically two questions. (i) We have to ask whether this aspect marker has a constant function, no matter if it is suffixed to different classes of verbs. If yes, the difference of aspect meaning is not due to the function of the suffixes, but it has to be ascribed to the meaning of the verb classes; if it is affixed to non-quality verbs, it represents CONclusive aspect, but if to non-quality verbs, ComingABout of the quality. Therefore, we have to ascribe this meaning difference to the interaction of the aspect marker and the different semantic feature of verb classes. I like this view and assume that the aspect form has only one meaning, which realizes the different meaning according to the verb class which precede it. Instead, if we do not stand on this viewpoint, we will go wrong into a "theory" that aspect markers themselves had various meanings, i.e. that they are ambiguous or homonymous, just like some Japanese grammarian who assert that *-te iru* is homonymous.

(ii) The second question is concerned with the morphological status of the aspect markers. We will formulate it simply: are they suffixes or verb stems? For example, if (13b) *ur-yət-t'* can be analyzed as [quality verb + aspect form + finite suffix], does the finite suffix *-t'* belong to quality verbs discontinuously or to the aspect form? If it belongs to the aspect form, it has to be interpreted as verb, on the contrary, if to the quality verb, the aspect form *-yət* only a suffix without verbal character. In general, if aspect forms are suffixes, the marker *-d'* belongs to the foregoing verb stems. The difference can be illustrated as follows:

(13) Morphological Status of Aspect Marker

- a. [V1(stem) + [V2(aspect marker) + *-d'*(finite marker)]_v]_v = aspectual complex verb
- b. [V1(stem) + [SUF(aspect marker)] + *-d'*(finite marker)]_v = aspectually suffixed verb

If (13a) is a correct analysis, aspect markers are themselves verb stems. Then, Nivkh has the concatenation of verb stems to construct verb complexes which ends with a finite marker at the end of them, just like in Japanese *-rare*, *-sase* and some other forms. We find also more analogies in this connection: the markers for conventional/habitual aspects *-xə*, *-t/-r* and *+had'* (11-5) above are parallel in a morphological view point to Japanese stem-concatenations, *te*-forms and adverbial form (ren-yookei) + independent verbs. This problem of the morphematic status of *-d'* is also related to an

another relevant issue about the morpheme concatenation which Krejnovich 1958 mentioned. The finite marker can be exchanged with a noun to make a free, i.e. non-bound, form in itself, which can make with other forms further compound nominals. Here, we find again a parallel phenomenon both in nominal and verbal spheres. The analysis (13a) is, therefore, well motivated. Namely, if this is true, we can conclude that the aspect markers are verbs themselves, just like in Japanese.

Third, it is not difficult to imagine that quality verbs have no iterative aspect in straight-forward way. And the conventional/habitual aspect is restricted to reduplication and the verb complex with +*hadʹ*, but the simple suffixation of -*xə* is excluded. The description of Panfilov 1965 appears to regard this morpheme as the inherent means to make a conventional/habitual aspect. The examples he cites are sentences with non-quality verbs like *və-xə-dʹ* (fight(dogs)), *lət-xə* (making), *vivi-xə-dʹ* (walk/go), which represent animate actions. This morpheme is perhaps the formal means to represent a habitual action. The dictionaries now available contain neither this particle nor its possible derivation. It needs a further investigation.

2.3. Lexical Aspect of Nivkh Quality Verbs

Otaina's analysis of quality verbs has brought about the crucial problems for lexical aspect of Nivkh verbs. As the table (12) shows, the aspect marker *-iv(i)/-iv(u)* make different aspectual meanings according as they are suffixed to quality and non-quality verbs. We ascribe this meaning difference not to the possible homonymity of the aspect marker, but to the concatenation type, i.e. to the inherent meaning difference of the verbs which precede the aspect marker.

Now, if we presuppose that the meaning of the aspect marker is constant, we have to ask first what it does mean. Look at some relevant examples from Panfilov 1965 (§ 40 and § 43) in case of the concatenation with non-quality verbs:

(14) Non-quality Verbs + *-iv(i)/-iv(u)* (Panfilov's examples)

a. *caj qʰavu-ivi -dʹ* (vs. *caj qʰavudʹ*)

tea boil -DUR-FIN

Tea is boiling. (vs. "tea boiled")

b. *hoqot əxt vidʹ yu. imŋ matqamatqa dʹi:r vəjrox vit qʰojnə-dʹ yu.*

then home go-FIN. they thick-thick tree under-to go-t(PART) sleep-together-FIN-PL.

Then they went home. They, going under a thick tree, slept together.

ŋaŋəŋ-ŋivŋ-gu pʰrə -ivi-dʹ yu imŋ mə-dʹ yu.

hunter-man-PL come back -DUR -PL they hear-FIN-PL.

The hunters are coming back, they heard.

c. *ŋi mu lət-iv(u) n'ivx nr^hə-d'*
 1PS ship make-DUR man look-FIN
 I saw a ship making man.

d. *pila n'ivx məy-r^h por-d' t^huyr t^hoʒ -yət -ivi -d' jə ha -d'*
 old man come-down-PART lie-FIN. fire go-out-CON-DUR-FIN warm-be-FIN.
 The old man came down and lay. Fire has been going out and was warm.

From these examples, it is obvious that the aspect marker *-ivi/iv(u)* indicates the going progress of an action (14c), a movement (14b) or a process (14a). The example (14d) shows that the marker can be combined with another aspect marker *-yət* (for conclusive/resultative aspect) and represents the resultative state after the process of the beforegoing verb finished, namely the resultative state in progress.

Panfilov 1965 does not mention the concatenation with quality verbs. But he notices that punctual verbs like *əspɪ'* (sting, stick) and the inherent durative verbs like *k^həmələd'* (think) can not be suffixed by this aspect marker.

As far as we have seen in the examples above, we can conclude that the aspect marker *-ivi/iv(u)* indicates no more than the durative progress of a process represented by the preceding verb. Now, we compare some relevant examples of quality verbs (GO 1978) with Panfilov's examples above.

(15) Quality Verbs *+iv(i)/-iv(u)* (Otaina's examples)

a. *mer əri p^hakefake ŋəʒ -jvu -d'*
 our river more-and-more(?) shallow-INCH-FIN
 Our river became shallower and shallower.

b. *if p^h-nanakək tob-jvu-d'*
 he self-elder-sister old-INCH-FIN
 He became elder than his sister.

c. *nin nin p^hu -t vi -ke, mer dəf hoŋya-jvu -d'*
 one one go-out-PART go-CONJ(=after), our house vacant-INCH-FIN.
 After (they) have gone out one by one, our house became vacant.

d. *if pil-jvo comsomy-jvu-d'*
 he big-CONJ(then), quiet-INCH-FIN.

If he grows, (then) he will become quiete.

The examples (15a and b) are straight-forward. As the finite marker $-d'$ marks the time preceding the speech time, the quality represented by the verbs have already come into existence when the sentence uttered. This time relation corresponds to Otaina's interpretation that this aspect form marks the time of coming about of the quality. In the examples (15c and d), the adverbial phrases preceding the aspect forms (marked with CONJ) indicate the time when the quality comes about. In (15d), the time is not set in aorist, because the adverbial phrase indicates the time when the condition is satisfied, namely, when the mentioned time (when he grows up) comes about. In any case, Otaina's interpretation is justified.

Now, assume that the time indicated by $-d'$ or the adverbial phrase in the sentences (15) is symbolized by a certain time interval $\exists t$, we can say that the quality Q is established in the time t. In the sentences (15a,b and c), the time t precedes the speech time t_0 because of the finite marker $-d'$. But in (15d), the relative order of the time t and the speech time t_0 is in reverse order because of the conditional clause which indicates the time when the situation Q comes about.

(16) Coming About (stanovlenie) of the Situation

- a. $\exists t (t \leq t_0) \vdash (t) Q$ for (15a,b and c)
 - b. $\exists t (t_0 \leq t) \vdash (t) Q$ for (15d, because of the subordinate clause)
- where t_0 : speech time

The formulation (16) says that in unmarked cases like (16a), the quality Q comes about at t which precedes the speech point.

Now, we will think about again what quality verbs mean in a non-aspectual usage. First, we will look back the finite sentences with so-called aorist tense- d' , e.g.

(17) Non-quality Verbs with $-d'$

- a. *nəx k^hrəu-d' ərq ur-d'* (GO22)
today rest ? good-FIN ($\text{ərq} < \text{ərq}t' = \text{press?}$, Otaina's Russian translation: *бм*)
Today may be good to rest.
- b. *if ərk ur-d'*
he already good-FIN
He is already well.
- c. *tə əri co ram-d'* (GO32)
this river fish many-FIN
This river has many fish.

d. *əyrkon/t^hof tə əri co ram-dʲ* (test sentence)

formerly this river fish many-FIN

Formerly, this river had many fish.

The sentences (17b and c) represent the situations "to be well" and "to be many", respectively. These situations include the speech time and the indefinite time interval preceding the speech time. This case is regarded as the normal representation of aorist. The sentence (17a) includes the time adverb "today", so that the represented situation includes the speech time. The modal word *ərq* (Russian *бы*) shows the speaker's feeling that the present situation goes on for a time being. The test sentence (17d) contains the time adverb *əyrkon/t^hof* (some time ago/in the old time), so that it can imply that fishes are now not so many as before, i.e. the described situation is not true at the speech time. My indigenous friend (Galina Demjanovna Lok) told me that the sentence is good in this meaning. So, we assume that the aorist can indicate the time interval which precedes the speech time. Therefore, we can formulate the aorist time relation as follows:

(18) Aorist Time of Non-quality Verbs

$\exists t (t \subset t_0 / t < t_0) \vdash (t) Q$ (or abridged: $\exists t (t \leq t_0) \vdash (t) Q$)

As Otaina 1978 asserts, the future tensed sentence of quality verbs are ambiguous: they have a future or a modal meaning. Looking back at her examples (10b) and some more examples:

(19) Non-quality Verbs in Future Tense

a. *if p^həmək jalagur k^hə -nə -dʲ* (GO68)

she own-mother resembling skillful-FUT-FIN

She will be skillful like her mother.

b. *tə q^hotrnonq-xu ərk əgut pil-nə-dʲ* (ibid.)

this bear-babies already rapid big-FUT-FIN

These bear-babies will be already rapidly big.

c. *tə an^jvelso pav -nə -dʲ -ra* (ibid.)

this year salmon prohibit-FUT-FIN-EMPH

This year salmon are prohibited to take.

d. *ətik p^hi ye bos nok-nə-dʲ xə-dʲ* (ibid.)

grandmother self buy cloth narrow-FUT-FIN think-FIN

Grandmother thought that cloth she for her self bought would be narrow.

The sentences (19a,b and c) show that the qualities concerned will come about in the time indicated

or implied by the time indicators. The complex sentence (19d) is an interesting example. Here, the future form of quality verb *nok-nə-dʹ* is subordinated by the matrix verb *xə-dʹ* (think/thought). According to Otaina (GO68), the embedded quality verb means that the quality comes about after the time represented by the matrix verb. Namely, the time when the cloth is narrow stands after or at least equal to the time she thought because of the future morpheme *-nə*: $xə-dʹ \leq t_0 \leq nok-nə-dʹ$.

As the modal usage of *-nə* indicates, needless to say, that the quality represented by the verb will come about after the speech time, quality verbs with the future suffix represent in any case that the quality comes about in the time after the speech time. Therefore, it is true that

(20) Time of Quality Verbs with *-nə*

$$\exists t (t_0 < t) \vdash (t) Q$$

Suppose that the lexical aspect of quality verbs Q is formulated as "\$...DUR...\$", because, first, it has a long situation, therefore "...DUR..." (We mark the internal duration of LA as small "DUR", too. The marking corresponds to the aspectual duration DUR because we assume that the latter is derived from DUR of LA). Second, we leave so far the beginning and the final frame not yet defined and write it as \$...\$. Third, as the situation comes about at a time t, the situation of quality verbs Q is surrounded by the speech time t₀.

(21) Time Relation of Nivkh Quality Verbs

a. concatenation types	b. time relations	c. t ₀ -position around situation Q
I. with aspect form <i>-ivu/-ivi</i>	$\exists t (t \neq t_0) \vdash (t) Q$	$t_0 ? \overline{Q\$DUR\$}$
II. in finite form <i>-dʹ</i>	$\exists t \vdash (t) Q$	$(t_0 <) \overline{Q\$DUR\$} \leq t_0$
III. in future form with <i>-nə</i>	$\exists t (t_0 < t) \vdash (t) Q$	$t_0 < \overline{Q\$DUR\$}$

Now, we have to ask how it looks like such a situation which comes about satisfying the conditions in (21). It has to be able to come about before as well as after the speech time, and at the same time the speech time can be included in it. It has to be nothing than an event whose situation is open both to past and to present. Such a situation can be formulated as

(22) LA of Nivkh Quality Verbs

$$Q = \text{situation of the form: } *...DUR...*$$

Otaina's quality verbs represent such an event whose processual feature is characterized as the situation of this type. The table (21) shows that it realizes the different time meanings according as it is combined with three different morphemes in (21a,b and c). We conclude that the language Nivkh has verbs with the situation type **...DUR...**, just as Japanese, but they have the language particular

morphosyntactic behavior as the table shows.

2.4. Lexical Aspect of Non-quality Verbs

Now, let us go back to the Panfilov's examples (14) which all contain the aspect marker *-iv(i)/-iv(u)*. We pick up the verb forms in order to see how they are concatenated and what temporal meaning they have:

(23) Meaning Types of Non-quality Verbs with *-iv(i)/-iv(u)*

	verb complex	analysis	meaning types
14a.	<i>q^havv-i-vi-dʹ</i>	boil-DUR-FIN	natural process in progress
14b.	<i>p^hrə-iv-i-dʹ yu</i>	come-back-DUR-FIN-PL	completed act in progress
14c.	<i>lətivv-</i>	make-DUR-	effective act in progress
14d	<i>t^hoʒ-yət-iv-i-dʹ</i>	go-out-CON-DUR-FIN	completed process and its result

He interpreted that this aspect form makes continuous process of the head verbs and called it as "vid prodoldzennogo dejstvija" in the sense of continuous aspect in English (p.76). However, it is not correct enough to regard the verb complexes above simply as durativization as a whole. Every example has its special problem. Even the first example with the intransitive verb *q^havv-* is not at all easy to interpret. *q^havv-* is a transitive verb and has the intransitive counterpart *q^hav-*, which is a quality verb with the meaning "to be hot". It has a phonological variant *χavv-dʹ* which is translated into Russian perfective verb *нагреть* (make hot) by Panfilov himself. He translated "*čaj q^havudʹ*" into "*чай нагрет*". It is not clear whether he showed an imperfective sentence or only one suitable sample of a perfective transitive usage. But he translated the sentence with the aspect marker *-iv* (14a) with *q^havv-i-vi-dʹ* into "*чай нагревается*", namely, in imperfective passive sentence. The question is, whether the original *q^havv-* is perfective in the meaning "to make something hot". If yes, the sentence (14a) has to be interpreted as "the tea has made hot and is now (yet) hot", namely perfective and resultative; Therefore, the sentence represents the resultative state.

The verb of the second sentence *p^hrə-iv-i-dʹ* is translated into imperfective "*подходят*" by Panfilov because of the durative marker. But the original verb *p^hrə-dʹ* is clearly perfective according to any lexicon available to me; it is translated into "*привьти*" or the analogous words. The sentence (14b) is complex, the verb concerned is embedded as the object sentence of *имη mədʹyu* (they heard). As the Nivkh has no grammatical means of *consecutio temporum*, the tense of the matrix and embedded sentences are the same, namely aorist *-dʹ*. But it is not clear whether the embedded verb *t^hoʒ-yət-iv-i-dʹ* has to be interpreted as "they have come back and are yet coming back" or simply as "they have been coming back". Preferable is here the former interpretation. Then, here again, the verb complex means perfective and durative, or better to say, progressive activity and its process.

The example (14c) is the adnominal usage of the verb *ləttʰ* (make (up), Russian: *делать, производить*). It represents an effective human act, i.e. it belongs to the so-called accomplishment verbs according to Vendler 1967 and Dowty 1979. With the durative marker *-ivi/-ivu*, the act is described as in progress. Here we have the typical case of a progressive description of a human act.

The example (14d) includes a verb complex of two kinds of aspect forms *tʰoʒ-γət-ivi*, namely, head verb+CON+DUR. The verb *tʰoʒ-* appears in some lexicons in the form *tʰəʒ-* with the same meaning: "go off, go out". The verb complex can be interpreted as "the fire has gone out and was warm" or "the fire has been going out and was warm". Both interpretations may be possible. But perhaps the former is preferable. Then, the complex has the temporal meaning like perfective and resultative state.

As we have seen above, the aspect form *-ivi/-ivu* does not always produce the same durative meaning, but it differs according to the LA of the verbs which precede it. This is easy to understand if we compare (14b) and (14c). Let us think about the example (14c), the sentence refers to an event that at the time *t* the speaker saw a man making a ship for the time being *T*. The time *T* includes the event time *t*, and the event was reported at the speech time *t0*. Therefore, the durative meaning comes about from the time relation $t \in T$ and the tense is established by the time relation $t < t0$. In this sentence, *-ivi/-ivu* makes up the long interval *T* out of the verb *ləttʰ*. This is only possible if the verb has a durative situation inherently. So, this verb must have a LA like $\# \dots \text{dur} \dots \#$, where $\#$ indicates a closed frame. On the contrary, the verb complex of (14b) is inherently perfective *pʰrədʰ*. Though the verb is aorist finite *-dʰ*, the sentence does not mean that the hunters have already come back, but they were coming back when the village heard the news. The process of coming back is stretched out towards the time when they heard the news by means of *-ivi/-ivu* which represents a durative or, better to say, a progressive state. But if *pʰrədʰ* alone stands with the finite marker *-dʰ*, the sentence has to be interpreted as they have already come back. Let us mark the coming back process with a stretched time interval *T*, then *T* precedes the time when the village heard the news at *t*, and this *t* precedes the speech time *t0*, namely $T \leq t \leq t0$. Interesting is the relation between *pʰrədʰ* and *pʰrəividʰ*: if the latter stands instead the former in the same sentence, the sentence will be *ɲaɲənʰivɣu pʰrədʰ ɣu imŋ mədʰɣu* (hunters have come back, they heard). In that case, the time of perfective *pʰrədʰ ɣu* will stand after the progressive *pʰrəividʰ*, namely $t \leq t0$.

The similar time relation is observed in the sentence (14a). (*if* *caj qʰavudʰ* (he boiled the tea) $<$ *caj qʰavuividʰ* (tea is/was boiling) \leq *caj qʰavudʰ* (tea is boiled) \leq *caj qʰavdʰ* (tea is/was hot). In this case, the aorist *-dʰ* covers both the event and the speech time.

The time relation of the sentence (14d) is difficult to interpret as above mentioned. Crucial is the ambiguity whether the verb complex means the state of the completed process, namely the resultative state or the completing process. This problem will be settled if we think about the behavior of the aspect form *-γət* a little more precise in 2.5.

As far as we have seen above, we assume that Nivh non-quality verbs have at least the LA types in the table (24). The assumption is, of course, yet tentative, especially because we collected the words only from Panfilov's description on aspect forms *-ivi/ivu*. But important is to see that the table indicates what types of complex aspect meaning comes about when *-ivi/ivu* is attached to what types of LA. In other words, we can judge what LA the verb has if it represent a certain complex meaning type when it is concatenated with *-ivi/ivu*. This implies the aspect form can be utilized like a litmus paper to find out the LA of verbs, just as Japanese *-te iru* can be used to differentiate durative from resultative LA.

(24) LA types of Non-quality verbs

	head verb of the complex	meaning of verb complex	LA of head verbs
14a.	<i>q^havu (-ivi-d')</i> (boil)	is/was already boiling	#DUR*
14b.	<i>p^hra(-ivi-d^hyu)</i> (come)	had come/been coming back	#PUN(+dur)*RES
14c.	<i>lot(-ivu-)</i> (make)	(was) making	#DUR#EFF
14d.	<i>t^hoʒ(-yət-ivi-d')</i> (go-out)	already has gone out	#PUN*RES

Suppose that the Otaina's quality verbs make a LA type which represent a state of various subclasses, we symbolize it as *DUR* altogether. We can summarize the LA types of the Nivkh verbs as follows:

(25) Lexical Aspect Types of Nivkh -- first approach--

- (a) *DUR*: the open stative, the quality verbs according to Otaina,
- (b) #DUR*, verbs for natural process
- (c) #PUN (+dur)*RES, verbs for resultative punctual activity whose process can be durativized if the aspect form *ivi-* is affixed,
- (d) #DUR#EFF, verbs for a durative action which leaves a certain effect necessarily, i.e. the so-called accomplishment verbs,
- (e) #PUN*RES, punctual verbs for activity which leaves a result.

The examples, see (11), (14) and (24).

There are surely more LA-types of verbs. We will find them in the next sections in relation to the other spectral forms and their concatenation possibilities.

2. 5. The concatenation of non-quality verbs with the aspect forms *-yət* and others

In order to go farther to find out some more LA types of the Nivkh verbs, we will examine now some crucial examples of the aspect form *-yət* from Panfilov 1965.

(26) Sentence Examples with *-yət* (PA § 40, pp.69-73)

- a. *ɲaɲəɲɪvɣ-gu pʰrə -yət -kə təv lət -tʰ*
 hunter-PL come-CON-soon-after house make-FIN
 The hunters, soon after they have come, made a house.
- b. *mər ɲafq it -tʰ, nʰi tvi -nə -dox qʰauk-ra, nʰi sək cəɲ*
 our friend say-FIN "1PL finish-FUT-DIR. NEG-AF 1PL all you
kʰu-yət-nə-dʰ-ra."
 kill-CON-FUT-FIN-AF
 Our friend said, "I am not yet defeated. I will have killed you all."
- c. *imɲ pʰrə -ɲan am-yu hə bal laqv sək pər-yət-t hum-dʰ-ra.*
 3PL come-back when tiger-PL this mountain around all lie-CON-PART exist-FIN-AF
 When they came back, tigers were all lying around the mountain.
- d. *hoqoɲan hə ɲa kummʰ. kutra qʰau -yət -ra.*
 then this animal failed. failing become-nothing-CON-AF
 Then, this animal fell. Falling (it) has become nothing (died).
- e. *utku-ogla mu xoru-xoru-yət-tʰ.*
 woman-child ship rock-rock-CON-FIN
 The child (woman) has rocked the ship.
- f. *tə ɡins-yu morʰqat humga sək nʰəɲ nʰivx-gu kʰu-t*
 this devil-PL survive-PART exist-IF all our people-PL kill-PART
 If these devils remain surviving, they kill all our peoples will have eaten them.
inʰ-yət-nə-dʰ-yu-da.
 eat-CON-FUT-FIN-PL-AF
 (will have eaten)

The first sentence (25a) is straight-forward. The verb *pʰrə* (come) + *yət* means the perfective conclusion of the action of coming. This aspectual meaning is indicated by the particle *-kə* (soon after). The sentence (25b) is a remarkable example; the verb *kʰudʰ/xudʰ/iydʰ* (kill) has the future suffix *-nə*, which indicates that the event will be accomplished in the future. This says that the aspect form *-yət* is not dependent on tense and represents only the finish of an event. Panfilov interpretes this usage of the aspect form as the marker for coherent action toward the participants of the event. In his sense, the sentence means "I will have killed every one of you altogether." The verb complex of the sentence (25c) *pər-yət-t hum-dʰ-ra* (were lying) is worth thinking about a little more. The constituent verb *pordʰ* is translated in Russian *лежа* (< *лежать* = lie) by Panfilov. Note that this Russian verb is stative, which does not seem to be connected with a conclusive aspect. Panfilov interpretes that in this case, the aspect form *-yət* is used to indicate a collected action: "the tigers

were lying altogether". But the verb *por^d* seems to be an action verb inherently. For CT1970 writes that the verb is used to represent the action of human being or animals and cites the usages: *muinar por^d* (to lie from sickness), *k^har por^d* (to lie for a rest). If so, the verb complex has to be interpreted as that an animate action has been done and the result of the action remained (the result is indicated by *hum^d*). Then, *por^d* is an action verb with the resultative state in the meaning like *лeжa* (lying). So, Panfilov's translation is good, but the aspectual feature of the head verb is different from the Russian correspondence. The sentence (25d) is a very interesting example; the aspect form *-yət* is here attached to the negative verb *q^haud^d* which follows the affirmative finite verb *kutra* (fiel), resulting the meaning "fell and became nothing". Panfilov interpretes this case as intensive usage of the aspect form. The negative verb + the conclusive aspect form *q^hau-yət* has the meaning that the negative state "non-existence" has come about. Therefore, this complex means that from the process of the precedent verb *kudra* (fell) occurred and the state "exist nothing" has come about. In short, [*-yət* +stative] is resultative/conclusive here, too. Let us go to the sentence (25e). According to Panfilov, *-yət* in (25e) indicates the sudden stop of the event process the verb represents. Namely, the swinging of the ship has suddenly stopped. The aspect form *-yət* means here also the finish of the verb process which is a durative action represented by the duplicated verb stem. Panfilov interpretes the stop is made "suddenly". Perhaps he intended to show that the aspect form *-yət* points the situation directly after the finished action. Anyway, the sentence shows that a long process of action is concluded with neither result nor effect. The last sentence (25f) contains the combination of the aspect form *-yət* and the marked tense form *-nə*, namely *in^lyət-nə-d^lyu-da*. This form represents the conclusive action of eating which occurs in the future. This implies that the aspect form is independent from the tense, as is the case in many other languages.

As we have seen above, the conclusive aspect form *-yət* can be attached to various types of verbs and realizes different meanings. We summarize them as follows:

(27) Meaning types of *-yət*

	forms of V+ <i>yət</i>	V and represented situation	formerly
(25a)	<i>p^hra-yət-kə...</i>	<i>p^hra</i> -(come): concluded action with result	<i>p^hra</i> ≤ [t]
(25b)	<i>k^hu-yət-nəd^{ra}</i>	<i>k^hu</i> -(kill): concluded of action with effect	<i>k^hu</i> < [t]
(25c)	<i>por-yət-t hum^dra</i>	<i>por</i> -(lie): concluded action with result state	<i>por</i> - ≤ [t]
(25d)	<i>kutra q^hau-yət-ra</i>	<i>q^hau</i> -(no): coming about of a state	[t] □ <i>q^hau</i>
(25e)	<i>χouχou-yət-t'</i>	<i>χouχou</i> -(swing): concluded a long action	<i>χouχou</i> < [t]
(25f)	<i>in^lyət-nə-d^lyu-da</i>	<i>in^l</i> -(eat): concluded action without no effect (in the future)	<i>in^l</i> < [t]

From this table we can conclude that the aspect form *-yət* realizes five different meanings according to the LAs of the precedent verbs. We summarize as follows:

(28) LA of the verbs in (27)

time relation	examples	LA
V1 \leq [t] + result(state)	<i>p^hrə</i> -(25a), <i>por</i> -(25c)	#PUN(\pm DUR)*RES
V2 < [t] + effect	<i>k^hu</i> -(25b)	#PUN*EFF
V3 < [t] - effect	<i>ir^l</i> -(25f)	#DUR#
V4 < [t] + long action	<i>χouχou</i> -(25e)	#+DUR#
[t] \in V5	<i>q^hau</i> -(25d)	*DUR*

We have got here some new distinctive types of LA by means of the combination of the aspect form *-γα*.

Panfilov suggests some more criterions to find other LA. The aspect form *-t^hu* for iterative marking is not possible to be attached to quality verbs. He cites some lexical examples of non-quality verbs like *juru-t^hu-d^l* (read many times, read well) vs. *juru-d^l* (read). But this suffix is said to be unproductive, the other morphological means like reduplication are used for the purpose.

The conventional/habitual aspect marker *-xə* has a distinctive function for LA. This form can not be attached to quality verbs, so that it is used to distinguish them from non-quality verbs, as remarked by Otaina 1978, too.

The complex combinations of different aspect forms represent complicated time relation of events. The sentence (14d) shows the example in which the conclusive/resultative and the durative aspect forms are combined to yield a resultative state: *t^huy^r t^ho3 -γət -ivi -d^l* (the fire has gone out and the state remained). Let us take very complicated combinations:

(29) Complex aspect forms with different LA types (PA78)

- a. *n^hmək p^hrə -ba p^hovo sid^llu nə -γα -řad^l*
 my mother come=back-after own village soon do-CON-STATE
 Soon after my mother came back to the village, she was already working.
- b. *ci mangoħař ja:ř lax p^h -əřp -γα -ku -řad^l ja?*
 you be-strong-become why cloud self-cover-CON-CAUS-STATE-QUESTION
 If you become strong, why the black cloud will have been covering you?

These examples show that the resultative state of the head verbs is indicated with *-γα* and is stretched out by *-řad^l* = contaminated form of *-had^l* (exist). This complex form can be utilized to determine the resultativeness (RES) of non-quality verbs.

The next sections contain the following topics:

3. Tense and LA
4. Interaction of LA, Aspect and Tense

5. Remarkable Time Expressions in Nivkh

6. Tentative Conclusion on the Nivkh Time Expressions

Abbreviations and Symbols:

TI: Time Indicators

LA: Lexical Aspect (inherent in verbs)

∃t: There is a time t

e: an event

\$...\$: ambivalent (=undefined) frame of a LA, \$ is * or #

*...\$: to the right open frame

#...\$: to the right closed frame

┆ : establish, ┆ (t) e: a event is established at the time t.

AF: affirmative morpheme

EFF: effective situation (after an accomplished action)

FUT: future morpheme

FIN: finite morpheme

PL: plural morpheme

CAB: coming about (aspect for quality verbs)

CON: conclusion/resultativeness (represented by a morpheme or an aspect form)

CONJ: conjunction morpheme

CONV: conventional process/action

DUR: a durative process

+DUR: a long durative process

HAB: habitual process/action/...

INCH: inchoative aspect form

NEG: negation morpheme

PART: a particle for adverbial concatenation

PRV: preservation of quality

RES: resultative situation

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