

B. Elson, ed. 1986
Language in Global
Perspective, Dallas (TX): The SIU

THE DUALIZER AND PLURALIZERS IN THE ALUTOR VERB

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Spoken by about a thousand people in some remote villages of Northern Kamchatka, Alutor is a language of the Chukchee-Kamchatka stock; no monographic description of it has been made until now. For a few basic facts about Alutor see Mel'čuk-Savvina (1978), and for a formal model of Alutor conjugation see Mel'čuk (1973). Here I will be exclusively concerned with one particular problem of Alutor verb morphology: the use of a dualizer and several pluralizers. A dualizer, respectively pluralizer, is a morph that expresses the dual, respectively the plural, and appears in a finite verbal word-form to mark the number of its grammatical subject and/or direct object.

1. **The Dual and the Plural of the Subject and/or Object as Expressed in the Verb.** The following three points need to be stated as a basis for the subsequent presentation:

- (i) The Alutor noun and personal pronoun distinguish THREE grammatical numbers: singular (sg), dual (du), and plural (pl).
- (ii) An Alutor transitive verb is invariably used in the so-called ERGATIVE CONSTRUCTION, that is, its grammatical subject is in the instrumental (or in the locative, if it is a human proper name) and its direct object is in the nominative; cf. Mel'čuk (1978). (There is no accusative in the language.)
- (iii) Any Alutor tensed verb obligatorily agrees both in person and number with its main actants: that is, an intransitive verb agrees with its grammatical subject, and a transitive verb with its grammatical subject and its direct object as well (one verb, *jələkki* 'to give', can agree with its indirect, rather than direct, object). Thus an Alutor transitive verb is BI-PERSONAL. Therefore, we have to distinguish the subject person vs. the object person and the subject number vs. the object number of the verb form (SUBJ vs. OBJ).

In the examples that follow I do not explain (for lack of space) numerous phonological and morphological alternations and I do not justify the particular morphological description I propose.¹

¹ To make the reading of the glosses easier, let me indicate that Alutor has three moods: IND(icative), IMPER(ative) and CONJ(unctive), the latter being close to both the English conditional and subjunctive; and two tenses: PRES(ent) and AOR(ist), roughly - English past indefinite; there is also POST(eriority), a form marking temporal sequence, and RES(ultative), a passive-like form denoting a state that results from a previous action or event. An important property of Alutor is frequent use of circumfixes, i.e. affixes that embrace a stem or another affix; in my illustrations the

Since the complete paradigms of the Alutor verb are too bulky, I exemplify only two combinations of subject-object persons: 1st person SUBJ – 3rd person OBJ and 3rd person SUBJ – 3rd person OBJ (nine forms per each combination).

(1) Examples of first person subject – third person object

– Singular subject

a. $t\bar{a}$ + nu + tkə + na $\gamma\bar{e}m$ + nan
 [1SG.SUBJ.IND eat PRES 3SG.OBJ I INSTR

wapaqa + \emptyset →
 fly agaric SG.NOM

Tənutkən $\gamma\bar{e}mnan$ wapaq 'I am eating a fly agaric'.

b. $t\bar{a}$ + nu + tkə + na + t $\gamma\bar{e}m$ + nan wapaqa + t →
 DU DU.NOM

Tənutkənat $\gamma\bar{e}mnan$ wapaqat 'I am eating two fly agarics'.

c. $t\bar{a}$ + nu + tkə + na + (w(wi))² $\gamma\bar{e}m$ + nan wapaqa + (w(wi)) →
 PL PL.NOM

Tənutkəna(w(wi)) $\gamma\bar{e}mnan$ wapaqa(w(wi)) 'I am eating many fly agarics'.

– Dual subject

d. mət + nu + tkə + na mur + i
 1DU.SUBJ.IND eat PRES 3SG.OBJ we-DU INSTR

wapaqa + \emptyset
 fly agaric SG.NOM

Mətnutkən muri wapaq 'We two are eating a fly agaric'.

e. Mətnutkəna + t muri wapaqa + t 'We two are eating two fly agarics'.

f. Mətnutkəna + (w(wi)) muri wapaqa + (w(wi)) 'We two are eating many fly agarics'.

circumfixes are marked by a superposed bracket: $\overline{q\bar{e}+j\bar{e}lqat+\emptyset+\gamma\bar{i}}$ 'be asleep!' For key terms, such as *morph*, *morpheme*, *allomorph*, *affix*, *suffix*, *circumfix*, etc. see Mel'čuk 1982.

² In Alutor speech, the pluralizer *-wwi* can be reduced to *-w* or deleted altogether (both in nouns and verbs). In formal, careful style the Alutor say *tənutkənawwi* 'I am eating them many'; less formally, it sounds *tənutkənaw*, and colloquially (the most frequent pronunciation) it becomes *tənutkəna*. (This is shown by parentheses meaning "optional".) Note that the vowel *-a* in an Alutor root or a suffix, which is obligatorily dropped before a pause or a zero suffix, is obligatorily retained before *-wwi* even if this suffix is itself deleted by the above-mentioned ellipsis. Thus we have:

tənutkən < **tənutkəna* > 'I eat it' – *tənutkəna* < **tənutkən* > 'I eat them many' [*←tənutkənawwi*];

wapaq < **wapaqa* > '[a] fly agaric' – *wapaqa* < **wapaq* > 'fly agarics' [*←wapaqawwi*].

- Plural subject

g. mət + nu + la + tkə + t + ∅
 1DU.SUBJ.IND eat PL PRES PL 3SG.OBJ

murγə + nan wapaqa + ∅ →
 we-PL INSTR fly agaric

Mətnulatkət murγənan wapaq 'We (many) are eating a fly agaric'.

h. mət + nu + la + tkə + na + t
 1DU.SUBJ.IND 3SG.OBJ DU

murγənan wapaqa + t →

Mətnutkənat murγənan wapaqat 'We (many) are eating two fly agarics' (and not *mətnulatkənat, as could be expected, see below).

i. mət + nu + la + tkə + na + (w(wi)) murγənan wapaqa + (w(wi))
 → Mətnutkəna(w(wi)) murγənan wapaqa(w(wi)) 'We many are eating fly agarics' (and not *mətnulatkəna(w(wi)), as could be expected, see below).

NB: Note the homophony of the surface verbal forms in (1.e-f) and (1.h-i): the verbal forms for 'we two' and 'we many' are not physically distinct if the 3rd person object is in the dual or in the plural (see below).

(2) Examples of third person subject - third person object

- Singular subject

a. ∅ + nu + tkə + nina qlavul + a
 3SG.SUBJ.IND eat PRES 3SG.OBJ man SG.INSTR

wapaqa + ∅ →
 fly agaric SG.NOM

Tutkənin qlavula wapaq '(The) man is eating a fly agaric'.

b. ∅ + nu + tkə + nina + t qlavula wapaqa + t →

Tutkəninat qlavula wapaqat '(The) man is eating two fly agarics'.

c. Tutkənina + (w(wi)) qlavula wapaqa + (w(wi)) '(The) man is eating many fly agarics'.

- Dual subject

d. na + nu + tkə + na qlavul + tək
 3DU.SUBJ.IND 3SG.OBJ man DU.INSTR

wapaqa + ∅ →

Nanutkən qlavulətək wapaq 'Two men are eating a fly agaric'.

- e. na + nu + tkə + na + t qlavul + tək wapaqa + t →
Nanutkənat qlavulətək wapaqat 'Two men are eating two fly agarics'.
- f. Nanutkəna + (w(wi)) qlavulətək wapaqa + (w(wi)) 'Two men are eating many fly agarics'.

- **Plural subject**

g., h., i. = d., e., f.; that is, in the presence of a non-singular 3rd person object, the verbal forms with a dual and those with a plural 3rd person subject are homophonous – just as are those with a dual or plural 1st person subject.

From (1) and (2), it can be seen that Alutor has special morphs, more specifically – suffixes and a circumfix, to dualize and pluralize the subject and the object of a verb as a function of its agreement with the corresponding NP. Let me give a brief survey of these morphs.

The **verbal dualizer** is subject to two restrictions. First, it applies to a singular actant (subject or direct object) only in the 3rd person. This is the suffix *-t*, the same as the dualizer of Alutor nouns, cf. *tənutkən* 'I eat it' vs. *tənutkəna+t* 'I eat them two' and *wapaq* 'a fly agaric' vs. *wapaqa+t* 'two fly agarics'. For the subjects and objects of the 1st and 2nd persons the dual is expressed syncretically – together with the person – by cumulative morphs *mət...-mək* 1 DU, *-mək* 1 DU, *φ...-tək* 2 DU, and *-tək* 2 DU. This syncretism appears also in 3rd person subjects of transitive verbs, see e.g. (2d).

Second, the dualizer applies to the subject only if there is no direct object, i.e., either in intransitive verbs or in the resultative (a kind of passive, where the "semantic" object becomes the grammatical subject while the "semantic" subject is demoted and disappears). If both the subject and the direct object are expressed in a given verb form, then only the object can be dualized, since a transitive dual subject is marked by a cumulative morph. Therefore, there is no homophony between a form meaning 'they two – them two' and that meaning 'he – them two':

- (3) \emptyset + nawəjat + tkə + nina + t →
3SG.SUBJ.IND feed *PRES* *3SG.OBJ* *DU*

Tawəjatətəkəninat 'He feeds them two' vs.

- na + nawəjat + tkə + na + t →
3DU.SUBJ.IND *3SG.OBJ* *DU*

Nanawəjatətəkənat 'They two feed them two'.

Let me now give several examples to show how the dualizer is used:

- (4) a. Dualizing the subject

- \emptyset + jəlqatə + tkən 'He is asleep' ~
3SG.SUBJ.IND sleep *PRES*

∅ + jəlqatə + tkə + t 'They two are asleep'.
DU

∅ + ta + jəlqatə + ∅ + η 'He will fall asleep' ~
POST sleep AOR POST

∅ + ta + jəlqatə + ∅ + ηə + t 'They two will fall asleep'.

γα + jəlqat + lina →
RES sleep SSG.SUBJ.IND

Γajəlqallin '(It appears that) he has slept' ~

Γajəlqallinat '(it appears that) they two have slept'.

γα + nasvissav + lin maniwra + n
pitch tent SSG.NOM

'(It appears that) the tent has been pitched' ~

Γanasvissavlinat maniwra + t '(It appears that) two tents have been pitched'.

b. Dualizing the object

tə + nawəjat + tkə + na →
1SG.SUBJ.IND feed PRES SSG.OBJ

Tənawəjatətkən 'I feed him' ~

Tənawəjatətkənat 'I feed them two'.

∅ + nawəjat + tkə + nina →
SSG.SUBJ.IND feed SSG.OBJ

Tawəjatətkənin 'He feeds him' ~

Tawəjatətkəninat 'He feeds them two'.

qə + nawəjat + ∅ + γi + γena →
2SG.SUBJ.IMPER feed AOR 2SG.SUBJ.IMPER SSG.OBJ

Qanawəjatγen! 'Feed him!' ~

Qənanawəjatγena + t! 'Feed them two!' (cf. fn. 6, second remark).

The verbal pluralizers are of two basic types:

- I. those that pluralize the singular actant; and
- II. those that pluralize the dual actant.

I. The singular-bound pluralizers are subject to the same restrictions as the dualizer *-t*: they occur only in the 3rd person and pluralize the subject only if there is no direct object (i.e., in intransitive verbs or in resultative forms); when both are present, then the object alone can be pluralized. Type I pluralizers are three in number:

(*w(wi)*), i.e., the same pluralizer as in nouns; it is used in all tenses and moods except in the indicative of intransitive verbs and in the resultative, thus pluralizing intransitive subjects in the imperative and the conjunctive, as well as objects.

la...-t, which is used in all forms of the indicative of intransitive verbs, except the resultative; this is a circumfix embracing the tense marker and pluralizing the intransitive subjects in the indicative.

lay, which is used in the resultative, where it pluralizes the subject and replaces, so to speak, the "expected" **lina* + (*w(wi)*); it is a megamorph manifesting two morphemes at once: {3SG.SUBJ.IND} + {PL3}.

(5) a. Pluralizing the subject

n + jəlqat + tkə + na →
SSG.SUBJ.IMPER sleep *PRES* *SSG.SUBJ.IMPER*

Nəjəlqatətəkən! 'Let him sleep!' ~

Nəjəlqatətəkəna(*w(wi)*)! 'Let them (many) sleep!'

n + ? + jəlqat + tkə + na →
SSG.SUBJ.CONJ *CONJ* *SSG.SUBJ.CONJ*

Najəlqatətəkən 'He would sleep (now)' ~

Najəlqatətəkəna(*w(wi)*) 'They (many) would sleep (now)'.

∅ + jəlqat + tkən →
SSG.SUBJ.IND

Jəlqatətəkən 'He is asleep' ~

∅ + jəlqat + la + tkə + t →
PL *PL*

Jəlqallatkət 'They (many) are asleep'.

∅ + ta + jəlqat + ∅ + ŋ →
SSG.SUBJ.IND *POST* *AOR* *POST*

Tajəlqatəŋ 'He will fall asleep' ~

∅ + ta + jəlqat + la + ŋ + t →

Tajəlqallaŋ³ 'They (many) will fall asleep'.

³ The element *-ŋ* of the posteriority circumfix *ta...-ŋ* is morphologically incompatible with several suffixes and suffixal parts of circumfixes: sometimes, this *-ŋ* forces the other suffix out of the form (such as in this case: *tajəlqallaŋ* instead of the phonemically well-formed **tajəlqallaŋət*), sometimes it is *-ŋ* that has to go. However, the corresponding rules are too complicated to be formulated here.

$\gamma a + j\acute{e}lqat + \text{lina} \rightarrow$
RES sleep 3SG.SUBJ.IND

Γajəlqallin '(It appears that) he has slept' ~

$\gamma a + j\acute{e}lqat + \text{la}\eta \rightarrow$
PL.SUBJ.IND

Γajəlqallaη '(It appears that) they (many) have slept'.

b. Pluralizing the object

Tənawəjatətəkən 'I feed him' ~

Tənawəjatətəkəna(w(wi)) 'I feed them (many)'.

Tawəjatətəkənin 'He feeds him' ~

Tawəjatətəkənina(w(wi)) 'He feeds them (many)'.

II. The dual-bound pluralizers operate only in the 1st and 2nd persons (of the actant in question), i.e., where the dual is expressed syncretically with the person. There are also three of them:

la in all tenses and moods, except the 1st person subject in the present of all three moods of intransitive verbs and the resultative; it pluralizes subjects as well as direct objects.

la...-t in the 1st person subject present of all three moods of intransitive verbs (but not in the resultative).

u in the resultative.

(6) a. Pluralizing the subject

$\text{ina} + \text{nawəjat} + \text{tkəni} + \text{tək} \rightarrow$
1SG.OBJ feed PRES 2DU.SUBJ

Inanawəjatətəkənitək 'You two are feeding me' ~

Inanawəjallatkənitək 'You (many) are feeding me'.

$[\text{To}\gamma\text{ok}] \quad \overbrace{\text{mən} + j\acute{e}lqat + \emptyset + \text{mək}} \rightarrow$
1DU.SUBJ.IMPER sleep AOR 1DU.SUBJ.IMPER

[Toγok] mappəlqanmək! 'Let us two have a sleep!' ~

[Toγok] mappəlqalla(mək)! 'Let us (many) have a sleep!'

\emptyset + ta + jəlqat + tkəni + tək →
2DU.SUBJ.IND POST sleep PRES *2DU.SUBJ.IND*
 Tajəlqatətkənitək 'You two will be asleep' ~
 Tajəlqallatkənitək 'You (many) will be asleep'.

mən + ? + jəlqat + tkən →
1DU.SUBJ.IND CONJ PRES
 Mənʔajəlqatətkən 'We two would be asleep' ~
 Mənʔajəlqallatkət 'We (many) would be asleep'.

ʔa + jəlqat + muri →
RES sleep *1DU.SUBJ.IND*
 ʔajəlqanmuri '(It appears that) we two have slept' ~
 ʔajəlqanmuru '(It appears that) we (many) have slept'.

ʔa + nawəjat + turi →
RES feed *2DU.SUBJ.IND*
 ʔanawəjatturi '(It appears that) you two have been fed' ~
 ʔanawəjatturu '(It appears that) you (many) have been fed'.

b. Pluralizing the object

tə + nawəjat + tkəni + tək →
1SG.SUBJ.IND feed PRES *2DU.OBJ*
 Tənawəjatətkənitək 'I am feeding you two' ~
 Tənawəjallatkənitək 'I am feeding you (many)'.

ən + nawəjat + mək →
2SG.SUBJ.IMPER feed *1DU.OBJ*
 Ənnawəjanmək! 'Feed us two!' ~
 Ənnawəjallamək! 'Feed us (many)!'.

2. **Morphemic Solutions for Alutor Dualizer and Pluralizer Verbal Morphs.** Taking into consideration the data presented above we can postulate for Alutor the three following verbal morphemes:

(i) A 3rd person dualizer:

{DU} ↔ -t

(ii) A 3rd person pluralizer:⁴

⁴ Note that under our approach an affixal morpheme can include different types of affixes, in this particular case – suffixes and circumfixes, as both Alutor pluralizers do. This is typical of the Alutor language, where all subject personal morphemes include simultaneously suffixes and circumfixes and

{PL 3}	↔	-(w(wi))		not in the indicative of intransitive verbs and not in the resultative
	↔	la...t		in the indicative of intransitive verbs but not in the resultative

(iii) A 1st/2nd person pluralizer:

{PL 1/2}	↔	-la		not in the 1st person (of subject) in the present of intransitive verbs and not in the resultative
	↔	la...-t		in the 1st person (of subject) in the present of intransitive verbs but not in the resultative
	↔	-u		in the resultative

Moreover, as indicated above, there is a pluralizer megamorph manifesting two morphemes at once:

{3SG.SUBJ.IND}	+	{PL 3}	↔	-lay		in the resultative
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It follows immediately that the Alutor verb has no personal morphemes (neither for the subject nor for the object) in the plural: the plural of subject and of object is shown either by a separate pluralizer or is not shown at all (in case of incompatibility of two pluralizers, etc., see below).

Let P stand for any person, P' for 1st/2nd persons, and M for any mood; then the stock of Alutor personal morphemes is specified as follows:

{P.SG.SUBJ.M}	{P.SG.OBJ}
{P.DU.SUBJ.M}	{P'.DU.OBJ}

That is, Alutor has {1SG.SUBJ.IND}, {2SG.SUBJ.IMPER}, {3SG.SUBJ.CONJ}, {1DU.SUBJ.IND}, etc., but no morphemes written as *{1PL.SUBJ.IND} or *{3PL.OBJ}, etc. A morphological meaning such as '1 pl' or '3 pl' is expressed by combining the morphemes {1DU...} + {PL} or {3SG...} + {PL}, respectively; this constitutes an interesting morphological peculiarity, which will be discussed below.

In the dual, the situation is slightly different from what we observe in the plural. Since the separate dualizer *-t* is used to dualize the 3rd person subject

the 1st person object morpheme (in the singular) – a suffix and a prefix. Examples:

{1SG.SUBJ.IND} has alternants *t* in the present and *t...-k* in the aorist; {1SG.OBJ} has alternants *-ʔəm* with 3rd person non-singular subject and *ina-* with 2nd person or singular subject.

only in objectless forms (see above, p. 424), dual personal morphemes (including cumulative person-number morphs) do exist for the 3rd person subject, but not for the 3rd person object (the latter being dualized by *-t*); thus we have three morphemes {3DU.SUBJ.M}, but none of the form *{3DU.OBJ}. The morphological meaning '3 du' of the subject in the transitive verbal forms is expressed through an allomorph of one of the morphemes {3DU.SUBJ.M}, but in objectless forms it is expressed, once again, by combining the morphemes {3SG...} + {DU}, very much like what we see in the plural.

This brings us to a curious feature of Alutor verbal morphology: SEMANTIC NON-ADDITIVITY of certain affixes, specifically of the dualizer and pluralizers. As a general rule, current morphological descriptions are based on the tacit assumption that when you add an affix *a* to a stem *s* the meaning 'a' of the former is added to the meaning 's' of the latter, so that you obtain – metaphorically speaking – the following:

$$\frac{s}{\text{'s'}} + \frac{a}{\text{'a'}} = \frac{s+a}{\text{'s+a'}}$$

Take the Latin declension: in, e.g., *urb+s*, *urb+is*, *urb+em*, ..., *urb+ibus* the meaning of the stem *urb* is 'city/town', while the suffixes add to it the meanings of number and case: 'sg, nom', 'sg, gen', 'sg, acc', ..., 'pl, abl'. This is a typical sample of perfectly additive suffixation, where the signans of the suffix and its meaning are added, respectively, to the signans and the meaning of the stem (whatever we understand by "meaning"). The same additive suffixation obtains in the number forms of the Alutor noun:

(7) a.	singular		dual		plural	
'reindeer'	<i>qura</i>	+ <i>ŋa</i>	<i>qura</i>	+ <i>t</i>	<i>qura</i>	+ (<i>w(wi)</i>)
'hand'	<i>mənγ</i>	+ <i>əlyən</i>	<i>mənγə</i>	+ <i>t</i>	<i>mənγ</i>	+ <i>u(w(wi))</i>
'hare'	<i>milut</i>	+ <i>∅</i>	<i>miluta</i>	+ <i>t</i>	<i>miluta</i>	+ (<i>w(wi)</i>)

As is clearly seen, the nominal stem carries the 'pure' lexical meaning, without any numerical specification; the number meaning ('sg', 'du', and 'pl') is simply added by the suffix:

- b.
- | | | | |
|-----------------|--------------------|----------------------|-----------------|
| <i>qura</i> | + <i>ŋa</i> | = <i>quraŋa</i> | 'a reindeer' |
| <i>reindeer</i> | | <i>SG.NOM</i> | |
| <i>qura</i> | + <i>t</i> | = <i>qurat</i> | 'two reindeer' |
| <i>reindeer</i> | | <i>DU.NOM</i> | |
| <i>qura</i> | + (<i>w(wi)</i>) | = <i>qura(w(wi))</i> | 'many reindeer' |
| <i>reindeer</i> | | <i>PL.NOM</i> | |

However, the Alutor VERBAL dualizer and pluralizers are not semantically additive: their meanings are not simply added to the meaning of the stem but

replace a corresponding "piece" of this meaning. Thus when the pluralizer *-la* is added to the stem (which, in this case, coincides with a full-fledged word-form):

┌──────────────────────────────────┐
 Ø + jəlqatə + tkəni + tək 'you-DU-sleep-PRES',

the meaning 'PL' of *-la* replaces 'DU' in the meaning of the initial form rather than being added to it, so that we get

┌──────────────────────────────────┐
 Ø + jəlqal + la + tkəni + tək 'you-PL-sleep-PRES'.

In much the same way, the dualizer *-t* is added to the stem which already has the meaning of the singular:

┌──────────────────────────────────┐
 n + jəlqat + tkə + na →
 3SG.SUBJ.IMPER sleep PRES 3SG.SUBJ.IMPER

Nəjəlqatətkən! 'Let him be sleeping!' vs.

Nəjəlqatətkənat! 'Let them two be sleeping!'

The meaning 'DU' of *-t* replaces the element 'SG' included in the meaning of the form *nəjəlqatətkən* (cf. NOTE at the end of the paper).

I do not know if this phenomenon is wide-spread in the languages of the world, or if additive suffixes with replacive meanings are an exception and restricted to a particular linguistic family (the same dualizer and pluralizers, which are semantically non-additive, appear in the closely related Koryak – but not, for instance, in Chukchee). Note, for example, that in Georgian, where independent verbal pluralizers of the subject and the object also exist, they are fully additive:

(8) Georgian

çer 'write' (3rd person object)			cem 'beat' (3rd person subject)		
subject	sg	pl	object	sg	pl
1st	vçer	vçert	1st	mçems	gvçems
2nd	çer	çert	2nd	gçems	gçemt

Here, *v-* marks only the first person subject, and *β-*, the second person subject, while *g-* – the second person object, without any indication of number; the singular is expressed separately – by the suffix *-β*, and the plural by *-t*; therefore, all the affixes are strictly additive in these Georgian forms. (The fact that 1sg and 1pl objects are marked syncretically, by *m-* and *gv-* respectively, does not interfere.) Cf. the four-way ambiguity of such a form as *g + cem + t*, where *-t* may be taken to pluralize both the subject and the object: 'I beat you many', 'we beat you alone', 'we beat you many' and 'he beats you many'.

The same seems to hold for Basque, which also has independent verbal pluralizers of the subject and the direct object (*-z/s/* and *-tz/c/*). These pluralizers alternate with the zero marker of the singular and are trivially additive. I would

like to mention also the case of Caddo (Chafe 1976: 68-69), which too has an independent dualizer and an independent pluralizer of the subject and the object of a finite verb. Unfortunately, the data available are too scanty for me to judge whether these dualizer and pluralizer are additive.

It would be interesting to explore the phenomenon of semantically non-additive affixes in other languages.⁵ Let me only hint here that a similar, although not identical, phenomenon is found in a few Indo-European languages in a class of the so-called "reflexive" verbs. Thus in Russian *serdit'* means 'to cause to be angry' while *serdit'sja* (with the addition of the reflexive *sja* suffix) is 'to be angry'; the meaning of *sja* is, as we see, a command for deleting the component 'to cause' in the meaning of the basic verb.

3. Cooccurrence of Dualizers and Pluralizers in a Verb Form. From the semantic viewpoint, in a transitive verb form (both) the subject and the object could be simultaneously dualized or pluralized. In other words, theoretically we can have the following three combinations of grammatical numbers in a verb:

- (i) $DU_{\text{subj}} + DU_{\text{obj}}$ ('they two - them two')
- (ii) $DU_{\text{subj/obj}} + PL_{\text{obj/subj}}$ ('they two - them many', 'we many - them two', etc.)
- (iii) $PL_{\text{subj}} + PL_{\text{obj}}$ ('we many - them many', etc.)

Let us take these up in turn.

- (i) Dualizer + Dualizer

As stated above, the morphologically independent dualization of the subject is possible only in objectless forms; where the object is present, it is the object alone that gets dualized. Consequently, two dualizers cannot appear in the same form, and never do.

- (ii) Dualizer + Pluralizer

Theoretically, the 1st/2nd person subject pluralizer *-la* could cooccur with the 3rd person object dualizer *-t*. To express the meanings

'we many, you many - them two'

the string of morphs **-la...na-t* could in principle be used: it is semantically and phonologically well-formed. But instead of **mätnulatkənat* 'we many are eating them two', which is ungrammatical, we have only *mätnutkənat*, the form homophonous with the form meaning 'we two - them two'. This is a purely morphological constraint, since as far as meaning or sound is concerned nothing prevents the form **mätnulatkənat* from existing. We formulate this constraint as a rule of

⁵ The same sort of semantic non-additivity is also observed on the lexical level. While an excellent <beautiful, poor,....> mother is a mother with certain qualifications added, an adoptive mother is not a mother at all; the meaning of adoptive is not simply added to that of mother but replaces and transforms a part of it. In French, *fauz marbre* 'imitation marble' is not marble; etc.

obligatory morphological ellipsis (**m** stands for morph):

(9) **m'** {PL...}_{subj}, **m''** {PL...}_{obj} / {DU}_{obj} → **m''**

The object dualizer or pluralizer "expels" the subject pluralizer where they should have appeared together in the same form for semantic reasons. In this sense, the Alutor direct object is stronger than the subject. We will immediately see that this is quite systematic.

(iii) Pluralizer + Pluralizer

Since the 3rd person subject cannot be independently pluralized in the presence of the object, we have only the following two combinations to consider:

- 1st/2nd person subject pluralizer, 1st/2nd person object pluralizer, i.e., the forms meaning 'we many - you many' and 'you many - us many'. Theoretically, these forms could include the string **-lala*, such as **mətnawəjallalatkənitək* 'we many feed you many'. This, however, never happens: only one *-la-* per form is allowed, and it bears on the object, which becomes 'you many'; as far as the subject is concerned, the numerical value is ambiguous between 'we two' and 'we many', so that the form *mətnawəjallalatkənitək* means indiscriminately 'we two/many feed you many'. This is the same homophony as before, in *mətnutkənat* 'we two/many eat them two'. This is taken care of by rule (9); so we see this ellipsis at work once again.

- 1st/2nd person subject pluralizer + 3rd person object pluralizer, with meanings

'we many, you many - them many';

these could be marked by the sequence **-la...+na+(w(wi))*, which however, happens to be ungrammatical: only *+na+(w(wi))* is admitted, the subject pluralizer being eliminated by the object pluralizer. As a result, a form such as *mətnawəjatətkəna(w(wi))* is ambiguous as to the number of the subject: 'we two/many feed them many'.

The obvious conclusion is that in an Alutor verb form only one dualizer or pluralizer may appear: in an intransitive verb it bears on the subject, in a transitive one, on the direct object. This fact is taken into account by rule (9), i.e., the rule of morphological ellipsis. The importance of rule (9) and the supremacy of the object dualizer and pluralizers (at the expense of the subject number markers) in Alutor is obviously related to the ergative character of the language. It is known that many syntactically ergative languages have developed from a previous state of so-called "semantic ergativity", where all verbs denote states rather than actions and are intransitive. Their only actant, i.e., their grammatical subject, fully determines the morphological devices used for agreement and the like. Later, with major syntactic changes, the verb might become transitive so that the former grammatical subject becomes the direct object; but many of the agreement mechanisms of the past are retained. That is what we probably observe in Alutor where the direct object is better served by the dualizer-pluralizer system

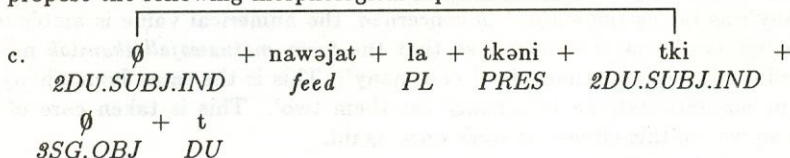
in the verb than is the grammatical subject.⁶

There are two further difficulties to be mentioned in connection with dualizer-pluralizer cooccurrence.

First, with the 2nd person subject in the plural and the 3rd person object in the dual or the plural no dualizer or pluralizer at all is admitted:

- (10) a. *tawəjallatkənitki* 'you many feed him'
 b. *tawəjatətəkənitki* 'you many feed them two/many' but not
 **tawəjallatkənitki*.

On the surface there is no object dualizer or pluralizer; therefore, it is not obvious how rule (9) can be applied here. But our explanation is straightforward: in these forms, we have a zero suffix of the 3rd person singular object, \emptyset -...-*tki* being the 2nd person plural subject cumulative marker; in Alutor, a dualizer or a pluralizer is dropped if it bears on a preceding zero morph. Thus for a form such as (10b) we propose the following morphological representation:



Starting from (10c), *-la* is deleted by rule (9) because of *-t*, which is itself deleted because of the preceding \emptyset ; the final result is just (10b). If the description (10c) is accepted, then the forms of the type *tawəjatətəkənitki* 'you two/many feed them two/many' are fully accounted for by the morphological ellipsis (9).

Second, with the 1st/2nd person plural subject and the 1st/2nd person dual object the subject pluralizer *-la* cannot be used:

⁶ Two important remarks seem in order here. First, how do I know which of the two obligatory actants of a transitive verb is its subject? The full answer is too complicated to give here; but since the question is crucial to my paper, I will provide a clue to the solution. The full paradigm of an Alutor intransitive ("subject only") verb includes 72 forms, which show the agreement with the subject by 72 "purely subject" circumfixes. A transitive ("subject - object") verb has 504 forms, where the prefixes show agreement with actant A_1 and the suffixes, with actant A_2 . Now, the prefixal parts of purely subject (= intransitive) circumfixes coincide with prefixes in subject-object forms in 320 of 504 cases, i.e., the rate of coincidence is 63%; the suffixal parts of the same circumfixes coincide with suffixes in subject-object forms only in 70 of 504 cases (13.5%). The ratio 63% : 13.5% = 4.6 indicates that in subject-object forms it is the prefix that points to the subject (= A_1) while the suffix reflects the object (= A_2).

Second, the Alutor object is "stronger" than Alutor subject not only with respect to dualizer/pluralizer markers but also in the following sense: a non-zero object suffix always expels from the word-form the suffixal part of a subject circumfix, although phonemically they could coexist without problems. Cf., for example, the last forms in (4b): *qənawəjatʔen!* instead of **qənawəjatʔyen* 'feed him!'; or else *mətnawəjattək* instead of **mətnawəjanməktək* 'we two fed you two'; etc.

- (11) mət̪nawəjatəkənɪtək 'we many feed you two', instead of
 *mət̪nawəjallatkənɪtək;
 nənawəjatəkənɪmək 'you many feed us two', instead of
 *nənawəjallatkənɪmək;

both starred forms are grammatical, but in a different sense, namely 'we/you two/many feed you/us many'.

This fact cannot be described in terms of morphological ellipsis (9), since forms (11) have no separate object dualizer or pluralizer. We need to postulate for Alutor a special morphemic rule that excludes the choice of the {PL 1/2} morpheme for the subject if there is a dual or plural 1st/2nd person object. This rule must be operational in Alutor for an obvious reason: in the verb, the dual object is pluralized rather than the subject, so that if we have *-la* in a verb form where both the subject and the object are 1st or 2nd person, the object will be inevitably pluralized, which we do not want in cases like (11).

4. **Summary.** The preceding presentation can be summarized as follows: The Alutor conjugation offers a number of interesting points to be studied in general morphology, of which the following five are particularly noteworthy:

- (a) separate dual/plural markers for the subject and the object within a verb form;
- (b) an asymmetric array of personal morphemes;
- (c) semantic non-additivity of dual/plural markers;
- (d) morphological ellipsis (object dualizers/pluralizers expelling subject ones);
- (e) the link between the supremacy of the object marking in the verb form and the ergative construction of the Alutor verb.

ACKNOWLEDGMENTS

I am grateful to Lidija Iordanskaja and Ian Mackenzie for their valuable remarks concerning this paper.

NOTE

It might be argued that semantic non-additivity is not found when dualizing or pluralizing the singular forms of the 3rd person, since in these forms one could postulate the zero suffix of the singular, so that the dualizer and pluralizers would become additive both in form and in meaning; for instance:

$n+jəlqat+tkə+na+θ_{sg} \sim n+jəlqat+tkə+na+t \sim n+jəlqat+tkə+na+(w(wi))$.

Such a description would be fully parallel to that of Alutor nouns, cf. (6). However, I have rejected this possibility and consider the markers of the 3rd person (of subject and/or object) as cumulative exponents of person and number

together, so that such verbal prefixes as *na-* (3rd person subject) or suffixes as *-nin(a)* (3rd person object) are presented as morphs of the morphemes

{3SG.SUBJ.IND} \longleftrightarrow *na-*

{3SG.OBJ} \longleftrightarrow *-nin(a)*

respectively.

My arguments for this solution are twofold. First, in the 1st and 2nd persons the separate presentation of the person and number is in any case impossible: markers such as *t-* '1sg', *m-* '1sg', *mət-* '1du', *mən-* '1du', *-mək* '1du', *-tək* '2du', etc., express the person and number syncretically; these are cumulative morphs and each one of the corresponding morphemes refers simultaneously to the person and the number. Therefore, treating the 3rd person differently would create an appreciable asymmetry in our description: the forms of the 3rd person would have a different morphological structure from those of the 1st/2nd persons, which would entail a number of unnecessary complications.

Second, even in the 3rd person we do not always find separate expression of the person and number. As already mentioned, the 3rd person dual transitive subjects are marked by cumulative person-number morphs. Take, for example, a transitive verb in the conjunctive:

(i) *n* + *?* + *nawəjat* + *∅* + *nina* →
3SG.SUBJ.CONJ *CONJ* *feed* *AOR* *3SG.OBJ*

Nanawəjatnin 'He would have fed him'

and

(ii) *nan* + *?* + *nawəjat* + *∅* + *na* →
3DU.SUBJ.CONJ *CONJ* *3SG.OBJ*

Nan'anawəjatən 'They two would have fed him'.

Here the semantic difference in the number of the subject (singular vs. dual) is related to the formal difference in the subject prefixes *n-* vs. *nan-* and the object suffixes *-nina* vs. *-na*. I cannot determine which segment should be assigned the meaning 'dual' in (ii) and where to put a zero affix for the singular of the subject in (i), should we try to separate the person and the number in the above forms. (In any event, the dualizer we could postulate here would be unique and quite different from the current Alutor dualizer *-t*.)

Note also that the form (ii) cannot be pluralized with respect to the subject: in accordance with a general rule of Alutor, one cannot separately pluralize the subject in the verb form if a non-zero object suffix is present (with a few exceptions). Therefore, the form (ii) is in fact ambiguous: 'They two/many would have fed him'. If we admit the separate dualization of the subject in these and many similar forms, we will be forced to violate this rule.

Let it be emphasized that the homophony with respect to the dual/plural subject is quite characteristic of the Alutor transitive forms containing a dual or

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1978 'Toward a Formal Model of Alutor Surface Syntax: Predicative and Complete Constructions', *Linguistics*. Special Issue, 5-39.