Note on CAUSE in Nivkh

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Summary: The language Nivkh has a suffix **-gu/-ku**, which makes a causative structure with double active actors as Causer and Causee. The Causee is marked by a special case **-ax**. The suffix also functions to derive transitive from intransitive verbs, but the **-gu/-ku**^derivative is causative only if they co-occur with a causee, otherwise simply transitive. In the majority of transitive-intransitive verb pairs, the derivative transitive verbs are not causative, but correlate with their intransitive counterparts in many other types of causality which involves no causee.

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Problems: Panfilov 1965 distinguishes three types of morphological causative verbs: (i) causative direct transitive verbs, (ii) causative oblique transitive verbs, (iii) causative reflexive transitive verbs. These types have such a common morphological feature that they are formed with the causative morpheme **-gu-/-ku-** attached directly to the verb stem, e.g. *eɣ-gu-dʲ* ($<$ *eɣ-dʲ* "to go home"). They are very productive, so that they are often regarded as representative causative structure of this language. In this paper, we examine first some relevant features of this morphological causative structure in order to get an image how the causative structure with this suffix looks like in this language. We will try to formulate the basic principle of the causative structure, which can be regarded as one of the typological prototypes of causation in general. Second, Panfilov mentions some types of transitive-intransitive pairs verbs. In most cases, the transitive counterpart is derived from intransitive by suffixation of **-u** to the stem (often accompanied by the top consonant lenition) like *viludʲ : pildʲ* (to make big : to be big), the class of pairs with the morphological opposition: fricative versus plosive stem-top consonant like *pʰaʒudʲ : faʒudʲ* (make to take off ,: take off <clothes>) and some other types. We find among them such transitive verbs which co-occur with a noun phrase with **-ax**, namely a causee. They are, therefore, causative verbs. But the majority of transitive verbs of this language can not take a causee in the place of the grammatical subject. We assume that such transitive verbs which do not co-occur with causee are not causative. Provided that the causee is an active actor of the embedded phrase in a causative structure, a causative verb involves two active actors. In contrast, the non-causative transitive verbs have only one active actor in their semantic configuration. Here lies a basic

boundary between causativity and transitivity. If our assumption is right, these linguistic notions are in rigid opposition, so that the one may not be derived from the other. In other words, the generic predicate CAUSE may not appear in the semantic interpretation of transitivity. But some questions are open: first, the active actor which is crucial in a causative structure can be inanimate? Second, the intentionality of an active actor is due to personification? Data examples tend to say yes, especially because they are from fables. But difficult is how the fact is interpreted in semantic terms.

1. Causative verbs with *-gu-/-ku-*

Panfilov 1965 gives the following sentences (1), (2) and (3) as representative examples, before the individual types he distinguishes: We will first examine the examples he gives.

(1) nʲi pʰoɢla-ax   təftox   eɣ-gu-dʲ-ra

   1sg refl-child-*ax* house-DIR return-CAUSE-Fin-affirm

 (Я заставил своего сына идти обратно домой, I let my own son to return home)

Note that *eɣdʲ* (to return) is a different verb from *vidʲ* (to go). We pay attention to the following points: (i) the grammatical subject of the whole sentence is the active agent *nʲi*. (ii) the second noun phrase with the suffix *-ax* *pʰoɢla-ax* represents the patient and at the same time the grammatical subject of the main verb *eɣdʲ*. (iii) the whole sentence can be analyzed as an embedded structure: the matrix sentence is [$_S$ nʲi -gu-[...]] and the embedded sentence is [$_{S1}$ pʰoɢlaax təftox eɣ-dʲra]. (iv) the grammatical subject of S *nʲi* brings about the event represented by [$_{S1}$ ...]. (v) therefore, the scope of the causative suffix *-gu* covers the whole embedded phrase S1.

In order to make the structure visible, let us first symbolize the causative marker with a generic predicate CAUSE and put it in front of its scope range like CAUSE [$_{S1}$ ...]. And we mark its inherent place   in the appropriate place by means of the symbol -___- in S1. With this instruments, we can write the basic structure of (1) as follows:

(1a) [$_S$ nʲi CAUSE [$_{S1}$ pʰoɢlaax təftox eɣ-___-dʲra]]

Note that, first, the grammatical subject of the embedded sentence is an active actor of an intransitive *eɣdʲ* (to return). Second, Panfilov names the case expressed *-ax* "дательно-бинительный падеж, dative-

causative case " in Panfilov 1962 Part I. Ch. 42, pp.131/132. We symbolize it with D(ative)C(asusative), in short, DC in the following. This noun phrase functions as the causee of the predicate CAUSE.

Now, we examine the second example.

(2) nʲi pajanax   co ŋəŋ-t   vi-gu-dʲ-ra

   1sg Pajan-DC fish take-Part go-CAUSE-Fin-affirm

  (Я попросил Пайана идти ловить рыбу, I asked Pajana to go fishing; *ŋəŋt vidʲ* : to go fishing, *ŋəŋ-t* : adverbal participle of *ŋəŋ-dʲ*)

 The sentence structure of (2) is almost the same as (1). Difference lies only in that a participle phrase *co   ŋəŋ-t* (fishing) is attached to the main verb. Important is in this sentence the scope of the predicate CAUSE. The embedded sentence has a verb complex: a participle attached to main verb [VC co ŋəŋ-t [V vi-dʲ]]. The grammatical subject of this complex verb phrase is the actor Pajan, who functions as causee. Therefore, the scope of the predicate CAUSE includes the actor/agent of the embedded phrase. The causative marker attached to the main verb dominates the component of the verb complex. The structure may be like [VC [VP co ŋəŋ-t [V vi]]-gu-dʲ]]. We have to assume that the causative suffix **-gu** dominates the verb phrase in a syntactic stand point, but appears in the place of suffix to the main verb stem. So, we can write the structure of (2) as follows:

(2a)[S nʲi CAUSE [S1 pajanax [VC [VP co ŋəŋ-t [V vi]]-___-dʲ]]].

 The third example includes an indirect speech which has an imperative marker in 2nd person singular *-ja.*

(3) i-ranrʰ   ittʲ: nʲoɢla   pʰ-iɣrə-r   paldox mər-gu-ja

    his-sister said: my-child refl-belong-Part forest-Dir go=to=forest-CAUSE-Imp

  (Его сестра говорит: "позволь моему сыну с собой в лес идти" , His sister said "please take my son in the forest with you". Note: *mərdʲ* alone means to go to forest, so that *paldox* is somewhat supplementary.)
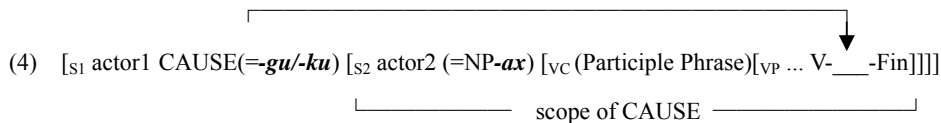

 Here, the complement of *ittʲ* (said) is an imperative sentence, so that the omitted grammatical subject is 2nd person singular (＜**-ja**). The grammatical subject of S1, the causee, is also omitted. It is the person who takes the child with himself and go to forest, namely the agent/actor of the S1 in 2nd person singular. We write it

out in (3a). The main verb of S1 dominates the participle phrase is $n^j oGla$ $p^h\text{-}iɣrə\text{-}r$ (taking my child with oneself). The direct speech can be analized as follows:

(3a)   [$_S$ (2sg) CAUSE [$_{S1}$ (cax) n^{j}oGla p^h-iɣrə-r [paldox mər-] -___-ja]]

   where p^h : reflxive pronoun of 2sg, *cax* :2sg+DC.

Remark that the $n^j oGla$ (my child), the object of the participle $p^h\text{-}iɣrə\text{-}r$ has no case marking, i.e. it stands in absolute case. In this causative imperative sentence, neither the the actor of S1, nor the actor of S is overtly expressed, so that the predicate CAUSE (=**-gut**) appears alone.

  Now, we summarize the structure analysis as far as the three example sentences are concerned. The causative sentence in this language has the basic structure as follows:

(4)   [$_{S1}$ actor1 CAUSE(=**-gu/-ku**) [$_{S2}$ actor2 (=NP**-ax**) [$_{VC}$ (Participle Phrase)[$_{VP}$ ... V-___-Fin]]]]
                                                                  scope of CAUSE

  Now, we examine each types of causative verbs Panfilov classifies to check how the basic causative structure (4) apply to them with what possible modifications.

1.1. "Causative direct transitive verbs"

  Panfilov regards this class of causative verbs as one of the subclasses of causative transitive verbs (chap. 21). His examples are the followings (cf. chap. 22):

(5) n^{j}i qanax   mavr ŋagi-gu-d^j-ra

   1sg dog-Dat drake go to-CAUSE-Fin-affirm

  (Я заставил собаку идти за селезнем, I let the dog go to get the drake.)

  The verb $ŋagid^j$ is transitive with the meaning *to go to get something*, taking an accusative object, *mavr* (the drake) with no case marker, i.e. in absolute case. The structure scheme looks like as follows:

(5a) [$_S$ nʲi CAUSE [$_{S1}$ qan-ax   mavr   ŋagi-___-dʲ-ra]

                          actor-DC   object   tr.

  Here *qanax* is the grammatical subject of the transitive verb *ŋagi-dʲ*, the object of which is *mavr* in absolute case. *qanax* stands in DC-case as the causee of causative transitive *ŋagi-gu-dʲ*.

  The next examples of Panfilov involves a verb complex with suffixes ***-gu/-ku*** and ***-ine***. The verb suffix ***-ine*** has optative meaning in the West-North (Amur) Dialect of this language. We symbolize it with WILL. The complex of the suffixes ***-gu/-ku*** and ***-ine*** is written as WILL+CAUSE, or WILL[CAUSE... becaus the scope of WILL includes CAUSE, therefore, it dominates the whole embedded sentence.

(6) ətək   utkuoɢlaax   vi-r   qan   buk-gu -inə-dʲ

    Father mothers child-DC   go-Part dog(obj.) yoke-CAUSE-WILL-Fin

 (Отец попросил сына пойти запрячь собак, Father asked Mothers child to go and to fix dogs to the sledge,

  Here *buktʲ* : one of the variants of *vyktʲ, puktʲ, ifktʲ* : (= запрячь (fix something to sledge))

The structure of (6) has only a minor change in contrast to (5a): the causative structure is involved by the optative predicate WILL:

(6a) [$_S$ ətək WILL [CAUSE [$_{S1}$ utkuoɢlaax [$_{VP}$ vi-r [$_{VP}$ qan buk]] $_{S1}$]-__]-___-]-dʲ]]

  The actor of the inner S1 *utkuoɢlaax* stands in DC-case and is the grammatical subject both of the participle *vi-r* and of the transitive phrase *qan buk-*.

The next sentence has a similar structure to (6a). We mark it directly with necessary indeces:

(7) [$_S$ nʲəŋ [$_{S1}$ cax   jaŋgutlaq   hədʲ   xu-gu-inə-dʲ-ra]

    1pl [2sg-DC   somehow   this one kill-CAUSE-WILL-Fin-affirm]

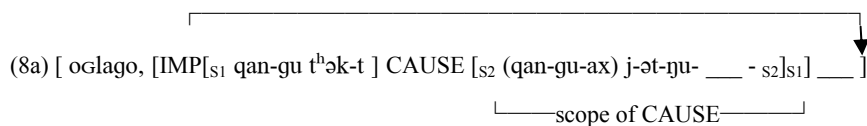 (Мы тебя собираемся просить убить его как-нибдь, We want to ask you to kill this one).

Here, we need a short comment on the verb *xudʲ*. This verb has morphological variants *iɣdʲ, kʰdʲ*. It means

"kill some one or game", i.e. an "inherent *kill*". This language has another verb meaning *kill*: *mugud^{ij}.* This verb has its intransitive counterpart *mud^{ij}.* So, *mugud^{ij}* is the causative derivation from the intransitive with the meaning *to let/make someone to become to die*. We suppose that this language has inherently two basic verbs in this sphere of notion: *xud^{ij}* and *mud^{ij}.* The one means *to get a prey by hunting/fishing* and the other *someone dies. xud^{ij}* is an inherent transitive verb, not any derivative. They both belong to the basic vocabulary of this language. But the causative *mugud^{ij}* is perhaps a derivative in later years. The complex *xɯ-gu-* is also the case. It means *to make someone to kill something*, but not *to make someone to make another one to die(=become not alive)*, namely, it can not be "double causative". If this assumption is right, the old idea of generative semantists as well as their present epigones to derive *kill* form *die* was inherently wrong.

   The next example has two points to be especially notice. First, it is an imperative sentence with an embedded verb phrase in a participle form. Second, it lacks the causee.

(8) oɢlago,   qan-gu t^{h}ək-t   jətŋu-gu-ve
    children(vocative), dog-Pl   take-Part watch-CAUSE-IMP(pl)
  （Дети, собак заведя, заставьте (их)(его) караулить,(Children, take dogs and let them watch (it/them))

   Here, the verbs *t^{h}ək-t* as well as *jətŋud^{ij}* are transitive. Their grammatical subject is common, namely the dogs.   The grammatical object of the second verb lacks. It is symbolized by the prefix *j-* as an unspecified object (cf. (36) below). Difficult is another problem: the scope of causative *-gu*. In this sentence, the suffix dominates only the main verb *jətŋɯ-*: the adverbial verb phrase in participle form *qan-gu t^{h}ək-t* (taking dogs) is out of the scope of the causative marker, but it is in the domain of the imperative suffix *-ve*. So, we interpret the sentence as follows:

(8a) [oɢlago, [IMP[$_{S1}$ qan-gu t^{h}ək-t] CAUSE [$_{S2}$ (qan-gu-ax) j-ət-ŋu- ___ - $_{S2}$]$_{S1}$] ___]
                         └──scope of CAUSE──┘

We pay attention to two points: (i) the scope of CAUSE can cover only a part of sentence. Here, only S1. At present we do not know why in this sentence the scope of CAUSE is limited within the verb phrase it is attached to, though it is not the case, e.g. in (6) above. (ii) The causee can be omitted. The condition for the

ellipsis is perhaps that it is once overtly mentioned beforehand.

   The next example contains the scope problem, too. Moreover, we find here a special function of a participle to connect verb phrases in this language.

(9) vi-nanak pʰ-utku kʰez-r vaqa lət-ku-ra

    3sg-sister refl-wife saying box   make-CAUSE-Fin

（Его сестра своему мужу сказала (чтобы) ящик сделал, His sister asked her husband to make a box.）

 Nivkh has no coordinative conjunction to connect phrases. Sentences are coordinated by using participles modifying the main verb. In the sentence (9), the participle *kʰez-r* (saying) can be translated into "said and". The sentence lacks the grammatical subject of S2 which is the causee marked by *-ax*. It is ellipsis. And the finite marker of the verb *-dʲ* is also omitted. We add this information to the original and rewrite the structure of the sentence (9) as follows:

(9a) [$_S$ vi-nanak [$_{S1}$ pʰ-utku kʰez-r] (AND) CAUSE [$_{S2}$ (pʰ-utku-ax) vaqa lət-___(-tʲ)-ra]]

In this interpretation, the actor of both S1 and S2 is the sentence top "his sister" who is the causer of the sentence S2. But different interpretations are possible, e.g. the second sentence can be the complement or final clause of *kʰez-r* (saying). So, the whole sentence will look like as (9b).

(9b) [$_S$ vi-nanak [$_{S1}$ pʰ-utku kʰe<u>z-r</u> [$_{S2\ complement}$/$_{final}$ (pʰ-utku-ax) vaqa lət-ku(-tʲ)-ra]]]

 Now, looking back to the structure of (6a) and compare it with (9a):

(6a) [$_S$ ətək CAUSE [$_{S1}$ utkuoɢlaax vi-r] [$_{S2}$ qan buk- ___ -inə-dʲ]]
(9a) [$_S$ vi-nanak [$_{S1}$ pʰ-utku kʰez-r] CAUSE [$_{S2}$ (pʰ-utku-ax) vaqa lət-___(-tʲ)-ra]]]

As far as the examples above are concerned, it is clear that the scope of CAUSE is overtly marked by the noun phrase with the case-marking *-ax*. It indicates the left range of the scope of CAUSE. However, it can be omitted in (9) and (3) above under the condition.

In a causative structure, as far as we have examined above, the subject of CAUSE is an active actor. The

grammatical subject of the embedded sentence contains an active actor as the grammatical subject. This is marked by the case DC, i.e. **-ax.** We name the first actor Causer and the second Causee, so that the causative structure of this language looks like as follows:

(4a) [$_S$ Causer CAUSE [$_{S1}$ (Causee marked by **-ax**) ... (V1**-t/-r**) ... V2-___-Fin]]

    where (i) V2 is the main verb,

        (ii) V1 is an adverbial participle dominated by V2,

        (iii) CAUSE is realized as **-gu/-ku** in place of ___ ,

        (iv) Causee is marked by the DC-case suffix **-ax**

        (v) Causee can be omitted if the referentially identical noun phrase stands beforehand,

        (vi) brackets indicate options,

        (vi) [$_S$] is the matrix sentence which involves inner verb phrases [$_{S1}$] contaiing 1V and V2.

1.2. Causative verbs with double objects

Panfilov 1965 shows three sentence examples with double object phrase in absolute case. We will think about them to find out problems:

(10) n^{j}i   p^{h}əməkax   t^{h}us **X**evgun ar-gu-inə-d^j

   1sg refl-mother-Dat meat Xevgun   meal-CAUSE-WILL-Fin

（Я попрпсил свою мать чтобы она накормила Хевгуна мясом, I asked my mother to give meal to

   Xegvun herself）

Here the verb *jard^j* requires three arity elements. In a simple sentence, all of them stand in absolute case: agent(mother of myself), patient(Xegvun) and object(meat). In the causative structure, the grammatical subject of the embedded phrase, namely Causee, is marked by DC And the other two arity elements remains in absolute case, as follows:

(10a) [$_S$ n^{j}i WILL[CAUSE [$_{S1}$ p^{h}əmək-ax   t^{h}us **X**evgun ar-___ -]-___-d^j]

In this connection, Panfilov mentions the case that the suffix **-gu** makes only a simple transitive verb, but does not make a causative structure. The following sentence is made up with a verb with three arity elements

which the causative suffix **-gu** is attached to. But the sentence lacks the causee, an active actor of the embedded phrase; instead of causee stands an inactive noun phrase as object.

(11) nʲi naar   pəks   tulku-gu-dʲ

   1sg leather dryer   get-into-CAUSE-Fin

  （Я шкуру одел на форму для сушки. I put leather into dryer. Here, pəks (dryer) is a special wood frame to

   strain a leather onto, representative ethno-cultural instrument.)

If the causative structure is applicable to this sentence, it would be analyzed as follows:

(11a) ? [$_S$ nʲi CAUSE [$_{S1}$ naar pəks tulku-___-dʲ]]
(11b) ?? [$_S$ nʲi CAUSE [$_{S1}$ nʲi-ax/nʲ-ax naar pəks tulku-___-dʲ]]

Surely, the both analyses are false. This implies that the sentence is not causative, but only transitive, though the main verb is marked by **-gu**.

The next sentence example is made of a direct transitive verb. But it shows us some interesting issues: (i) in spite of the suffix **-gu,** it is not causative, (ii) the main verb has the intransitive counterpart making a transitive/ intransitive pair, (iii) the verb is a simplex with somewhat ethnographical meaning, too.

(12) nʲi poloťʰenc   firm-gu-dʲ

   1sg *sheet*-Abs   re-hang-CAUSE-Fin

  (Я перевесил полотенце, I hang the sheet to another place.）

   The verb *firmgudʲ* has the intransitive counterpart *firmdʲ*, which Panfilov translated into Russian as: перевешива<u>ся</u> через что-лубо (to be re-hanged up through something). Savel'eva/Taksami 1970 registers this word in the form: *firm<u>u</u>dʲ*, with Russian translation: перевешивать через что-лубо (to re-hang through something). The difference is too important to ignore, in that, if Panfilov is right, the verb represents a state, but if not, an act. I suppose Savel'eva/Taksami is right, from the following reason: they record some derivatives like *firmuinədʲ*, *firmuťʰadʲ* and *firmugudʲ* which are all derived from *firmudʲ* in the "act"-meaning. The optative meaning of *firmuinədʲ* as well as the habitual expression of *firmuťʰadʲ* are

unreasonable to derive from a state expression. By the way, the simplex verb *firmud^j* represents an important routine work in the ordinary life of Nivkh society to hang and re-hang up dry fishes and nets, etc., a typical ethnographical word.

Now, let us try to represent the causative structure of (11) just like as sentences above:

(12a) ?[$_S$ n^{j}i CAUSE [$_{S1}$ polot^{h}enc   firm-___-d^j]]

But this structure is curious. It lacks the causee. The possible causee may be *n^{j}i-ax* (12b) or the main verb may be reflexivized (12c). But these sentences are not good. In contrast, if the causee is some one other than *n^{j}i-,* for instance, *my brother* like (12d), the sentence has no problem. But the meaning is different.

(12b)?? n^{j}i n^{j}iax polot^{h}enc firmgud^j
(12c)?? n^{j}i polot^{h}enc p^{h}firmgud^j
(12d) n^{j}i (p^{h}əkənax) polot^{h}enc firmgud^j (p^{h}əkənax must stand in precontext.)

Therefore, we assume that the sentence can have no causee nor reflexive marker. This says that the sentence (12) is not causative, though the suffix **-gu** is attached to the verb. So, it is possible to assume that the suffix does not necessarily mark a causative structure as Panfilov implies (p.49). Cf. 2.1. below.

1.3. Causative oblique verbs

Panfilov shows three example sentences for this class of verbs. The first one has an overt marker for the causee, but in other two it is omitted. In each sentence, the verb requires a nominal phrase in directive case (according to Panfilov дательно-направительный п., dative-directive case). It functions as patient in deep case.

(13) n^{j}i   xevgun-ax   erx   qala-gu-d^j
    1sg   Xevgun-DC 3sg-Dir hate-CAUSE-Fin
   （Я заставил Хевгуна ненавидеть его. I let Xevgun$_i$ hate him$_j$.）

The 3rd person *erx* is another person than Xevgun. The causative structure of this sentence is clear enough to omit the formulation.

The second sentence of this type includes an adverbial participle phrase q^hat^h-r to explain a presupposed reason why mother made his child excuse to the guest. But judging from the sentence meaning, the causative suffix does not domain the participle phrase. Therefore, the structure looks like (14a)]:

(14) əmək pʰ-oɢla   qʰatʰ-r   antχku-dox vaɣr-gu-dʲ

  mother Refl-child   belch-Part guest-Dir   be=aschamed-CAUSE-Fin

（Мать, своего ребенка рыгая, заставила (его) устыдиться гостей. Mother, as her child belched, let

 him excuse himself to the guest.) The structure is as follows:

(14a) [$_S$ əmək [$_{S1}$ pʰ-oɢla qʰatʰ-r] CAUSE [$_{S2}$ (pʰ-oɢla-ax) antχku-dox vaɣr-___-dʲ]]

The child p^h-$oɢla$ is the grammatical subject of the participle and the that of the main verb $vaɣr$-gu-d^j. So, the second occurrence of p^h-$oɢla$ is omitted. It will be of the form p^h-$oɢla$-ax, with causative case marking. The condition of the ellipsis is that a referentially identical NP is mentioned in the direct context, as assumed above. A interesting sentence, but so far we find no problem.

The third sentence Panfilov has a similar structure. The causee in the second verb phrase is omitted. The first verb phrase contains the referentially identical noun phrase with the causee. Different is that the first verb phrase is not a participle, but a subordinate clause with a conjunction-suffix -ke.

(15) oɢla qan tχop-ke   pʰ-erx um-gu-dʲ

   child dog annoy-CONJ Refl-3sg angry-CAUSE-Fin

（Ревенок, сабаку тревожа, заставил (его) разозлиться на собя. The child annoyed the dog and made

 it angry against himself.）

1.4. Causativc reflexive verbs

  Among the examples of reflective verbs Panfilov gives, the sentence (16) seems to be a typical one. The verb $p^hrəu$-d^j(to learn) is used as frequently as its transitive counterpart $rəu$-d^j(to teach).

 (16) nʲi gudanax cuz lu-rx   pʰ-rəu-gu-dʲ

   1sg Gudan-DC   new song-Dir Refl-teach-CAUSE-Fin

（Я попросил Гудана выучить меня новой песня, I asked Gudan to teach me a new song.）

Note that the reference of the reflexive prefux p^h is not the grammatical subject of the embedded phrase, Gudan, but that of the whole sentence, n^ji . This shows that the reflexivazation has to occur within the sentence S, but not in S1.. Any way, this causative sentence can be analyzed as follows in a theoretical way:

(16a) [$_S$ n^{j}i CAUSE [$_{S1}$ gudanax cuz lurx p^h-rəu-___- d^j]

The second example has a reflexive verb derived from the corresponding transitive, which is used frequently, too. But the meaning of the reflexive usage is specified in somewhat figurative way: the transitive *urud^j*   has a normal usage in the meaning *to count/teach*, but the reflexive means *to behave well*.

(17) hela, p^{h}u-t   n^j-ax   p^h-uru-gu-ve

     Interj, *go-out*-Part 1sg-DC   Relf-*count*-CAUSE-IMP

 （Ну, выходите, дайте мне вас сосчитать. Hay, go out and let me count yourself）

Panfilov translates the verb *p^{h}urud^j* (S/T: *p^h-jurud^j*) into Russian *считать себя*, (literally:*count/teach youself*). The reflective pronoun p^h is interpreted as 2nd person singular in this imperative sentence. The basic sentence structure can be analyzed roughly as follows:

(17a) Interjection, [$_S$ IMP[(2sg) [[$_{S1}$ p^{h}u-t]   AND [$_{S2}$ CAUSE [$_{S3}$ n^{j}ax (agent) [$_{S4}$ p^h(obj=2sg)-uru$_{S4}$]

     -___$_{S3}$]$_{S2}$]] -___$_S$]

  The hierarchical structure of Causer, Causee, Subject and Object of this sentence looks like (17b). The terms omitted are in the brackets.

(17b)

	Causer	Causee	Subject	Object	verb
S			(2sg)	S1 & S2	-ve
S1			(2sg)	----	p^{h}u-t
S2	(2sg)	1sg n^{j}ax	(2sg)	S3	**-gu**
S3			1sg n^{j}ax	S4	(DO)
S4			(2sg)	Refl p^h-	-uru

The next sentence example Panfilov shows includes an ellipsis problem:

(18) nʲi əɣrkə kʰeq-umgu pʰ-iɣ-gu-dʲ-ra

  1sg nearlky fox-mother   Refl-kill-CAUSE-Fin-Affirm

（Я чуть выло не дал возвожность убить себя лисице-женщна. I nearly let the mother-fox to kill herself.）

The causative structure of the sentence looks like as (18a). Note that the causee has no case marker. It refers a non-human active. We will ask whether the suffix *-ax* can be optional in such a case. But it is not sure. Interesting is another point, too, that the reflexive pronoun refers to fox-mother, not the grammatical subject of S like the sentences above. It may be due to the tight lexicalization of the verb $pʰ\text{-}iɣ\text{-}dʲ$.

(18a) [S nʲi əɣrkə CAUSE [S1 kʰeq-umgu pʰ-iɣ-___-dʲ-ra]]

The following example is interesting in many ways. First, it lacks the casuee element though it is human active in 1st person singular, second, the main verb is inherently transitive and its reflexivization is optional.

(19) nʲi ucitʰel-dox zadaca pʰ-əksəm-gu-inə-t vi-dʲ

  1sg teacher-Dat task(Abs.) Refl-explain-CAUSE-WILL-Part go-Fin

（Я пошол к учителю просить (его) объяснить мне задачу. I went to the teacher with wish to let her explain the task.）

The causative structure of this sentence is embedded in the main sentence S1 in the form of an participle phrase, namely, S2. It has a function as final phrase with optative meaning. It can be analyzed as (a) and somewhat formerly as (b). Note that the causee in participle phrase S2 is omitted. This ellipsis is also conditioned by the pre-mentioned reference-identical nominal phrase, *ucitʰel* (teacher).

(19a) [S nʲi [S1 ucitʰel-dox [S2 (ucitʰel-ax) zadaca pʰ-əksəm-gu-inə-t S2] vi-dʲS1]]

  b [S nʲi [S1 ucitʰel-dox vi-dʲS1] WILL(2)-[CAUSE(1) [S2 (ucitʰel-ax) zadaca pʰ-əksəm-_1_-_2_-t S2]]

We have hitherto examined the causative sentence with the suffix *-gu/-ku* Panfilov 1965 shows and found out

the basic causative structure in this language as formulated in (4a). The crucial feature of this structure lies among others the overt mention of the causee with the case DC **-ax**. For this marking, both the grammatical subject and that of the embedded phrase has to be an active actor, so that a causative sentence includes two active actors. The causee can be omitted, when the referential identical noun phrase goes beforehand, e.g. in a participle phrase. The sentence (18) makes an exception: the causee of this sentence is an active, but non-human. It is not sure, whether the basic causative structure (4a) can be applied to such a sentence. The question is open.

2. Causativity and Transitivity

Nivkh has various morphological types of transitive verbs. A remarkable type is the transitive verbs derived from the corresponding intransitive verbs with the suffix **-gu/-ku**, which is, as is often said, the causative suffix inherently. We will first examine the usage of this types of transitive verbs and look for some basic principles to determine the causative as well as the transitive structure of this language.

2.1. Transitive verbs with *-gu/ku*

Among various morphological types of transitive verbs, there are some which are often regarded to have a causative meaning in contrast to their intransitive counterparts. A famous example is the opposition *mud^j:mugud^j. mud^j* is intransitive verb meaning *to die* in a simple sense. In contrast, its transitive counterpart *mugud^j* is derived from intransitive *mud^j*, but it does not seem to mean *to kill* in a straightforward way. Panfilov as well as Savjeleva/Taslami translate it into Russian as imperfective transitive *умерщвлять* (to make a state of being dead) or perfective *умеритвить*(to make a state of having been dead). The sentence (20) must be interpreted into (20a) but not into (20b):

(20) **[**$_S$ **X**evgun [$_{S1}$ p^{h}əkən mu-gu-d^{j}ra]]

    a. Xevgun made his own elder brother dead.

    b. Xevgun killed his own elder brother.

The structure (21) cannot explicate why *p^{h}əkən* has not the suffix **-ax**. And (21b) is also bad because the grammatical subject of mu-d^j cannot be an active actor. Therefore, both structures are false. Note that sentence is not causative despite the general assumption.

(21) **a.** ??[$_S$ **X**evgun CAUSE [$_{S1}$ pʰəkən mu-___-dʲra]]

    b. ??[$_S$ **X**evgun CAUSE [$_{S1}$ pʰəkən-<u>ax</u> mu-___-dʲra]]

If this is right, we have to assume that the verb of S is not CAUSE, because CAUSE without causee is not possible, except that it is omitted elliptically. Let us take one more example including another verb with a similar behavior:

(22)   **X**evgun pʰkʰegu se-gu-dʲra.

    (Xegvun twist his own nets.)

If the causative structure can be applied to this sentence, it would look like as (22a):

(22a) *[$_S$ **X**evgun CAUSE[$_{S1}$ pʰkʰegu se-___-dʲ-ra]]

pʰkʰegu (his own nets) are not possible to be a causee because it cannot be an actor. According to the definition of causative structure (4a), the generic verb CAUSE can not establish without its arity elements Causer and Causee. Therefore, the analysis (22a) is false.

  Panfilov mentions some other verb pairs of this class, e.g. *polmdʲ* (to be blind)*: polmgudʲ*(to make one to be blind)*, pʰud*(to go out) *: pʰugudʲ*(to make one go out). For the pair *polmdʲ : polmgudʲ*, the same holds true as *mudʲ :mugudʲ*, but the second pair needs to be examined. Savjeleva/Taksami gives the following examples for the verb:

(23) a. ŋəxux pəjŋaax pʰugudʲ

    (выпустить путицу из клетки, to let a bird out of cage)

   b. pʰsuorŋux cʰaχ pʰugudʲ

    (выпыстить воду из ванны, to let water out of tank)

   c. təvux pʰugudʲ

   (заставить выйти из дому, to let go out of house)

The first usage (23a) is clearly causative; the causee is marked overtly by means of the suffix *-ax* attached. But, in contrast, that of (23b) stands in absolutive; water can not be an active causee, though its moves. Only

in a figurative expression, it may be interpreted as causative. The third phrase (23c) is not sufficient to judge whether it is causative or simple transitive because it lacks the possible causee. If the verb has an actor as the grammatical subject of p^hud^j, say a dog, it is causative. So, Panfilov is right in that he regards the verb as the boarder case between causative and transitive.

The transitive verbs with *-gu/-ku* are, therefore, undetermined for themselves whether they are causative or simple transitive. We suppose that they are causative if they make a causative structure like (24) (i.e. the simplified (4a)) below, but, if not, they are simple transitive like (23b).

(24)   [$_S$ Causer CAUSE [$_{S1}$ Causee ...V-___-...]]

The causee has to be, in this language, active. An inactive noun phrase, or to say more exactly, a noun phrase the speaker regards as impossible to be an actor, cannot appear in the casuee-place. In this language, the causative suffix *-gu/-ku* triggers to establish the causative structure (24), if and only if there can be a causee NP in S1. To say reversely, if there is no possible causee NP, the CAUSE-structure is not established; then, the verb V is a simple transitive like (22) and (23b).

2.2. Transitive verbs with *-u*

The word-formational suffix *-u* is very productive in Nivkh. It is attached to the stem of intransitive verbs to make the corresponding transitive. The process is accompanied by the fricativazation (=lenition) of the top consonants of intransitive verbs, if these are plosives. Panfilov mentions the following verb pairs as examples:

(25) *-u* with fricativization (=lenition)

 (a) vilud^j (увеличивать, to make big) : pild^j (быть большим, to be big)

   ɣəlud^j (удлинять, to make long) : kəld^j(быть длиным, to be long)

   ʒaqaud^j (укреплять, to strengthen) : t^{h}aqad^j (быть крепким, to be strong)

   xəlɣud^j (расслаблять, to loosen) : k^{h}əlxt^j (быть расслабленным, to be loose)

   səud^j (сушить, to dry) : cəud^j (сохнуть, to be dry)

   fətud^j (расщерлять, tear) : p^{h}ətt^j (быть расщерленным, to be split)

   ɣəŋud^j (замораживать, to freeze) : kəŋd^j(замеразать, to be frozen)

   somrud^j (распрягать, to free) : comrd^j (освобождаться из упражки, ошенника, to be free)

(b) sohud^j (растапливать, to melt (tr.)) : cohd^j (таять, to melt (intr.))

ʒoʒud^j (тушить, to extinguish) : tʰoʒd^j (потухать, to vanish)

vandud^j (выращивать, to grow (tr.)) : pand^j (родиться, to grow up)

firkud^j (повора́ивать, to turn (tr.)) : pʰirkt^j (повора́иваться, to turn (intr.))

siŋrud^j (мучить, to torment) : ciŋrd^j (мучиться, to have pain)

volud^j (повалить, throw/knock down) : pold^j (упасть, to fall)

rəmʒud^j (ронять из рук, to throw down) : təmʒd^j (падать из рук, to drop down)

vəlbəlud^j (перевертывать, to turn over) : pəlbəld^j (переверчуться, to be turned over)

(c) faʒud^j (раздевать, to strip (someone) off (clothes)) : pʰaʒd^j (раздеваться, to take off (clothes))

ɣərud^j (останавливать, to stop (tr.) : krəd^j (останавливаться, to stop (intr.))

  The intransitive verbs of the class (25a) has no actor/agent who doe any intentional act. Their "deep case" is regarded as object. They represent the state of the object, like *to be big, loose*, etc., namely, STATE(object), or better to write, object^STATE.

  The corresponding transitive verbs, e.g. *vilud^j* (versus *pild^j*), represent a certain act of the grammatical subject of the verbs which bring about the state. The actor does something to bring about the state as the effect of his act. This process involves some relevant semantic features: (i) actor/agent, (ii) his act, i.e. DO something, (iii) it brings about the state as its effect and (iv) the state of the object, namely object^STATE=*pild^j*. We will comment these factors in short:

(i) The actor/agent indicates an intentional subject who does (ii),

(ii) What his act does is expressed only covertly. It is not specified by the meaning of the verb. Therefore, we omit

  the specification of "something" in the semantic description of the verbs. In the verb meaning, the effect of the

of the

  act is relevant alone.

(iii) We symbolize "bring about the state as effect" as MAKE. This notion is different from CAUSE in that it

  involves no causee, so that the effect is not a new act of the second actor. Moreover, MAKE implies that it

  brings about an effect produced by DO-something (ii).

(iv) We will symbolize the state of an object as "object^STATE$_i$=*pild^j*". The notation is equivalent to

  "STATE$_i$(object)=*pild^j*", perhaps more familiar in logical notations, but clumsy.

(v) Note that an effect differs from a result in that a effect is brought about by an intentional act of an active

actor, while a result can be brought about by an inactive/non-intentional motivation.

By means of these notational instruments we derive the meaning structure of $vilud^{ij}$ from $pild^{ij}$:

(26) a. $vilud^{ij}$ means [actor^DO [MAKE [object^STATE=$pild^{ij}$]]], or

   b. $vilud^{ij}$ means [$_S$ actor^DO [$_{VP}$ MAKE [$_{S1=STATE}$ object^STATE=$pild^{ij}$]]]

  If we take into account a more general notation to describe the lexical meaning of verbs which I initiated in Kaneko 1995 (revised 2003) and in *Time Expressions in Nivkh* in CES8 2006, we can add some more lexical information about lexical aspect of verbs to (26a,b). Moreover, if we want to add the arity information, we can formulate the lexical meaning of the verb $vilud^{ij}$ like the following:

(26) c. $vilud^{ij} = [_{t1}$ actor^DO [$_{t2}$ Effect=object^STATE$_i$=$pild^{ij}$

   where the frame " [$_{t1}$ ... [$_{t2}$ Eff " indicates the event-type of a durative process with closed beginning and open end with an effect. cf. Kaneko 2006b in this volume CES9.

   The second type of the transitive derivations in (25b) are different form the verbs (25a) in that they have a different structure in the embedded phrase. Let us choose the verb pair $vandud^{ij}$ (to grow (tr.)): $pand^{ij}$ (to grow up (intr.)). The intransitive $pand^{ij}$ represents a inactive process of an animate object which has a lexical aspect: [$_{t1}$ (durative) [$_{t2}$ Result. (for this notation cf. Kaneko 2006b in this volume)   We write the meaning of the intransitve verb $pand^{ij}$ as "object^PROCESS $= [_{t1}$ $pand^i$(durative) [$_{t2}$ Result=$pand^{ij}$". The transitive counterpart $vandud^{ij}$ represents an active DO of an actor/agent. Its meaning can be formulated analogously to (26) as follows:

(27) a. phrase structure notation:

   $vandud^{ij}$ means [$_S$ actor^DO [$_{VP}$ MAKE [$_{S1}$ object^PROCESS$_i$ $=$ $pand^{ij}$]]]

   b. lexical aspect notation:

   $vandud^{ij} = [_{t1}$ actor^DO [$_{t2}$ Effect=object^PROCESS$_i$ $=$ $pand^i$(durative) [Result $=$ $pand^{ij}$

   Here (27a) is a phrase structure like notation, (27b) a lexical aspect notation.

The other verbs in (25b) have an analogous structure, except that some of them $ci\eta rd^{ij}$ (to have pain) and

perhaps *pold^j* (to fall) also are not resultative.

The third type (25c) includes here only two examples. The intransitive counterparts are not inactive verbs, but have intentional actors as grammatical subject. Therefore, the structure of S1 is different from (26) and (27): it has an actor, so that the verb of S1 is DO: [$_{S1}$ actor^DO＝p^{h}aʒd^j], in the notation of meaning type: [$_{t1}$ actor^DO＝p^{h}aʒd^j $_{t2}$[Result. In this case, we suppose that the generic predicate of the matrix sentence S has an option : it can be MAKE or CAUSE:

(28) a. *faʒud^j* means [$_S$ actor^DO [$_{VP}$ MAKE [$_{S1}$ actor^DO$_i$ ＝*p^{h}aʒd^j*]]

    b.*faʒud^j* means [$_S$ actor^DO [$_{VP}$ CAUSE [$_{S1}$ actor^DO$_i$ ＝*p^{h}aʒd^j*]]

The difference lies in that the second actor in S1 in MAKE-sentence (28a) is practically a doll who get dressed up. In contrast, the actor of CAUSE-sentence (28b) has a will to dress up intentionally. In the latter case, the following sentences are possible (at present testing):

(29) a. əmək oɢla faʒud^j (Mother dressed the child up)

    b. əmək oɢlaax p^{h}aʒgud^j (Mother asked the child to dress up)

The meaning notation (28) can be rewritten in terms of aspectual meaning type:

(29) a. *faʒud^j* ＝[$_{t1}$ actor^DO [$_{t2}$ Effect=actor^DO$_i$ (non-intentional)＝*p^{h}aʒd^j*

    b. *faʒud^j* ＝[$_{t1}$ actor^DO [$_{t2}$ Effect=actor^DO$_i$(intentional) ＝*p^{h}aʒd^j*

Here, we have examined the transitive-intransitive verb pairs of the type **-*u*-**transitive to get the tentative conclusion: the transitive verbs of the type is related to the corresponding intransitive by way of the semantic structure like as follows:

(30)a. **-*u*-**transitive＝[$_S$ actor^DO [$_{VP}$ MAKE [$_{S1}$ object^STATE/PROCESS or actor^DO ＝intransitive]]

    b. **-*u*-**transitive＝[$_{t1}$ actor^DO [$_{t2}$ Effect=object^STATE/PROCESS or actor^DO ＝intransitive

2.3. The other types of transitive verbs

Nivkh has many other morphological types of transitive verbs which have their corresponding intransitive verbs. The majority of them are marked with a fricative consonant change at the top of the stems. Panfilov mentions following pairs:

(31) rəŋʒələdʲ (взвешить, to weigh (tr.)) : təŋʒələdʲ (весить, to weigh (intr.))

    ratadʲ (сохранять, to preserve) : tatadʲ(быть целым, to be precious)

    χavudʲ (нагревать, to make warm) : qʰavudʲ(быть нагретным, to be warm)

    ɣəsqodʲ (обжеть, to burn) : kəsqodʲ (обжечься, to get burned)

    ɣukudʲ (отряхать, to drop/ let fall) : kukudʲ (опасть, to fall)

    səudʲ (снимать (одежду итд.), to take off) : cəudʲ (сняться, to fall out)

    vunʲdʲ (истекать чем-либо, to loose (power)) : punʲdʲ(капать, to drip out; протекать, to flow out)

    rəudʲ (учить, to teach) : təudʲ (привыкать, to get accustomed)

    folqodʲ (продырявидь, to dig a hole) : pʰolqdʲ(продырявидься, to be made a hole)

    rʰadʲ (жарить, to burn) : tʰadʲ (жариться, to be burned)

    ʒosqtʲ (сломать, to break) : tʰosqtʲ(сломаться, to be broken)

    ʒodʲ (гнуть, to bend) : tʰodʲ (согнуться, to be bent)

Some of these verb pairs show a direct semantic relation between the transitive and intransitive counterparts. To take an example, the pair *χavudʲ* (to make warm) : *qʰavudʲ* (to be warm, ST:*qʰavdʲ*) can be related to each other as is formulated as follows:

(32) $\chi avud^j =$ [$_S$ actor^DO [$_{VP}$ MAKE [object^q^havud^j]]]

A similar relation can be found for the pairs: *ɣukudʲ* (to drop/ let fall) : *kukudʲ* (to fall), *səudʲ* (to take off) : *cəudʲ* (to fall out), *folqodʲ* (to dig a hole) : *pʰolqdʲ* (to be made a hole), *rʰadʲ* (to burn) : *tʰadʲ* (to be burned), *ʒosqtʲ* (to break) : *tʰosqtʲ* (to be broken) and *ʒodʲ* (to bend) : *tʰodʲ* (to be bent). But if we want to apply the formula like (32) to the pair *ɣəsqodʲ* (to burn) : *kəsqodʲ* (to get burned). We do not succeed in a straight forward way to restrict its general applicability, because the the intransitve *kəsqodʲ* means *to get a skin burn or scald*, so that the grammatical subject of the intransitive verb, namely the object in "deep case", is limited to a part of human body in a normal usage. In many other cases, the meaning of transitive and intransitive verbs does not correspond in a straight forward way. Let us take an example from the pairs above

(31): *rəŋʒələd^{j}* (to weigh (tr.)) : *təŋʒləd^{j}* (to weigh (intr.), ST: *təŋʒd^{j}*). The verbs are used in the following way:

(33) a. cʰo meqr kilogramm teŋʒd^{j} (The fish weights 2 kilogram,)

   b. cʰo rŋʒləd^{j} (to weigh fish)

The transitive verb means "actor DO something in order to know how (much) the fish weighs". But the intransitive counterpart represents only the meaning part "how (much) the fish weighs". This meaning relation cannot be captured by the generic predicate like MAKE. It can be verbally expressed almost like "in order to know". We will symbolize this optative meaning alone by means of "≫". So, it can be written like:

(34) *təŋʒləd^{j}* ≐ [$_S$ actor^DO] ≫[$_{S1}$ HOW [object^ *teŋʒd^{j}*]]]

   where ≫: a final causalty.

The semantic relation between *ratad^{j}* (to preserve) and *tatad^{j}* (to be precious) is not simple, too. The stem of the verbs **tata** is used often in the meaning *to be valuable/wholly*, e.g. tata moks nid^{j} (to eat the precious piece), tata ɜstakan rad^{j} (to drink the cup vacant). The intransitive verb means that something is precious and makes an opposition with the transitive with the meaning *to preserve something in its value*. This pair is surely related each other with the morpho-phonological opposition of their stem top consonants **t-** vs. **r-**. And they are in some relation also in a semantic sense. But the meaning change is not direct, it can be explained like *to make something precious*. It represents rather a causal act in a certain sense: *because of the preciousness of the object, the actor deals it with good care*. Approximately the meaning relation can be written as follows:

(35) [object^*tatad^{j}*] ⇒ actor^DO[object^*ratad^{j}*]

   where ⇒ indicates "so that" or "therefore".

In general, it seems to be impossible to formulate the meaning relation of the verb pair in (31) only by means of the generic predicates like MAKE and CAUSE in a lot of cases. In other words, the semantic relation between transitive and intransitive pairs cannot be necessarily described in a formula like (32) above, but we have to introduce other sorts causal relationship, as (34) and (35) show, in order to show their

semantic correlation even if approximately. Therefore, we cannot attempt a direct semantic derivation of transitive from intransitive verbs, or vice verse, by way of a single rule like (32). In fact, the transitive-intransitive pairs with the same stems are related practically with individually special semantic value. We have observed the cases (34) and (35), but there are many other cases to surprise: e.g. the pair *vun^{j}d^j* (to loose (blood/power)) versus *pun^{j}d^j* (to drip out, to flow out). The intransitive meaning shows the reason why the transitive meaning comes about, namely: because power drips/flow out, one's body looses of power. The pair *rəud^j* (to teach, cf. *p^{h}rəud^j* (to learn)): *təud^j* (to get accustomed) suggest a more remote causality. Any way, the meaning relation (32) is but a standard prototype of semantic derivation between transitive-intransitive verb pairs.

2.4. Prefixed transitive verbs

  There are some other morphological types of transitive verbs in Nivkh which have intransitive counterparts. Among them, there is a special class of transitive verbs which make their intransitive counterparts by means of prefixing of ***j-, i-*** and ***e-***. These prefixes are first noticed by Krejnovich 1958, who interpreted that they are the residual object marker of indefinite pronouns, so that the transitive verbs of this class are of old origin according to his view. But Panfilov 1960 regarded the prefixes rather as independent short forms of pronouns of third person singular implying they have nothing to do with the residue of incorporated old pronouns. However, it appears to be somewhat curious to see that Panfilov 1965 classifies them as a class of transitive verbs, saying that the prefixes do not appear if the direct object appear (p.42). Rather, we can also regard them as intransitivized counterparts of the inherent transitive, e.g.*jott^j* : *ott^j* . Any way, these verbs make a big class and include many important daily life words which belong to the basic vocabulary of this language.

(36) a. j- : ald^j(догонять, catch up) ＞ jald^j, əskt^j(опережать, surpass) ＞ jəskt^j, ott^j(шить, sew) ＞ jott^j, urkut^j(таскать, pull) ＞ jurkut^j, ard^j(кормить, feed) ＞ jard^j, ot^{j}t^j(спрашбать о ком-л., ask) ＞ jot^{j}t^j, aŋrd^j(удивиляться чему, кому, be astonished)＞jaŋrd^j, oxtt^j (лечить, cure)＞joxtt^j, əʒd^j(эвать, call)＞ jəʒd^j, omɣd^j(стрить ч.л.,reap) ＞ jomɣd^j, haqt^j(резать, cut) ＞ jaqt^j, haʒd^j (схватывать, bite) ＞ jaʒd^j, həɭəld^j(лезать, lick) ＞ jəɭəld^j, hətt^j(вытаскивать, throw out) ＞ jətt^j, jəd^j(варить, voil) ＞ jəd^j, hiiʒd^j (подражать кому-л., imitate)＞jiiʒd^j, hupt^j(завязывать, bind)＞jupt^j ,...

   b. i- : p^{h}rəd^j, frəd^j(убирать, put in order) ＞ ivrd^j; txud^j, rxud^j(спать, лежать на ч., sleep on) ＞ irkud^j; vukt^j, pukt^j, bukt^j(запрягать кого-л. во что-л., bind to)＞ifkut^j; hɭəd^j, sləd^j, tləd^j, xləd^j (тянуть, pull)＞irləd^j; ximd^j, k^{h}imd^j(давать кому-л.что-л., give)＞imɣd^j;

xirdʲ, kʰirdʲ(пользоваться, хранить, носить,use, carry) > iɣrdʲ; nrʰədʲ(видеть, see, look on) > indədʲ;
xudʲ, kʰudʲ(любить,увибать, косить, grasp, kill, get) > iɣdʲ; nʲidʲ(есть, eat) > inʲdʲ,...

   c. e- : moqtʲ(отрезать, mow) > əmqtʲ; tʰvaidʲ, rʰvaidʲ (плевать на ч., spit) > ərvaidʲ;
rʰoɢdʲ, tʰoɢdʲ(давить на что, press) > ərqtʲ;χodʲ, qʰodʲ (пожать, о животных, give birth) > əɢdʲ;
cχoudʲ, sχoudʲ(стурать, wash) > əʒɢoudʲ; nʲŋaudʲ, sŋaudʲ, cŋaudʲ(шевелить, трогать, беспоцоить) >
ənʲŋaudʲ; smodʲ, cmodʲ(любить, love) > əʒmudʲ; vodʲ, podʲ, bodʲ(брать,держать, take) > əvdʲ;
səvdʲ, cəvdʲ (колоть, pick)>əsptʲ; nʲaaʒdʲ(воровать, steal)>ənŋaʒdʲ; cχadj, sχadʲ (не любить,не
 принимать, hate)>əsqadʲ; χrodʲ, kʰrodʲ(вешать ч.на ч., sit down)>əɣrodʲ; crovdʲ, srovdʲ(прибитл,
приколотить, knack) > əʒrovdʲ; ŋaavdʲ(душить, wring) > əʒŋaɢvdʲ; tʰrodʲ, crodʲ, srodʲ
(ивзбираться на ч., climb) > əʒrodʲ; cχaqavdʲ, sχaqavdʲ (стирать ч. небрежно, wash roughly) >
əʒɢaqavdʲ: kʰnadʲ, χnadʲ(мазать, paint)>əɣnadʲ,...

The transitive-intransitive pairs have typical usage, e.g. in case of the pair *nʲidʲ(eat) >inʲdʲ* , in the following
way:

(37) tətŋan *inʲve*!   tədʲ als amra urdʲra.   als   *nʲive*!

    morning eat-Imp. this mushroom taste good-Fin-Aff mushroom eat-Imp

   (Take breakfast!, This mushroom is good to eat. Eat mushroom.)

The transitive form appears when it has an overt object, while the prefixed forms are used when the object is
unspecified or , better to say, is determined customarily like in (37): *i-* indicates meal, here breakfast because
of *tətŋan* (time of morning). The transitive-intransitive opposition depends here on whether the object stands
overtly or not. If we accept the view of Panfilov 1960 and regard the prefixes as short forms of non-specific
pronoun, the verbs are yet transitive, but the objects are non-specific.
Now, let us try to formulate the relation of the verb pairs each other. As the most transitive verbs of this class
take an animate/human actor as the grammatical subject, they begins with the structure actor^DO. But what
the actor does, is given by the verb meaning itself without any mediation of a generic predicate like MAKE,
to say nothing of CAUSE. The content of DO is described directly by the verb phrase [$_{VP}$...] The meanig of
the pair *nʲidʲ(eat): i-nʲdʲ* can be written as follows:

(38) a. *nʲidʲ* =[actor^DO[$_{VP}$ object(+overt&−specific)^*nʲidʲ*]]

b. $i\text{-}n^j d^j$ =[actor^DO[$_{VP}$ object($-$overt&+specific)^$\text{-}n^j d^j$]]

In the formula like this, "actor^DO" means that the verb represents an intentional animate/human act. This meaning formulation (38) is sufficient to be a semantic description for the moment.
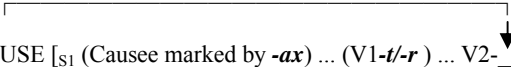

3. CAUSE in Nivkh

In this paper we have brought up two questions: 1. how does the causative structure of this language looks like? and 2. what derivational relation can be found between transitive-intransitive verb pairs? So, we have ignored many questions about simplex verbs which have no direct derivational counterparts, e.g. *eʒmud^j* (to love), *xad^j* (to be), and a lot of others. Nor we have any interest in so-called meaning/conceptual structure of verbs, namely, in the internal structure of the verb meaning. We are concerned with internal relation between verb meanings alone. Summing up the observation above, we will try now to draw a picture about the interesting behavior of the verb structure here concerned in the language Nivkh.

3.1. Causative Structure

From the analysis of the transitive verbs with the so-called causative suffix *-gu*, we have taken out the prototypical causative structure (4a) :

(4a) [$_S$ Causer CAUSE [$_{S1}$ (Causee marked by *-ax*) ... (V1-*t/-r*) ... V2-___-Fin]]

　　　Here CAUSE is realized as *-gu/-ku* in the place ___.

Crucial in this structure is the Causee. It is marked by a special suffix *-ax*, which indicates the Dative-Causative case according to Panfilov 1965 and many other literature. In the grammatical system of this language, this case appears only in this position to indicate the active actor with the function as Causee in the causative structure (4a). May be, we will find some cases to show other functions of this case if we look about more language data. But as far as we see at present, we say that the case is used as active case for the Causee in a causative structure in this language.

It is often said that the active case marker *-ax* can be omitted so that the causee can stand without any case marking, i.e. in absolutive case. However, as far as we have seen above, we find only one such case, namely (18). In the causee position in this sentence, it stands an animate noun phrase *k^hgumgu* (fox mother) who/which wants to kill herself. Say, a half personification. A marginal case. In all the other sentences there

stands the causee with **-ax**,. Or the causee marked with **-ax** is totally omitted: the sentences (3), (8), (9), (14), (15) and (19). Otherwise, no causative structure can be established: (11) and (12).

Here comes up a question how the ellipsis of **-ax** noun phrase is conditioned. The condition is rigid but normal: a referentially identical noun phrase has to be stand in the directly foregoing context. This condition is satisfied in all the 6 sentence above mentioned.

The second crucial issue of the structure (4a) the scope of **-gu/-ku**. First, the scope is marked by the causee with **-ax** explicitly. The typical example is the sentence (17). The participle verb phrase remains out of the scope of **-gu.** But in case the causee is omitted, it is not marked by any morpho-syntactic means. But in a discourse like the sentences (8) and (9) above, it is practically needless to say that the participle verb phrase can not be involved in the scope of **-gu**. In order to avoid the ambiguity, there are surely many other grammatical means. If necessarily,   we can put a pause direct after the participle for instance. For the marking of the scope we have utilized the generic predicate CAUSE tentatively, but it is clumsy to write the verb final language structure with the verb top order of logical notation. A compromise.

There is one more point to notice in the causative structure (4a): it has two actors, namely the Causer in S and the Causee in S1. Both are regarded as indispensable arity elements of the generic predicate CAUSE, at least as far as implied from the causative structure of this language. It may be better to dare to assert that the double actor system is the prototype of CAUSE.

3.2. Transitive-Intransitive Pair Verbs

The language Nivkh has some morphological types of transitive-intransitive derivation. The causative suffix **-gu/-ku** is one of them. But it does not necessarily make the causative verbs, cf. (23a,b,c). It make a transitive- intransitive verb pair, e.g. p^hugud^i(to let/make one to go out): p^hud^i(to go out). p^hugud^j can be causative when it makes a causative structure (23a), but if not, a simple transitive (23b,c). We have observed some other types of transitive-intransitive pairs Panfilov 1965 mentioned, namely the verb pairs derived form intransitve verbs by suffixation of **-u** and/or top consonant lenition. The majority of transitive verbs have actor as the grammatical subject who does something and make an effect or let a result behand. The transitive-intransitive relation can be somewhat formally written as

(30)a. **-u**-transitive＝[$_S$ actor^DO [$_{VP}$ MAKE [$_{S1}$ object^STATE/PROCESS or actor^DO ＝intransitive]]

    b. **-u**-transitive＝[$_{t1}$ actor^DO [$_{t2}$ Effect=object^STATE/PROCESS or actor^DO ＝intransitive

The phrase structure notation (30a) is needless to explain. In contrast, the notation (30b) contains some more information about lexical aspect of verb which is the substantial content of DO, cf. Kaneko 1999, 2003 and 2006b. I prefer the second one, but for convenience (31a) is sufficient.

Though the semantic correlation (30) between transitive and intransitive pair verbs is surely a prototype derivation pattern, but it is not always applicable. The examples (35) and (36) are enough to show that some other kinds of causal relation combine the verb pairs:

(34) $təŋʒləd^{ij}$ (to weigh(tr.)) $\doteq$ [$_S$ actor^DO] $\gg$[$_{S1}$ HOW [object^ $teŋʒd^i$(to weigh(intr.))]]]

　　where $\gg$: a final causalty.

(35) [object^$tatad^{ij}$(to preserve(tr.)] $\Rightarrow$ actor^DO[object^$ratad^{ij}$(to be precious(intr.)]

　　where $\Rightarrow$ indicates "so that" or "therefore".

Moreover, when we look about the type of prefixed transitive verb (2.4.), we find such semantic relation typically shown by the pair n^iid^{ij}(to eat x)and i-n^id^{ij} (to eat it)(38):

(38) a. n^iid^{ij} =[$_S$ actor^DO[$_{S1}$ object(+overt&−specific)^n^iid^{ij}]]

　　b. i-n^id^{ij} =[$_S$ actor^DO[$_{S1}$ object(−overt&+specific)^-n^id^{ij}]]

Here S1 represents approximately the content of the act DO itself, so that the difference lies in the opposite value of the specificity the object has.

3.2. Vocabulary as a Discrete Group

The causative structure of the language Nivkh depends on the syntactic configuration like (4a). The marker is attached to verb stem by morphological means, the suffix *-gu/-ku*, but its scope is determined syntactically again. But the correlation between transitive-intransitive pair verbs has only a limited regularity. A possible morphological correspondence like *-u*^suffixation alone (25) does not necessarily mean that the semantic relation goes parallel through the verb group. The parallel regularity is more difficult to find in the class of prefixed verbs (36). Therefore, even as long as the verbs are concerned above, possible semantic regularity between transitive and intransitive pairs is very limited. Suppose that the generic predicates like CAUSE and MAKE can be related by the mediation of another one, say BringAbout, such that

BringAbout
$$\begin{cases} \text{(a) +causee} \rightarrow \text{CAUSE} \\ \text{(b) } -\text{causee} \rightarrow \text{MAKE} \end{cases}$$

We have seen that (b) can be applied to a relatively small group of verbs and there are some other kinds of semantic correlation between the pair members.

We have avoided meaning analysis of verbs. This is not only because of the limited regularity of morphologically related verb pairs. But also because we assume that vocabulary is in principle a discrete group of words each of which reflects an apperceptive notion in our memory. It can be understood and interpreted, but not dissected.

The example sentences analyzed in this paper are all quoted from Panfilov 1965 who collected them during his field work in Kalima (a village in Lower Amur) among others. The main informant was a high-teen girl named Maria Nikolaevna (later) Puxta. Reading the example sentences, I imagined I heard her voice, but that is no more possible now and forever. Ruhe sanft, sanfte Ruh! Maria Hikolaeva!

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