In Defense of COMP: Complementation in Moksha Mordvin

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Abstract

In this paper, we argue that an adequate description of Moksha Mordvin[1] complement clauses requires preserving the traditional LFG distinction between OBJ and COMP grammatical functions. Most clausal complements in Moksha belong to one of the two major types: clauses headed by deverbal nouns (nominalizations) and finite complement clauses introduced by complementizers. The behaviour of nominalized clauses mostly corresponds to the behaviour of nominal arguments, such that they can be distributed between the grammatical functions SUBJ, OBJ, and OBL, without the need for an extra COMP function. Similarly, the majority of finite complements can be viewed as SUBJ, OBJ and OBL depending on the case form of their proforms and quantificational modifiers and the presence of object agreement on the verb. However, a subset of verbs does not fit into this classification: on the one hand, their complements do not trigger object agreement; on the other hand, they cannot be viewed as SUBJ or OBJ, because they cannot be replaced by nominal proforms and cannot be accompanied by any quantificational modifiers. We conclude that an additional grammatical function COMP must be used to account for the behaviour of these complement clauses.

1 Introduction

The status of complement clauses has been subject to debate in recent LFG literature. In early LFG (Kaplan and Bresnan 1982), finite complements were viewed as belonging to a special grammatical function (GF) COMP, reserved for clausal arguments and distinct from such nominal argument GFs as SUBJ, OBJ, and OBL$_\theta$. However, this was never an integral part of the framework, nor was sufficient empirical support for this analysis originally provided; hence, many authors (Alsina, Mohanan, and Mohanan 2005; Forst 2006; Patejuk and Przepiórkowski 2016) have argued, from different evidence, that COMP is a redundant GF, and all clausal arguments can be assimilated to the core GFs. A different line of reasoning maintains that while some or even most complement clauses indeed behave like ordinary subjects, objects, and obliques, others display different behaviour and do require a special GF (Dalrymple and Lødrup 2000; Lødrup 2004). Lødrup (2012) has even extended the use of COMP to some *nominal* arguments in Norwegian, thus depriving it of some of its redundancy as a special GF for clauses.

In light of this debate it is interesting to consider data from languages where verbal arguments are encoded by agreement markers on the verb, which thus signal their belonging to the argument structure of the latter. In some Uralic languages direct objects can optionally trigger verbal agreement marker, as e.g. in Moksha-Mordvin.

Moksha Mordvin[2] is a language of the Finno-Ugric branch of the Uralic lan-

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2. Glosses follow the Leipzig Rules (https://www.eva.mpg.de/lingua/resources/glossing-rules.php), with the addition of the abbreviations ADD: additive, CN: connegative,

guage family. Among Finno-Ugric languages, it is characterized by a rather elaborate system of verb morphology. In particular, Moksha distinguishes between subject-only (SU) and subject-object (SO) verb agreement markers (Koljadënkov and Zavodova, 1962; Molnár, 2001). While all intransitive verbs use the SU agreement set (1), transitive verbs may vary between SO (2) and SU (3) marking depending on the marking of the direct object (nominative or definite genitive), which, in turn, is regulated by a complex set of patterns, similarly to other instances of Differential Object Marking (Dalrymple and Nikolaeva 2011).

(1) *son*   **sa-s'**   *kud-u*
    s/he[NOM] come-PST.3SG house-LAT

    'S/he **came** (SU) home.'

(2) *son*   **s'uc'-əz'ə**   *id'-ənc*
    s/he[NOM] scold-PST.3SG.O.3SG.S child-3SG.POSS.SG.GEN

    'S/he **scolded** (SO) the child.'

(3) *son*   **s'uc'-əs'**   *c'ora-n'ɛ*
    s/he[NOM] scold-PST.3SG boy-DIM

    'S/he **scolded** (SU) a boy.'

The choice of the agreement pattern is regulated by the definiteness and animacy of the DO, aspectual properties of the verb etc. (Bartens 1999, 125). Compare Molnár (2001), É. Kiss (2004) for Hungarian, Nikolaeva (1999) for Khanty, Nikolaeva (2014) for Nenets. For the rules of DOM and agreement in Moksha, see Toldova (in press) and Kozlov (in press).

Moksha is also notable for a rather diverse array of clause combining strategies; in particular, complement clauses can be expressed either as finite CPs (see below) or nominalized verb forms (4–5) that occur with a wide variety of case markers:

(4) *mon*   *falu*   *jukšn'ə-sa*   *šava-n'ɛ-t'n'ə-n'*
    I[NOM] always forget.HAB-NPST-3SG.O.1SG.S plate-DIM-DEF.PL-GEN
    šta-kšn'ə-ma-t'
    wash-HAB-NMLZ-DEF.SG.GEN

    'I always forget (SO) **to wash** (nmlz.) dishes.'

DIM: diminutive, EL: elative, EXST: existential verb, HAB: habitual, ILL: illative, IN: inessive, LAT: lative, NPST: nonpast, O: direct object (person-number marker), PQP: pluperfect, PROL: prolative case, PRON: pronominal, S: subject (person-number marker), TMPR: temporal case.

(5) *paša*   *s'iz'-s'*   **tonafn'-əma-stə-nzə**
Paul[NOM] be.tired-NPST.3SG learn-NMLZ-EL-3SG.POSS

'Paul is tired (SU) **of studying** (nmlz.).'

Transitive verbs can either take the SO agreement markers or SU, depending on the matrix verb and the semantics of the complement clause. Thus, 'know' generally uses the SO pattern (6) while 'promise', the SU pattern (7):

(6) *učit'əl'-s'*   **soda-si-n'ə**   /   **soda-s'*   [**što**
teacher-DEF.SG[NOM] know-NPST.3PL.O.3SG.S know-NPST.3SG COMP

   pet'ɛ er' mejn'ɛ vor'g-əčn'-i urok-stə]
   Peter every what.TMPR run.away-IPFV-NPST.3SG class-EL

'The teacher **knows** (SO) **that** Peter always misses classes.'

(7) *paša*   **abəščanda-s'**   /   **abəščanda-z'ə*   [**što**
Paul[NOM] promise-PST.3SG promise-PST.3SG.O.3SG.S COMP

   iḷ'caman'   *kud-u*]
   accompany.NPST.1SG.O.3SG.S house-LAT

'Paul **promised** (SU) **that** he would accompany me home.'

The indirect object complements do not trigger verbal agreement, like nominal indirect objects:

(8) *sosec'*   **ken'ɛr'čn'-i**   [**što**   *mi-z'ə*
neighbour.DEF.SG[NOM] rejoice.HAB-NPST.3SG COMP sell-PST.3SG.O.3SG.S

   traks-ənc   *pitn'i-stə*]
   cow-3SG.POSS.SG.GEN expensive-EL

'My neighbour **is glad** (SU) **that** he has sold the cow at a high price.'

In this paper, we claim that the constructions exemplified above have the following structure. Nominalizations are NPs occupying the corresponding standard grammatical functions SUBJ, OBJ and OBL$_\theta$, while all finite complements are CPs at c-structure. At the same time, most finite complements show no major differences from noun phrases in their f-structure behaviour: finite complements following the SO pattern are OBJ, while many finite complements following the SU pattern behave like SUBJ or OBL$_\theta$ in terms of f-structure. However, a small but significant class of complements does not display nominal properties and has to be viewed as occupying a separate grammatical function COMP.

In other words, our aim is to demonstrate that complementation in Moksha is neither reducible to the standard nominal grammatical functions SUBJ, OBJ and OBL$_\theta$ nor to the distinction between c-structure categories. Rather, both a separate

grammatical function COMP and the distinction between NP and CP are required in order to provide an adequate analysis. In terms of LFG, we are going to show that Moksha complementation involves the following oppositions: NP vs. CP at the c-structure, and SUBJ vs. OBJ vs. OBL$_\theta$ vs. COMP at f-structure.

2 The system of complementation

We will first consider the syntactic properties of nominalizations and finite complement clauses. We will analyze their morphological properties and their syntactic properties such as the external distribution and the internal structure.

2.1 Nominalizations

One of the non-finite complementation strategies is the nominalization in -*ma*.[3] In terms of c-structure, nominalizations are clearly NPs. First, they take all the nominal inflectional markers, including case and possessive markers (9) and nominal plural markers (10):

(9) *mon* **ken'ɛ'r'd'-an** [*son'* **sa-ma-də-nzə**]
I[NOM] be.happy-NPST.1SG s/he.OBL come-NMLZ-ABL-3SG.POSS

'I **am glad** (SU) **of** his **coming**.'

(10) *mon* **tonad-ən'** [*son'* **sa-kšn'ə-ma-nzə-ndi**]
I[NOM] be.accustomed-PST.1SG s/he.OBL come-HAB-NMLZ-3SG.POSS.PL-DAT

'I **am accustomed** (SU) **to** his **visits** (lit. his **comings**).'

Second, nominalizations have external nominal distribution. This means that they can be used as complements of postpositions (11) and they can be promoted to the subject in passive (12).

(11) *mon* **atkəz-an** [*es'* **šta-ma-z'ə-n'** **ez-də**]
I[NOM] refuse-NPST.1SG self wash-NMLZ-1SG.POSS-GEN in-ABL

'I **refuse** (SU) to wash myself.'

(12) *ičkəz'də* **mar'a-v-s'** / *mar'a-v-s't'* **raka-ma-s'**
from.afar hear-PASS-PST.3SG hear-PASS-PST.3PL laugh-NMLZ-DEF.SG[NOM]
i **mora-ma-s'**
and sing-NMLZ-DEF.SG[NOM]

'**Laugh** and **singing was heard** (SU) from afar.'

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3. For the purposes of this paper, we exclude infinitival complements from consideration.

Another feature of nominalized DOs is obligatory SO agreement. In the DO position of transitive verbs nominalizations trigger SO agreement and occur in genitive case (13).

(13)   *mon*   *kel'k-**sa***   [*t'ɛ*   *s't'ix-t'*   ***azəndə-ma-t'***   ]
       I[NOM] like-NPST.3SG.O.1SG.S   this   poem-DEF.GEN   tell-NMLZ-DEF.SG.GEN

       'I **like** (SO) **to tell** this poem.'

Third, nominalizations are internally structured as NPs. This is observed in their internal word order, DO marking, and the encoding of modifiers. Nominalizations have verb-final word order (SOV), unlike the basic word order in independent sentences, which is SVO. This conforms to the predominantly head-final NP syntax (15), see Plešak (in press).

(14)   a.   *son*   ***juksta-z'ə***   [***šava-n'ɛ-n'***   /   **šava-n'ɛ-t*
           s/he[NOM]   forget-PST.3SG.O.3SG.S   dish-DIM-GEN   dish-DIM-PL

           šta-ma-t'   ]
           wash-NMLZ-DEF.SG.GEN

           'S/he **forgot** (SO) to wash **the dishes**.'

     b.   *son*   *šta-j*   *šava-n'ɛ-t*
           s/he[NOM]   wash-NPST.3SG   dish-DIM-PL

           'S/he washes (SU) dishes.'

(15)   *baba-z'ə*   *kaja-s'*   *lɛm*   ***vas'ɛ-n'***   *tar'elka-s*
       grandmother-1SG.POSS.SG[NOM]   pour-PST.3SG   soup   Basil-GEN   plate-ILL

       'My grandmother poured (SU) some soup **into Basil's plate**.'
                                              (Plešak in press, ex. 72)

DOs in independent clauses occur either in the definite genitive, or in the nominative. However, nominalizations take the DO in the *in*definite genitive, like NP possessors, cf. (14a) and (15). In contrast, nominative DOs are not allowed, unlike in finite clauses (14b).

Another nominal feature is the possibility of using adjectives to modify nominalized clauses (16). This possibility is banned in finite clauses.

(16)   *mon*   *iz'-in'ə*   ***uč-ə***   *ton'*   *is'ak*   /   ***is'akən'***
       I[NOM]   NEG.PST-PST.3.O.1SG.S   wait-CN   you.OBL   yesterday   yesterday's
       sa-ma-c'ə-n'
       come-NMLZ-2SG.POSS.SG-GEN

       'I didn't **expect** (SO) you to come **yesterday**.' (lit. 'I didn't expect your yesterday's coming')

Thus, nominalizations have both morphological and syntactic properties of NPs, in what concerns their internal structure and external distribution. Free variation between nominal and verbal encoding of internal constituents, such as the possibility of alternatively using adjectives or adverbs (16), means that nominalizations in Moksha have a mixed structure, with a clausal layer (of category S, since Moskha shows no evidence of a VP constituent) embedded under a nominal layer. The analysis of Bresnan and Mugane (2006), and similar analyses involving "category sharing", seem adequate for Moksha.

Other grammatical features of nominalizations show that they can be assimilated into the grammatical functions subj, obj and obl at f-structure. Nominative-marked nominalizations can be treated as subjs. Nominalizations in the definite genitive (which in Moksha can mark DOs), when they serve as arguments of matrix verbs, can be promoted to subject in passive constructions and trigger object agreement on the verb, which clearly classifies them as obj. In oblique cases, nominalizations, like oblique NPs, are not coindexed on the verb in any way, and are distributionally indistinguishable from oblique NPs, hence their GF can be treated as obl; there is no need to stipulate a special GF.

Hence, we conclude that at f-structure, nominalization can be assimilated to subj, obj and obl; there is no need for a separate function comp.

2.2 Finite complements

2.2.1 C-structure status

Unlike nominalizations, finite complement clauses are definitely not NPs. They do not have nominal morphology. In terms of external distribution, finite clauses do not behave like NPs: they can only be clause-level arguments and cannot serve as complements of adpositions or nominal dependents.

The internal syntax of finite complement clauses is also different from that of NPs. First, word order in complement clauses is free, like in independent sentences, consider (17) and (18):

(17) a. *vas'ɛ*   *lɛd'-i*   *tiša*
     Basil[NOM] mow-NPST.3.SG grass[NOM]

    b. *tišə*   *lɛd'-i*   *vas'ɛ*
     grass[NOM] mow-NPST.3SG Basil[NOM]

'Basil is mowing (SU) the lawn (lit. grass).' (Toldova 2017).

(18) a. *mon*   *iz'-in'ə*   ***n'ɛj-ə*** [***štobə*** *vas'ɛ*
     I[NOM] NEG.PST-PST.3.O.1SG.S see-CN   COMP Vasya[NOM]

     st'ixətvər'en'ijə *tonafn'-əl'*   ]
     poem   learn-PQP.3SG

b. *mon   iz'-in'ə   **n'ɛj-ə** [**štobə** vas'ɛ*
   I[NOM]   NEG.PST-PST.3.O.1SG.S   see-CN   COMP   Vasya[NOM]

   tonafn'-əl'   st'ixətvər'en'ijə]
   learn-PQP.3SG poem

'I didn't **see** (SO) Basil learn the poem.'

Second, DOs in complement clauses cannot be marked with the indefinite genitive, while unmarked DOs are allowed (19), exactly as in independent sentences.

(19) *son   n'ɛj-s'   **pin'ə**/ **pin'ə-n'*
      s/he[NOM] see-PST.3.SG dog   dog-GEN

'S/he saw (SU) **a dog**.' (Toldova 2017)

The verb can be modified by adverbs only; adjectives in adverbial function are not grammatical.

Thus in c-structure finite complements should thus be treated as CPs displaying fully clausal internal structure.

2.3   F-structure status: SU vs. SO agreement with finite complements

In spite of their non-nominal c-structure syntax, most clausal complements introduced by the subordinators *što, štobə* 'that', *koda* 'how', *məz'ardə* 'when' can be assimilated to the grammatical functions OBJ and OBL$_\theta$.

Complement-taking predicates (CTPs) that take the complementizers *što* 'that' and *məz'ardə* 'when' can be used in both SU and SO patterns, as shown above in (6–7). In the case of transitive CTPs, whether the complement can trigger object agreement is largely lexically determined by the verb, and mostly correlates with factivity. Factive complements can be roughly defined as those complements whose truth value is presupposed to be true, see Kiparsky and Kiparsky (1970) and later work. The presupposed information cannot be negated by the same speaker in the subsequent context. Thus, the verb *know* is infelicitous in sentences like (20), because it often introduces presupposition of the truth of its complement. By contrast, verbs like *think* and *suppose* do not have such a presupposition; they introduce non-factive complements.

(20)   He thinks / # knows that Joan has left, but that is not true.

Factivity seems to play the crucial role while determining the choice of the agreement pattern of CTPs in Moksha-Mordvin.[4] For example, in (6) the verb *sodams* 'know' introduces a complement that is presupposed to be true: its truth

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4. This situation is broadly similar to other languages where factive complements are more "object-like" than non-factives; see Kastner (2015) on the syntactic correlates of factivity in clausal complements.

is preserved under negation and in a question ('The teacher doesn't know that ...' / 'Does the teacher know that ... ?'). Therefore, this verb most often takes the SO pattern. By contrast, in (7) the verb 'promise' occurs with the SU pattern; the SO pattern is unacceptable. This is easily explained by the fact that the meaning of 'promise' presupposes the falsity of the dependent clause at the moment the sentence is uttered (something that is already done cannot be promised). Hence, the complement in (7) is a non-factive proposition, which is usually introduced by SU.

Serdobolskaya and Kozhemyakina (2014) consider 24 CTPs that take finite complements. Among them, there are CTPs that have a strong preference towards one of the agreement patterns or even only allow one of the agreement patterns. This group consists of factive verbs ('know', 'forget (that)'), showing preference towards SO, and the verbs that take a complement with an irrealis meaning ('fear', 'hope') or a false truth value ('promise'). With factive verbs, the SU pattern can be used in the presupposition-opaque context, i.e. if the presupposition does not project, see Karttunen (1973) and Beaver and Geurts (2012). With non-factives, the SO can be used in the case of the semantic shift implying the factivity reading of the complement. Consider the following examples:

(21) a. *mon*   ***iz'-in'ə***   ***ars'-ə*** [*što*   *son*   *t'aftamə*
          I[NOM]   NEG.PST-PST.3.O.1SG.S   think-CN   COMP   s/he[NOM]   so

          s'ir'ə], *son*   *pɛk octə   n'ɛft'-i*
          old   s/he[NOM]   very new.EL look-NPST.3SG

          {Context: 'Why didn't you help Mariya Ivanovna with the heavy bags? She's already past 80! –} I didn't **think** (SO) she's that old, she looks young.'

      b. ***t'a-t***   / **t'a-k*   ***ars'-ə*** [*što*   *mon*   *ton'*
          PROH-IMP.SG   PROH-IMP.3SG.O.SG.S   think-CN   COMP   I[NOM]   you.OBL

          mel'-gə-t   *šta-sajn'ə*   *šava-n'ɛ-t'n'ə-n'*   ]
          after-PROL-POSS.2SG   wash-NPST.3PL.O.1SG.S   dish-DIM-DEF.PL-GEN

          'Don't **think** (SU) **that** I will wash the dishes after you.'

In (21a) the verb 'think', used in the meaning close to 'realize, become aware of', introduces a factive presupposition in terms of Kiparsky and Kiparsky (1970), and thus, the SO pattern is used. In its regular meaning ('believe, suppose') this verb usually takes the SU pattern, see (21b). The most frequent pattern with *ar's'əms* / *dumandams* 'think' is SU; the SO pattern is, however, possible in some special contexts where the meaning shift is observed.

Some CTPs allow both agreement patterns, e.g. 'wait', 'understand'. With these verbs, the SO pattern is chosen if the context implies the factivity of the complement, and the SU pattern is chosen otherwise.

Thus, factive complements occur with SO, while non-factive propositions trigger the SU pattern.

Apart from factive and non-factive propositions, many authors distinguish a separate class of event (state-of-affair) complements such as the complements of direct perception verbs:

(22) *pet'ɛ*   *pɐžaluj   aš*   *kucɐ.*   *mon*   ***iz'-in'ə***   /
Peter[NOM] probably NEG.EXST house.IN I[NOM] NEG.PST-PST.3.O.1SG.S

  iz'-ən'*   ***n'ɛj-ə* [***koda*** *son   sa-s'*   ]
  NEG.PST-PST.1SG see-CN   how   he   come-PST.3SG

'Peter is probably not at home. I didn't **see** (SO) him return (so probably he didn't return).'

Events and propositions (both factive and non-factive) are delimited based on several criteria such as the possibility to have a truth value, contain negation, be located in space and time and have duration, see Asher (1993) and Peterson (1997). Similar distinctions are introduced in Ransom (1986) (in terms of *truth* vs. *occurrence*) and Dik (1997) (in terms of *facts / possible facts* vs. *states-of-affairs*).

In Moksha Mordvin event (state-of-affair) complements occur with a dedicated complementizer *koda* 'how' and obligatorily trigger the SO pattern, as seen in (22). This example also shows that this is the case even if the complement clause denotes a situation that did not happen.

Thus, events and facts require the SO pattern, while the SU pattern is used with non-factive propositions. We refer the reader to Serdobolskaya and Kozhemyakina (2014) for further information on the semantics of complementation in Moksha.

2.3.1 SO-complements as OBJ

The discussion of the status of complement clauses as objects in current literature (Dalrymple and Lødrup 2000; Moulton 2009; Kastner 2015) is mostly based around the following evidence. Many languages make a distinction between complements that can be promoted to subject in passive (23), and between complements that are or are not be referred to by the same anaphoric device as used for NPs (*I believe it* vs. *I believe so*).

(23) a. That the earth is round was not believed.

   b. *That it would rain was hoped.   (Dalrymple and Lødrup 2000, 5–6)

Coordination with a non-derived noun is also considered, see (24).

(24) a. * John claimed responsibility and that the building collapsed

   b. ? John denied the allegations and that the building collapsed

(Kastner 2015, 173)

Two other related criteria introduced by Letuchiy (2012) are the possibility of pleonastic anaphora with extraposition of the complement (*I believe it that he has come*) and the possibility of quantification of several complements of the same syntactic type (*I believe everything: that he has come and that he has passed the exam*).

According to these criteria, Mordvin SO complements seem to belong to the nominal type. In addition to triggering object agreement, which is only allowed for DOs, they can become the subject if the matrix verb is passivized:

(25) *son'-d'ejə-nzə* ***soda-v-s'*** [*što* *son'* *jora-saz'*
      he.OBL-PRON.DAT-3SG.P know-PASS-PST.3SG COMP he.OBL want-NPST.3.O.3PL.S

      vaḷt-əm-s]
      dismiss-INF-ILL

      'It **was known** (SU) to him **that** they would dismiss him.'

Next, they allow pronominalization along the nominal pattern, namely, they can be replaced by the nominal pro-form *t'ɛn'* 'this':

(26) *mon* *kunarə* *soda-jn'ə* [*što* *vas'ɛ* *ašč-əl'*
      I[NOM] for.a.long.time know-PST.3.O.1SG.S COMP Basil[NOM] be-PQP.3SG

      t'ur'ma-sə]— *də* *mon-gə* ***t'ɛ-n'*** *soda-sa*
      prison-IN yes I-ADD this-GEN know-NPST.3SG.O.1SG.S

      'I have known (SO) for a long time that Basil had been in prison. – Yes, I know (SO) **it** too.'

They can also cooccur with a pleonastic pronoun of the same type:

(27) *mon* ***t'ɛ-n'*** *soda-sa* [*što* *vas'ɛ* *ingəl'ə*
      I[NOM] this-GEN know-NPST.3SG.O.1SG.S COMP Basil[NOM] front.IN

      ašč-əs' *t'ur'ma-sə*]
      be.located-PST.3SG prison-IN

      'I know (SO) **it** that Basil was in prison before.'

Next, they can be replaced by a quantifier:

(28) *učit'əl'-s'* *n'ɛj-əz'ə* ***s'embə-t'*** [***koda***
      teacher-DEF.SG[NOM] see-PST.3SG.O.3SG.S all-DEF.SG.GEN how

      kola-jt' *val'mə-t'*] *i* [***koda*** *r'isava-jt'*
      break-PST.3.O.2SG.S window-DEF.SG.GEN and how draw-PST.3.O.2SG.S

      s't'ena-t']
      wall-DEF.SG.GEN

      'The teacher saw (SO)**everything**: **how** you broke the window and **how** you painted on the wall.'

Finally, they can be coordinated with a non-derived noun:

(29)   *mon*   *pel'-an*   *t'ɛ*   *c'ora-t'*   *ez-də*   *son*
     I[NOM] fear-NPST.1SG this boy-DEF.SG.GEN in-ABL s/he[NOM]

     soda-si   *mon'* **kud-əz'ə-n'**   *i*   [*što* *pozdə*
     know-NPST.3SG.O.3SG.S I.OBL house-1SG.POSS.SG-GEN and COMP late

     sa-šənd-an   *kud-u*   ]
     come-IPFV-NPST.1SG house-LAT

     'I'm afraid (SU) of this fellow. He **knows** (SO) where I live (lit. he knows my **house**) and **that** I come home late.'

All of this shows that the most parsimonious analysis would treat such complements as OBJ, without stipulating additional grammatical functions.

2.3.2   SU-complements as COMP

However, a minority of finite complement clauses are not easily classified as either direct objects or obliques. Non-factive finite complements do not control matrix verb object agreement and cannot be promoted to subject by passivization of the matrix verb (with the reservation on some special constructions with *ar's'əms* and *dumandams* 'think').

Non-factive complements cannot be replaced by the nominal proform *t'ɛn'* 'this'; the adverbial *t'aftə* 'thus' must be used instead:

(30)   *nu*   *mon*   **t'aftə**/ **t'ɛ-n'*   *af* *dumand-an*
     well I[NOM] thus   this-GEN NEG think-NPST.1SG

     {Context: 'Basil is so smart, he will surely pass the exams with excellent marks! —} Well, I do not think (SU) **so** / **that*.'

They make use of the pleonastic pronoun of the same type:

(31)   *vas'ɛ*   {**t'aftə** *iz'*   *koṛta* / **t'ɛ-n'*   *iz'-in'ə*
     Basil[NOM] thus NEG.PST.3SG say.CN   this-GEN NEG.PST-PST.3.O.1SG.S

     koṛta } [**što** *son*   *pastupanda-s' institut-u*   ]
     say.CN   COMP he[NOM] enter-PST.3SG institute-LAT

     'Basil didn't say (SU) it (lit. **so**) **that** he would enter the university.'

They cannot be replaced by a quantifier. If a quantifier is used, native speakers can in some cases switch to the SO pattern, but the meaning of the verb is shifted. For example, 'think' is interpreted as 'consider, ponder on'.

(32) *mon* **ar's'-əsa** *s'embə-n'* [*što* *son*
I[NOM] think-NPST.3SG.O.1SG.S all-GEN COMP s/he[NOM]

pastupanda-j *institut-u*] *i* [*što* *mu-j* *c'ebɛr'*
enter-NPST.3SG university-LAT and COMP find-NPST.3SG good

rabota]
job

'I **consider** (SO, *SU) **all** the situations, **that** he will enter the university and **that** he will find a good job.'

They mostly cannot be coordinated with a non-derived noun (unless the matrix verb uses the SO pattern, as in examples above):

(33) *mon* **ar's'-əsan** / **ar's'-an** *t'a-kə* **mɛl'-t'**
I[NOM] think-NPST.3SG.O.1SG think-NPST.1SG this-ADD thought-DEF.SG[NOM]

kona-n' *i* *ton* *i* [*što* *vas'ɛ* *ər'vɛjɛ-j*
which-GEN and you and COMP Vasya[NOM] marry-NPST.3SG

maša-n' *lank-s*]
Masha-GEN on-ILL

'I have (lit. **think**, SO, *SU) the same **thought** as you and also **that** Basil will marry Mary.'

This distinguishes these complements from both OBJ and OBL_θ complements, as the latter use various case forms of the pronoun *t'ɛn'* 'this'. All of this shows that such complements do not cluster with either SUBJ, OBJ or OBL_θ arguments.

2.3.3 Oblique arguments of intransitive verbs as OBL_θ

There are a number of intransitive matrix verbs that take finite complements. These complements take the same complementizers *što*, 'that', *štobə* 'in order to', *koda* 'how' and *məz'ardə* 'when' (34)–(35). Clearly, unlike with nominalized arguments, the oblique case feature cannot be expressed on a finite verb; therefore, it is not at all obvious that such complements are indeed obliques, and do not belong to the type discussed in the previous section.

(34) *mon* **pel'-an** *t'ɛ* *c'ora-t'* **ez-də**
I[NOM] fear-NPST.1SG this boy-DEF.SG.GEN in-ABL

'I **am afraid** (SU) **of** this fellow.

(35) *mon* **pel'-an** [*što* *vas'ɛ* *pozdə sa-j*
I[NOM] fear-NPST.1SG COMP Basil[NOM] late come-NPST.3SG

 kud-u]
 house-LAT

I **am afraid** (SU) **that** Basil will come home late.

The oblique status of this class of complements is shown through the use of diagnostics considered above: they can be pronominalized by the 'nominal' anaphoric pronoun *t'ɛn'* 'this', which takes the corresponding oblique case (36), and allow extraposition with the pleonastic use of the same pronoun (37):

(36) *mon* *dumand-an* [*što* *vas'ɛ* *af* *pastupanda-v-i*]
I[NOM] think-NPST.1SG COMP Basil[NOM] NEG enter-PASS-NPST.3SG

 institut-u — *mon* *tožə* **t'a-də** *pel'-an*
 institute-LAT I[NOM] also that-ABL fear-NPST.1SG

'I think (SU) that Basil will not enter the university. — I am afraid (SU) **of that** as well.'

(37) *mon* **t'a-də** *pel'-an* [*što* *vas'ɛ* *pozdə sa-j*
I[NOM] that-ABL fear-NPST.1SG COMP Basil[NOM] late come-NPST.3SG

 kud-u]
 house-LAT

'I am afraid (SU) (lit. **of it**) **that** Basil will come home late.'

These complements allow replacement by quantifiers, just as SO-complements:

(38) *da* *mon* **s'əmbə-də** **pel'-an** [*što* *af* *pastupand-at*
PTCL I[NOM] all-ABL fear-NPST.1SG COMP NEG enter-NPST.2SG

 institut-u] *i* [*af* *muj-at* *rabota*]
 institute-LAT and NEG find-NPST.2SG work

{Context: 'What are you afraid of, why worry? —} I **am afraid** (SU) **of everything**, both **that** you won't enter the institute and **that** you won't find a job.

Finally, they allow coordination with non-derived nouns:

(39) *mašə ken'ɛr'd'-i* **p'at'orka-t'i** *i* **što** *t'ad'a-c*
Mary rejoice-NPST.3SG five.mark-DEF.SG.DAT and COMPL mother-3SG.POSS.SG

 son' *karma-j* *šna-mə*
 s/he.OBL begin-NPST.3SG compliment-INF

'Mary rejoices **at the 'five'** (= A mark) and **that** mother is going to praise her.'

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Thus, the pro-forms of complements that occupy the position of the oblique arguments of the verb show all the properties of oblique NPs. Hence, such complements can be classified as OBL.

3 Discussion

3.1 Generalization

A generalization that emerges from the above is that a minority of finite complement clauses introduced by *što*, *štobə* and *məz'ardə* and denoting non-factive propositions are not easily classified as either direct objects or obliques. They do not control matrix verb object agreement and cannot be replaced by the nominal proform *t'ɛn'* 'this'; the adverbial *t'aftə* 'thus' must be used instead. The same issue concerns pleonastic uses of the pronouns. They do not allow replacement by the quantifier 'all' and are not coordinated with non-derived nouns. This distinguishes these complements from SUBJ, OBJ and OBL$_\theta$ complements, as the latter use various case forms of the pronoun *t'ɛn'* 'this'. This is summarized in the following table:

Comp. type	Factive	Nominal morph.	Internal structure	PP	SO agr.	Pass.	Pron.
nmlz.	+/—	+	nominal	+	+/—	+	+
finite comp., obj. (SO-agr.)	+	—	clausal	—	+	+	+
finite comp., obj. (SU-agr.)	—	—	clausal	—	—	—	—
finite comp., obl.	+/—	—	clausal	—	—	—	+

3.2 Analysis

From the table above, we can see that all nominalizations can be uncontroversially treated as belonging to the standard grammatical functions. All finite clauses are different from nominalizations in that they lack any nominal morphology and have clausal internal structure and external distribution. In terms of LFG, this represents the difference between NP and CP status at c-structure: while nominalizations are NPs, finite complements are CPs.

At f-structure, most of the finite clauses can also be treated as OBJ or OBL$_\theta$, like nominalizations. However, non-factive complements are an exception, as they have a number of unique features, such as the use of the adverbial proform *t'aftə* 'thus', the preference against coordination with non-derived nouns and the

impossibility to be replaced by quantified NPs. Clearly, these features cannot be due to differences in c-structure categorial status, as all finite complements have clausal status and must be treated as CPs according to other criteria. In LFG terms, an adequate description of Moksha data requires stipulating an additional grammatical function: comp.

This line of reasoning can be summarized in the following classification of Moksha complement clauses in LFG terms:

	NP	CP
SUBJ	*-ma*	*što, məz'ardə*
		('be wanted', 'be liked', 'be shameful' e.a.)
OBJ	*-ma-t'*	*što, štobə, koda, məz'ardə*
		('know', 'see', 'forget' e.a.)
OBL	*-ma* + OBL	*koda, məz'ardə, što, štobə*
		('rejoice', 'fear', 'be.surprised' e.a.)
COMP	–	*što, štobə, məz'ardə*
		('think', 'promise', e.a.)

By way of illustration, consider the proposed c- and f-structures for three examples. First, in (40), is the structure of (9): a nominalized clause with an oblique complement. Like nominal arguments, such a complement does not trigger verb agreement, but has both NP status at c-structure and OBL_{ABL} status at f-structure.[5]
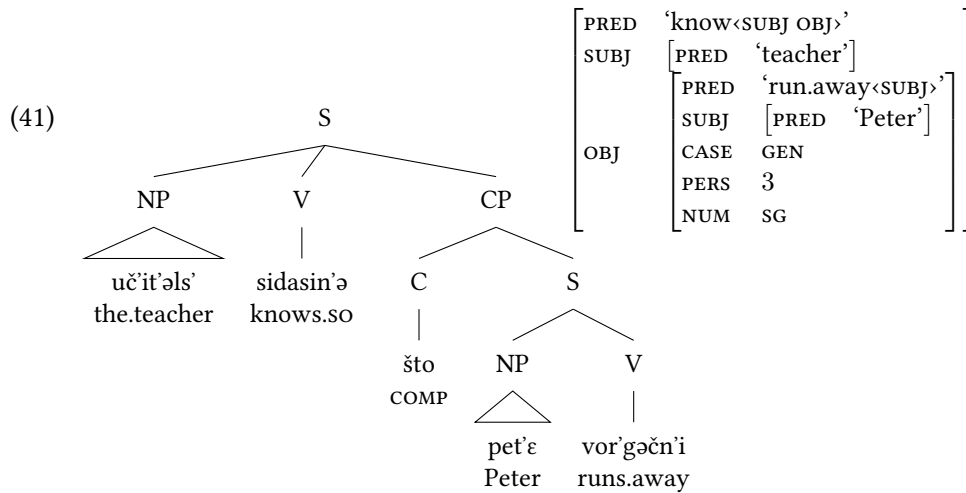
(40)
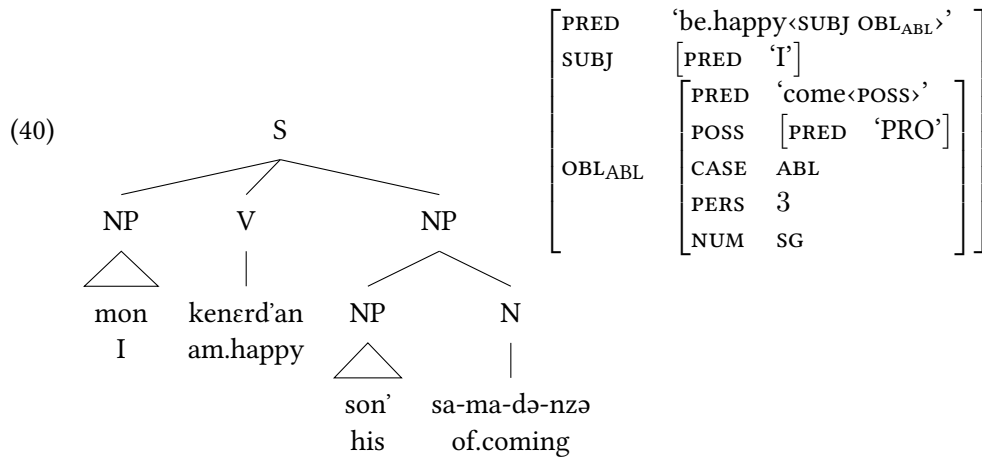
Second, (41) illustrates the structure of (6), a sentence where the complement clause is finite and triggers object agreement (adjuncts are omitted as insignificant). The PERS and NUM features of the clause are reflected on the verb through agreement. The feature CASE is not morphologically expressed on the finite verb, but the complement clause receives it through a functional annotation on the
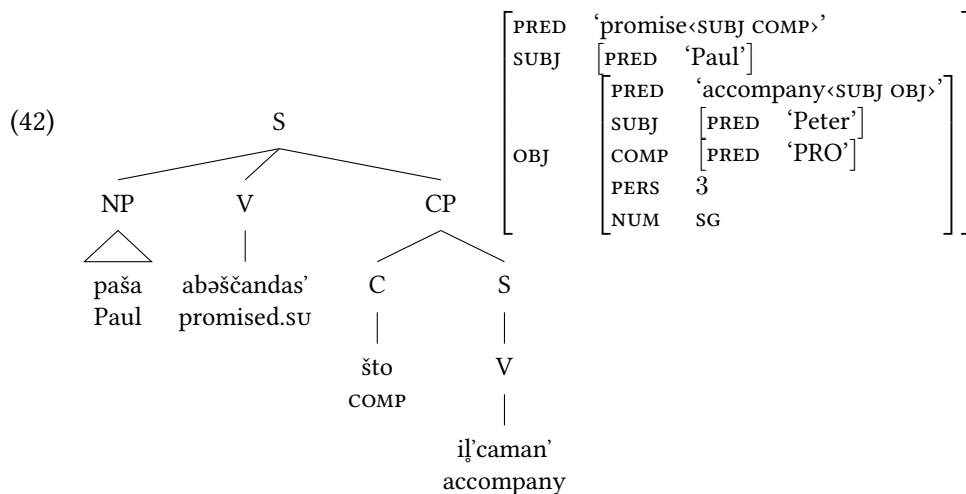
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5. On the representation of genitive subjects as POSS arguments, see Laczkó (2000).

matrix verb like (↑OBJ CASE) = GEN. This annotation licenses the correct morphological forms of case-marked elements such as pronouns (when they are used instead of the finite clause or pleonastically) and quantifiers.

(41)

$$
\begin{bmatrix}
\text{PRED} & \text{'know\textlangle SUBJ OBJ\textrangle'} \\
\text{SUBJ} & \begin{bmatrix} \text{PRED} & \text{'teacher'} \end{bmatrix} \\
\text{OBJ} & \begin{bmatrix}
\text{PRED} & \text{'run.away\textlangle SUBJ\textrangle'} \\
\text{SUBJ} & \begin{bmatrix} \text{PRED} & \text{'Peter'} \end{bmatrix} \\
\text{CASE} & \text{GEN} \\
\text{PERS} & 3 \\
\text{NUM} & \text{SG}
\end{bmatrix}
\end{bmatrix}
$$

S
— NP
—— uč'it'əls' / the.teacher
— V
—— sidasin'ə / knows.so
— CP
—— C
——— što / COMP
—— S
——— NP
———— pet'ɛ / Peter
——— V
———— vor'gəčn'i / runs.away

Finally, the structures in (42) are for (7), where the finite complement does not trigger object agreement. This classifies the complement clause as COMP; it is not assigned a CASE feature, as there is no nominal or pronoun in Moksha that can occupy this grammatical function.

(42)

$$
\begin{bmatrix}
\text{PRED} & \text{'promise\textlangle SUBJ COMP\textrangle'} \\
\text{SUBJ} & \begin{bmatrix} \text{PRED} & \text{'Paul'} \end{bmatrix} \\
\text{OBJ} & \begin{bmatrix}
\text{PRED} & \text{'accompany\textlangle SUBJ OBJ\textrangle'} \\
\text{SUBJ} & \begin{bmatrix} \text{PRED} & \text{'Peter'} \end{bmatrix} \\
\text{COMP} & \begin{bmatrix} \text{PRED} & \text{'PRO'} \end{bmatrix} \\
\text{PERS} & 3 \\
\text{NUM} & \text{SG}
\end{bmatrix}
\end{bmatrix}
$$

S
— NP
—— paša / Paul
— V
—— abəščandas' / promised.SU
— CP
—— C
——— što / COMP
—— S
——— V
———— il̥'caman' / accompany

Thus, while our data do not support the early LFG view that *all* clausal complements belong to the grammatical function COMP, they demonstrate that it might be too early to abandon this notion altogether, as Alsina, Mohanan, and Mohanan (2005), Forst (2006) and Patejuk and Przepiórkowski (2016) seem to suggest. Rather, the more fine-grained approach of Dalrymple and Lødrup (2000) and Lø-

drup (2004, 2012) seems to be more appropriate both for Moksha and in the wider cross-linguistic perspective.

3.3 Alternative explanations

While the introduction of an additional grammatical function for a subset of complement clauses seems to be the most straightforward approach, other accounts of our data are in principle possible. First, given the high degree of correlation between object agreement and factivity, it might be tempting to consider a purely semantic explanation. However, this does not in principle preclude our syntactic approach. Similar differences between factive and non-factive clauses are well-known cross-linguistically (Kastner 2015), but it is not clear whether they all converge on the same syntactic representation. It might well be that the semantics only predicts a tendency to prefer certain kinds of structures. Given that phenomena such as agreement, case assignment, and pronominalization are all heavily conditioned by syntactic constraints, it seems that any account of Moksha complementation must involve a difference in syntactic status at some level of structure.

Another option is to treat the "exceptional" complements as being OBJ_θ. This idea is attractive in that one can draw a clear parallel with the treatment of Northern Khanty non-agreeing DOs in Dalrymple and Nikolaeva (2011), which they analyze as OBJ_θ. But the key difference is that in Northern Khanty, there are syntactic discrepancies between *nominal* agreeing and non-agreeing DOs; therefore, it makes sense to assign nominal non-agreeing DOs a special GF. This is not the case in Moksha, where both kinds of nominal arguments seem to be full-fledged direct objects (Kozlov in press). Major syntactic differences are only observed in the clausal domain. Hence, for a GF that is purely clausal, the label COMP seems to be more appropriate than OBJ_θ, although language-internally this is, of course, a purely terminological issue.

4 Conclusion

A topic of current debate in the LFG literature is the existence of a dedicated grammatical function COMP for clausal complements. While the standard LFG approach draws a clear distinction between "clausal" and "nominal" c-structure categories (NP vs. CP) on the one hand, and "clausal" vs. "nominal" grammatical functions on the other (SUBJ, $OBJ_{(\theta)}$, OBL_θ vs. (X)COMP), Alsina, Mohanan, and Mohanan (2005) have argued that there is no need for a separate grammatical function COMP, and all the differences between nominal and clausal complements are explicable in terms of their phrase structure categories. The data of Moksha Mordvin rather support the alternative point of view expressed in Dalrymple and Lødrup (2000), namely, that COMP is required to explain the data of languages that have several types of complement clauses, some of which do indeed cluster with nominal direct objects (namely, factive and eventive complements), but some of

which do not (non-factive propositions). Since Moksha draws a very sharp syntactic distinction between nominalized (NP) and finite (CP) subordinate clauses, it is not possible to interpret such a split among finite complement clauses in terms of c-structure categories, and a separate grammatical function COMP is necessary for a full account of the data.

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