Czech Modal Complement Ellipsis from a Comparative Perspective

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Abstract: This paper deals with Modal Complement Ellipsis (MCE) in Czech from a comparative perspective. We show that Czech MCE displays a mixed behaviour in comparison with languages like English, Dutch and French. Like English, it allows for various extractions from the ellipsis site and for different subjects in ACD constructions. Like French and Dutch, it does not allow for intervening elements between modal verb and ellipsis site and it requires voice identity of the elided VP and its antecedent. Adopting a deletion approach to analysis, we propose to account for this behaviour by parametrizing the syntactic properties of a presumably universal ellipsis feature [E], initially proposed by Lobeck (1995). In our proposal, the syntax of [E] include the head licensing ellipsis and the ellipsis site. We argue that the type of licensing head (T, V or Mod) and the type of ellipsis site (VP, TP or VoiceP) induce the properties of MCE that we observe at the surface.

Key-words: VP-ellipsis, modal verbs, auxiliary verbs, Czech, Romance languages, Germanic languages

1. Introduction

This paper deals with ellipsis of verbal phrase that occurs in context of modal verbs, as in (1). Following Aelbrecht (2008), I will refer to this phenomenon as Modal Complement Ellipsis (henceforth MCE) in order to distinguish it from a well-known phenomenon of VP-ellipsis in English (Ross 1969, Sag 1976, Merchant 2001, *a.o.*). When it comes to other languages than English, it seems relevant to set apart ellipsis after auxiliary verbs, and ellipsis after modal verbs, because the former is not always available in languages that display the latter, as e.g. Romance[1] languages (Busquets & Denis 2001, Depiante 2001, Dagnac 2008, 2011 *a.o.*) and Germanic languages like German or Dutch (Lobeck 1995, Aelbrecht 2008), see (2). The contrast between English on the one hand, and Romance and other Germanic languages on the other has been argued to follow from the properties of modal verbs (see Section 2).

(1) a. John helped them, but Mary could not.
b. Jean les a aidés, mais Marie n'a pas pu. (French) (=1a)
J. them has helped.pl but M. NEG.has NEG could
c. Jan heeft ze geholpen, maar Maria mocht niet. (Dutch) (=1a)
J. has them helped but M. could not

(2) a. John helped them, but I did not.
b. *Jean les a aidés, mais je n'ai pas. (French) (=2a)
J. them has helped.pl but I NEG.have NEG
c. *Jan heeft ze geholpen, maar Ik heb niet. (Dutch) (=2a)
J. has them helped but I have not

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[1] Except for Portuguese, see Matos & Cyrino (2002).

Interestingly, Czech behaves differently from both English-like and Romance-like languages in that: (i) ellipsis is only partially available after auxiliary verbs[2], compare (3b) with the past auxiliary and (3c) with the future auxiliary, and (ii) ellipsis after modal verbs in (3a) does not behave entirely like either VP-ellipsis in English, or like MCE in French or Dutch, as we will see in detail in Section 4. While the possibility of ellipsis after auxiliary verbs in Czech can be claimed to depend on their morphosyntactic status (see Section 3.1), I will argue that the mixed properties of Czech MCE follow from both the properties of modal verbs (see Section 3.2) and the structure targeted by ellipsis. Adopting a deletion approach to ellipsis, I will propose that we can account for (not only) Czech MCE by parametrizing the syntactic properties of a presumably universal ellipsis feature [E], initially proposed by Lobeck (1995) and formalized in Merchant (2001), which determines the licensing head and the selection of the ellipsis site in each language.

(3) a. Jan jim pomohl, ale Marie bohužel nemohla. (Czech)
J. them.DAT helped but Marie unfortunately NEG.could
'John helped them, but unfortunately Mary could not.'
b. *Jan jim pomohl, ale já bohužel nejsem.
J. them.DAT helped but I unfortunately NEG.AUX.1SG
'John helped them, but unfortunately I did not.'
c. Jan jim bude pomáhat, ale Marie bohužel nebude.
J. them.DAT AUX.3SG help but Marie unfortunately NEG.AUX.3SG
'John will help them, but unfortunately Mary won't.'

The paper is organized as follows. Section 2 briefly presents the main evidence for a deletion approach to MCE. Section 3 presents the auxiliary and modal verbs in Czech. I discuss here ellipsis after auxiliary verbs and argue that modal verbs behave syntactically neither like T nor like V heads. Section 4 focuses on the properties of MCE in Czech in comparison with English, French and Dutch. I show that Czech MCE resembles English VP-ellipsis in that it allows for various extractions from the ellipsis site and for different subjects in ACD constructions. In contrast, Czech MCE is similar to French and Dutch in that it does not allow for intervening elements between modal verb and ellipsis site and it requires voice identity of the elided phrase and its antecedent. Section 5 proposes a syntactic analysis of this variation based on the mechanism of ellipsis and the syntax of the feature [E], as developed in Aelbrecht (2010). Section 6 sums up the paper.

2. Assumptions about the syntax of ellipsis

There are two main approaches to ellipsis in the literature, the deletion approach and the null proform approach, both of which have been applied to VP-ellipsis and to MCE. Within the first approach, ellipsis is considered as a deletion or not spelling-out of a fully specified verbal phrase. This analysis is generally assumed for VP-ellipsis in English after both auxiliary and modal verbs (Ross 1967, Sag 1976, Hankamer & Sag 1976, Merchant 2001, 2007 a.o.), see (4a), but it has also been recently argued for Dutch (Aelbrecht 2008, 2010) and Romance (Dagnac 2011). The second type of analyses sees ellipsis as involving a null verbal proform, so-called Null Complement Anaphora, represented by *e* in (4b). This analysis has been in particular proposed by Depiante (2001) for Spanish and Italian, and by Lobeck (1995) for Dutch.

[2] See Section 3.1 for different forms of the auxiliary verb *být* 'to be' in Czech.

(4) a. You can help me, but she can't [$_{VP}$ help me].
b. Je kan me wel helpen, maar ze kan niet [$_{VP}$ *e*]. (Dutch)
you can me PRT help but she can not

The main argument in favour of a deletion approach that I will adopt here consists in the possibility of extraction from the ellipsis site. Extraction of the wh-object from the elided VP is possible in English, while it seems impossible in Dutch and Spanish, compare (5a) and (5bc). However, even if Dutch does not behave exactly like English, Aelbrecht (2008, 2010) shows that at least subject extraction from the elided VP in Dutch in (6) is possible, contrary to object extraction. She argues that this is because MCE in Dutch targets a larger string than VP-ellipsis in English, namely VoiceP, which constitutes a phase blocking the object extraction (i.e. when the licensing head is merged, the ellipsis site is sent to PF and the site is frozen for extraction).

(5) a. I don't know who Sue invited, but I know who she couldn't invite.
b. *Ik weet wie Katrien moet uitnodigen maar ik weet niet wie ze moet niet.
I know who K. must invite but I know not who she must not
(Dutch, Aelbrecht 2008)
c. *José no sabe qué libro Maria quiere leer, pero Pedro sabe qué revisto Anna no pudo
J. not knows which book M. wants read but P. knows which revue A. not can
(Spanish, Depiante 2001)

(6) a. Deze broek moet niet gewassen worden, maar die rok moet wel. (Dutch, Aelbrecht 2008)
this pants must not washed become but that skirt must PRT
'These pants don't need to be washed, but that skirt does.'
b. ...maar die rok$_i$ moet wel [$_{TP}$ t$_i$ [$_{VoiceP}$ ~~t$_i$ gewassen worden~~]]]

Likewise, Dagnac (2011) shows that even object extraction is possible in Romance if subjects in both clauses are identical, as in (7). She calls this constraint The Same Subject Constraint. Assuming that modal verbs in Romance are raising verbs selecting a TP, Dagnac argues that the ellipsis after modal verbs in Romance is not a VP-deletion but a TP-deletion. This allows to explain e.g. why ellipsis in ACD constructions requires subjects of both elided TP and its TP antecedent to be identical.

(7) a. Maintenant, je sais à qui je peux confier mon fils, mais je ne sais toujours pas
now I know to who I can confide my son but I NEG know still NEG
à qui je ne peux pas. (French, Dagnac 2011)
to who I NEG can NEG
'Now I know to whom I can confide my son, but I still don't know to whom I can't.
b. ... à qui$_i$ je$_j$ ne peux pas [$_{TP}$ ~~t$_j$ [$_{vP}$ t$_j$ confier mon fils t$_i$~~]]
c. Ahora, ya sé a quién puedo confiar mi hijo, pero todavía no sé
now already know.1SG to who can.1SG confide my son but still NEG know.1SG
a quién no puedo. (Spanish, Dagnac 2011) (=14a)
to who not can.1SG

In addition, an overt pronoun and the verbal anaphor *le faire* 'do it' are ungrammatical with wh-extraction and relativization from the VP in French, see (8a) and (8b) respectively (Dagnac 2008)[3]. This also supports the claim that there is a movement from an elided structure, which cannot be reduced to a null pronoun.

[3] French modal verbs may combine with an overt pronoun in contexts without extraction. Here, the pronoun can be analysed as a pronominalization of the overt TP complement of the modal verb. These contexts thus constitute arguments neither for deletion, nor for null anaphora. See also Section 4.1.

(8) a. Il embrasse qui il peut / *qui il peut le faire / *qui il le peut.
he kisses who he can who he can it do who he it can
b. Léa lit tous les livres qu'elle peut / *qu'elle peut le faire / *qu'elle le peut.
Lea reads all the books that she can that she can it do that she it can

Dagnac's and Aelbrecht's arguments thus make it very reasonable to assume that there is an underlying syntactic structure in contexts involving MCE, but they also suggest that we need to specify for each language, (i) the type of head licensing ellipsis, and (ii) the ellipsis site. I will propose in Section 5 that these two micro-parameters can be encoded in the syntax of the ellipsis feature [E] responsible for the distribution of ellipsis throughout languages.

3. Auxiliary and modal verbs in Czech

Czech is a West-Slavic language with a rich morphology in both its nominal system (number gender, case) and its verbal system (tense, voice, aspect). It also differs from English, French and Dutch in that (i) it is a subject pro-drop language, (ii) it has second position clitics (2PCl) including pronominal and verbal (auxiliary) clitics, and (iii) it has – despite its basic SVO order – a relatively free word order that reflects the information structure of the clause. Like many other languages, it shows various elliptical constructions, such as gapping and sluicing (Gruet-Skrabalova 2016).

3.1 The auxiliary *být*

Czech uses only the auxiliary verb *být* 'be', in three series of forms: (i) forms in *js-* in the past tense, (ii) forms in *by-* in the conditional mood, (iii) forms in *bud-* in the future tense. Past and conditional forms are second position clitics (2PCl), which combine with lexical *l*-participles in the active voice, and with the (non-clitic) passive auxiliary *byl* 'been' and lexical *n*-participles in the passive voice, see (9ab)[4]. The future forms are autonomous words, and combine with non-finite imperfective verbs in the active voice, and with *n*-participles in the passive voice, see (9cd). Veselovská (1995, 2008) argues that Czech clitic auxiliaries bear agreement, but not tense features, and thus that they are generated above T (cf. Roberts 2010, who places Slavic 2PCL in the C-system). By contrast, the non clitic future auxiliary should be merged within the extended VP since it is sensitive to Aspect on the lexical verb (cf. Kyncl 2008), as shown in (9c). For the purpose of this paper, I assume that 2PCl auxiliaries are generated in a low C-head, while non clitic future and passive auxiliaries are generated below T (Aspect and Voice respectively, see Cinque 2004), as indicated in (10). I also assume the finite auxiliaries move to T to check their T-feature.

(9) a. já jsem (ne)četl / (ne)přečetl všechny tyhle knihy
I PAST.1SG NEG.read.IMPF NEG.PF.read all these books
'I (have) (not) read all these books.'
b. já jsem (ne)byl pozván
I PAST.1SG NEG.been invited.PASS
'I was (not) invited.'

(i) Jean peut te répondre, mais moi, je ne (le) peux pas.
J. can you answer you, but me I NEG it can NEG
(ii) Je vais résister aussi longtemps que je (le) peux.
I will resist as long that I it can

[4] Czech morphologically distinguishes active *l*-participles and passive *n*-participles. *L*-participles are considered as tensed forms (see Veselovská 1995, 2008), which may bear sentential negation *ne-*.

c. já budu číst / *přečíst všechny tyhle knihy
I FUT.1SG read.IMPF PF.read all these books
'I will read all these books.'
d. já (ne)budu pozván
I NEG.FUT.1SG invited.PASS
'I will (not) be invited.'

(10) [$_{CP}$ ... CL [$_{TP}$ ... [$_{AspP}$ bud- [$_{VoiceP}$ byl [$_{VP}$ ...]]]]]

As has already been shown in Section 1, ellipsis is not available with clitic auxiliaries, see (11). Gruet-Skrabalova (2012) argues that this follows precisely from their clitic status: 2P clitics cannot license VP-ellipsis because they appear too high in the structure with respect to the VP domain. We will return to the analysis of ellipsis in (11a) in Section 5.3.

(11) a. Já budu číst nahlas, a ty budeš taky.
I FUT.1SG read aloud and you FUT.2SG too
'I will read aloud, and you will too.'
b. *Já jsem / bych četl nahlas, a ty jsi / bys taky.
I PAST.1SG COND.1SG read aloud and you PAST.2SG COND.2SG too
Intended: 'I read aloud, and you did too.' / 'I would read aloud, and you would too.'

3.2 Modal verbs

There are five strictly modal verbs in Czech: *moci/moct* 'can/be able to', *smět* 'may/be allowed to', *muset* 'must/have to', *nemuset* 'need not', *mít* 'have to') These verbs have mixed morphosyntactic properties, as shown in Kyncl (2008): like functional verbs, they have no imperative (**mus*) and no passive (**musen*, **mocen*) and they do not combine with aspectual affixes (**domuset*, **musívat*). They are not sensitive to the aspectual makeup of the lexical verbs either, contrary to the future auxiliary *budu* requiring imperfective verbs in (9c) above. Like lexical verbs, modal verbs combine with the auxiliary *být* 'to be', see (12bc), and bear the prefix *ne-* expressing sentential negation when they are finite, as we can see in (12ab). They can be followed by active or passive infinitival verbs, see (12d).

(12) a. Nemůžu přece přečíst / číst všechny tyhle knihy.
NEG.can.1SG though PF.read read.IMPF all these books
'I cannot read all these books.'
b. Nemohl jsem přece přečíst / číst všechny tyhle knihy.
NEG.could PAST.1SG though PF.read read.IMPF all these books
'I could not read all these books.' (*I have not could ...)
c. Nikdy nebudu moci přečíst / číst všechny tyhle knihy.
never NEG.FUT.1SG can PF.read read.IMPF all these books
'I will not be able to read all these books.' (*I will not can ...)
d. Já budu muset být pozván.
I FUT.1SG must be invited.PASS
'I will have to be invited.'

Although modal verbs can occur with the auxiliary verbs, they cannot co-occur, like in English, and contrary to Romance or Dutch. The co-occurrence of French and Dutch modal verbs in (13c) and (13d) respectively can be explained if we assume, as has been argued in the literature (Ruwet 1972, Wurmbrand 1999, 2001)[5], that they are raising verbs selecting not a VP, but a TP complement.

[5] Traditionally (e.g. Ross 1969), deontic verbs have been claimed to be control predicates and epistemic verbs to be raising predicates. For Wurmbrand (1999), however, this semantic difference is not represented in syntax.

(13) a. *Já musím moci prečíst ty knihy.
I must can PF.read these books
intended: 'I have to be able to read these books.'
b. *You must can read these books.
c. Vous devez pouvoir lire ces livres. (French)
you must can read these books
d. Hij moet goed kunnen koken. (Dutch, Lobeck 1995:40)
he must well can cook
'He has to be able to cook well.'

Czech modal verbs also systematically require climbing of pronominal clitic complements of the lexical verb, and thus behave obligatorily like restructuring verbs (Medová 2000). Although clitic climbing is typical for Romance languages (e.g. Rizzi 1978, Roberts 1991), it is no longer true for modal verbs in French.

(14) a. Petr musí přečíst ty knihy. / Petr (je) musí (*je) přečíst.
P. must PF.read these books P. CL:them must CL:them PF.read
'Peter must read these books / them.'
b. Pierre doit lire ces livres. / Pierre (*les) doit (les) lire. (French)
P. must read these books P. CL:them must CL:them read
'Peter must read these books / them.'

The properties of Czech modal verbs discussed above suggest that they behave neither like T heads, as in English (Sag 1976 *a.o.*), nor like V heads, as in French or Dutch (Aelbrecht 2008, Dagnac 2011). Given their restructuring properties, I assume that modal verbs are heads of a specific functional projection ModP between V and T (cf. Cinque 2004) selecting an extended VP projection as complement.

As already said, ellipsis is available after modal verbs, as shown in (15a). Interestingly, ellipsis may occur even if the modal verb follows the future auxiliary and is therefore non-finite, as in (15b). This suggests that MCE is not licensed by the head T. Note that the modal verb does not appear in the first sentence and thus constitutes new information in the elliptical clause.

(15) a. I když já čtu nahlas, ty nemusíš.
even if I read.1SG aloud you NEG.must.2SG
'Although I read aloud, you do not have to.'
b. I když já budu číst nahlas, ty nebudeš muset.
even if I FUT.1SG read aloud you NEG.FUT.2SG must
'Although I will have to read aloud, you will not have to.'

4. Modal Complement Ellipsis in Czech

This section focuses on Czech MCE in comparison with English, Dutch and French. We will see that Czech MCE looks like English VP-ellipsis with respect to extraction and subjects in ACD constructions, and like French and Dutch MCE with respect to the size of the elided string and voice properties of the elided VP and its antecedent.

4.1 English-like properties

In non-elliptical constructions, the verbs 'can' and 'must' in the languages under discussion can have two readings, a deontic (root) reading and an epistemic reading. Czech is similar to English in that both readings are also acceptable in elliptical constructions, although ellipsis

appears most frequently with the deontic reading. In contrast, it has been observed for Romance and Dutch[6], that MCE is only available with deontic reading of these modal verbs:

(16) deontic reading:
a. Jan na večírek přijít nemohl a Petr nesměl.
J. to party come NEG.could and P. NEG.could
'John was not able to come to the party, and Peter was not allowed.'
b. John couldn't come to the party, and Peter was not allowed.
c. Jean a pu venir à la soirée, mais Pierre n'a pas pu. (French) (=19b)
J. has could come to the party but P. NEG has NEG could
d. Jan kon naar het feest kommen, maar Piet mocht niet. (Dutch) (=19b)
J. could to the party come but P. could not

(17) epistemic reading:
a. Může to být pravda, ale nemusí. (=20b)
can it be true but NEG.must
b. It can be true, but it doesn't have to.
c. *Cela peut être vrai, mais cela ne doit pas. (French)
this can be true but this NEG must NEG
d. ?Het zou waar kunnen zijn, maar het hoeft niet. (Dutch)
it should true can be but it should not

Another property Czech shares with English concerns the possibility of pronominalizing the elided string. Actually, missing material after modal verbs in Czech is not in complementary distribution with an overt pronoun, as shown in (18). French and Dutch behave differently except for contexts with extraction like in (19) (see Section 2, note 3). This might be not completely surprising if both pronominalization and MCE in these languages target a TP, as proposed by Dagnac (2011) (see Section 5.1).

(18) a. Jan ti odpoví, ale já (*to) nemůžu. (=18b)
J. you.DAT answers but I it NEG.can
b. John will answer you, but I can't (*it).
c. Jean te répondra, mais moi, je ne (le) peux pas. (French) (=18b)
J. you answer.FUT.3SG but me I NEG it can NEG
d. Jan zal je antwoorden, maar ik kan (het) niet. (Dutch) (=18b)
J. will you answer but I can it not

(19) a. Jean lit tous les livres qu'il (*le) peut. (French)
J. reads all the books that he it can
b. Joris leest elk boek dat hij (*het) kan. (Dutch)
J. reads every book that he it can

Elliptical relative clauses, so-called Antecedent Contained Deletion, display another property in which languages may differ. In Czech and English, relative clause containing ellipsis and its matrix clause may have different subjects. On the contrary, Romance and Dutch require both subjects to be identical (The Same Subject Constraint, see Section 2), see (20).

[6] Cf. Barbiers (1995), Lobeck (1995), Aelbrecht (2008). For our informants, the verb *moeten* 'must' would be ruled out in (16d), the verb *hoefen* 'should' being more acceptable.

(20) a. Jan čte všechny knihy, které Marie nesmí.[7]
J. reads all books that M. NEG.can
'John reads all books that Mary is not allowed to read.'
b. John reads all the books that Mary can't.
c. *Jean lit tous les livres que Marie ne peut pas. (French, Dagnac 2008)
J. reads all the books that M. NEG can NEG
d. *Joris leest elk boek dat Monika moet niet. (Dutch, Aelbrecht 2008)
J. reads every book that M. must not

Finally, recall that the main argument for the deletion approach of MCE is based on extraction from the elided string. In Czech, several types of extraction are possible, to both A- and A'- positions. Extraction to subject position can be seen with the inaccusative verb *přijít* 'come' in the example (16a) above, repeated in (21).

(21) extraction to subject position:
Jan na večírek přijít nemohl a Petr nesměl.
J. to party come NEG.could and P. NEG.could

The example (22) shows regular *wh*-object extraction of the dative wh-word *komu* 'to whom' to the CP domain (cf. Section 2, ex. (7)), and the example (23) shows topicalization of an accusative DP-object. It must, however, be noted that extraction from VP in English usually requires a specific contrastive focus (Schuyler 2001, Lasnik 2001, Merchant 2008b). This is also true for French, where topicalization is acceptable provided the context is contrastive enough[8]. In Czech, no specific prosody is required to accompany extraction in the examples below. I assume that this is because the word order in Czech is much is much freer than in English and French, and serves to mark a specific information status of a phrase. In English, the information focus or topic status is generally marked by prosody. With respect to extraction, Czech may thus seem even more permissive than English.

(22) *wh*-object extraction:
Vím komu můžu děti svěřit a komu nemůžu.
know.1SG who.DAT can.1SG children confide and who.DAT NEG.can.1SG
'I know to whom I can confide my children and to whom I can't.'

(23) object topicalization:
a. Hračky už jsem koupila, ale knížky jsem ještě nemohla.
toys.ACC already PAST.1SG bought but books.ACC PAST.1SG yet NEG.could
'I have already bought the/some toys, but I was not yet able to buy the/some books.'
b. The toy she had already bought, but the book she really couldn't.
c. Les jouets, je les ai déjà achetés, mais les livres, je n'ai pas encore pu. (French)
the toys I them have already bought but the books I NEG.have NEG yet could
d. *Het speelgoed had ik al gekocht, maar het boekje kon ik niet. (Dutch)
the toy have I already bought but the book could I not

The last example in this section presents a more questionable extraction: in English, (24b) is generally considered as a case of pseudogapping, but some also analyse it as involving

[7] We provide here an attested and more natural example:
Helenku bolelo břicho a tak Elizabetka snědla všechny bonbóny který Helenka nemohla.
H.DAT ached stomach and so E. ate all sweets that H. NEG.could
'Helen had a stomach ache, so Elisabeth ate all sweets that Helen could not.'
[8] The degree of contrast may explain why native speakers' judgements on this kind of data vary.

movement (Aelbrecht 2007, Gengel 2013). Whether or not we assume that (24a) involves an object extraction, Czech would again be similar to English rather than to French or Dutch.

(24) a. Já budu volit pro něj a ty můžeš pro ni.
I FUT.1SG vote for him and you can for her
b. I will vote for him, and you can for her.
c. *Je voterai pour lui, et tu peux pour elle. (French, Dagnac 2011)
I vote.FUT.1SG for him and you can for her

d. *Ik zal voor hem stemmen, en je kan voor haar. (Dutch, Aelbrecht 2008)
I will for him vote and you can for her

4.2 Differences from English

Despite several similarities with English VP-ellipsis presented in the previous subsection, Czech MCE is also (at least to some extent) similar to French and Dutch MCE.

First, we observe that verbal elements intervening between modals and the VP must be elided, see the passive auxiliary 'be' in (25). In French and Dutch, these elements also include negation and aspect morphemes[9], which in Czech appear directly on the verb stem.

(25) a. Tento text může být čten nahlas, ale tato báseň skutečně nemůže (*být). (=25b)
this text can be read.PASS aloud but this poetry really NEG.can be
b. This text can be read aloud but this poetry really cannot (be).
c. Ce texte peut être lu à voix haute, mais ce poème ne peut vraiment pas (*être).
this text can be read in voice high but this poetry NEG can really NEG be
(French, Dagnac 2011) (=25b)
d. Deze tekst kan hardop gelezen worden, maar deze poëzie kan echt niet (*zijn). (=25b)
this text can aloud read be but this poetry can really not be (Dutch)

By contrast, second position clitic auxiliaries are obligatory with MCE in Czech, see (26a), which is not surprising since they occur very high in the clause (cf. Section 3.1).[10] Note also that second position pronominal clitics that are complements of the lexical verb are excluded. These clitics normally appear on modal verbs, see (14a) above and (26b). This suggests that pronominal clitics must be elided before clitic climbing.[11]

(26) a. Já jsem to musela podepsat, ale ty *(jsi) (*to) nemusel.
I PAST.1SG CL:it had-to sign but you PAST.2SG CL:it NEG.had-to
'I had to sign it, but you didn't have to.'
b. Já jsem to musela (*to) podepsat (*to).
I PAST.1SG CL:it had-to CL:it sign CL:it
'I had to sign it.'

Finally, it has been pointed out (Hardt 1993, Merchant 2008, 2013) that the voice of the elided VP and that of its VP antecedent in English may differ. In (27a), the elliptical clause is in the active voice, while the clause with the VP antecedent is in the passive voice. The

[9] Cf. Dagnac (2008):
(i) *Paul peut avoir fini en juin, et Luc peut aussi avoir [~~fini en juin~~].
Paul can have finished in June and Luke can too have finished in June
(ii) *Paul peut repasser LM01 et Luc peut ne pas [~~repasser LM01~~].
Paul can take LM01 and Luc can not take LM01

[10] Contrary to MCE, auxiliary clitics cannot escape sluicing, as has been noted by Merchant (2001) in his *Sluicing-Comp Generalization*. This follows if MCE targets a smaller structure than sluicing does.

[11] For Roberts (2010), pronominal clitics consistently escape the interior of the low *v*-cycle. If this is true, MCE in Czech targets a larger structure than the low *v*-cycle, which is compatible with our analysis in Section 5.

example (27b) shows the opposite distribution: passive elliptical clause and active clause containing the antecedent.[12] Assuming that voice is encoded on the head Voice and that Voice is distinct from the head *v*, Merchant (2008) argues that VP-ellipsis in English targets a verbal phrase (*v*P/VP) below Voice head. Ellipsis therefore does not include VoiceP.

(27) a. This problem had to be solved long ago, but obviously nobody could (~~solve it~~).
b. The janitor must remove the trash whenever it is apparent that it should be (~~removed~~).

Contrary to English, we can see in (28) that Czech, French and Dutch require the same active or passive morphosyntax in both the elliptical clause and the clause containing the VP antecedent.[13] Ellipsis in (28) is excluded because the elliptical clause is presumably in the active voice, while the clause containing the antecedent is in the passive voice. This suggests that VoiceP is included in the ellipsis site.

(28) a. Ten problem měl být dávno vyřešen ale nikdo zřejmě nemohl *(ho vyřešit).
this problem had-to be longtime solved.PASS but nobody obviously NEG.could (it solve)
'This problem had to be solved long ago, but obviously nobody could solve it.'
c. Ce problème aurait déjà dû être résolu, mais personne n'a pu *(le résoudre).
this problem has.COND yet had-to be solved but nobody NEG.has could (it solve)
(French, Dagnac 2011) (=30a)
d. Dit probleem had al lang geleden opgelost moeten worden maar niemand kon
this problem had already long ago solved must be but nobody could
*(het opgelessen). (Dutch)
(it solve)

Given the properties discussed above, I conclude that Czech MCE seems to target a larger structure that VP-ellipsis in English, but probably a smaller structure than MCE in French or Dutch.

4.3 Summary

The Table 1 below summarizes the properties discussed in this section. Lines 1 to 3 indicate for each language whether it allows ellipsis after auxiliary verbs (Aux + ellipsis), co-occurrence of an auxiliary and a modal verb (T + Mod), and co-occurrence of two modal verbs (Mod + Mod). With respect to MCE, lines 4 to 8 indicate whether it is compatible with deontic and epistemic reading of modal verbs (Deont/Epist reading), with subject extraction, object topicalization, wh-object extraction and object scrambling (if there is any). Finally, lines 9 to 12 show whether MCE requires identical subjects in ACD constructions (Same Subject Constraint) and identical voice on the verb (Voice identity), and whether it allows a passive auxiliary to occur after the modal verb (Passive Aux). We can see that Czech shares most but not all the examined properties with English.

[12] Apparent counter-examples in English are reanalysed by Merchant (2007/2013) as cases of pseudogapping.
[13] Voice identity also applies to ellipsis after the auxiliary future verb, see Section 5.3.

Table 1 Properties related to MCE

		Czech	English	French	Dutch
1	Aux + ellipsis	Yes/No (2PCl)	Yes	No	No
2	T + Mod	Yes	No	Yes	Yes
3	Mod + Mod	No	No	Yes	Yes
4	Deont/Epist reading	Yes/Yes	Yes/Yes	Yes/No	Yes/No?
5	Subject extraction	Yes	Yes	Yes	Yes
6	Object topicalization	Yes	Yes	Yes	No
7	Wh-object extraction	Yes	Yes	Yes	No
8	Object scrambling (?)	Yes	Yes	No	No
9	Same Subject Constraint	No	No	Yes	Yes
10	Overt pronoun	No	No	Yes/No	Yes/No
11	Voice identity	Yes	No	Yes	Yes
12	Passive Aux	No	Yes	No	No

5. Proposal

Before proposing an analysis of MCE in Czech, I present here my assumptions about the general mechanism licensing ellipsis, following in particular Aelbrecht (2010), and to some extent Lobeck (1995), Merchant (2001) and van Craenenbroeck & Lipták (2013). I thus assume that: (a) ellipsis is triggered in a checking relation (*Agree*) between the licensing head X and the ellipsis site YP, (b) there is a feature [E] that occurs on the head of Y and indicates that YP[14] will not be spelled out (non-pronunciation at PF), once the feature is checked out by the head X.

The feature [E] has a specific syntax consisting of two properties: (i) selection of the head on which the feature may occur, i.e. the head of the constituent that will be elided (SEL X), (ii) uninterpretable features that must be checked against the features of the head licensing ellipsis (uY). I will propose that parametrizing these two properties accounts for the behaviour of (not only) Czech MCE. The elided YP must be given (Barbiers 1995, Lobeck 1995, Merchant 2001), and syntactically/structurally isomorphic with its antecedent (cf. Fiengo & May 1994).

5.1 Specifying the properties of the [E]-feature in MCE

We have seen in Section 3 that the behaviour of modal verbs in Czech suggests that they are neither T nor V head, but rather head of a specific functional projection between T and V, which I call Mod. They can therefore co-occur with T but not with other modal verbs.

To account for ellipsis licensed in the contexts of modal verbs in Czech, I propose in (29a) that the feature [E] is merged on the head Voice, i.e. that it selects as ellipsis site the phrase headed by Voice (SEL Voice). Moreover, the feature [E] must have its uninterpretable features (uMod) checked out by the head Mod, i.e. it is licensed by Mod. The properties of the [E] feature in Czech would differ from the properties of the [E] feature in English, French and Dutch respectively, as shown in (29bcd). In English, ellipsis targets *v*P and is licensed by T (see Merchant 2007). In French, ellipsis targets TP and is licensed by modal V selecting a TP (see Dagnac 2008). In Dutch, ellipsis targets VoiceP but it is licensed by a deontic V (see Aelbrecht 2008). Contrary to Dutch, however, we do not need to postulate that the VoiceP in Czech constitutes a phase blocking object extraction, since both subject and object extractions may take place before VoiceP is sent to PF.

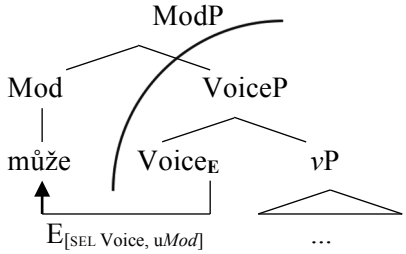
[14] This assumption is at variance with Merchant (2001), for whom it is the complement of the head bearing [E] that is elided.

(29) The syntax of [E] feature in MCE:

a. Czech:	E_{MCE} [INFL [uMod], SEL [Voice]]	
b. English:	E_{MCE} [INFL [uT], SEL [*v*]]	(cf. Merchant 2007)
c. French:	E_{MCE} [INFL [uV], SEL [T_{nf}]]	(cf. Dagnac 2008)
d. Dutch:	E_{MCE} [INFL [uV_{deon}], SEL [Voice]]	(cf. Aelbrecht 2008)

(30) a. Czech: [$_{ModP}$ může [~~$_{VoiceP}$ [$_{vP}$ ~~t_{subj}~~ [$_{VP}$ …]]]~~]]]

a'.



b. English: [$_{TP}$ can [$_{AspP}$ (have) [$_{VoiceP}$ (been) [$_{vP}$ t_{subj} [~~$_{VP}$ … ~~]]]]]

c. French: [$_{VP}$ peut [~~$_{TP}$ t_{subj} [$_{AspP}$ [$_{vP}$ t_{subj} [$_{VP}$ …]]]]~~]

d. Dutch: [$_{VP}$ kan [$_{TP}$ t_{subj} [~~$_{VoiceP}$ [$_{vP}$ t_{subj} [$_{VP}$ …]]]~~]]

The proposed analysis can account for the properties of Czech MCE as follows. First, MCE requires voice identity in both the elliptical clause and its antecedent, i.e. both clauses must be either active or passive. Assuming that the parallelism requirement on ellipsis includes voice features, postulating that the feature [E] targets VoiceP guarantees that ellipsis takes place only if elided and antecedent VoiceP are identical. Furthermore, since VoiceP is neither a nominal nor a clausal phrase, it follows that it cannot be pronominalized by an overt pronoun.

Second, MCE does not target the clitic and the future auxiliaries, but it cannot leave aside the passive auxiliary. Since clitic auxiliaries are generated high in the structure, the analysis predicts that they will not be included in the ellipsis site. Likewise, the future auxiliary generated above modal verbs will not be elided (see Section 3.1, ex. (10)). In contrast, the passive auxiliary located in the VoiceP will be elided along with the VoiceP.

Third, MCE allows extraction of focused (wh-object) and contrastively focused XPs (contrastive topics). Since elided elements are informationally given, it follows that only focused XPs can escape ellipsis and undergo extraction. This is especially visible in the case of pronominal object clitics, which cannot be focused, and will thus never be allowed to escape the ellipsis site. Extraction of non-identical XPs from the ellipsis site could, however, be viewed as problematic for parallelism constraints assumed for deletion, although these constraints do not mean full morphophonological identity. I thus propose to assume with Merchant that focus overrides "identity condition" in deletion (Merchant 2001). In the case of subject extraction from *v*P to TP, for instance, the identity required for deletion reduces to the type of argument (referential DP), but it does not concern the meaning or the reference of the DP subjects themselves. In the case of Antecedent Contained Deletion, we can consider that the subject of the relative clause must escape deletion precisely because it is contrasted with the subject on the main clause.

(31) a. Jan čte všechny knihy, které$_i$ Eva nesmí (číst t_i).
John reads all books that Eva NEG.can read

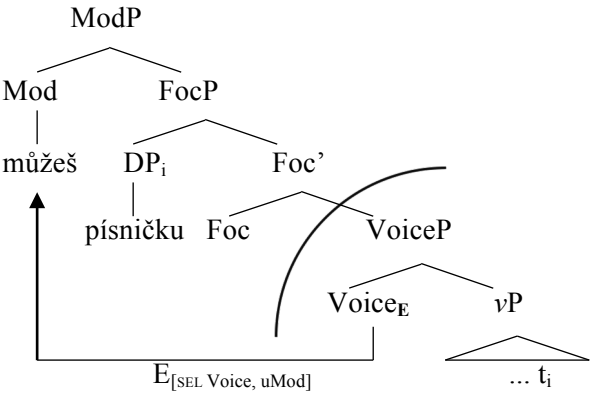
b. Jan čte [$_{VoiceP}$ [$_{VP}$ t_{sub} t_v všechny knihy [$_{CP}$ které$_i$ [$_{TP}$ Eva [$_{\mathit{Mod}P}$ nesmí [~~$_{\mathit{Voice}P}$ [$_{vP}$ t_{sub} [$_{VP}$ … t_i]]]~~]]]]]

The observation that extraction is relatively easy in Czech can be related to the monoclausal structure of sentences with modal verbs. In the case of an intermediate extraction (if we assume objects scrambling instead of pseudogapping), like in (32), we can suppose that

extracted elements are hosted by a TP-internal Focus position (following Beletti 2004) between the modal verb and the elided VoiceP. This kind of extraction would not be available in French or Dutch, where ellipsis targets the TP complement of the modal V.

(32) a. Já třeba napíšu Heleně básničku, a ty zas můžeš písničku.
I maybe PF.write H.DAT poem.ACC and you then can song.ACC
'I might write a little poem for Helen, and you, you can write a little song for her.

b.



5.2 Extending the analysis to ellipsis after the future auxiliary

Since English modal and auxiliary verbs represent the same kind of head (Ross 1967), it is not surprising that they behave alike with respect to ellipsis. We can thus reduce the analysis of MCE to the analysis of VP-ellipsis, by having the same [E] feature for both. In French and Dutch, modal and auxiliary verbs are syntactically different heads and behave differently with respect to ellipsis. If these languages only possess the [E] feature with the syntax given above, ellipsis after auxiliary verbs will be excluded since auxiliary verbs are not V heads and do not have a non-finite TP complement.

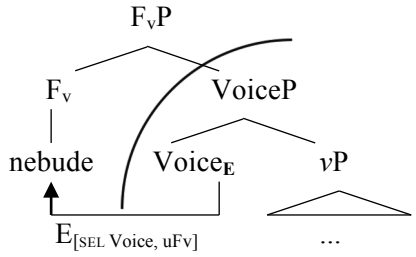
As for Czech, I propose that the analysis in terms of VoiceP-ellipsis can be extended the future auxiliary because: (i) the future auxiliary is a functional verbal head between V and T, (ii) its complement is an extended VP, and (iii) the ellipsis also requires voice identity, see (33):

(33) a. *Udělali to, kdykoliv museli ~~(to udělat)~~. / *to muselo ~~(být uděláno)~~.*
did.PL it whenever had-to.PL (it do) it had-to (be done.PASS)
'They did it whenever they did have to (do it).'
b. *Měl být operován, ale nebude ~~(operován)~~ / *nebudou ~~(ho operovat)~~.*
had-to be operated.PASS but NEG.FUT.3SG operated.PASS) NEG.FUT.3PL (him operate)
'He had to be operated but he will not (be operated).'

To allow both the future auxiliary and modal verbs to license ellipsis, I suggest defining the [E] feature as follows: (i) the licensing head is a functional verbal head F_v, that can be realized as Mod and Asp, and (ii) the uninterpretable features of [E] are uF_v, see (34b).

(34) a. Měl být operován, ale *pro*$_i$ [$_{AspP}$ nebude [$_{\sout{VoiceP}}$ ~~PASS~~ [$_{\sout{VP}}$ ~~operován t$_i$~~]]]
had-to be operated.PASS but NEG.FUT.3SG operated.PASS
'He had to be operated but he will not (be operated).

b.



6. Conclusion

In this paper, I have dealt with Modal Complement Ellipsis (MCE) in Czech from a comparative perspective. I have shown that Czech modal verbs and Czech MCE exhibit a mixed behaviour with respect to languages like English, French, and Dutch. Like English, it allows for various extractions from the ellipsis site and for different subjects in ACD constructions. Like French and Dutch, it does not allow for intervening elements between modal verb, and ellipsis site and it requires voice identity of the elided VP and its antecedent.

I have argued that the properties of MCE that we observe at the surface are induced by the head licensing ellipsis (F_v, V, or T) and the ellipsis site (VoiceP, TP or VP). Adopting a deletion account of MCE based on a presumably universal ellipsis feature [E], I have undertaken to parametrize this feature [E], whose properties include precisely the licensing head and the ellipsis site. In addition, the properties of this E feature also imply whether ellipsis is available with auxiliary verbs. As for Czech, I have proposed that [E] is licensed by a functional verbal head F_v, which can be realized by modal verbs or the future auxiliary, and targets VoiceP.

The question remains whether we can relate the parametrization of the [E] feature to other language properties. One hypothesis to explore can be found in Cyrino & Matos (2002), who claim that there is a correlation between the possibility of verbal ellipsis (after both auxiliary and modal verbs) and the structure of the extended verbal projection, in particular the realization of aspect. This issue is however outside the scope of this paper and must be left to further investigation.

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