Referential Subject and Object Gaps in Modern Icelandic

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1. Introduction[1]

This paper aims to shed light on Modern Icelandic (henceforth MI) sentence coordinations that exhibit co-occurring subject and object gaps. MI, typologically not considered a *pro*-drop language, seems to have retained a curious remnant of argument drop from Old Norse, where referential null subjects and objects were a common phenomenon (e.g. Hjartardóttir 1987; Thráinsson & Hjartardóttir 1986; Sigurðsson 1989; Rögnvaldsson 1990a). (1a, b) give examples from Old Norse and MI:

(1) a. Hoðr tók mistiltein$_i$ og   skaut e_i at Baldri.   [Old Norse]
       'Hodd took mistletoe and shot (it) at Baldur.'
                              (from Nygaard 1905, in Rögnvaldsson 1990a: 368, 3)
   b. Ég tók blaðið$_i$ og   braut saman.   [MI]
      I   took paper-the and folded together
     'I took the paper$_i$ and folded (it$_i$) together.'

   While there are referential null elements in MI, their nature is generally different from e.g. Italian-type null elements (Italian being a *pro*-drop language): MI referential argument gaps mostly involve null topics in the sense of Huang (1984). That is, referential arguments (subjects and objects) can be dropped in main clauses only when topicalized. Where MI has null subjects which are not due to topic drop, they have a generic, non-

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referential reading and are restricted to specific constructions, such as impersonal passives and null expletives (cf. Sigurðsson 1989; 1993).[2]

Yet it has been claimed that MI as well as some other Scandinavian languages exhibit argument gaps that seem not to form a chain with [Spec, CP], i.e. they purportedly cannot be analyzed as null topics binding a variable (cf. among others Thráinsson 1979, 1991; Sigurðsson 1993, 1989; Rögnvaldsson 1990a, 1990b; Platzack 1987; Thráinsson & Hjartardóttir 1986). This paper will examine these constructions in MI and, contrary to these previous claims, analyze object gaps indeed as null topics bound by a variable. For subject gaps arguments will be provided to the effect that MI does allow subject *pro* in coordinate structures, which in combination with object topic drop results in conjuncts with two argument gaps.

In the following section I will review the evidence that has been presented in the literature for referential *pro* in coordinate structures in MI. Since subject drop has been claimed to interact with object drop in MI (Rögnvaldsson 1990a, Sigurðsson 1989), I first will consider the distribution of null subjects before I then turn to null objects.

2. Coordination and subject pro
Evidence for referential subject *pro* in CP coordinations comes from agreement and word order facts. Let me begin with agreement:

(2) Ég elska þig og dýrka þig.
    'I love you and admire you.'

While (2) is usually analyzed as VP coordination, facts are slightly different when coordinations involve impersonal verbs which take different case frames. In MI, impersonal verbs do not agree with the subject, but are either in the default form or (optionally) agree in number with a Nominative object, if present.[3] In coordinating impersonal verbs with Nominative-Accusative verbs where the subject triggers person as well as number agreement, it will be possible to determine whether the overt subject in sentences like (3) is indeed the subject of both conjuncts.

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[2] For the sake of completeness it should be mentioned that independent of any *pro*-drop classifications, certain types of referential null element are potentially universal (Sigurðsson 1989: 139ff.; cf. also Haegeman 1990), such as null elements found in diaries, letters, telegrams, etc. These null elements are largely limited to the first person singular and a narrow discourse context.

[3] For the subject status of oblique preverbal NPs cf. among others Zaenen et al. (1990).

(3) a. Þeir   sjá   stúlkuna og finnst /*finnast hún   áltileg.
   they (N) see (3pl) girl-the   and finds (3sg/*3pl) she (N) attractive
   'They see the girl and find her attractive'

(Rögnvaldsson 1990b: 351, 8)

   b. Þeim   líkar   maturinn og   *borðar/borða mikið.
   them (D) likes (3sg) food-the   and eat (*3sg/3pl) much
   'They like the food and eat much.'

(ibid., 9)

   c. Okkur   vantaði   peninga   og (við)   vorum   svangir.
   us (D.1pl) lacked (3sg) money (A.pl) and we (N.1pl.) were (1pl.) hungry.

(Sigurðsson 1989: 137, 5b, 6b)

In (3a), the verb in the second conjunct, *finnast* is impersonal and takes a Dative subject and a Nominative object, i.e. there is no subject-verb agreement. The fact that *finnast* does not agree with the plural subject of the first conjunct, but appears instead in the third person singular form, can only be accounted for if the second conjunct is assumed to have its own thematic subject. In contrast, when the verb in the first conjunct takes oblique case but the verb in the second conjunct does not, only the second verb agrees with the Nominative subject, as in (3b) above. Likewise, the agreement pattern in the second conjunct in (3c) is the same whether the subject is overt or covert, i.e., the verb *vorum* never appears in the 3rd person singular, as would be expected if dependent on the oblique matrix subject. These agreement facts give reason to believe that the overt subject is not the subject of both conjuncts and thus allow to distinguish cases of VP from S coordination, according to Bresnan and Thráinsson (1990).

In addition to agreement facts, possible positions of the subject can serve as a diagnostic for which level of coordination we are dealing with (cf. Bresnan & Thráinsson 1990). Indefinite (and right dislocated) NPs can occur to the right of VPs in MI expletive constructions, as shown in (4):

(4) a. Það mun [$_{VP}$ t_i kaupa   fiskinn]   [$_{NP}$ maður   í hvítum buxum]$_i$
   there will   buy (Inf) fish-the (A)   man (N) in white   pants
   'A man in white pants will buy the fish.'

   b. Það   mun [$_{VP}$ t_i kaupa   fiskinn   og keyra hann   heim]
   there will   buy (Inf) fish-the (A) and drive him (A) home   man
   [$_{NP}$ maður   í hvítum buxum]$_i$
   man (N) in white   pants
   'A man in white pants will buy the fish and take it home.'

(Bresnan and Thráinsson 1990: 358, 8)

As the indefinite NP follows the conjoined phrases, (4b) should be analyzed as VP coordination with a right-dislocated subject.

Under the assumption that case spreads over conjoined Vs and VPs, instances where a structurally and a obliquely case marked subject are conjoined should be instances of IP or CP coordination.[4] As predicted by this analysis, subject postposing in *það*-sentences is not possible:

(5) a. [NP Maður í hvítum buxum] mun [VP kaupa   fiskinn]   og
   man (N) in white pants   will   buy (Inf) fish-the (A) and
 [líka   hann   vel].
  like (Inf) him (N) well
 'A man in white pants will buy the fish and like it a lot.'
 b. Það   mun [VP t_i kaupa fiskinn] [NP maður í hvítum buxum]$_i$ og
 there will   buy   fish-the (A) man (N) in white pants   and
 [líka   hann   vel].
 like(Inf) him (N) well
 'A man in white pants will buy the fish and like it a lot.'
 c. *Það   mun [VP kaupa   fiskinn]   og [líka   hann   vel]
  there will   buy (Inf) fish-the (A) and like (Inf) him (N) well
 [NP maður/manni í hvítum buxum].
  *man (*N/*D) in white pants*
            (Bresnan and Thráinsson 1990: 359, 11a-c)

In sum, Bresnan and Thráinsson (1990) show that VPs can only be conjoined if the case frames of the two verbs are identical; everything else must be analyzed as IP or CP coordination, as agreement as well as word order patterns show. Note that 'identical' does not imply a canonical Nominative-Accusative / Nominative-Accusative pattern; also instances where both of the subjects are in the Accusative or both of the objects carry the Nominative case can be coordinated at a level below IP/CP.

This section has reported evidence for subject *pro* in coordinate structures. Agreement and word order facts show that for coordinations involving verbs with different case marking on their respective subjects, a subject *pro,* IP or CP analysis for the second conjunct makes the correct predictions. The next section discusses object gaps in coordinate structures.

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[4] Bresnan and Thráinsson (1990) speak of CP coordination, yet there are proposals to analyze SVO sentences as IPs in MI, since there is evidence for V-to-I independent of V-to-C (Jonas 1996: 45ff.; Vikner 1991; 1995). Bresnan and Thráinsson's analysis works equally under the assumption of IP.

3. Object gaps in coordinate structures

MI exhibits constructions that seem to have a referential object gap in the second conjunct of two conjoined sentences. These gaps only appear in conjoined, not in subordinate clauses, as illustrated in (6a, b):

(6) a. Ég elska þig og   dýrka   [MI]
      I love you and (I) admire (you).
  b. *Ég elska þig þvi að   dýrka
      I love you because (I) admire (you).
  c. *Ég dýrka.
      I admire

Note that the sentences cannot be analyzed in terms of an intransitive reading of the second verb, as (6c) shows.

Rizzi (1986) has developed several diagnostics which serve to determine whether apparent postverbal gaps are structurally present empty positions or whether they are due to syntactically intransitive lexical entries in which the understood internal θ-role has been absorbed in the lexicon. In particular, he uses predictions from binding theory and control theory, as well as small clause constructions in order to pin down the nature of postverbal argumental gaps in Italian. Rögnvaldsson (1990a) has adapted Rizzi's methodology for MI, and I shall follow Rizzi's and Rögnvaldsson's *procedere* rather closely to determine the structural presence of a postverbal null element. Both Rizzi and Rögnvaldsson use the diagnostics to argue for the pronominal character of the covert argument. In the present context, the diagnostics will be used to argue for the presence of a covert element only, since they do not determine the nature of these gaps (and are in fact compatible with a null-topic analysis as well).[5]

Control Theory. Bach's Generalization (Bach 1979) captures the fact that subject controllers that are themselves direct objects must be structurally represented. In Italian, the object position can be filled by a null element:

(7) Il bel tempo invoglia a [PRO restare]   [Italian]
    The nice weather induces to   stay   (Rizzi 1986: 503, 9a)

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[5] The data that I present in this section of the paper have been collected during spring and summer 2001 and stem partly from Icelanders who live in the US (none of them longer than 3 years) and partly from Icelanders that I interviewed during a trip to Iceland. Speakers range from 21 to 73 years of age, with the majority of them being between 25 and 30. Most of them are from the Reykjavík area.

The MI equivalent to (7) is ungrammatical, as shown in (8):

(8) Þetta góða veður hvetur *(fólk) til að stoppa.   [MI]
    This nice weather induces people to stay (Rögnvaldsson 1990a: 373, 30)

If we turn to coordinate structures, however, a different picture emerges. According to Rögnvaldsson (1990a: 371), sentences like (9) are marginally acceptable in MI; for my speakers they were fully grammatical:

(9) √/? Ég   hótaði   honum og skipaði (honum) að PRO fara.
      I (N) threatened him (D) and ordered (him; D) to   leave.

(9) shows that in MI coordinate structures, referential direct objects that are themselves controllers of subject PRO can be covert.
    Binding Theory. If the understood object can be the antecedent of a reflexive, the presence of a covert filler element can be established on the basis of Principle A of binding theory:

(10) La buona musica riconcilia con   se stessi.   [Italian]
     'Good   music reconciles with oneself'   (Rizzi 1986: 504, 11a)

In coordinate structures, MI patterns with Italian:

(11) Ég hjálpaði honum á fætur og fylgdi   (honum) heim til sin. [MI]
     I (N) helped him (D) on feet and followed (him; D) home to REFL
     'I helped him$_i$ to his feet and followed him$_i$ to his home.'
                                    (Rögnvaldsson 1990a: 370, 16)

(11) shows that MI allows referential objects to be covert; their structural presence can be inferred from them acting as binders of reflexives.
    Small clauses. In Italian, the understood object can be modified by a small clause:

(12)   Un dottore serio visita nudi   [Italian]
       'A serious doctor visits nude [+pl.]'   (Rizzi 1986: 505, 14a)

The plural agreement on the adjective shows it is not the singular subject that is modified. (13) gives the corresponding Icelandic construction; the object cannot be covert.

(13) a. Yfirleitt málar þessi frægi málari   *(fólk)   [MI]
     in general paints this   famous painter (m.sg.N) people (n.sg.A)
      klætt   í hvitu.
     dressed (n.sg.A)   in white

Again, MI coordinate structures, like Italian, allow for null objects in argument small clauses (Rögnvaldsson, 1990a: 371, 22, 23)[6]:

(14) Ég uppörvaði Harald   og gerði (hann) stoltan   af
     I (N) encouraged Harold (A) and made (him; A) proud (A.m.sg.) of
     sjálfum sér_i.
     himself
(15) Ég þekkti hann vel og taldi   (hann)   mjög heiðarlegan.
     I   knew   him (A) well and believed (him; A) (to be) very honest (A.m.sg.)

Agreement in argument small clauses allows us to infer the presence of a covert referential object in the second conjunct of (14) and (15).

Rizzi's diagnostics thus allow us to assume the presence of a structural gap in MI. The question remains whether the empty element is genuinely pronominal in nature or rather an A'-bound variable, as most instances of empty arguments in MI. Here it becomes important that the object gap constructions in MI are incompatible with a preverbal overt subject.

(16) a. Ég   tók blaðið   og (*ég) braut saman
        *I (N) took paper-the (A) and (*I) folded together*
       'I took the paper and (*I) folded (it) together'
    b. Þeir   sjá   stúlkuna og (*þeim) finnst   falleg
       they (N) see *(3pl)* girl-the *(A)* and (them, *D*) finds *(3sg)* beautiful *(Nfsg)*
       'They see the girl and (*they) find (her) beautiful'

On the basis of sentences like (16) it has been claimed that MI null objects are parasitically dependent on the co-occurrence of a null subject in the same conjunct. If the null elements were topicalized, so the argument continues, one would have to allow for recursive topicalization in Icelandic (Rögnvaldsson 1990a). This has been taken as motivation for trying to accommodate referential subject as well as object *pro* in MI grammar. However, Rögnvaldsson's analysis lacks a straightforward way to account for the null-subject dependency of null objects that Rögnvaldsson has to

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[6] Rögnvaldsson (1990a: 371) analyses these sentences as adjunct small clauses; I do not follow this analysis here.

assume on the basis of sentences like (16). In the next section, I want to propose an analysis that builds on some of Rögnvaldsson's insights, but avoids the problematic assumption of object *pro*.

4. Subject pro and object topic drop

In section two of the paper, I have reported the discussion about null subjects in MI, and adopted a subject *pro* analysis for coordinations involving verbs with non-matching case patterns. This would leave the [spec, CP] position available for a null object topic. Object-topic drop is needed independently in the grammar of Icelandic; it thus seems desirable to explain the argumental gaps in these terms. Consider the following sentences (both verbs are canonical Nominative-Accusative verbs):

(17) a. Ég elska þig og [$_{VP}$ dýrka   þig].
  'I   love you and   admire you.'
 b. Ég elska þig   og [$_{CP}$ e_i dýrka   *pro* t$_i$].
  'I   love you and   admire'
 c. *Ég elska þig   og [$_{CP}$ e_i ég dýrka   t$_i$].
  'I love you and   I   admire'
 d.? Þig   elska ég og [$_{CP}$ e_i dýrka   ég t$_i$].
  'You love   I and   admire I'

I propose the following analyses for the sentences above: (17a) is a VP coordination; there is no subject gap (and of course no object gap, since both postverbal arguments are overt). (17b) has been analyzed in the literature as involving VP coordination (i.e. no subject gap) and referential object *pro* (Rögnvaldsson 1990a), or as CP coordination with recursive topicalization (Sigurðsson 1989). Instead I hypothesize the postverbal gap to arise from object topic drop, which entails that this is a CP coordination despite the homogeneous Case pattern.[7] The subject is assumed to be *pro* in postverbal position due to subject-verb inversion (V2).

Example (17c) has been used in the literature to argue for the null-subject constraint on referential null objects; it has been claimed that object *pro* is dependent on subject *pro*. This analysis is not correct according to the line of argumentation pursued here. The sentence is ungrammatical

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[7] Due to evidence for V-to-I independent of V-to-C (Jonas 1996: 45ff.; Vikner 1991; 1995) and due to the fact that subject-initial clauses can be embedded where topicalization is impossible, subject initial sentences are often analyzed as IPs, not CPs in MI (Rögnvaldsson & Thráinsson 1990; Jonas 1996). That is, (34b) has to be analyzed either as IP-CP coordination or also the first conjunct has to be a CP. I will tentatively assume to former here, but this question needs to be addressed in more detail.

because the subject has to be postverbal in the presence of a fronted XP constituent. The ungrammaticality is due to a V2 violation rather than a null subject constraint violation.

Example (17d) is predicted to be grammatical by my analysis, which is confirmed by judgments given in Rögnvaldsson (1990a: 376) for (18b).

(18) a. ?*Sigga   elskar þennan mann,   en [$_{CP}$ e_i María   hatar t$_i$
       Sigga (N) loves   this   man (A) but   Mary (N) hates (him; A)

    b. ? Þennan mann   elskar Sigga,   en e_i hatar María t$_i$.
       this   man (A) loves Sigga (N), but (him, A) hates Mary (N)
       'Sigga loves this man, but Mary hates him'

The ungrammaticality of (18a) is straightforwardly accounted for under my approach, since the subject position is incompatible with topicalization. A covert topic occupies [spec, CP], thus the subject can only be postverbal, as in (18b). For sentences like (18b) the picture gets blurred, however. While 5 of my speakers (21 - 30 years old) rejected similar sentences with an overt subject in pre- or postverbal position, to 3 others (22 - 40 years old) sentences with an overt postverbal subject were acceptable. No generalizations can be made about subjects' acceptance of postverbal overt subjects and their acceptance of argument gaps in conjunction with quirky case. There is potentially an important difference, however, between Rögnvaldsson's sentences given in (18) and the sentences I used. In (18), the subjects are not identical, whereas for my sentences, the overt subject was always coreferential with the subject in the first conjunct, as for instance in (19):

(19) Þig   elska ég   og   dýrka ég.
    you (A) love I (N) and admire I (N)
    'You, I love and admire.'

It might thus be that stylistic preferences influenced speakers' judgments: an overt subject pronoun in the second conjunct identical to the subject in the first conjunct might introduce a pragmatic 'oddness factor' that leads to ungrammaticality for some speakers.

Note that also the following sentences are ungrammatical:

(20) a. *Ég   elska þig   og   dýrka ég.
       I (N) love you (A) and admire I (N)
       'I love you$_i$ and you$_i$ I admire.'

b. *Ég   elska þig$_i$ og þig$_i$ dýrka ég.
   I (N) love you (A) and you (A) admire I (N)
   'I love you$_i$ and you$_i$ I admire.'

In (20a), the first conjunct has basic SVO order, while the second conjunct displays object topic drop, according to my analysis. So far, the ungrammaticality is unpredicted. But the ungrammaticality of (20b) - the equivalent to (20a) with overt topicalized object - suggests that the ungrammaticality is independent of object/topic drop. That apparently a non-topicalized and a topicalized sentence cannot be coordinated with the two objects being coreferential can be explained in terms of prominence relations and information structure: in canonical SVO word order, given information tends to occur early in the sentence and lack prosodic prominence (Lambrecht 1994; Foley 1999). If in a coordination an SVO word order is conjoined with OVS order, the movement of the second object to the syntactic topic position increases its prominence contrastively. It will thus no longer be interpreted as given and can therefore not be interpreted as coreferential with the object in the first conjunct. In order for two sentences with the same subject and object to be coordinated, they need to share the same prominence relations among their arguments. Franks (1993) has shown for Polish data that morphologically well-formed ATB dependencies are ungrammatical if the relative prominence relations among arguments are not the same. For ATB constructions, he defines 'most prominent' as the highest A-position associated with a θ-role. While the topic position is an A' position, Franks's account can be used for coordination in more general terms: for subject and object to be interpreted as coreferential in a coordinate structure, they must be equally prominent or non-prominent. On this assumption it is possible to account for the ungrammaticality of (20a, b).

   One objection might be that the proposed analysis is contradictory: if (17b) above, repeated here as (21), is analyzed in terms of subject *pro* and object topic drop, this sentence does indeed coordinate a non-topicalized structure in the first conjunct with a topicalized structure in the second conjunct.

(21) Ég elska þig og *e$_i$* dýrka *pro* t$_i$.
     I love you and   admire
     'I love you and admire you.'

Due to the fact that the subject and object of the second conjunct are covert, however, they are both of extremely low prominence (and have in fact no

prosodic prominence whatsoever) and can thus be interpreted in accordance with the default SVO/ agent-theme prominence structure in the first conjunct. This enables this coordination without a clash of prominence relations.

Another point needs to be addressed in order to corroborate the null-topic hypothesis: The most obvious diagnostic for a variable (which means topic-drop instead of *pro*-drop) is the mutual exclusiveness of null elements with overtly topicalized elements. Testing whether topicalization of a non-argument interferes with covert arguments in the second conjunct again renders a very mixed picture:

(22) Í fyrra elskaði ég   hana   en núna hata.
      before   loved   I (N) her (A) but now hate
      'Before I loved her, but now (I) hate (her).'

Judgments from 8 speakers were obtained for this sentence; four rejected it completely (25, 40, 40 and 73 years old), two 25-year-olds thought it marginally acceptable, while two further speakers (also 25) judged it to be fully grammatical. First it has to be said that clearly more speakers fully rejected it than fully accepted it. In the light of the judgments of the hesitant speaker and the one that accepted it, it might be worthwhile to take into consideration that generally the speakers I interviewed expressed an overall dispreferrence for object topicalization, independent of any null subjects/objects or coordinate structures. Also Sigurðsson (1989: 142 and *passim*) remarks on the relative markedness of null topic constructions in MI compared to German. If topicalization is restricted in its use, we can expect this to influence judgments on structures that display other unusual characteristics, like two argument gaps. The speakers I interviewed naturally recognized topicalized structures, and acknowledged the correctness of the sentences but pointed out that they would not actively use constructions with fronted objects. It thus might be that in MI, the stylistic use of object topicalization is relatively restricted for younger

speakers.[8] While only further research can determine the status of topicalization for younger speakers of MI, the data lead us to expect a lot of variability in speaker judgments with respect to topicalizations - the more so when impersonal verbs and quirky case frames are involved.

Another issue that deserves consideration is Cardinaletti's (1990; in Rizzi 1994) findings on object topic drop in the Germanic languages. She argues that object drop is restricted to third person. While canonical object topic drop in MI as well as in German (a very topic-drop-happy language) indeed always receives a third person default interpretation, looking at coordinate structures gives again a slightly different picture. I want to argue here that for both languages, coordinations license non-third-person topic-drop. Example (17d) above, here repeated as (23) is a case in point:

(23) ? Þig   elska ég og dýrka   ég
    You love   I and admire I

The fact that German also allows for non-third-person topic-drop in coordinate structures is thus taken to be supporting evidence for my analysis of (17b) above.

(24) Kennt Ihr   uns?   [German]
    know you (pl, N) us (A)?
    'Do you (pl) know us?'
    a. Ach ja, Euch   kennen wir   schon.
       oh yes, you (pl,A) know   we (N) already.
    'Oh yes, we know you (pl) already.'
    b. *Ach ja, e_i kennen wir t_i schon.
        Oh yes,   know   we   already.

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[8] In this context, also violations of V2 have been observed to be acceptable to some younger speakers, as for instance in (iva). (ivb) shows the canonical subject-verb inversion after XP fronting.
(iv) a. Í dag kennarinn   er lasinn.
          today teacher-the is sick
     b. Í dag er kennarinn lasinn.
        today is teacher-the sick
   'Today, the teacher is sick'
Similar observations have been made by Joan Maling and Sigríður Sigurjónsdóttir (Maling and Sigurjónsdóttir 2001) who distributed a questionnaire to 10th grade students throughout Iceland. The questionnaire included sentence (iva) above, intended to be an ungrammatical control. However, an unexpectedly high number of subjects, both adolescents and adults, judged it to be acceptable (cf. also Pouplier 2001).

    c. √ Ach ja, kennen Euch   schon.
       Oh yes, know   you (pl, A) already
    d. √ Euch   haben wir schon gesehen und kennen *(wir)   schon.
       you (pl, A) have we (N) already seen and know   we (N) already.
      'We have seen you before and know you already.'

Subject topic drop in (24c) is grammatical, while object topic drop in (24b) is unacceptable for a second person object. (24d) illustrates non-third-person object topic-drop in coordination. Note that it cannot be analyzed as VP coordination, because the second conjunct obligatorily needs an overt subject in postverbal position (German does not have subject *pro*). That the verb has raised above the subject shows that the verb must be in C°, i.e. the second conjunct has a null topic in [spec, CP].

While there is a lot of variability in the data and several points are left open here, it becomes clear that there are two types of referential argument gaps in MI that are licensed in coordinate structures only: referential subject *pro* and non-third-person object topic-drop. For both gaps, restrictions that hold otherwise in the grammar are lifted through the presence of a coordinating element.

Ultimately, it is desirable to formalize special licensing or identification mechanisms that can be found in coordinations. The following brief discussion is not designed to be a thorough analysis of (a theory of) coordination, but is merely meant as a sketch of how such a formalization might be achieved. It might be worthwhile to consider whether the distributional characteristics of the data are accountable for in theories of coordination that hypothesize conjuncts to project (and head) their own XP. Both Johannessen (1998) and Munn (1992; 1993) propose a syntactically hierarchical structure for coordinations. Such a structure which introduces a syntactic asymmetry between the two conjuncts but captures them under the domain of a single XP seems promising in the present context, since it needs to be accounted for why these argument gaps only show up in the second conjunct of coordinate structures. In Munn's theory, coordinating conjunctions project their own maximal projection in the form of BP, a 'Boolean phrase' headed by B°, a Boolean operator. Conjunct 2 is adjoined to conjunct 1, both coordinated elements are governed by the Boolean operator B°, as illustrated in (25).

(25)
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              XP1
        XP1         BP
              B°         XP2
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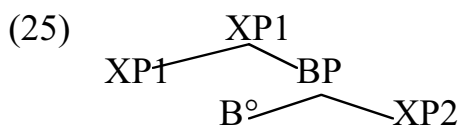
This Boolean operator B° has set-forming properties. As an operator and thus quantifier, the head of the Boolean phrase raises out of the BP at LF to adjoin to the first conjunct (Munn 1993: 151, 4.14).[9] The intuitive appeal of Munn's account in the present context lies in the conceptualization of the conjunction as an operator that can range over a set of conjuncts at LF qua its group forming nature.[10]

(26) shows the proposal by Johannessen (Johannessen 1998: 109, 1a), in which both conjuncts are part of the coordination phrase, CoP (in Munn, the top node is identical with the first conjunct), which is headed by the functional head Co°.[11]

(26)

CoP[X]
  X   Co'
first
conjunct
        Co°   Y
    conjunction *second*
                   conjunct
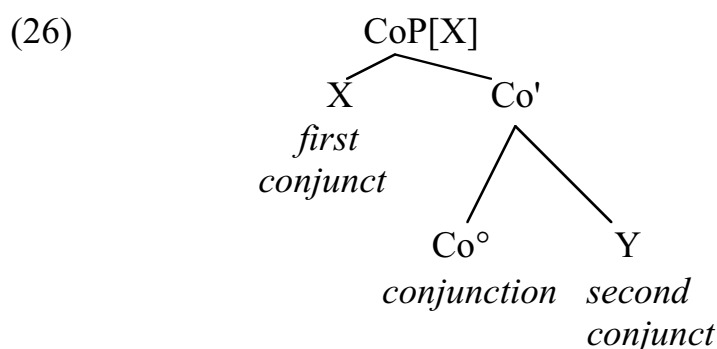
Note that one of the conjuncts is in a spec-head relation with the conjunction, while the second conjunct stands in a head-complement relation to the conjunction. She thereby avoids some of the most problematic assumptions Munn makes, such as head-adjunction to a maximal projection or quantifier raising out of a coordinate structure (cf. Heim & Kratzer 1998: 280). The CoP inherits syntactic category features from its specifier conjunct by spec-head agreement (Johannessen 1998: 110f.).[12] Only the first conjunct can project its features throughout the maximal projection. However, it is not entirely clear how it can be ensured that features (e.g., case in NP coordinations) match between X and Y, i.e.

[9] For a discussion of the somewhat unusual adjunction of a head to a maximal projection, cf. Munn (1993: 151f.).

[10] Munn (1993: 37ff.) provides evidence for a [Spec, BP] position, but he never actually draws the B' level in the tree structure, which is why it is omitted here.

[11] X and Y can be a head, an intermediate or a maximal projection. Cf. Johannessen (1998: 110) for a discussion how specifiers and complements that are not maximal projections violate X' theory, but can be accommodated in a Minimalist framework.

[12] That the category features of a specifier are projected to the maximal projection of a head is allowed in coordinations only, because conjunctions are hypothesized to lack proper categorical features (Johannessen 1998: 111).

how the conjunct in the complement position would come to agree in its features with the conjunct in the spec position.[13] For both theories technical details have to be worked out in order to truly judge their potential to account for the data, yet their approaches eventually provide a more principled account of why restrictions that normally hold in MI can come to be lifted in coordinate structures.

5. Conclusions

MI is clearly not a genuine *pro*-drop language, yet certain types of referential null elements are an active part of the grammar. Evidence for subject *pro* in coordinate structures comes from agreement and word order considerations. On typological grounds it seems problematical to assume object pro in a modern Germanic language, especially since the phenomenon is tightly constrained. Object topic-drop, on the other hand, is independently part of MI grammar. The structural presence of a covert object position could be established on the basis of control, binding and agreement facts. If the covert objects are assumed to be due to topic drop, the apparent null subject constraint reduces to a word order constraint.

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[13] In a footnote, Johannessen (1998: 73n32) refers to coordinations with two argument gaps in Norwegian, but she excludes them from her analysis.

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