On the argument structure of raising-to-subject with passive predicates in Swedish

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Abstract

This paper concerns the argument structure analysis of raising-to-subject with passive predicates in Swedish and other Germanic languages. Support is given for the analysis in which the raising-to-subject construction constitutes a regular passive, the passive counterpart of active raising-to-object. The fact that there does not seem to be an active counterpart for certain predicates, such as the predicate *say*, as well as the fact that raising-to-subject does not seem to be possible with the periphrastic passive in Swedish is attributed to certain semantic restrictions on the raising-to-object construction and the periphrastic passive construction, respectively.

1   Introduction

This paper gives an LFG-analysis of the argument structure of raising-to-subject with passive predicates in Swedish and other Germanic languages, giving support to the traditional standpoint in which passive raising-to-subject constitutes the passive counterpart to active raising-to-object. Furthermore, the paper discusses the reasons for the differences between the Germanic languages in which passive construction can be combined with raising-to-subject, concluding that what passive construction is used in a language corresponds to the general restrictions on the available passive constructions in that language.

The outline of the paper is as follows. Section 2 gives a background to the problem under discussion. Section 3 concerns related studies on raising-to-subject with passive predicates in the Germanic languages, focusing on an HPSG analysis of the construction in Danish. Section 4 discusses why the construction is not possible with the periphrastic passive in Danish and Swedish, and Section 5 why certain verbs only occur in the raising-to-object construction when the object is a reflexive pronoun. The conclusions drawn from sections 4 and 5 are then formalised within the Lexical Mapping Theory of LFG in Section 6. Section 7 summarizes the main conclusions of the study.

2   Background

In Swedish, as well as in several of the other Germanic languages, there is a construction in which the subject of a passive predicate has a thematic role only in relation to an embedded infinitival predicate. In (1-a), an example is given with the passive predicate *sägs* 'be said'. Example (1-b) illustrates that raising-to-subject is typically only available with the morphological passive in Swedish, formed with a suffix *-s*, and not with the periphrastic passive, formed with the auxiliary *bliva* 'become' in combination with a past participle.

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(1) a. Hon sägs   vara en utpräglad   målskytt.
         She says.PASS be   a   specialized goal-scorer
         'She is said to be a specialized goal scorer'.
         (http://www.vf.se/node/315601)
     b. *Hon blir   sagd vara en utpräglad   målskytt.
         She becomes said be   a   specialized goal-scorer
         'She is said to be a specialized goal scorer.'
         [constructed]

The subject *hon* in (1-a) does not have a thematic role in relation to the passive predicate *sägs* 'be said'. Instead it has a thematic role in relation to the embedded predicate *vara en utpräglad målskytt* 'be a specialised goal scorer'.

   The fact that there is no thematic role associated with the subject is reinforced by the possibility of a non-referential subject.

(2) Det   sägs   att hon är en utpräglad   målskytt.
     EXPL say.PASS that she is a   specialised goal-scorer
     'It is said that she is a specialised goal scorer.'
     [constructed]

In (2), the non-referential *det* 'it' constitutes the subject of the passive predicate *sägs* 'is said'.

   If we assume that the subject of the passive predicate corresponds to the object of an active predicate, which is the traditional view on passives (e.g. Teleman et al., 1999, 360), the active correspondent to the passive sentence in (1-a) would be the subject-to-object raising construction in (3).

(3) *Folk   säger henne vara en utpräglad   målskytt.
     People say   her   be   a   specialized goal-scorer
     'People say that she is a specialized goal scorer.'
     [constructed]

The object *henne* 'her' in (3) would correspond to the subject *hon* 'she' in (1-a). However, there is a problem about this correspondence. The sentence in (3) is unacceptable, which has led to claims that raising-to-subject with passive predicates should be analysed as a non-canonical passive, where the subject of the passive does not correspond to the object of any perceivable active construction (Ørsnes, 2011; Ørsnes & Müller, 2013).

   Even though the sentence in (3) is unacceptable, the predicate *säga* 'say' is not always unacceptable in the raising-to-object construction. When the object is a reflexive pronoun, raising-to-object seems possible, as exemplified in (4). Note that it is also possible to insert the emphatic *själv* 'self', showing that this is no intrinsic reflexive.

(4)   Hon säger sig/sig själv vara en utpräglad   målskytt.
        She says PRO.REFL be   a   specialized goal-scorer
        'She considers herself to be a specialized goal scorer.'
        [constructed]

In (4), the object is the reflexive pronoun *sig* or *sig själv*, which is coreferential with the subject referent. This referent is also associated with the subject of the embedded predicate *vara en utpräglad målskytt* 'be a specialised goal scorer'.

The verb *säga* 'say' thus only occurs in raising-to-object when the object is a reflexive pronoun. Other verbs, such as *anse* 'consider', occur in both raising-to-subject and raising-to-object, without the object being restricted to reflexive pronouns. This is shown in (5).

(5)   a.   Folk   anser   henne vara en utpräglad   målskytt.
             People consider her   be a   specialized goal-scorer
             'People consider her to be a specialized goal scorer.'
             [constructed]
        b.   Hon anses   vara en utpräglad   målskytt.
             She consider.PASS be   a   specialized goal-scorer
             'She is considered to be a specialized goal scorer.'
             [constructed]

In both (5-a) and (5-b), the pronoun *henne/hon* 'her/she' does not have a thematic role in relation to the main clause predicate *anse/anses* 'consider/be considered', but instead to the embedded predicate *vara en utpräglad målskytt* 'be a specialised goal scorer'.

As pointed out in the introduction, the paper concerns two questions relating to the data shown above. The first question concerns the relationship between passive raising-to-subject and active raising-to-object. Do these form an active-passive alternation for predicates such as *säga* 'say', or is passive raising-to-subject derived from another type of sentence? The second question concerns the reasons why it is only the morphological passive that occurs in raising-to-subject in Swedish (and possibly also Danish). As will be seen, in other languages, such as English, raising-to-subject is also possible with a periphrastic passive.

3   Related studies

Raising-to-subject with passive predicates is found in several, but not all, Germanic languages. Examples are given in (6) for Danish, Dutch, English, Norwegian and German, respectively. All but German exhibit the construction.

(6)   a.   Han påstås   at være bortrejst
             he   claim.PASS to be   away
             'He is claimed to be away.'
             (Ørsnes, 2011: 24)

b. De boten worden geacht   over een dag of vier Kaap Hoorn te
   the boats became considered over one day or four Cape Horn   to
   ronden.
   round
   'The boats are predicted to round Cape Horn in about four days.'
   (Noël & Colleman, 2010: 158)

c. Melvin was believed to be an addict (by everyone).
   (Postal, 1974: 56)

d. pasienten   (. . .) kan tenkes   å være gravid.
   patient.DEF   can think.pass to be   pregnant
   'The patient might be assumed to be pregnant.'
   (Lødrup, 2008: 175)

e. *Obama wird behauptet die Wahlen   zu gewinnen
   Obama is   claimed   the elections to win
   'Obama is claimed to win the elections.'
   (Ørsnes, 2011: 23)

The construction seems to be most productive in English and Swedish (Postal, 1974; Lyngfelt, 2010), but it is also found in Norwegian (Lødrup, 2008) and Danish (Ørsnes, 2011). In Dutch, raising-to-subject with passive predicates is restricted to a considerably more limited number of verbs than the other languages (Noël & Colleman, 2010). Noël & Colleman (2010, 161-162) list the predicates *geacht worden* ('be considered/supposed to'), *verondersteld worden* ('be supposed to') and *verwacht worden* ('be expected to'). In Standard German, the construction is said not to be found at all (Reis, 1973; Ørsnes, 2011).

There are basically two ways of analysing raising-to-subject with passive predicates, concerning the relationship between passive raising-to-subject and active raising-to-object. One way is to analyse raising-to-subject with passive predicates as a regular passive in which the subject of the passive predicate corresponds to the object of an active sentence. In that case, the subject of the raising-to-subject sentence corresponds to the object of the raising-to-object sentence. This is unproblematic for predicates such as Swedish *anse*, as exemplified in (4). However, it is then necessary to explain why there does not seem to be an active correspondent in connection to certain other predicates, such as Swedish and English *säga/say*. Such an explanation will be given in this paper, based on the semantic restrictions on the raising-to-object construction.

If raising-to-subject with passive predicates is not seen as a regular passive, the alternative[1] is to see it as an irregular passive, deriving not from active raising-to-object, but from another type of sentence containing a finite clausal complement. For those who take this stance (e.g. Ørsnes, 2013), it is necessary to explain why it seems that only the languages that allow raising-to-object allow raising-to-subject

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[1]There is also the analysis, which occurs within constructionist approaches, in which the relevant sentence is not derived from an active sentence, but constitutes a construction in its own right (Noël & Colleman, 2010; Lyngfelt, 2010). This approach will not be further discussed here.

with passive predicates. The question is also what accounts for the impossibility of raising-to-subject with passive predicates in languages such as German if the construction is simply derived from sentences with verbs taking finite complements, which are possible in German. One study that seeks to answer this question is Ørsnes (2011, 2013). In the rest of this section, Ørsnes' analysis will be presented, and it will be shown that, although descriptively accurate, Ørsnes' approach lacks in explanatory force.

Ørsnes (2013) gives an HPSG analysis of raising-to-subject with passive predicates for Danish. Ørsnes has a lexical rule in which the input is verbs taking a finite clausal complement, where the subject is a so-called Designated Argument (i.e. restricted to agents and experiencers). The output of the rule is raising predicates, where the verb has the *s*-form and where the complement is a full infinitive. There is thus no connection made between passive raising-to-subject and active raising-to-object. Ørsnes' rule is governed by four constraints: (i) Passivization, (ii) the Subject Condition, (iii) the Raising Principle, and (iv) the Participle Principle. Passivization suppresses the most prominent argument, letting a less prominent argument (NB not restricted to the object) be linked to the subject function. The Subject Condition requires all verbal predicators to have a subject. The Raising Principle says that, if a referential subject is not assigned a thematic role by a verb, it must be structure-shared with the unexpressed subject of an embedded predicate. Finally, the Participle Principle is a language-specific constraint, which says that 'a past participle can only be formed from verb with a subject which is not raised' Ørsnes (2013, 331).

The Participle Principle is particularly relevant for the present study as it is supposed to account for the differences we see in the realization of raising-to-subject with passive predicates in different languages, in Ørsnes' case Danish, English and German. The idea is that the subject of the past participle cannot occur with the past participle alone. Ørsnes describes the subject of the past participle as being 'blocked' (Ørsnes, 2013, 333). Instead, there has to be an auxiliary, where, in the case of active sentences, the subject of the past participle occurs as the subject of the auxiliary. For Danish and German, Ørsnes holds that it is only in the case of non-raised subjects that the subject can be 'blocked'. Raising-to-subject is thus incompatible with the formation of past participles in Danish and German. For English, any kind of subject can be blocked in the formation of past participles, which means that raising-to-subject is possible with periphrastic passives (Ørsnes 2013: 333-334).

In section 3.1, I will show that there is a different way from Ørsnes' to account for the unacceptability of the raising-to-subject construction with periphrastic passives in Danish, and its acceptability in English. It will be seen that the semantic restrictions associated with the various passive constructions in the SVO languages (English and the Scandinavian languages) govern the possibility of raising-to-subject with periphrastic passives.

Furthermore, in opposition to Ørsnes, I will claim that raising-to-subject and raising-to-object do form an active-passive alternation. In section 3.2, it will be

shown that there is a semantic restriction on raising-to-object tied to evidentiality, which makes certain verbs incompatible with the construction unless the object is a reflexive pronoun. There will thus be no need for a specific non-canonical passive formation rule yielding raising-to-subject with passive predicates, as there is in Ørsnes (2013).

4 Raising-to-subject with the periphrastic passive

As was mentioned in the background section, raising-to-subject is only available for the morphological passive and not for the periphrastic passive in Swedish, which is also claimed to be the case in Danish (Ørsnes, 2013). In the case of Danish, Ørsnes proposes that this is due to the so called Participle Principle, which precludes raising-to-subject in conjunction with past participles in Danish and German.

The Participle Principle is slightly problematic as a syntactic principle. Assuming that the empirical support is correct, i.e. that there is no raising-to-subject with periphrastic passives in Danish,[2] it is nonetheless strange that this constraint would apply to Danish and German, presumably Swedish as well, but not to the closely related language Norwegian. In Norwegian, raising-to-subject is undoubtely possible with the periphrastic passive,[3] and seems to be the only choice in the past tense. In the first part of this section, data from Norwegian on the possibility of raising-to-subject with periphrastic passives are presented. Then, in the second part of the section, my account of the relationship between raising-to-subject and the periphrastic passive is given.

4.1 Raising-to-subject with passive predicates in Norwegian

Norwegian makes use of a periphrastic passive and a morphological passive, just like Danish and Swedish. However, the distribution and use of the passives differ between the three languages. In Norwegian newspaper text, Laanemets (2012, 92) finds about a 50-50 distribution between the periphrastic and the morphological passive. In Danish, the distribution is said to be 60 % use of the morphological passive and 40 % use of the periphrastic passive. In Swedish, she finds a distribution of 97 % use of the morphological *s*-passive and 3 % use of the periphrastic *bliva*-passive. It can thus be seen that, in terms of frequency, the morphological

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[2]One reviewer claims that it is easy to find examples of raising-to-subject with periphrastic passives in Danish, and gives examples such as the following:

(i) Sidstnævnte rige blev sagt at være "ledet eller bistå   af" frimureri.
     latter   realm was said to be led   or   assisted by freemasonry
     'The latter realm was said to be "led or assisted by" freemasonry.'

[3]The fact that raising-to-subject is possible with periphrastic passives in Norwegian was pointed out to me by Helge Lødrup at the HEADLEX16 conference.

passive is the default, unmarked alternative in Swedish, but not in Danish or Norwegian. Furthermore, in Norwegian, the morphological passive is only used in the present tense, while for the past tense, the periphrastic passive is the only option (Laanemets, 2012, 97).

Interestingly, raising-to-subject with the periphrastic passive is found in both the present and past tense in Norwegian. In the present tense, where both passive constructions are possible, we find both passive constructions represented in raising-to-subject. Google searches for the strings *sies å være* and *blir sagt å være* both yield numerous credible sentences, two of which are given in (7).

(7) a. Jeg blir   sagt å være relativt   lettlest
         I   become said to be   relatively easy-to-read
         'I am said to be relatively easy to read.'
         (http://vgd.no/)
     b. Jeg sies   å være selvopptatt …
         I   say.PASS to be   selfcentered
         'I am said to be self centered.'
         (http://www.klassekampen.no/)

The sentence in (7-a) contains the periphrastic passive *blir sagt* ('is said'), and the sentence in (7-b) contains the morphological passive *sies* ('is said').[4]

In the past tense, we only find the periphrastic passive represented in raising-to-subject in Norwegian. This corresponds to the fact that the morphological passive is generally not used in the past tense in Norwegian. A Google search for the string *ble sagt å være* yields numerous sentences. Two examples are given in (8).

(8) a. Kvinnens   påkledning ble   sagt å være i strid med god
         the-woman's dress   became said to be   in battle with good
         moral og sekularisme
         morals and secularism
         'The way the woman dressed was said to stand in opposition to good morals and secularism.'
         (https://www.minervanett.no/)
     b. Hun ble   sagt å være beskytteren …
         She became said to be   the-guardian
         'She was said to be the guardian ….'
         (https://no.wikipedia.org/)

The examples in (8) show that raising-to-object is possible with the periphrastic *bliva*-passive in Norwegian.

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[4]Even though both passive constructions can be found in conjunction with raising-to-subject in the present tense in Norwegian, it should be mentioned that the morphological passive is the dominant construction here, just as it is in Swedish and Danish. A reviewer points out that, in the Norwegian NoWaC corpus, there are 5780 hits for the string *sies å være* 'is said to be', but only 21 hits for the periphrastic *bli/blir sagt å være* 'become/becomes said to be'.

From the above data, it can be seen that the possibility of raising-to-subject for the morphological passive and the periphrastic passive follows the general restrictions on the passive construction in terms of tense in Norwegian. Ørsnes would have to assume that any kind of subject can be blocked in the participle formation of Norwegian, just as they can be in English. However, no explanation is then given for what other properties of English and Norwegian would make this the case. In the next section, a different account is given for the possibility or impossibility of raising-to-subject for the periphrastic passive.

4.2 Raising-to-subject and the semantic restrictions on the two passives

As mentioned previously, it seems as if raising-to-subject is only possible with the morphological passive in Danish and Swedish, while it is possible with the periphrastic passive in English and Norwegian. The claim made in the present section is that the possibility of the periphrastic passive in these languages is a result of the general semantic restrictions on the periphrastic passive in the respective language.

If we start by considering English, there is only one passive construction available, which is the periphrastic passive using the auxuliary *be* (disregarding other auxiliaries) in conjunction with a past participle. As a result of the fact that there is only one passive construction, there are not the same semantic restrictions on that passive construction as we will see for for instance Swedish where there is a choice between the periphrastic and the morphological passive.

Similar to the situation for English, in the past tense in Norwegian, only the periphrastic passive is possible. The fact that only one passive construction is available means that there are no semantic restrictions on the construction. It thus follows that raising-to-subject with periphrastic passives is possible in the past tense in Norwegian.

For the present tense in Norwegian, the past and present tense in Danish and all tenses in Swedish, both the morphological and the periphrastic passives are available options (Laanemets, 2012, 97). The reason why the morphological passive is preferred in all three languages when both passive constructions are available seems to be a result of the general semantic restrictions on the periphrastic passive in these languages, as well as what passive construction can be considered the default passive in the respective language. One semantic restriction, which seems to hold relatively well for all three languages, is the tendency for the periphrastic passive not to be used for generic statements (Laanemets, 2012, 111). Engdahl (2000) uses the following pair of sentences to exemplify the difference between the two passives.

(9) a. Dörren   öppnas   utåt
        door.DEF open.PASS outward
        'The door opens outward.'
     b. *Dörren   blir   öppnad utåt
        door.DEF becomes opened outward
        'The door opens outward.'

In the case where we have a sign on a door saying that the door opens outward, only the morphological passive is possible in Swedish. The periphrastic passive here seems incompatible with a generic statement of this kind. Furthermore, as discussed in Engdahl (1999, 2000, 2006), the subject referent of the periphrastic passive in Swedish tends to be in control of the event in some way and tends to be animate. In (9), we have a generic statement with an inanimate subject, which is in no way in control of the event.

In the case of raising-to-subject with passive predicates, we have a similar situation as in the case of the sentence in (9). Consider our sentence from the introduction again, here repeated as (10).

(10) Hon sägs   vara en utpräglad   målskytt.
      She says.PASS be   a   specialized goal-scorer
      'She is said to be a specialized goal scorer.'
      (http://www.vf.se/node/315601)

The sentence in (10) expresses a generic statement and not a specific event. The subject, although it is animate, is not in control of the event. It thus seems as if the periphrastic *bliva*-passive is incompatible with the raising-to-subject construction in Swedish.

5 The relationship between raising-to-subject and raising-to-object

As pointed out in section 3, one of the issues for the approach in which raising-to-subject with passive predicates is a regular passive construction concerns the faulty correspondence between predicates occurring in passive raising-to-subject and active raising-to-object, respectively. In this section, it will be argued that there is a reason for this seemingly faulty correspondence in the form of one restriction concerning evidentiality on raising-to-object.

5.1 The restrictions on raising-to-object

As mentioned above, it seems as if not all predicates that occur in passive raising-to-subject have an active raising-to-object correspondent. This is particularly the case for Danish, where the raising-to-object construction is said to be marginal at best (Ørsnes, 2013). For Swedish, Lyngfelt (2010) found 47 passive verbs par-

ticipating in raising-to-subject in the PAROLE[5] corpus of written Swedish. Out of these 47 verbs, Lyngfelt claims that only 24 verbs participate in the raising-to-object construction. If there is an active-passive alternation between raising-to-object and raising-to-subject in the case of all 47 verbs, we need an explanation why only 24 are found in the raising-to-object construction. Such an explanation seems to be possible to provide in terms of a particular restriction concerning evidentiality on raising-to-object. Lyngfelt claims that there are certain situations in which raising-to-object structures are facilitated, in particular cases where the object is a reflexive pronoun. As will be seen below, in a corpus investigation of the relationship between raising-to-subject and raising-to-object, which also includes additional material not contained in the PAROLE-corpus, most verbs that Lyngfelt only found in raising-to-subject structures can also be found in raising-to-object structures when the object constitutes a reflexive pronoun. One group of verbs seems to be more or less completely restricted to reflexive pronoun objects when they occur in the raising-to-object construction.

5.2 Raising-to-object and evidentiality

As mentioned, the reason for the above-mentioned restriction to reflexive pronouns for many predicates in the raising-to-object structure will here be provided in terms of evidentiality. Linguistic evidentiality concerns 'the explicit encoding of a source of information or knowledge (i.e. evidence) which the speaker claims to have made use of for producing the primary proposition' (Diewald & Smirnova, 2010, 1). Evidentiality can be encoded either lexically or grammatically. An example of the lexical encoding of evidentiality in Swedish is for instance the verb *lär*, which is claimed to express the fact that the truth of the proposition is based on indirect evidence (de Haan, 2007, 143). An example of the grammatical/syntactic encoding of evidentiality is described in Asudeh & Toivonen (2012), where copy raising in English and Swedish is discussed. Asudeh & Toivonen (2012) claim that, in a copy raising sentence such as the one in (11), the subject constitutes the perceptual source for the proposition expressed.

(11)   Han verkar som om han är lugnare nu.
        he   seems as   if   he is calmer now
        'He seems like he is calmer now.'
        (Teleman et al., 1999, 56)

In 11, the sentence thus expresses the evidential fact that the proposition that the referent of *he* is calmer now is based on the speaker perceiving the referent of *he*.

In the case of the raising-to-object construction, the construction likewise seems to express evidentiality. Interestingly, in comparison to the copy raising construction mentioned above, where the subject expresses the perceptual source, in

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[5]PAROLE is one of the corpora within the corpus collection Korp (Borin et al., 2012). It contains approximately 19 million words of primarily newspaper texts (but also novels, magazines and web material), and is annotated with morphosyntactic information.

the case of the raising-to-object construction, the subject also seems to express the source for the primary proposition of the utterance. However, rather than being a perceptual source, it is here a purely evidential source. There seems to be a requirement for the raising-to-object construction that the subject referent constitutes the evidential source for the truth of the proposition expressed in the complement subclause. We can call this restriction the Evidential Source Requirement:

(12)   The Evidential Source Requirement:
        The subject referent of the raising-to-object construction is required to express the evidential source for the truth of the proposition expressed in the complement subclause.

In the current section, support is given for the Evidential Source Requirement in terms of corpus data from written Swedish. First, the corpus data is presented, and then it is shown how this data provides support for the Evidential Source Requirement.

In order to see what verbs are represented for raising-to-subject and raising-to-object, a search for raising-to-subject with passive predicates was performed in the same corpus used by Lyngfelt, PAROLE. A search query was constructed, yielding all sentences containing a verb ending an an -s, immediately followed by a verb ending an -a.[6]

The search query yielded 4,674 hits. Out of these hits, 56 verbs were found occurring in the subject with infinitive construction;[7] 16 of these were object control verbs and 40 raising-to-object verbs. For some verbs that were not found in the raising-to-object construction in PAROLE, supplementary Google searches were made, yielding credible examples for all but two verbs.[8] Arguably, the reason that Lyngfelt found only 24 out of 47 verbs participating in raising-to-object is the size of the PAROLE corpus.

Out of the 40 raising-to-object verbs, 15 occur more or less exclusively with reflexive pronoun objects. Many of the verbs that Lyngfelt found only occurring in the raising-to-subject construction also occur in the raising-to-object construction when the object is a reflexive pronoun.

In (13) and (14), the raising-to-object verbs are listed, both those restricted to reflexive objects and those that are not.

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[6]The search string used is [word = ".s" & pos = "VB"] [word = ".a" & pos = "VB"]. As can be seen, it does not cover cases where there is one or more words intervening between the passive verb and the infinitive verb. Furthermore, it does not cover infinitives that do not end in an -a, such as Swedish *få* 'get'.

[7]Verbs such as *hoppas* 'hope' and *ryktas* 'be rumoured', which always occur in the *s*-form, were excluded.

[8]The two verbs that were not found in the object control or raising-to-object are *karaktärisera* 'characterise', *upplysa* 'inform'. Possibly, these would be found as well given a large enough material.

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(13)   Verbs not restricted to reflexive pronouns in the raising-to-object construc-
         tion:
         ange 'state', anse 'consider', anta 'assume', beräkna 'calculate', förklara
         'declare', förmoda 'assume', förutsätta 'presume', konstatera 'point out',
         misstänka 'suspect', påstå 'suggest', tippa 'bet', tro 'believe', uppfatta
         'perceive', döma 'judge', erkänna 'admit', räkna 'count', spå 'foretell',
         uppleva 'experience', uppskatta 'estimate'.

(14)   Verbs restricted to reflexive pronoun objects in the raising-to-object con-
         struction:
         rapportera 'report', säga 'say', tänka 'imagine', uppge 'state', vänta
         'await', antyda 'suggest', avse 'intend', besluta 'decide', befara 'fear',
         betrakta 'regard', förutspå 'foretell', förutse 'anticipate', förutsätta 'pre-
         sume', utlova 'promise', förvänta 'expect'.

The fact that the verbs which under other circumstances do not participate in the
raising-to-object construction do so when the object is a reflexive pronoun provides
support for the Evidential Source Requirement. For verbs such as *anse* 'consider'
or *uppleva* 'experience', it is part of the lexical semantics of these predicates that
the subject referent constitutes the evidential source for the proposition expressed
in the complement subclause. For *anse* 'consider', the evidential source is tied to
the opinion of the subject referent. For *uppleva* 'experience', the evidential source
is tied to the experience of the subject referent. However, for a predicate such as
säga 'say', which is one of the predicates restricted to a reflexive pronoun object
when occurring in raising-to-object, there does not seem to be any specification for
the evidential source for the truth of the proposition expressed in the complement
subclause. If somebody says something, we do not know the basis for the truth or
falsity of what is said. The same holds for predicates such as *rapportera* 'report' or
uppge 'state'. Consider then what happens when the object in the raising-to-object
construction for a predicate such as *säga* 'say' is a reflexive pronoun. It seems that
when you say (or state, or report) something about yourself, then you also express
that you are the evidential source for whatever is said (or stated, or reported). The
presence of an evidential source in the lexical semantics of the relevant predicates
thus seems to govern whether they are restricted to a reflexive pronoun object or
not.[9]

   In the next section, we will see how the conclusions drawn from sections 4 and
5 can be formalised within the Lexical Mapping Theory of LFG.

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[9]Some of the more infrequent predicates, such as *förutspå* 'foretell', could be analysed as being
lexically specified for an evidential source, but is nevertheless not found without a reflexive pronoun
object. The meaning of *förutspå* 'foretell' is also approximately the same as for the predicate *spå*
'foretell', which is found with other types of objects. It is possible that the predicate *förutspå* 'fore-
tell' is not restricted to reflexive pronoun objects, but that the infrequency of the predicate clouds the
facts.

6   Argument structure analysis

For the argument structure analysis presented here, the revised Lexical Mapping Theory (LMT) of Kibort (2007, 2014) and Kibort & Maling (2015) is made use of. Similar to the mapping theory of Bresnan & Kanerva (1989) (one recent realisation in Bresnan et al. (2016)), it is based on the use of the features [±r] and [±o]. The argument function SUBJ is [-r, -o], OBJ is [-r, +o], OBL_θ is [+r, -o], and OBJ_θ is [+r, +o]. Kibort's approach differs from previous versions of the LMT in two primary assumptions. Firstly, Kibort assumes a universally available syntactic subcategorisation frame with fixed argument positions:

(15)   Subcategorisation frame:
       $\langle$ arg1,   arg2,   arg3 ...,   arg4 ... $\rangle$
       [-o]/[-r]   [-r]   [+o]   [-o]

Every predicate subcategorises based on the subcategorisation frame above. The features associated with each argument position governs what argument functions the predicate can take. The arg1[-o] slot, for instance, can map to either SUBJ or OBL_θ. What makes the arg1[-o] slot typically map to SUBJ is the so called Subject Default:

(16)   Subject Default:
       The first argument compatible with the SUBJ function is mapped to SUBJ.

Apart from the Subject Default, there is only one mapping principle, namely that '[t]he ordered arguments are mapped to the available functions compatible with their intrinsic marking' (Kibort, 2014).

   As pointed out above, I assume that raising-to-subject with passive predicates, including predicates such as *säga* 'say', constitutes the passive counterpart of active raising-to-object. Given this assumption, the argument structures for raising-to-object *säga* and raising-to-subject *sägs*, respectively, can be represented as follows:

(17)   Argument structure for raising-to-object *säga* 'say':

                    1 (agent) $\emptyset$ **4** (proposition)
                         | | |
       säga 'say'   arg1   arg2   arg4
                       [–o]   [–r]   [–o]
                         | | |
                       SUBJ   OBJ   XCOMP

(18)   Argument structure for passive raising-to-subject *sägs* 'say':

<div align="center">

1 (agent) $\emptyset$ **4** (proposition)

| | |

sägs 'is said'   arg1   arg2   arg4

[−o]   [−r]   [−o]

[+r]

| | |

(OBL$_{agent}$)   SUBJ   XCOMP

</div>

The active raising-to-object predicate *säga* 'say' takes three arguments, arg1[-o], arg2[-r] and arg4[-o].[10] These three arguments are realised in a sentence such as the one in (4): *hon säger sig vara en utpräglad målskytt* 'she says REFL be a specialised goal scorer'. Following the Subject Default, the first argument is mapped to SUBJ. The two other arguments are mapped to the only compatible functions OBJ and XCOMP.[11] For the passivised *sägs* 'be said', arg1[-o] is assigned a [+r]-feature, meaning that it can only be mapped to OBL$_{agent}$. Following the Subject Default, arg2[-r] is mapped to SUBJ. The only compatible function for arg4[-o] is then OBJ. The two argument structures in (16) and (17) thus represent a standard active-passive alternation.

As can be seen, the OBJ of the active predicate, which is associated with the semantically empty arg2[-r], corresponds to the SUBJ of the passive predicate, which is also associated with the semantically empty arg2[-r]. As arg2[-r] is not associated with any semantic marker, the grammatical function associated with this argument position is either structure shared with an argument embedded within the XCOMP or realized as an expletive (in Swedish, *det*). An example of the construction with an expletive was given in (2). In this sense, raising-to-subject *sägs* 'is said' is like any other raising predicate, alternating with a construction with a subject *it* and a finite clausal complement.

Given the argument structure above, the lexical entries for active *säga* 'say' and passive *sägs* 'be said' can be represented as follows.

(19)   Lexical entry for the active raising-to-object predicate *säger* 'says':

<div align="center">

säger 'says'   V   ($\uparrow$ PRED) = '*say* ⟨SUBJ, XCOMP⟩, OBJ'

($\uparrow$ TENSE) = PRESENT

($\uparrow$ OBJ) = ($\uparrow$ XCOMP SUBJ)

($\uparrow$ OBJ PRON-TYPE) =$_c$ REFLEXIVE

</div>

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[10]There is a separate argument structure for the non-raising predicate *säga* 'say', which only takes two arguments, associated with the roles agent and proposition, respectively.

[11]Following Zaenen & Engdahl (1994), the function XCOMP is assumed to be equivalent to OBL$_{prop}$.

(20)   Lexical entry for the passive raising-to-subject predicate *sägs* 'is said':

$\quad$ *sägs* 'is said'   V $\{(\uparrow \text{PRED}) = \text{'say } \langle \text{OBL}_{agent}, \text{XCOMP} \rangle, \text{SUBJ'} \mid$
$\qquad\qquad\qquad\qquad (\uparrow \text{PRED}) = \text{'say } \langle \text{XCOMP} \rangle, \text{SUBJ'}\}$
$\qquad\qquad\qquad\qquad (\uparrow \text{TENSE}) = \text{PRESENT}$
$\qquad\qquad\qquad\qquad (\uparrow \text{SUBJ}) = (\uparrow \text{XCOMP SUBJ})$
$\qquad\qquad\qquad\qquad (\uparrow \text{XCOMP VFORM}) =_c \text{BARE-INF}$

Note the f-description saying that the object of active *säger* 'says' is restricted to reflexive pronouns: $(\uparrow \text{OBJ PRON-TYPE}) =_c \text{REFLEXIVE}$. As argued above, the fact that the object of this particular predicate is restricted to reflexive objects is not an arbitrary syntactic fact. It is instead derived from the Evidential Source Requirement. There should thus be a semantic constraint formulated in the lexical entry saying that the referent of the subject constitutes the evidential source for the truth of the proposition expressed in the XCOMP. How such a constraint should be formulated in detail will have to be left for future research, however. It is unclear what the status of the role evidential source is in the current theory. As the subject is already associated with the agent role, associating the subject with another role would possibly violate the principle of coherence.

How the restriction of the raising-to-subject construction to the periphrastic passive should be formalised will also not be specified in detail here.

7   Conclusion

This paper has provided an analysis of the argument structure of raising-to-subject with passive predicates in Swedish and other Germanic languages. It has been shown how the traditional analysis in which raising-to-subject with passive predicates constitutes the passive counterpart of active raising-to-object can be given support, despite the fact that certain predicates, such as *säga*, only seem to participate in the passive alternative and not the active. It is claimed that there is an Evidential Source Requirement for the raising-to-object construction, where the subject referent is required to express the evidential source for the truth of the proposition expressed in the complement subclause. Furthermore, it is claimed that there are semantic restrictions precluding the periphrastic passive from participating in the raising-to-subject construction in Danish and Swedish. In Swedish, the raising-to-subject construction is incompatible with the restrictions on the periphrastic passive, which is typically used for specific rather than generic events, where the subject referent can be characterised as being in control. In Norwegian, it can be shown that both passive constructions participate in raising-to-subject. Work remains in specifying how the semantic restrictions on raising-to-object and the periphrastic passive could be given a more detailed formulation within LFG.

References

Asudeh, Ash & Ida Toivonen. 2012. Copy raising and perception. *Natural Language and Linguistic Theory* 30(2). 321–380.

Borin, Lars, Markus Forsberg & Johan Roxendal. 2012. Korp – the corpus infrastructure of Språkbanken. In *Proceedings of LREC 2012*, Istanbul: ELRA.

Bresnan, Joan, Ash Asudeh, Ida Toivonen & Stephen Wechsler. 2016. *Lexical-Functional Syntax*. Oxford/Malden, MA: Blackwell.

Bresnan, Joan & Jonni Kanerva. 1989. Locative inversion in Chicheŵa: a case study of factorization in grammar. *Linguistic Inquiry* 20(1). 1–50. Reprinted in Tim Stowell and Eric Wehrli (eds.), Syntax and Semantics No. 26: Syntax and the Lexicon, pp. 53–101. New York: Academic Press.

Diewald, Gabriele & Elena Smirnova. 2010. Evidentiality in European languages: the lexical-grammatical distinction. In Gabriele Diewald & Elena Smirnova (eds.), *Linguistic Realization of Evidentiality in European Languages*, 1–15. Berlin/New York: Walter de Gruyter.

Engdahl, Elisabet. 1999. *The choice between bli-passive and s-passive in Danish, Norwegian and Swedish* Manuscript. Gothenburg: University of Gothenburg.

Engdahl, Elisabet. 2000. Valet av passivform i modern svenska. In Linda Jönsson, Viveca Adelswärd, Ann Cederberg, Per A. Pettersson & Caroline Kelly (eds.), *Svenskans beskrivning 24*, Linköping University Electronic Press.

Engdahl, Elisabet. 2006. Semantic and syntactic patterns in swedish passives. In Benjamin Lyngfelt & Torgrim Solstad (eds.), *Demoting the agent*, 21–45. Amsterdam: John Benjamins.

de Haan, Ferdinand. 2007. Raising as grammaticalization: the case of Germanic *seem*-verbs. *Rivista di Linguistica* 19(1). 129–150.

Kibort, Anna. 2007. Extending the Applicability of Lexical Mapping Theory. In Miriam Butt & Tracy Holloway King (eds.), *Proceedings of the LFG07 Conference*, Stanford, CA: CSLI Publications.

Kibort, Anna. 2014. Mapping out a Construction Inventory with (Lexical) Mapping Theory. In Miriam Butt & Tracy Holloway King (eds.), *Proceedings of the LFG14 Conference*, Stanford, CA: CSLI Publications.

Kibort, Anna & Joan Maling. 2015. Modelling the Syntactic Ambiguity of the Active vs. Passive Impersonal in LFG. In Miriam Butt & Tracy Holloway King (eds.), *Proceedings of the LFG15 Conference*, Stanford, CA: CSLI Publications.

Laanemets, Anu. 2012. *Passiv i moderne dansk, norsk og svensk: et korpusbaseret studie af tale- og skriftsprog*. Tartu: University of Tartu Press.

Lødrup, Helge. 2008. Raising to object in Norwegian and the derived object constraint. *Studia Linguistica* 62(2). 155–181.

Lyngfelt, Benjamin. 2010. Om subjekt med infinitiv, särskilt i passiv. In Ann-Catrine Edlund & Ingmarie Mellenius (eds.), *Svenskans beskrivning 31*, Umeå: Umeå universitet, Institutionen för språkstudier.

Noël, Dirk & Timothy Colleman. 2010. Believe-type raising-to-object and raising-to-subject verbs in English and Dutch. *International Journal of Corpus Linguistics* 15(2). 157–182.

Ørsnes, Bjarne. 2011. Passives and evidentiality: Danish reportive passives and their equivalents in German. *Acta Linguistica Hafniensia: International Journal of Linguistics* 43(1). 21–59.

Ørsnes, Bjarne. 2013. The Danish Reportive Passive as a Non-Canonical Passive. In Artemis Alexiadou & Florian Schäfer (eds.), *Non-Canonical Passives*, 315–336. Amsterdam: John Benjamins.

Ørsnes, Bjarne & Stefan Müller. 2013. Passive in Danish, English and German. In Stefan Müller (ed.), *Proceedings of the 20th International Conference on Head-Driven Phrase Structure Grammar*, 140–160. Stanford, CA: CSLI Publications.

Postal, Paul M. 1974. *On Raising. One Rule of English Grammar and Its Theoretical Implications*. Cambridge, MA: The MIT Press.

Reis, Marga. 1973. Is there a rule of subject-to-object raising in German? *Chicago Linguistic Society: Papers from the 9th regional meeting* .

Teleman, Ulf, Staffan Hellberg & Erik Andersson. 1999. *Svenska Akademiens grammatik 4. Satser och meningar*. Svenska Akademien.

Zaenen, Annie & Elisabet Engdahl. 1994. Descriptive and Theoretical Syntax in the Lexicon. In B. T. S. Atkins & Antonio Zampolli (eds.), *Computational Approaches to the Lexicon*, 181–212. Oxford: Oxford University Press.