

Abstract

This paper focuses on passive constructions in Dutch. Specifically, we focus on *worden*, as well as *krijgen* passives in Dutch, for which we propose a uniform, raising analysis in HPSG. We also show that such an analysis can be carried over to account for passives cross-linguistically. Specifically, we look at corresponding structures in German and show that there is no need for a dual raising and control analysis for the German “agentive” (*werden*) and the German “dative” (*kriegen*) passives, respectively, as has been proposed in Müller (2002) and Müller (2003).

1 Introduction

As an introductory general explanatory note to the Dutch data we will be looking at in the following, we need to point out here that Dutch distinguishes between nominative and non-nominative personal pronouns and exhibits no morphological distinction between indirect and direct objects. As far as word order in Dutch ditransitives that we are interested in here is concerned, indirect objects precede direct objects.

The following are examples of the main passives in Dutch.^{1,2}

- (1) a. Peter kust haar.
Peter.subj kisses her.obj1
“Peter kisses her.”
b. Zij wordt gekust (door Peter).
she.subj is kissed (by Peter)
“She is kissed (by Peter).”
- (2) Het raam is geopend.
the window.subj is opened
“The window is open.”

There are also impersonal passives in Dutch:³

- (3) a. Peter danst in Amsterdam.
Peter.subj dances in Amsterdam
“Peter is dancing in Amsterdam.”
b. In Amsterdam wordt gedanst.
In Amsterdam is danced
“There is dancing in Amsterdam.”
- (4) a. Peter arriveert in Amsterdam.
Peter.subj arrives in Amsterdam
“Peter arrives in Amsterdam.”
b. *In Amsterdam wordt gearriveerd.
In Amsterdam is arrived
“There is arriving in Amsterdam.”

¹The *zijn* (“stative”) passives in (2) above are beyond the scope of this paper.

²In the glosses subj = subject, obj1 = object1 (*primary object*), obj2 = object2 (*secondary object*).

³Impersonal passives are also beyond the scope of this paper.

Finally, Dutch also exhibits a special kind of passives which are formed with the auxiliary *krijgen* (“to get”; henceforth, *krijgen* passive). The *krijgen* passive is formed from ditransitive verbs in Dutch, which subcategorise for a *primary* (obj1) and a *secondary* (obj2) object. The *secondary* object of the ditransitive verb surfaces as the subject of the *krijgen* passive:

- (5) a. Ik stuur hem het boek toe.
 I.subj send him.obj2 the book.obj1 to
 “I send him the book.”
 b. Hij krijgt het boek toegestuurd.
 he.subj gets the book.obj1 sent-to
 “He gets the book sent.”
 (6) a. We betalen hem zijn salaris door.
 we.subj pay him.obj2 his wages.obj1 through
 “We continue to pay him his wages.”
 b. Hij krijgt zijn salaris doorbetaald.
 he.subj gets his wages.obj1 paid-through
 “He is being paid his wages.”

In contrast, when the *primary* object of the ditransitive verb surfaces as the subject of the passive form of Dutch ditransitives, like the one in (5a), for instance, then this passive is formed with the auxiliary *worden*, like the passive form of regular transitive verbs in Dutch (see example (1) above):

- (7) a. Ik stuur hem het boek toe.
 I.subj send him.obj2 the book.obj1 to
 “I send him the book.”
 b. Het boek wordt hem toegestuurd.
 the book.subj is him.obj2 sent-to
 “The book is sent to him.”
 c. *Hij wordt het boek toegestuurd.
 he.subj is the book.obj1 sent-to
 “*He is sent the book.”

As can be observed in examples (5) and (6) above, the *primary* objects of the active forms in (5a) and (6a) (*het boek* and *zijn salaris*, respectively) retain their grammatical function (obj1) in the passive sentences in (5b) and (6b). Actually, the absence of the *primary* object of the ditransitive active form from the corresponding *krijgen* passive renders the latter ungrammatical:

- (8) *Hij krijgt toegestuurd.
 he.subj gets sent-to
 “*He was sent.”

2 Some interesting exceptions

An exception in the passive patterns in Dutch presented in section 1 is observed with the verb *betalen* (to pay) and its derivatives (*doorbetalen* (to continue payment), *uitbetalen* (to pay out), *terugbetalen* (to pay back), etc).

As shown from examples (7a)–(7c) above, in general *secondary* objects (obj2s) in Dutch ditransitives can never passivise with the auxiliary *worden*. That is, the *secondary* object of Dutch ditransitives, like *geven* and *betalen*, can never surface as the subject of a *worden* passive:

- (9) *Hij wordt het boek gegeven.
 he.subj is the book.obj1 given
 “He is given the book.”
- (10) *Hij wordt zijn salaris doorbetaald.
 he.subj is his wages.obj1 paid-through
 “He is being paid his wages.”

An exception to this pattern is observed in structures like the one in example (11) below. Moreover, when in active sentences headed by the verb *betalen* (to pay) the *primary* object (obj1) is not phonologically realised, then *krijgen* passive structures are also possible (see example (11b) below), in contrast to the behaviour of the rest of the Dutch ditransitives as presented in (8) in the previous section. This last pattern is also to be observed with the verb *uitkeren* (to pay out (benefits); see example (12)).

- (11) a. Hij wordt doorbetaald.
 he.subj is paid-through
 “He is being paid.”
- b. Hij krijgt doorbetaald.
 he.subj gets paid-through
 “He is getting paid.”
- (12) a. Hij krijgt uitgekeerd.
 he.subj gets paid-out
 “He is getting paid out benefits.”
- b. Hij wordt uitgekeerd.
 he.subj is paid-out
 “He is being paid out.”

But whereas (11a) and (11b) have the same meaning, (12b) does not entail the same as the sentence in (12a). Specifically, *hij* is the secondary object in (11a), (11b) and (12a), whereas it is the primary object in (12b). We will return to examples (11)–(12) in section 5.

3 Cross-linguistic evidence and previous analyses

German also exhibits similar passive structures to the Dutch ones we have presented in section 1. Interesting for our purposes here are the passives of German ditransitives shown in the following examples (from Müller (2003)):

- (13) a. Der Mann hat den Ball dem Jungen geschenkt.
 the man.nom has the ball.acc the boy.dat given
 “The man gave the ball to the boy.”

- b. Der Ball wurde dem Jungen geschenkt.
 the ball.nom was the boy.dat given
 “The ball was given to the boy.”
- c. Der Junge bekam/kriegte den Ball geschenkt.
 the boy.nom got the ball.acc given
 “The boy got the ball as a present.”

Müller (2002), adapting Heinz and Matiassek (1994)’s account of, among others, passivisation in German, proposes a raising analysis for the German *werden* passives (see example (13b) above) and a control-like analysis for the German *bekommen/kriegen* passives, like the one in example (13c) above. The lexical entry for the auxiliary *bekommen* in (14) below is (slightly modified) from (Müller, 2002, p. 149) and captures the gist of his analysis for the dative *bekommen/kriegen* passives in German.

(14) *bekomm-* (dative passive auxiliary)

$$\left[\begin{array}{l} \text{DA} \langle \boxed{1} \rangle \\ \text{SUBCAT} \langle \boxed{1} \text{ NP } [\text{str}]_{\boxed{2}} \rangle \oplus \boxed{3} \oplus \boxed{4} \\ \text{XCOMP} \left\langle \text{V} \left[\begin{array}{l} \text{PPP} \\ \text{LEX} \\ \text{SUBCAT} \boxed{3} \oplus \langle \text{NP } [\text{dat}]_{\boxed{2}} \rangle \oplus \boxed{4} \\ \text{XCOMP} \langle \rangle \end{array} \right] \right\rangle \end{array} \right]$$

Before looking in detail at the analysis proposed in (14), we need to note that in general, in Müller (2002)’s work, subjects are treated differently, as indicated in the following:

- In the subcat list, the first element with structural case is assigned nominative, while the rest of the elements accusative (cf. also Przepiórkowski (1999), Meurers (1999), Meurers (2000)).
- As far as infinitives are concerned, a lexical rule moves subjects from the subcat to the subj list.
- Finally, the feature DA (Designated Argument) represents a complement with subject properties and is introduced in order to distinguish unergatives and unaccusatives.

The control-like part of the account Müller (2002) proposes in (14) lies on the subject of the dative passive auxiliary being coindexed with the dative element of the embedded participle. As mentioned in (Müller, 2002, p. 149) “all elements from the SUBCAT list of the embedded verb are raised to the SUBCAT list of *bekommen* except for the dative object”.

The analysis in (14) above for the German *bekommen/kriegen* passives is somewhat surprising given the fact that passive structures in German headed by *bekommen/kriegen* do not entail that somebody gets something, as the following examples from (Müller, 2002, p. 132) also aim at showing:

- (15) Er bekam zwei Zähne ausgeschlagen.
 he got two teeth PART(out).knocked
 “He got two teeth knocked out.”
- (16) a. Der Bub bekommt/kriegt das Spielzeug weggenommen.
 the lad gets the toy PART(away).taken
 “The boy has the toy taken away from him.”
 b. Der Mann bekommt/kriegt das Fahren verboten.
 the man gets the driving forbidden
 “The man is forbidden to drive.”
 c. Der Betrunkene bekam/kriegte die Fahrerlaubnis entzogen.
 the drunk got the driving allowance withdrawn
 “The drunk had his driving license taken away.”

As (Müller, 2002, p. 132) also proposes “the meaning of *bekommen* and *kriegen* is bleached in these constructions. Therefore it is not justified to assume that the subject in such dative passive constructions is a receiver and gets a thematic role from *bekommen/erhalten/kriegen*”. In other words, Müller (2002) also disfavours a control analysis for the German *bekommen/kriegen* “dative” passives.

The only reason imposing an analysis like the one presented in (14) we can think of is the realistic technical difficulty to have the lexically case marked dative secondary object (NP [_{dat}]) of the SUBCAT list of the passive participle getting raised to the subject NP of the auxiliary *bekommen/kriegen*, which should bear a structural nominative case. Thus, the analysis in (14) only denotes an index sharing between the structurally case marked subject NP of the auxiliary *bekommen/kriegen* and the lexically case marked secondary object NP of the passive participle, in the spirit of a control analysis, instead of an entire synsem object sharing between these two NPs, which would have been expected under a raising analysis, as would have also, apparently, been favoured by Müller (2002).

The analysis discussed above is faithful to the insights of the passivisation analyses proposed in Kathol (1994) and Pollard (1994), which, thus, face the same problems as the ones mentioned above in relation to the analysis of Müller (2002).

Specifically, Kathol (1994), following Hinrichs and Nakazawa (1989)’s approach to auxiliaries in German, proposes in short that passive auxiliaries in German can not only “absorb” the argument structure of their verbal complements, but also choose to raise only a subset of this argument structure, or to realise certain complements in a different way.

This is captured in the lexical entry for the auxiliary *werden*, proposed in (Kathol, 1994, p. 246):

- (17) *werden*
- $$\left[\begin{array}{l} \text{SUBJ} \quad \langle \text{NP}[\text{nom}]_{[1]} \rangle \\ \text{COMPS} \quad [2] \ \& \left\langle \text{V} \left[\begin{array}{l} \text{VFORM} \quad \text{part ii} \\ \text{SUBJ} \quad \langle \text{NP} \rangle \\ \text{COMPS} \quad \langle \text{NP}[\text{acc}]_{[1]} \rangle \ \& \ [2] \end{array} \right] \right\rangle \end{array} \right]$$

In (17) above what is promoted to subject is not the entire NP, but only its index specification. To quote (Kathol, 1994, p. 246):

“Since indices do not contain a specification for CASE, they can belong to NPs with *different* case values without giving rise to conflict. Structure-sharing among indices then ensures that the case alternation does not affect the part of the linguistic information that remains constant, namely the role the argument plays in semantic interpretation.”

In the same spirit the following entry for the auxiliary *bekommen* below aims at capturing the gist of Kathol’s analysis for the German dative *bekommen/kriegen* passives.

(18) *bekommen* (Kathol, 1994, p. 246)

$$\left[\begin{array}{l} \text{SUBJ} \quad \langle \text{NP}[\text{nom}]_{[3]} \rangle \\ \text{COMPS} \quad [1] \& [2] \& \left\langle \begin{array}{l} \text{VFORM} \quad \text{part ii} \\ \text{SUBJ} \quad \langle \text{NP} \rangle \\ \text{COMPS} \quad [1] \& \langle \text{NP}[\text{dat}]_{[3]} \rangle \& [2] \end{array} \right\rangle \end{array} \right]$$

Finally, Pollard (1994)’s analysis of the German *bekommen/kriegen* passives is very similar to that of Kathol (1994) briefly presented above and is captured in the following lexical entry for the passive auxiliary *bekommen*:

(19) passive auxiliary *bekommen* (Pollard, 1994, p. 291)

$$\left[\begin{array}{l} \text{HEAD} \quad \text{V}[\text{bse}] \\ \text{SUBJ} \quad \langle \text{NP}[\text{str}]_{[1]} \rangle \\ \text{COMPS} \quad [2] \& [3] \& \left\langle \begin{array}{l} \text{HEAD} \quad \text{V}[\text{part}] \\ \text{SUBJ} \quad \langle \text{NP}[\text{str}]_{\text{ref}} \rangle \\ \text{ERG} \quad \langle [2] \rangle \\ \text{COMPS} \quad [2] \& \langle \text{NP}[\text{dat}]_{[1]} \rangle \& [3] \end{array} \right\rangle \end{array} \right]$$

Thus, in Pollard (1994)’s analysis the NP[*dat*] is not attracted, but is coindexed with the matrix subject.

This fact does not only point even more clearly to a control, rather than a raising analysis, but is in general the common background which underlies all the three analyses of Müller (2002), Kathol (1994) and Pollard (1994) presented in the previous.

An additional problem shared among Müller (2002), Kathol (1994) and Pollard (1994) lies in the fact that in their analyses it is in a way or another assumed that the nominative case on the value of the SUBJ feature is redundant as the value of SUBJ needs a finite realisation context (i.e., a finite auxiliary) which is associated with nominative case assignment. In situations, though, where the subject is realised

with a different case specification, this actually leads to a complication in the analysis because the case specification has to be changed back into *accusative*. Thus, examples like the following in Dutch cannot be accounted for by the accounts of Müller (2002), Kathol (1994) and Pollard (1994):

- (20) Ik zie hem gekust worden.
I.nom see him.acc kissed be
“I see him being kissed.”
- (21) Ik zie hem het boek toegestuurd krijgen.
I.nom see him.acc the book PART-sent get
“I see that he gets the book sent to him.”

4 Motivation for a raising analysis of passives in Dutch

The analysis we propose and formalise in the next section for the Dutch passives we have presented in section 1 is a uniform raising analysis. The motivation in favour of such an analysis, especially for the *krijgen* passives, in contrast to a control analysis like the one proposed, among others, in (14) in section 3, is based on the general treatment of raising and control phenomena, as also presented in Pollard and Sag (1994).

Specifically, following Jacobson (1990), (Pollard and Sag, 1994, p. 141) show that whereas equi verbs allow NPs (or PPs) instead of their VP complement, this is never true for raising verbs (the examples are from (Pollard and Sag, 1994, pp. 141–142)):

- (22) Leslie tried/attempted/wants something/it/to win.
- (23) *Whitney seems/happens something/it.

Such contrasts between equi and raising verbs, (Pollard and Sag, 1994, p. 142) comment, “follow directly from the Raising Principle.⁴ Since the raising verbs in (23) assign no semantic role to their subject argument, there must be an unsaturated complement on the same SUBCAT list. But NPs like *something* or *it* are saturated, and hence the SUBCAT list required for examples like those in (23) is systematically excluded.”

krijgen-headed structures in Dutch behave in a similar way to raising structures like the one in example (23) above:

- (24) ?Hij krijgt het boek toegestuurd en zijn buurman krijgt dat ook.
he gets the book sent and his neighbour gets that too
“*He is sent the book and his neighbour is that too.”
- (25) *Hij krijgt uitbetaald en Piet krijgt dat ook.
he gets paid and Peter gets that too
“*He gets paid and Peter gets that too.”

⁴Raising Principle (Pollard and Sag, 1994, p. 140): Let E be a lexical entry whose SUBCAT list L contains an element X not specified as expletive. Then X is lexically assigned no semantic role in the content of E if and only if L also contains a (nonsubject) Y $\left[\text{SUBCAT } \langle X \rangle \right]$.

- (26) a. *Uitbetalen bij ziekte? Nee, dat krijg ik niet.
 PART-pay in case of illness? No, that get I not
 “To pay in case of illness? No, that I don’t get.”
 b. *Mij uitbetalen bij ziekte? Nee, dat krijg ik niet.
 me PART-pay in case of illness? No, that get I not
 “To pay me in case of illness? No, that I don’t get.”

Moreover, *krijgen*-headed passive structures, like the ones in the examples above, behave in a similar way to regular raising structures in Dutch, as we show in the following:

- (27) a. *Het probeert te regenen.
 it tries to rain
 “It tries to rain.”
 b. Het schijnt te regenen.
 it seems to rain
 “It seems to rain.”
 (28) a. Ik probeer te winnen en mijn tegenstander probeert dat ook.
 I try to win and my opponent tries that too
 “I try to win and so does my opponent.”
 b. *Ik schijn te winnen en mijn tegenstander schijnt dat ook.
 I seem to win and my opponent seems it too
 “I seem to win and so does my opponent.”
 (29) a. De wedstrijd winnen? Ja, dat probeer ik.
 the match win? yes, that try I
 “To win the match? Yes, that is what I try.”
 b. *De wedstrijd winnen? Ja, dat schijn ik.
 the match win? yes, that seem I
 “To win the match? Yes, that is what I seem.”

For completeness, we should underline here that Dutch regular passive constructions, i.e., constructions headed by the auxiliary *worden*, also conform to regular raising structures in Dutch, like the ones in (27a)-(29b) above:

- (30) *Ik werd door hem geslagen en zij werd dat ook.
 I was by him beaten and she was that too
 “I was beaten by him and she was too.”
 (31) a. *Kussen? Nee, dat werd ik nog nooit.
 kiss? no, that was I yet never
 “To kiss? No, I have never been that.”
 b. *Mij kussen? Nee, dat werd ik nog nooit.
 me kiss? no, that was I yet never
 “To kiss me? No, I have never been that.”

The raising analysis we propose for the Dutch constructions at hand, especially for the *krijgen* passives, finds more supporting evidence in data like the following:

- (32) De volgende heette ook Sjef - drugsverslaafd, acht keer achtereen opgenomen
 the next one was-called also Sjef - drug-addicted, eight times placed
 in een afkickcentrum en twee keer een sociale woning toegewezen gekregen en weer
 in a detox-center and twice a social-security house assigned got and again
 afgenomen.
 taken-away
 “The next one was also called Sjef - a drug addict, has been placed eight times in a detox
 center, and a social security house has been assigned to him and taken away from him twice.”
- (33) En nu krijgen wij het probleem onder de neus gewreven.
 and now get we the problem under our nose pushed
 “And now we are presented with the problem.”
- (34) Niet alleen het kind dat dit boek krijgt voorgelezen, voelt zijn oprechte optimisme
 not only the child who this book gets PART.read, feels his sincere optimism
 bevestigd.
 acknowledged
 “Not only the child to whom one reads this book will feel that his sincere optimism is ac-
 knowledged.”

The examples (32)-(34) illustrate the use of the *krijgen* passive with a subject that does not appear to bear the semantic role of “receiver”.

Consequently, the subjects of the aforementioned sentences are not arguments introduced by the auxiliary *krijgen*, but elements of the SUBCAT list of the embedded past participles (*afgenomen*, *gewreven*, *voorgelezen*), which are raised to the subject function of the structures in (32)-(34).

The object-to-subject raising analysis for the Dutch *krijgen* passives we propose here is at odds in spirit with analyses of the corresponding *kriegen/bekommen* passives in German, like the ones of Haider (1984) and Haider (1985), which propose that the German *kriegen/bekommen* passives may look like ordinary passive or raising constructions, but are not, and, consequently, that the subject of the passive auxiliary in sentences like the following

- (35) ...dass er ein Buch geschenkt kriegte
 ...that he.nom a book.acc presented got
 “...that he got a book as a present” (Haider, 1985, p. 98)

is an argument of the higher verb, *kriegen*, rather than of the lower passive participle. The idea in these analyses is that the recipient passive construction works something like the parallel English construction with *get* and *have* as the higher verb

- (36) Pat got/had [three papers accepted].

in which the subject *Pat* is not an argument of *accept* because of the ungrammaticality of what would be the source sentence:

- (37) *They accepted Pat three papers.

We will not argue here against the essence of Haider's analysis as far as the German *kriegen/bekommen* passives are concerned. For this we are referring the reader to Müller (2002).

We would like, though, to underline that the main idea of Haider's analysis, which suggests that the subject of the passive auxiliary in the parallel German construction with *kriegen* and *bekommen* is an argument of the higher verb, cannot be considered to hold in the case of the Dutch *krijgen* passive that we are focusing on here. Sentences like the following

- (38) a. Zij wierpen hem de oplossing in de schoot.
 they.subj threw him.obj2 the solution.obj1 in the lap
 "They made the solution very easy for him."
 b. *Zij wierpen de oplossing in de schoot.
 they.subj threw the solution.obj1 in the lap
 "They made the solution very easy."
 c. Hij krijgt de oplossing in de schoot geworpen.
 he.subj gets the solution.obj1 in the lap thrown
 "He is offered the solution very easily."

indicate that *hij* in (38c) is indeed an object (the secondary object (obj2)) of *werpen* (which has been raised to subject) and which is obligatory, as the ungrammaticality of the sentence in (38b) indicates (for the intended meaning). Therefore, in (38c) it must be *hij* that fulfills the requirement that the embedded passive participle has a secondary object (obj2).

Finally, we argue here that it is also wrong to assume, as Haider (1986), Heinz and Matiassek (1994) and Kathol (2000) do for the parallel German passive constructions with *kriegen* and *bekommen*, that both *krijgen* and the embedded participle assign the semantic role of "theme" to the accusative primary object (obj1) of the Dutch *krijgen* passives. Consequently, as we show, and similarly to our treatment of the subject of the Dutch *krijgen* passives that we have presented above, the primary accusative objects of the constructions at hand are not selected by *krijgen*, either.

Specifically, as we have already shown in (11b), for instance, in section 2, repeated here for convenience

- (39) Hij krijgt doorbetaald.
 he.subj gets paid-through
 "He is getting paid."

there are *krijgen* passive structures in Dutch where the accusative primary object (obj1) is not even phonologically realised.

Moreover, in amalgamated combinations of Dutch ditransitives with somewhat more predicted/*fixed* primary objects, such non-functionally controlled obj1s may also be realised as primary objects of the corresponding passives headed by *krijgen*:

- (40) a. ... dat hij mij een rad voor ogen draait
 ... that he.subj me.obj2 a wheel.obj1 in-front-of eyes rotates
 "... that he is misleading me"

- b. ... dat ik een rad voor ogen krijg gedraaid
- (41) a. ... dat ik hem de huid volscheld
 ... dat I.subj him.obj2 the skin.obj1 spray
 “... that I yell bad things at him / that I curse at him”
 b. ... dat hij de huid krijgt volgescholden
- (42) a. ... dat ik hem een hart onder de riem steek
 ... dat I.subj him.obj2 a heart.obj1 under the belt put
 “... that I give him hope”
 b. ... dat hij een hart onder de riem krijgt gestoken
- (43) a. ... dat ik hem zand in de ogen strooi
 ... that I.subj him.obj2 sand.obj1 in the eyes pour
 “... that I mislead him”
 b. ... dat hij zand in de ogen krijgt gestrooid
- (44) a. ... dat ik hem de duimschroeven aandraai
 ... that I.subj him.obj2 the screws.obj1 tighten-up
 “... that I put him under pressure”
 b. ... dat hij de duimschroeven krijgt aangedraaid

In conclusion, based on the behaviour of *krijgen* in relation to the subject and the primary object of the Dutch passive constructions it heads that we have shown above we propose that the *passive krijgen* should be treated as a true auxiliary.

5 Formalisation of the analysis

Based on the motivation presented in section 4, we formalise our analysis for the Dutch *worden* passive in the lexical entry in (45) below and our analysis for the Dutch *krijgen* passive in the lexical entry in (46) below. Both lexical entries use the function *raise_to_subject()* (Figure 1).⁵

This function takes a noun synsem, and preserves all values in the output, except for the CASE value, which is set to *nominative* or *accusative*.

As aimed at and expected, in both lexical entries below all the elements of the SUBCAT list of the embedded participle are raised to the SUBCAT list of *worden* and *krijgen*, respectively. In the case of *worden*, the accusative primary object of the embedded participle surfaces as the nominative subject of the auxiliary after raising. In the case of *krijgen*, it is the dative secondary object which surfaces as the nominative subject of the auxiliary after raising.⁶

⁵There are other ways in which the same effect can be obtained in a formalism. We chose a function because it is compact and easy to understand. Specifically, the function *raise_to_subject()* (Figure 1) is really only an abbreviatory device, since it only consists of simple unifications. The same effect could be obtained, more verbosely, without functions.

⁶In our analysis, primary objects (obj1) bear accusative case, and secondary objects (obj2) dative case.

$$\text{raise_to_subject} \left(\left[\begin{array}{c} \left[\begin{array}{c} \left[\begin{array}{c} \text{LOC} \\ \text{NONLOC} \end{array} \right] \oplus \left[\begin{array}{c} \text{CAT} \\ \text{CONTENT} \\ \text{CONTEXT} \end{array} \right] \oplus \left[\begin{array}{c} \text{HEAD} \\ \text{SUBCAT} \\ \text{LEX} \end{array} \right] \oplus \left[\begin{array}{c} \text{CASE} \\ \text{nom} \vee \text{acc} \end{array} \right] \end{array} \right] \oplus \left[\begin{array}{c} \text{CASE} \\ \text{case} \end{array} \right] \end{array} \right] \oplus \left[\begin{array}{c} \text{SUBCAT} \\ \text{LEX} \end{array} \right] \oplus \left[\begin{array}{c} \text{CONTENT} \\ \text{CONTEXT} \end{array} \right] \oplus \left[\begin{array}{c} \text{HEAD} \\ \text{SUBCAT} \\ \text{LEX} \end{array} \right] \oplus \left[\begin{array}{c} \text{CASE} \\ \text{case} \end{array} \right] \end{array} \right) \longrightarrow \left[\begin{array}{c} \left[\begin{array}{c} \text{LOC} \\ \text{NONLOC} \end{array} \right] \oplus \left[\begin{array}{c} \text{CAT} \\ \text{CONTENT} \\ \text{CONTEXT} \end{array} \right] \oplus \left[\begin{array}{c} \text{HEAD} \\ \text{SUBCAT} \\ \text{LEX} \end{array} \right] \oplus \left[\begin{array}{c} \text{CASE} \\ \text{nom} \vee \text{acc} \end{array} \right] \end{array} \right]$$

Figure 1: Definition of the function `raise_to_subject()`

(45) *worden* (passive auxiliary)

$$\left[\begin{array}{c} \text{SUBCAT} \left\langle \text{raise_to_subject}(\text{[1]}) \right\rangle \oplus \text{[2]} \oplus \text{[3]} \\ \text{XCOMP} \left\langle \text{V} \left[\begin{array}{c} \text{PPP} \\ \text{LEX} \end{array} \right] + \left[\begin{array}{c} \text{SUBCAT} \\ \text{XCOMP} \end{array} \right] \oplus \left\langle \text{[1] NP [CASE acc]} \right\rangle \oplus \text{[3]} \right\rangle \end{array} \right]$$

(46) *krijgen* (dative passive auxiliary)

$$\left[\begin{array}{c} \text{SUBCAT} \left\langle \text{raise_to_subject}(\text{[1]}) \right\rangle \oplus \text{[2]} \oplus \text{[3]} \\ \text{XCOMP} \left\langle \text{V} \left[\begin{array}{c} \text{PPP} \\ \text{LEX} \end{array} \right] + \left[\begin{array}{c} \text{SUBCAT} \\ \text{XCOMP} \end{array} \right] \oplus \left\langle \text{[1] NP [CASE dat]} \right\rangle \oplus \text{[3]} \right\rangle \end{array} \right]$$

The lexical entry in (45) accounts for the examples in (1b) and (7b) in section 1. In the case of example (1b) the value of [2] in (45) is the empty list, since the verb *kussen* (to kiss) is transitive, and not ditransitive. [3] may contain a PP denoting the logical subject (*door Peter* in example (1b)).

The lexical entry in (46) accounts for the examples in (5b) and (6b) in section 1, where the ditransitive verbs have a primary object. For most ditransitive verbs, the primary object is compulsory, while for *uitkeren* and the *betalen*-family, it is optional. Example (8) demonstrates the former: the primary object is missing, while in (5b) and (6b) it is present (i.e. [2] in (46) is a list containing the primary object). In examples (11b) and (12a) on the other hand, [2] is the empty list: the primary object is absent.

This variation is a lexical property of the verbs, and not limited to the passive mood, as the following examples show.

- (47) *Ik stuur hem toe.
I.subj send him.obj2 to

“*I send him.”

- (48) We betalen hem door.
we.subj pay him.obj2 through
“We continue to pay him.”

- (49) Ze keren het uit.
they.subj pay it. out
“They pay it out benefits.”

(47) is (5) without (compulsory) primary object, (48) (6a) without (optional) primary object, and (49) (12) also without (optional) primary object.

As far as example (11) is concerned, we assume that the verb *betalen* (to pay), as well as its derivatives *doorbetalen*, *uitbetalen*, *terugbetalen*, etc., may also have a purely transitive use:

- (50) a. Ik betaal de tuinman.
I.subj pay the gardener.obj1
b. De tuinman wordt betaald.
the gardener.subj is paid

In such cases, the sole object of the active form of the *betalen*-family verbs is considered to be their primary object, which may, therefore, be accounted for by the auxiliary *worden* in (45). Then the value of [2] in (45) is the empty list, since the verb *betalen* (to pay) is considered to function as transitive, and not ditransitive.

Finally, the analysis we propose here can also account straightforwardly for the structures in (20) and (21) of section (3), repeated here for convenience:

- (51) Ik zie hem gekust worden.
I.nom see him.acc kissed be
“I see him being kissed.”
(52) Ik zie hem het boek toegestuurd krijgen.
I.nom see him.acc the book PART-sent get
“I see that he gets the book sent to him.”

6 Conclusion

We have motivated and formalised a uniform raising analysis for the *worden* and *krijgen* passives in Dutch. The analysis accounts for the Dutch data presented in section 1, without needing to find refuge to ad hoc theoretical and technical resorts, like the analysis of Müller (2002) (cf., the control-like analysis of the German *bekommen/kriegen* passives), as presented in section 3. The formalisation of the analysis in section 5 is essentially based on the fact that the information shared in raising constructions may leave out some paths from the SYNSEM information, while still remaining a raising analysis. In the case at hand, the SYNSEM value of the primary object of the embedded participle of the *worden* passive, as well as the SYNSEM value of the secondary object of the embedded participle of the *krijgen* passive, are raised to the subject of their respective auxiliaries, with only their CASE value changing to the (nominative or accusative) case required by the

subject. Such a formalisation does not only account in a straightforward way for the behaviour of the Dutch data at hand (see section 1), but it can also offer a solution to the analysis presented in (14) in section 3 for the German *bekommen/kriegen* passives. Finally, such a formalisation also amends naturally the shortcomings of the intended raising analyses of German passives proposed in Kathol (1994) and Pollard (1994), which suggest that what should be raised to the subject of the *werden* and *bekommen/kriegen* passives is not the entire argument NP, but only its INDEX specification, since indices do not contain a specification for CASE, and they can, thus, belong to NPs with *different* case values without giving rise to a conflict. But as was also mentioned in section 3, structure-sharing only among indices points to a control analysis of passivisation in German. Thus, our analysis, which formally captures the fact that passivisation is based on structure-sharing of entire synsem objects, is the most straightforward analysis.

7 Outlook: open issues

The analysis for the Dutch passives we have presented in section 5 accounts, as we have shown, straightforwardly for structures like the following:

- (53) Hij krijgt het boek opgestuurd.
he.subj gets the book.obj1 PART-sent
“He gets the book sent to him.”
- (54) Hij krijgt uitbetaald.
he.subj gets PART-paid
“He gets paid’.”

Such an account, though, fails to make predictions for structures like the one in (55a), where the passive structure is headed by *worden*, instead of the expected *krijgen*, as is shown in (55b):

- (55) a. Kleine kinderen moeten worden voorgelezen.
small children.subj must be PART-read
“Small children must be read to.”
- b. Dan krijgen ze voorgelezen uit krant of tijdschrift.
then get they.subj PART-read from newspaper or journal
“Then they get read to from newspaper or journal.”

The analysis we have proposed in section 5 also fails to make predictions for structures like the ones in (56a) and (57a), in which the secondary (indirect) objects (obj2s) are raised to the subject of the passive structures headed in both cases by *worden*. The predicted structures are the ones in (56b) and (57b), respectively.

- (56) a. Reizigers worden verzocht uit te stappen.
passengers.subj are requested PART to step
“Passengers are requested to leave.”

- b. Reizigers wordt verzocht uit te stappen.
passengers.obj2 is requested PART to step
“One is requesting the passengers to leave.”
- (57) a. Een tijd geleden werd hij gevraagd te koken voor Tony Blair.
a while ago was he.subj asked to cook for Tony Blair
“A while ago he was asked to cook for Tony Blair.”
- b. Twee maanden geleden werd hem gevraagd terug te komen.
two months ago was him.obj2 asked PART to come
“He was asked two months ago to come back.”

Structures like the ones in (56a) and (57a), for instance, show that unergatives in Dutch in which the direct object is not phonologically realised tend to treat the indirect object of their subcat list as a direct one at the process of passivisation. This tendency is yet to be accounted for.

References

- Haider, Hubert. 1984. Mona Lisa lächelt stumm – Über das sogenannte deutsche “Rezipientenpassiv”. *Linguistische Berichte* 89, 32–42.
- Haider, Hubert. 1985. The Case of German. In Jindrich Toman (ed.), *Studies in German Grammar*, pages 65–101, Dordrecht: Foris.
- Haider, Hubert. 1986. Fehlende Argumente: vom Passiv zu kohärenten Infinitiven. *Linguistische Berichte* 101, 3–33.
- Heinz, Wolfgang and Matiassek, Johannes. 1994. Argument structure and case assignment in German. In John Nerbonne, Klaus Netter and Carl Pollard (eds.), *German in Head-Driven Phrase Structure Grammar*, pages 199–236, CSLI Publications, no. 46 in CSLI Lecture Notes.
- Hinrichs, Erhard and Nakazawa, Tsuneko. 1989. Subcategorization and VP Structure in German. *Proceedings of the Third Symposium on Germanic Linguistics*.
- Jacobson, Pauline. 1990. Raising as Function Composition. *Linguistics and Philosophy* 13, 423–475.
- Kathol, Andreas. 1994. Passives without Lexical Rules. In John Nerbonne, Klaus Netter and Carl Pollard (eds.), *German in Head-Driven Phrase Structure Grammar*, pages 237–272, CSLI Publications, no. 46 in CSLI Lecture Notes.
- Kathol, Andreas. 2000. *Linear Syntax*. New York, Oxford: Oxford University Press.
- Meurers, Detmar. 1999. Raising spirits (and assigning them case). In *Groninger Arbeiten zur Germanistischen Linguistik (GAGL)*, volume 43, pages 173–226.

- Meurers, Detmar. 2000. *Lexical generalizations in the syntax of German non-finite constructions*. Arbeitspapiere des SFB 340, No. 145, Tübingen: Eberhard-Karls-Universität.
- Müller, Stefan. 2002. *Complex Predicates: Verbal Complexes, Resultative Constructions, and Particle Verbs in German*. Studies in Constraint-Based Lexicalism, No. 13, Stanford: Center for the Study of Language and Information.
- Müller, Stefan. 2003. Object-To-Subject-Raising and Lexical Rule: An Analysis of the German Passive. In Stefan Müller (ed.), *Proceedings of the HPSG-2003 Conference, Michigan State University, East Lansing*, pages 278–297, CSLI Publications.
- Pollard, Carl. 1994. Toward a Unified Account of Passive in German. In John Nerbonne, Klaus Netter and Carl Pollard (eds.), *German in Head-Driven Phrase Structure Grammar*, pages 273–296, CSLI Publications, no. 46 in CSLI Lecture Notes.
- Pollard, Carl and Sag, Ivan A. 1994. *Head-Driven Phrase Structure Grammar*. University of Chicago Press.
- Przepiórkowski, Adam. 1999. On case assignment and "adjuncts as complements". In Gert Webelhuth, Jean-Pierre Koenig and Andreas Kathol (eds.), *Lexical and Constructional Aspects of Linguistic Explanation*, pages 231–245, CSLI Publications, No. 1 in Constraint-Based Lexicalism.