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The grammar of German *haben*

1. Preliminaries:

German *haben* functions both as a main verb (MV) and as an auxiliary (AUX) in German. As an auxiliary it has a very typical distributional function in that it is the lexically selected form for the periphrastic perfect of just 2 verb classes from a total of four: it is selected by the transitive verbs (tV) and the non-terminative (durative) subclass of the intransitive verbs (iV). Both the ergative class (eV) and the terminative (non-durative) intransitive verbs select *sein*. Note that eV is a syntactic-semantically characterized class of verbs with very specific syntactic properties (past participle attribute being the most prominent).¹

Next to its AUX-function, *haben* - much alike *have* in English and the *avoir*-correspondences in French and the Romance languages - has the status of a MV taking an accusative object. Let us set up its lexical form in the following way:

(1) *haben*: $\theta[\theta____]$

e is the designated external argument meaning that it shares syntactic properties of the agentive of tV. θ within the brackets is the internal structural argument (and, consequently, an accusative).

If the periphrastic *haben*-perfect is passivized the AUX will invariably become *sein* or *werden*. The citation form of the perfect passive participle (PPP) is *gefangen sein/werden*, θ [____], whereas the perfect active participle (PAP) is *jemanden gefangen haben*, e [θ _____].

2. The problem and its background.

On the basis of what is sketched out in the preliminaries we can ask the following questions: (1) What do the periphrastic perfect of tV with the AUX *haben* and *haben* as MV have in common to warrant the use of the same lexical item? What, in turn, do the passive, eV and other categories (adjectives, prepositional infinitives, gerunds) have in common for not using *haben*, but *sein* (*werden*)?

(2) Haider (1984) was the first one to ask the question put under (1) and propose, in the framework of his theory of syntactic case, the following answer: a PPP absorbs the case of the direct object (DO) and, consequently, "blocks" its subject case from further structural disponibility (according to

the principle that any caseless NP in the sentence, granted that it assumes a phonetic form, has to be assigned case and that such NP will get the nominative if no verb-governed structural case can be claimed). According to Haider's terminology, the perfect participle blocks just the *designated* argument (graphically underlined in the lexical format above and below). The prepositional infinitive, however, while semantically resembling the past participle, blocks any the subject whether (lexically) designated or not (Haider 1984).

(1) *ein bestimmter Faktor* \cong *ein Faktor, der bestimmt (worden) ist*

a specified factor \cong a factor that specified (become) is

(2) *ein zu bestimmender Faktor* \cong *ein Faktor, der bestimmt werden muß*

a to specifying factor \cong a factor that specified become must
"to be specified"

(3) *ein bestimmender Faktor* \cong *ein Faktor, der (etwas) bestimmt*

a specifying factor a factor which (smthg.) specifies
"a determining factor"

Note that in (2), in contrast to (3), the reading of what is a present participle, *bestimmend-*, is passive as soon as it cooccurs with the preposition *zu*. The heads of the preposed attributes are accordingly DO in (1) and (2), but SUBJ in (3). Superficially speaking, (1) and (2) likewise block their subjects. However, as Haider notes quite correctly, there is no ubiquitous parallel

between attributive PP's and P + Inf in German.

(4) *der eingeladene Gast* - *der einzuladende Gast*
the invited guest the to-inviting guest
"the guest to be invited"

(5) *die aufgegangene Sonne* - **die aufzuziehende Sonne*
the risen sun the to-rising sun

(6) ?? *der gewanderte Karstens* - **der zu wandernde Karstens*
the walked K. the to walking K.

aufgehen in (5) is an eV (*wandern* in (5), by contrast, is a durative intransitive). The divergence between (4) and (5) - P + Inf unacceptable only with eV - has to be accounted, according to Haider, not in terms of blocking and absorption of a θ -role and the DO-accusative, but of the subject *whatever its θ -designation*. Haider further assumes that a deblocking effect is operative which explains the differences in (6) to (8).

(6) *Der Mann hat ein Weib zu lieben* - **der ein Weib zu liebende Mann*
The man has a woman to love the a woman to loving man
"Every man has to love a woman" "man having to love a woman"

(7) *Das Weib ist zu lieben* - *ein zu liebendes Weib*
The woman is to love a to loving woman
"a woman to be loved"

(8) **Der Mann ist das Weib zu lieben* - **der zu liebende Mann*
The man is the wife to love the to loving man

Just like the PPP *geliebt, zu lieben* blocks its subject *der Mann*, as is demonstrated by (7) and the uninterpretable (8). However, the very same subject, *der Mann*, is deblocked in (6) by *haben*, while remaining blocked in (7) in cooccurrence with *sein*.

I would like to argue that Haider's proposal is in disregard of the properties of *haben* as a MV. Departing from the grammar of the MV *haben*, we will see that the behaviour of *haben/sein* + *zu* + infinitive depends on the selectional properties of the two verbs. Consequently, no such process as deblocking will have to be appealed to in accounting for the behaviour of the prepositional infinitive and its similarity to that of the PPP both as predicative and as attribute. Further arguments will be adduced from Dutch to show that, unless we distinguish carefully between PPP and PAP as lexically or syntactically motivated morphological forms, Haider's deblocking parameter will yield no explanation and is faced with counter evidence to his predictions.

3. The selectional properties of *haben*.

There are four selectional grids to be distinguished:

two-place *haben* with an accusative such as in (9)

two-place *haben* with a predicative to the

accusative; (10)

two-place *haben* with an accusative and a postposed attribute; (11)

two-place *haben* with an accusative and the preposition *zu* before an (inflected) infinitive; (12).

See the following illustrations:

(9) V + NP -4: *Ich habe ein neues Fahrrad*

I have a new bicycle

(10) V + NP-4 + AP/PP: *Wir haben die Kiste offen/zu/im Auto/dort*

We have the trunk open/closed/in the car/
(over) there

(11) V + NP-4 + past participle (P Part):

Das Pferd hat die Fesseln bandagiert

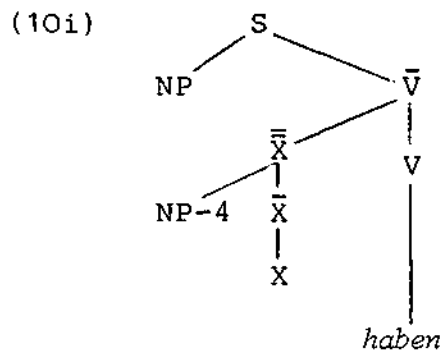
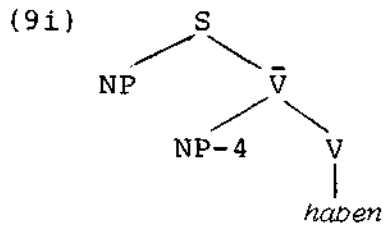
The horse has his ankles bandaged

(12) V + NP-4 + *zu* + INF: *Ich habe etwas zu lesen*

I have smthg. to read

(12) is ambiguous between the factual "I got something to read" and the modal "I got/have to read something." It will be assumed that the modal reading has a purely pragmatic source. That is, it has no syntax distinct from the factual (truth-functional) reading.

Now, note the correspondences and distinctions between the syntactic analyses of (9) - (12), which, by the way, are in full agreement with the traditional view.



(10i) covers not only (10), but also (11) and (12), the specifications for the variable category X being the following: X = AP, PP for (10), X = PPP for (11) and X = zu + INF for (12). The underlying assumption for this analysis is that not only N and V, but also A and P can be heads of constituents that contain a subject. In other words, the logical relation of subject and predicate between an NP and X is expressed within the domain of a reduced (small) clause. The entire small clause is in the function of a complement to *haben*.

The surface reading of *haben* in examples like (11) (*haben* + past participle) is, of course, ambiguous at best, with a strong preference for an AUX-reading of *haben*. Disambiguation may rest on semantic triggers such as in the example in (11). In substandard varieties of German, however, additional syntactic clues may be present such as focus intonation and word order. The following observations seem to hold for

what the distributional specifications of focus stress and linearization were meant to mirror.

Our focus of interest, namely the selectional behaviour of *haben* according to (12), shares all the distributional properties that we have found to hold for the MV-reading of *haben*, that is *haben* as a main verb + a complex complement constituent containing a verbal form, except for the semantic distributional characteristic. Note, in particular, the systematic ambiguity that we have noticed to hold in the case of (11), *haben* + NP-4 + PPart.

(19) ... , *daß wir den Schatz versteckt haben*

..., that we the treasure hidden have

(20) ... , *daß wir den Schatz zu verstecken haben*

that we the treasure to hide have

(21)*... , *daß wir den Schatz haben versteckt*

(22)*... , *daß wir den Schatz haben zu verstecken*

(21) and (22) are acceptable only under the AUX-reading of *haben* and the active reading of the past participle. Under the intended reading, however, with PPart and Prep + Inf as predicatives to the dependent NP-4 and *haben* as MV, (21) and (22) are out. Quite accordingly, the modal interpretation is effectuated only under the accompanying distributional properties of *haben* as AUX. Thus, while (19) has a double reading, "we hid the treasure" as well as "we got the treasure hidden", (21) has only the first interpretation. Likewise,

(23) is ambiguous between the factual "that we have nothing to eat" and the modal "that we have to eat nothing", while in (24) the modal variety is definitely absent.

(23), *daß wir nichts zu essen haben*

that we nothing to eat have

(24), *daß wir nichts haben zu essen*

that we nothing have to eat

Obviously, there are further selectional restrictions at work barring the very same complementary distribution between (20) and (22), in that either sentence has only the modal reading. But I take this to be a subordinate and accidental, since highly restricted matter, which does not reduce the weight of our argument categorically. *haben* is categorially ambiguous between MV and AUX in (23), but it is no longer in (24): it is restricted to the reading with MV-status of *haben*.

4. The argument: the governing properties of *haben* is all we need.

I claim that Haider's deblocking mechanism triggered, as he claims (Haider 1984), by *haben* before the preposition *zu* + infinitive, whereas the blocking of the agent subject remains intact with the predicative *sein* "to be", is an unnecessary technical assumption. All

we need are the selectional and governing properties of *haben* as MV and AUX. Furthermore, the mechanisms of blocking and deblocking = the subject θ -role = and the principle of case-assignment do not cover the whole story of passive and the past participle.

4.1. Note in the first place that the distinction between *haben* (and *sein*) as a MV is necessary prerequisite in order to account for the difference between the phenomena we discussed in (13)-(24) (see Abraham 1985 for a more detailed motivation). Note, in particular, that any historical account of the role that *haben* played in the periphrastic perfect will have to make use of the small clause analysis. In assuming that *sein/werden* blocks the subject-NP, while *haben* deblocks it again, Haider takes these verbs to function as auxiliaries.

(25) *Hier ist etwas zu essen*

Here is something to eat

(26) *Wir haben etwas zu essen*

We have something to eat

(25) and (26) show very clearly, however, that the modal reading that would enforce an analysis of *sein* and *haben* as auxiliaries, is not the only one. While the semantic difference would suffice to warrant the two distinct structural analyses the

above-mentioned distributional characteristic will confirm our conclusion. Given the small-clause structures, [etwas zu essen] in (25) fills the argument position that the lexical frame foresees for *sein*: [θ ____]. In (26), [etwas zu essen] fills the place of the object argument in the frame of *haben*: θ [θ ____], whereas *wir* takes the place of the designated argument. Since (*zu*) *essen* is not-finite it only assigns case to the inherent structural argument, the accusative, whereas the subject position receives no case in the absence of a positive marking for subject-verb congruency in INFL. This is all in line with the fundamental assumptions of the case-filter and the theory of government in GB (Chomsky 1981). No extra mechanism is required.

4.2. Haider's assumption that *sein/haben* + PPart bear out blocking and deblocking effects in order to accommodate the empirical facts, is to be seen as a well-reasoned attempt to find one common explanatory mechanism for the fact that one identical morphological form is passive conjoined with *sein/werden*, but active with *haben*. This is to be preferred to the traditional reasoning that there are two homonymic participial morphemes operative that have nothing to do with one another. However, we can as easily avoid such an unsatisfactory bipartition of the PPart form

by assuming two *sein*- and *haben*-morphemes each with different lexical formats:

(27)

MV: *haben*: $\underline{\theta}$ [XP[θ]___] *sein*: [XP[θ]___] *werden*: [XP[θ]___]

AUX: *haben*: $+\underline{\theta}$ *sein*: $-\underline{\theta}$ *werden*: $-\underline{\theta}$

Remember that $\underline{\theta}$ means "lexically designated as external (= subject) argument". As AUX the verbs have no sub-categorization frame and hence no θ -specification. However, while *haben* allows the realization of an external argument with subject status ($+\underline{\theta}$), *sein* and *werden* do not in either category ($-\underline{\theta}$). See Hoekstra (1984). What would be an independent motivation for assuming homonymic *haben* (and *sein*)? Let us briefly investigate a number of phenomena.

4.3. We have motivated in more detail (Abraham 1985) that the small-clause reading of *haben* + NP-4 + PPart is restricted to terminative tV, i.e. intuitively verbs that describe transition from an event to a state or the reverse: ~~wir~~ or ~~wird~~ Verbs that exclude such a reading are barred from a small-clause reading.

(28) **das Weib ist geliebt*; **der Wagen ist geschleppt* - *wird*
the woman is loved the wagon is drawn is being
geliebt/geschleppt
loved / drawn

(29) *das Weib ist verurteilt; der Wagen ist geladen - wird*
the woman is convicted the wagon is loaded - is being
verurteilt/geladen
convicted/ loaded

(30) **Der Bauer hat sein Weib durch seinen Nachbarn geliebt;*
The farmer has his wife by his neighbour loved
*...*den Wagen vom Pferd geschleppt*
the wagon by the horse drawn

(31) *Der Bauer hat sein Weib durch den obersten Richter*
The farmer has his wife by the highest judge
verurteilt; ...den Wagen durch den Knecht geladen
convicted; the wagon by his knight loaded

The distribution of the blocked agentive prepositional phrase is strictly complementary between the non-terminative (durative) verbs *lieben* and *schleppen* in (28) and (30), on the one hand, and the terminative (mutative) verbs *verurteilen* and *laden* in (29) and (31), on the other. Remember that both verb classes are transitive, which is shown by their faculty to passivize. But while non-terminative verbs disallow the stative passive (adjectival passive) and consequently also realization of the blocked agent phrase, terminative TVs allow for both the stative and the event passive and, under the latter reading, also the blocked agent phrase. This is quite in line with the distinct category status of the past

participles of the involved verbs: non-mutative verbs like *lieben*, *schleppen* disallow the aspectual change from event to state, since they are on-going state verbs in the first place. Consequently, the adjectivizing past participle of *tv* has no grasp on the non-mutative verbs. The adjectival PPart is unacceptable by virtue of doubling up on an already existing property. Note that the (originally) mutative *werden* "become" enforcing the event-passive reading, however, is possible.

(32) *das vom Mann geliebte Weib* = *das vom Mann geliebt*

the by the man loved woman = the by the man loved

werdende Weib

being woman

der vom Pferd geschleppte Wagen = *der vom Pferd geschleppt*

the by the horse drawn wagon = the by the horse drawn

werdende Wagen

being wagon

4.4. How does the distinction of the subcategorization frames of *haben/sein* as MVs and Aux's carry over to structures with the prepositional infinitive.

(33a) *Der Papst ist von den Gläubigen zu verehren*

the pope is by the believers to respect

(33b) *der von den Gläubigen zu verehrende Papst*

the by the believers to respect pope

(33c) **Der Papst ist für die Gläubigen zu verehren*

the pope is for the believers to respect

(33d) **der für die Gläubigen zu verehrende Papst*

the for the believers to respect pope

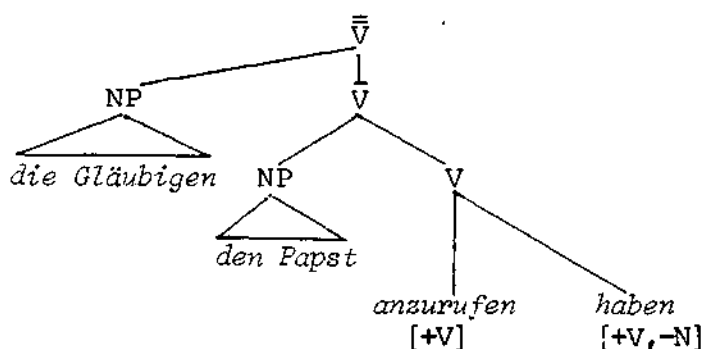
The agent subject is blocked. *zu verehren* is the adjectival passive as (33b) shows. *sein* is in the status of AUX. Now compare (33a,b) and (28). Clearly, both *verehren* and *lieben* are non-mutative verbs. Consequently, if the prepositional infinitive is taken to be of the force of a passive participle we would not expect (33a) to be acceptable. But the parallelism between (28) and (33a) holds only at the surface as Haider (1984) noticed and quite ingeniously explained within his framework. An adjectival passive participle takes a copula verb, in our case *sein* as a MV; see (28). Neither adjective nor the copula have a semantic grid such as to select an agent, blocked or unblocked, in the first place. In (33a), however, *sein* + *zu* + INF has the status of an AUX as the modal connotations (either *must* or *may*) confirm. The blocked agent phrase is possible since *zu* + INF behaves like an event-passivation of a transitive sentence.

(34) *Die Gläubigen haben den Papst anzuerkennen*

The believers have the pope to recognize

No blocking effect takes place in (34): *haben* is an AUX (modal reading!), but it takes an external argument (subject) anyway according to (27).

(35) AUX-reading of *haben*:¹



But German has a surface means to distinguish auxiliary status from that of main verb with respect to the prepositional infinitive.

- (36) a *Gott ist für die Menschen zum Anbeten (da)*
 God is for (art) men to (dat.) worship (there)
- b **Gott ist für die Menschen anzubeten da*
 God is for men to worship there
- c **der von den Menschen zum Anbeten seiende Gott*
 the by (art.) men to (dat.) worship being God
- d *der für die Menschen zum Anbeten *(da seiende) Gott*
 the for (art.) men to (dat.) worship (there being) God

- (37) *Die Menschen haben Gott zum Anbeten*
 (art.) men have God to (dat.) worship
 "Man has God for worshipping"

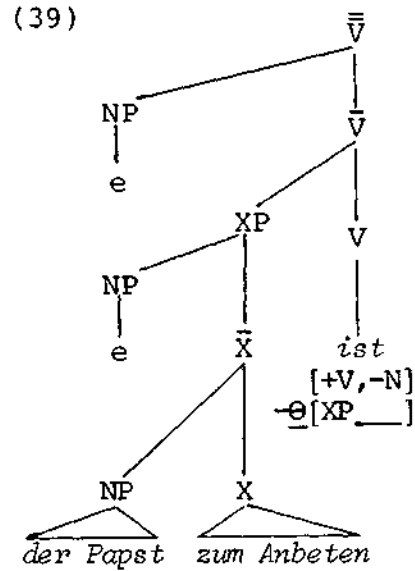
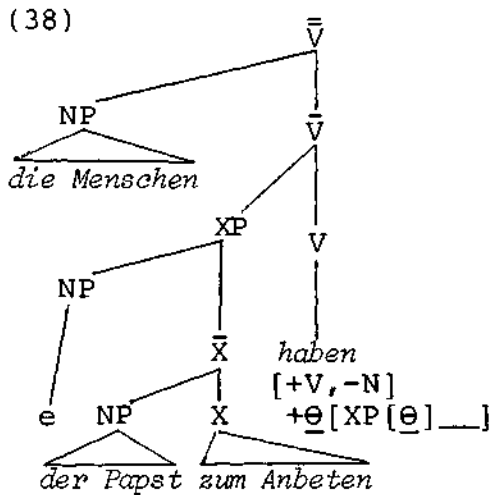
The gerund realizations *zum Anbeten* in (36a,c,d) and (37) are distributionally distinct from the infinitival

verbal. The local "there" (in *da sein*, to be taken as a verbal prefix to the copula *sein*) can cooccur only with the gerund and is excluded with the prepositional infinitive; see (36a) and (36b). As expected the non-verbal gerund is incompatible with the blocked agent phrase, see (36c). (36d) just shows that the attribute in pre-head position must realize congruency morphology. If congruency inflection is impossible as in the case of the category status [-V,+N] for the gerund we will have to insert a congruency indicator in the form of the present participle of the copula *sein* (which, however, is not accepted style in German). Otherwise, (36d) is out.

In colloquial German, certainly in the varieties of Upper German (Austrian and Bavarian, not, however, Alemannic) there is no prepositional infinitive, but only the gerundial form. The common feature of colloquial and Standard German now is that invariably the gerund reads in the non-modal sense, while the Standard German prepositional infinitive, except for certain selectional constituents of the NP-4 (see (23) and the adjoined brief discussion), has the modal reading with *haben* and *sein* in the status of AUX. The colloquial vernacular chooses the bare infinitival + an explicit modal (*müssen/können* "must/can").

- (34') *Die Gläubigen müssen (können) den Papst anerkennen*

The gerundial form clearly connects to the small-clause structures that we discussed for other types of the *haben*-subcategorization.



(38) is the structure for (37), whereas (39) stands for the structural essentials of (36a).

4.5. *zu* + INF and the prepositional gerund behave differently with respect to object binding, which is what we expected on the basis of the obvious category distinctions: prepositional infinitivals have verbal qualities and will consequently be [+V,-N] or else [+V] as for past passive participles, while the gerund is of noun status: [-V,+N]. This correlates, of course, with the different status of *haben* and *sein*: the infinitival [+V,-N] goes with the AUX, while the gerund [-V,+N] is in cooccurrence with the copula.

This should bear out with the different syntactic verb

'classes, tV, iV and eV, respectively.

(40) a *Wir haben nichts *(zu) verschenken* ... tV

We have nothing to give away

b *Durch uns ist nichts zu verschenken*

By us is nothing to give away

c *Wir haben nichts zum Verschenken*

We have nothing to (dat.) give away

d *Nichts ist zum Verschenken (*durch uns)*

Nothing is to (dat.) give away by us

(41) a *Wir haben Schweizer neben uns *(zu) wohnen* ... iV

We have Swiss nextdoors to live

b **Schweizer sind neben uns (zu) wohnen*

Swiss are nextdoors to live

c *Wir haben Schweizer neben uns wohnen/? zum Wohnen*

We have Swiss nextdoors live to (dat.) live

d *Schweizer sind uns zum Wohnen neben uns*

Swiss are to live (gerund) nextdoors

**neben uns (zu) wohnen*

nextdoors (to) live (infinitive)

(42) a **Wir haben keinen Zug an(zu)kommen* ... eV

We have no train (to) arrive

b **Der Zug ist nicht anzukommen*

The train is not to arrive

c *Wir haben keinen Zug zum Ankommen*

We have no train to (dat.) arrive

d *Der Zug ist nicht zum Ankommen*

The train is not to (dat.) arrive

The versions in a,b present infinitival verbal forms. While all three verb classes allow for (*haben* + *zu* + INF)-constructions, *haben* + NP-4 + *zu* + INF is possible only for transitive verbs. Haider (1984) insightfully made clear what the reason is: *zu* + INF behaves like a Past Passive Participle (PPP) in that it blocks its external (subject) argument, i.e. disables it from further structural participation. In (41) and (42), however the AUX *haben* activates structurally the blocked external argument, which it could do only in its capacity as a main verb. For the blocking effects compare (41b) and (42b), which are both unacceptable. As a MV, however, the NP-4 is elicited by the sub-categorization frame of *haben*. The construction of *haben* + NP-4 + prepositional gerund is accommodated by a small-clause structure as in (39).

This warrants the following formation rules for Past Participles, *zu* + INF, and *zu* + gerund:

(42) <u>PPart of tV</u>	<u><i>zu</i> + INF</u>	<u><i>zu</i> + Det + INF</u>
[+V]	[+V]	[-V,+N]
[NP[∅]___]	[NP[∅]___]	[_____]

The categorial status of both PPart and *zu* + INF is imperfectly [+V]: PPart can receive adjectival status in predicative structures, or else it receives full verbal status under the active or passive event reading. *haben* as AUX is subcategorized for just an external argument, but its categorial status [+V,-N]

will carry over to the verbal constituent. *sein/ werden* as AUX are not subcategorized for an external verbal constituent. The formation of *haben/ sein + zu + INF* runs parallel.

The (prepositional) gerund, however, has no full categorial, non-verbal status and thus no subcategorizational properties. It can only cooccur with *haben* or *sein* as a main verb. Gerundial constructional properties are fully determined by the syntactic and semantic selectional characteristics of *haben* and *sein*.

4.6. Given the premiss that *zu + INF* blocks any external argument irrespective of its semantic type it can be predicted that one-place-verbs do not allow the prepositional infinitive with *sein* as auxiliary. Remember that *sein* externalizes its internal argument (*sein*: [θ ___] as eV) and claims the subject of *zu + INF*, which, however, is blocked. This prediction is borne out with intransitive verbs.

- (43) **der Zug ist zu fahren* - **der zu fahrende Zug*
the train is to go the to go train
**die Blume ist zu wachsen* - **die zu wachsende Blume*
the flower is to grow the to grow flower

A brief, but nevertheless careful inquiry has unearthed the following thoroughly surprising, but yet unmistakable Dutch intransitive *zu + INF*-constructions

in predicative position:

- (44) *de ongelukken zijn nog te gebeuren* - *de nog te gebeuren*
the accidents are yet to happen the yet to happen
ongelukken
accidents

In the same vein:

- (45) *de nog op te treden problemen*
the yet to appear problems
de binnenkort te verwelken bloem
the before long to wilt flower
het morgen te beginnen kamerdebat
the tomorrow to start parliamentary debate
de gauw binnen te komen trein
the soon to arrive train

This formation is systematic and by no means lexicalized. What is going on? Note the common denominator in (44) and (45) as distinct from (43): What allows the prepositional infinitives in predicative contexts are invariably eV, while (43) are true intransitives. Remember now what eVs are, namely a mutative (terminative) subclass of the intransitive verb class (see Abraham 1955a for a full motivation of this complex phenomenon). The predicative and attributive *zu + INF* is out in the case of non-mutative (= durative) iV as in (43), whereas they are tolerable up to standard with eV. This just shows that there is more behind the

syntactic behaviour that will have to be included in the syntactic account (see Abraham 1985b for an attempt give a formal account of aspectual characteristics on the sentence level).

5. Conclusion

The grammar of *haben* is an intriguing, but nevertheless systematic interplay between the subcategorizational characteristic of the lexical element as an auxiliary and as a main verb, on the one hand, and the syntactic and lexical semantic properties of the verbal forms it occurs with. It was one of our major goals to uncover the lexical and structural prerequisites that underlie Haider's (1984) more technical assumptions of blocking and deblocking with respect to the past participle and the prepositional infinitive. Whether or not we will content ourselves with distributional facts such as the distinct syntactic behaviour of tV, iV, and eV or the specifics of PPart and the prepositional infinitive, will depend on whether or not we aim at an account with explanatory force. I think I have at least indicated that the distinction of iV and eV has a semantic basis. What remains a desiderate is the account of this semantic basis in structural terms (see Abraham 1985b), possibly also an

explanation why *zu* before an infinitive triggers
exactly what it triggers.

Abraham, Werner

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Notes

1. Note that this solution makes insubstantial the question that we have raised in connection with (20) and (23), i.e. whether or not the small-clause solution (with *haben* as MV) or the AUX-solution (without small clause) has to be envisaged.