

NP-Incorporation in German*

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1 Introduction

There is a long tradition (starting with Drach 1937; for a current exposition, see, e.g., Pittner & Berman 2010) of splitting up the German clause into different fields. This approach, called the ‘Theory of Topological Fields’, is fruitful and is part of every elementary course on German syntax.

(1)	prefield	left sent. bracket	middle field	right sent. bracket; verbal complex	postfield
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The simplified schema in (2) indicates how these fields can be filled according to standard generative approaches:

(2)	XP_1	V_{fin}^0	$XP_2 XP_3 \dots$	$Y^0 \dots V_1 V_2 \dots$	$XP_n XP_{n+1} \dots$ (verb-second clause)
	C^0		$XP_1 XP_2 XP_3 \dots$	$Y^0 \dots V_1 V_2 \dots V_{fin}$	$XP_n XP_{n+1} \dots$ (verb-end clause)

In a verb-second clause, the prefield is assumed to be filled by one maximal projection and the left sentence bracket by the finite verb. If the left sentence bracket is filled by a complementiser, the result is a verb-final clause. The middle field may contain any number of maximal projections just like the postfield; however, while the middle field may host sentence constituents of any category, the postfield mainly hosts clauses and PPs. The field which remains to be addressed and which is the crucial one for this paper is the right sentence bracket. It is assumed to host all elements of the complex predicate except the one in the left sentence bracket. It is beyond debate among contemporary researchers interested in the topic that at least at one level of representation some of the combinations of verbs in German and other West Germanic languages constitute a complex predicate. Complex predicate formation among verbs obligatorily arises with auxiliaries and modal verbs and, optionally, with

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the rather large class of so-called ‘restructuring verbs’ (to which, e.g., *versuchen* (‘try’) belongs).¹ The term ‘verbal complex’ is also used to refer to the material inside the right sentence bracket. It is a central assumption in generative accounts of German that the complex predicate is only constituted by head-elements. As far as I know this assumption has never been disputed in accounts which belong to the Chomskyan camp of generative syntax.

However, there are empirical reasons to doubt this basic assumption. For example, the most influential German grammar book, the Duden, not only refers to the nominal head-elements preceding the infinitival verb in (3) as belonging to the verbal complex of the clause, but also to the more complex nominal constituents inside the brackets in (4); see Duden (2009, 858f.).

- (3) a. *dass Max heute [Karten spielen wird]*
 that Max today cards play will
 ‘that Max will play cards today’
- b. *dass Maria [Professorin werden möchte]*
 that Maria professor become.INF wants
 ‘that Maria wants to become a professor’
- (4) a. *Für Süßigkeiten wird Otto wohl stets [eine große Vorliebe zeigen]*
 for sweets will Otto PRT always a great liking show
 ‘(As I assume) Otto will always have a great fondness for sweets.’
- b. *Zum Vorherfahrenden sollte man hier besser [einen
 to.the one.driving.in.front should one here better a
 deutlichen Abstand halten]*
 broad distance keep
 ‘Here you should keep a broad distance to the one driving in front of
 you.’

¹ It was mainly Hubert Haider (see for a synopsis Haider 2010) who by developing insights of Bech (1955) argued that complex predicate formation goes together with a mono-clausal structure. This means that the verbal complex is not built by verb movement but is base-generated in syntax. Other researchers working in the generative framework adopt a bi-clausal analysis (e.g., Wurmbrand 2001), i.e., an analysis according to which every dependent verb is base-generated as the head of its own VP and then moves to its governing verb to be adjoined to it.

- c. *In Konstanz hat Otto [einen unfreiwilligen Halt gemacht]*
 in Konstanz has Otto an involuntary stop made
 'Otto made an involuntary stop in Konstanz.'

The nominal head elements inside the brackets in (3) are not problematic for the standard assumption. However, the nominals adjacent to the infinitival verbs in (4) occur with the indefinite article *ein* and with a modifier. Thus they are likely to be phrasal. As crucial evidence that they belong to the right sentence bracket, the Duden (2009) presents the fact that the PPs dependent on these nominal phrases may be moved to the prefield, as in (4).² This mobility is taken as an indication that the PPs behave like standard sentence constituents, which in turn is taken to mean that the licensing nominal elements are part of a complex predicate. Obviously, this line of reasoning presupposes that in German it is not possible to extract out of a DP. In section 4.2, it will be argued that this presupposition is valid.

We should note in passing that these noun-dependent PPs may also appear inside the middle field:

- (5) a. *Otto wird für Süßigkeiten wohl stets eine große Vorliebe zeigen*
 Otto will for sweets PRT always a great liking show
- b. *Hier sollte man zum Vorherfahrenden besser einen großen*
 here should one to.the one.driving.in.front better a broad
Abstand halten
 distance keep
- c. *Otto hat in Konstanz einen unfreiwilligen Halt gemacht*
 Otto has in Konstanz an involuntary stop made

There is a very obvious fact which the Duden surprisingly does not mention, namely that the dependent PP may also occur to the right of the nominal, (6). This fact is interesting since, given the logic of the Duden, it shows that also these PPs may be part of the right sentence bracket, which means that rather complex phrases may belong to the complex predicate.

² In the following sections further evidence will be given that the Duden is right in treating the nominal inside the brackets in (4) as being part of the right sentence bracket.

- (6) a. *Otto wird wohl stets eine große Vorliebe für Süßigkeiten zeigen*
 Otto will PRT always a great liking for sweets show
- b. *Hier sollte man besser einen großen Abstand zum*
 here should one better a broad distance to.the
Vorherfahrenden halten
 one.driving.in.front keep
- c. *Otto hat einen unfreiwilligen Halt in Konstanz gemacht*
 Otto has an involuntary stop in Konstanz made

These indefinite nominals in (4) are part of a structure which comprises a semantically bleached verb and a nominal element which predominantly determines the meaning of the predicate, i.e., they belong to a so-called Light Verb Construction.

The left parts of a verbal complex may be moved to the prefield.

- (7) a. *Karten wird Max heute spielen*
 cards will Max today play
- b. *Karten spielen wird Max heute*
 cards play will Max today
- c. **Spielen wird Max heute Karten*
 play will Max today cards
- d. *Eine große Vorliebe für Süßigkeiten wird Otto wohl stets zeigen*
 a great liking for sweets will Otto PRT always show
- e. *Eine große Vorliebe für Süßigkeiten zeigen wird Otto wohl stets*
 a great liking for sweets show will Otto PRT always
- f. **Zeigen wird Otto wohl stets eine große Vorliebe für Süßigkeiten*
 show will Otto PRT always a great liking for sweets

These data can be taken as evidence for a left-branching structure of the verbal complex.

- (8) a. *[[[Karten] spielen] wird]*
 cards play will

- b. [[[*eine große Vorliebe für Süßigkeiten*] *zeigen*] *wird*]
 a great liking for sweets show will

The very fact that the left branches of the complex predicates can occupy the prefield can be seen as confirmation of the thesis that the right sentence bracket, i.e., the verbal complex, may contain maximal projections, since the prefield is assumed to be a place for maximal projections. In section 5 we will come back to structures like the ones in (9).

- (9) a. [_V [_{VP} [_{NP} *Karten*] *spielen*] *wird*]
 cards play will
- b. [_V [_{VP} [_{NP} *eine große Vorliebe* [_{PP} *für Süßigkeiten*]]] *zeigen*] *wird*³
 a great liking for sweets show will

With regard to nominal constituents, the Duden (2009) only mentions bare forms like in (3) and forms which belong to a Light Verb Construction like the ones in (4) as belonging to the right sentence bracket. The Duden (2009) goes on to state that other phrasal constituents are incorporated in German, namely certain resultatively interpreted APs and PPs.

The present paper proceeds as follows. In section 2, it will be demonstrated that the Duden is correct in suggesting that resultatives are part of the verbal complex in German. Section 3 contains the main concern of the present paper. It is argued that for German one has to acknowledge that many more instances of nominal phrases are part of the verbal complex than the Duden (2009) assumes. Thus, it will be argued that ‘NP-incorporation’ is much more widespread than previously thought. Section 4 discusses some challenging phenomena of German syntax whose analyses are claimed to give further support for NP-incorporation in German. The final section 5 discusses which arguments of an incorporated XP may be realised inside the verbal complex.

The data discussed in the present paper show great similarities with data of different languages discussed under the header of ‘pseudo-incorporation’ or semantic incorporation. These notions usually refer to the combination of a verb with a syntactically not quite complete nominal phrase, which is property-denoting, rather than entity-denoting or universally quantified. This nominal phrase only acquires referentiality because the verb causes it to be

³ I will come back to the question of why incorporated nominals are NPs and not DPs.

existentially bound. Thus, for pseudo-incorporated noun phrases it is assumed that morphosyntactic deficiency, and semantic incompleteness go together.

In the literature on pseudo-incorporation the issue of the position of the pseudo-incorporated phrases in syntactic structure either is not discussed at all or is answered in quite distinct ways. However, the common assumption seems to be that pseudo-incorporation, as the name suggests, does not involve overt incorporation in syntactic structure. Contrary to that, the overall aim of the present paper is to show that, at least in German, an especially close semantic relationship between a non-specific indefinites NP and its subcategorising predicate is mirrored by real syntactic incorporation of the NP into the constituent representing the predicate of the clause. Thus, from the perspective of German it is argued that in this field we do find a close congruence between semantic and syntactic structure.

2 Resultatives

Let us start with a look at the positioning of manner adverbials in German:

- (10) *Maria schaut sich gerade was ganz genau an*
 Maria looks.at RFL currently something very carefully PRT
 'Maria is currently looking at something very carefully.'

In (10), a *wh*-indefinite precedes a manner adverbial. This is noteworthy in view of the fact that *wh*-indefinites cannot scramble.⁴ Thus, (10) demonstrates that

4 That *wh*-indefinites are scrambling-resistant is demonstrated by data like those in (i). With the help of data involving wide focus or the scope of quantifiers, it has been established that, for example, the base positions of the arguments of a transitive verb like *lesen* are Nom < Acc, and that for a psych verb like *empören*, they are Acc < Nom. Thus, in (ia) and (ic) the sentence constituents appear in the base orders (cf., e.g., Lenerz 1977, Frey 2003). In (ib) and (id) these orders have been changed by scrambling of the *wh*-indefinites. That the sentences are ungrammatical demonstrates that a *wh*-indefinite cannot be scrambled (e.g., Haider 2010 among others).

- (i) a. *dass wer was lesen will*
 that someone something to-read wants
 'that someone wants to read something'
- b. **dass was wer lesen will*

the base position of a manner adverbial is lower than the base position of a direct object. In fact, with the same kind of evidence it can be shown that the base position of a manner adverbial is lower than the base positions of the standard arguments of the various verb types and lower than the base positions of other adverbials (cf., e.g., Frey 2003).

We now turn to resultatives, to which directional argumental PPs belong (Wechsler & Noh 2001). The examples in (11) are of interest. They show that, at least under standard intonation, a manner adverbial cannot follow a resultative. Hence, the base position of resultatives must be lower than the base position of manner adverbials.

- (11) a. *Paul hat (??langsam) die Sachen (langsam) unter das Klavier*
 Paul has slowly the things slowly under the piano
*(*langsam) gelegt*
 slowly put
 'Paul has put everything under the piano slowly.'

- b. *Max hat (??schnell) die Tasse (schnell) leer (*schnell) getrunken*
 Max has quickly the cup quickly empty quickly drunk
 'Max (quickly) emptied the cup.'

As an aside we note that in (11) the positioning of the manner adverbials in front of the direct objects does not yield perfect sentences. This is due to the fact that adjectival manner adverbials like *langsam* and *schnell* do not like to undergo standard scrambling. However, it can be observed that the result is different when these adverbials are contrastively focussed.

That the option of positioning the PP in (11a) is in fact due to its status as a resultative is confirmed by the examples in (12). A non-resultative PP behaves differently. It can easily precede a manner adverbial under standard intonation.

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- c. *dass wen was empörte*
 that someone.acc something.nom shocked
 'that something shocked someone'

- d. **dass was wen empörte*

- (12) a. *Maria wird jeden auf dieses Problem nachdrücklich
 Maria will everyone.acc about this problem emphatically
 hinweisen
 point.out
 'Maria will emphatically point this problem out to everyone.'*
- b. *Otto hat über die Euro-Krise sehr laut gesprochen
 Otto has about the Euro-crisis very loudly talked
 'Otto talked about the Euro crisis very loudly.'*

Another peculiarity of German resultatives is that, in contrast to other sentence constituents, they cannot scramble (e.g., Steinitz 1989; Frey 1993):

- (13) a. **Paul hat [unter das Klavier]_i die Sachen t_i gelegt
 Paul has under the piano the things put*
- b. *Max hat die Tasse (vorher) leer_i (*vorher) t_i getrunken
 Max has the cup before empty before drunk
 'Max drank the whole cup (before).'*

For our purposes it is crucial that there is evidence that resultatives are not just special sentence constituents with a very low base position in the middle field but that they are part of the complex predicate (cf. Helbig & Buscha 1986; Abraham 1986; Frey & Tappe 1992 for German and Neeleman 1994 for Dutch). A first clue is given by the fact that they cannot scramble, as seen in (13). Even more instructive is the difference in grammaticality between (14a,b) on the one hand and (15a,b) on the other.

- (14) a. *Gesprochen hat Max erst gestern über dieses Thema
 spoke has Max only yesterday about this subject
 'Only yesterday Max spoke about this subject.'*
- b. *Getrunken hat Max die Milch heiß
 drunk has Max the milk hot
 'Max drank the milk hot.'*
- (15) a. **Gelegt hat Paul die Sachen unter das Klavier
 put has Paul the things under the piano*

- b. **Getrunken hat Max die Tasse leer*
 drunk has Max the cup empty

(14a,b) show that in German, the main verb alone may be positioned in the prefield. In (14a) a prepositional object stays behind, and in (14b) a depictive adverbial does. In contrast, (15a,b) demonstrate that a resultative may not be left behind. In order to get grammatical sentences, the resultatives have to accompany their predicates to the prefield:

- (16) a. *Unter das Klavier gelegt hat Paul die Sachen*
 under the piano put has Paul the things

- b. *Leer getrunken hat Max die Tasse*
 empty drunk has Max the cup

To see the relevance of (15a,b) for our discussion, we observe that the ungrammaticality of these examples cannot be due to the reluctance of resultatives to scramble. This follows from data like (17): a wh-indefinite object, which cannot scramble, may remain in the middle field when its predicate is moved to the prefield.

- (17) *Gegessen hat Paul bereits was*
 eaten has Paul already something
 'Paul has already eaten something.'

Note in passing that (17) demonstrates that one has to envisage that verbs without their complements may constitute a proper candidate for filling the prefield, i.e., that they already constitute a maximal projection (cf. Frey & Tappe 1992).

If the reluctance of resultatives to scramble cannot be blamed for the ungrammaticality of the sentences in (15), the reason for their deviance must be the following: resultatives belong to the complex predicate. This explains (15) since, as seen above, only left parts of a complex predicate may be moved to the prefield. Thus, resultatives are not sentence constituents base-generated low in the middle field, but are base-generated as part of the complex predicate:

- (18) a. [_V[[_{PP} *unter das Klavier*] *gelegt*] *hat*]
 under the piano put has

- b. [_V[[_{AP} *leer*] *getrunken*] *hat*]
 empty drunk has

As is to be expected under our assumptions, a resultative phrase alone can very well be moved to the prefield:

- (19) a. *Unter das Klavier hat Paul die Sachen gelegt*
 under the piano has Paul the things put
- b. *Leer hat Max die Tasse getrunken*
 empty has Max the cup drunk

For an understanding of why resultatives are incorporated into the predicate, the semantic function of resultatives is likely to be relevant. Resultatives express a property of an argument which becomes true as a result of the event denoted by the main verb. Thus, it is reasonable to assume that the main verb and the resultative together express a predication of this argument. Correspondingly, in syntax the resultative and the verb together subcategorise for this argument, i.e., they form a complex predicate.

Let us turn to sentence negation. The occurrence of *nicht* as sentence negation induces a reading without any contrastive effect.⁵ Sentence negation *nicht* is generated very low in the structure. That it is generated close to the complex predicate in the right sentence bracket⁶ is most conclusively demonstrated by the fact that arguments which cannot scramble precede it:

5 I would like to point out that if *nicht* is used as sentence negation, this does not mean that it necessarily has scope over all sentence constituents; cf. (i). The paraphrase of (ia) under normal intonation is not 'it is not the case that Hans has read nearly all articles'; rather the paraphrase is 'for nearly all articles it holds that Hans has not read them'. The reason is that the scope-sensitive object of (ia) is not in the c-command domain of *nicht*. For (ib), the paraphrase 'it is not the case that Hans has read this article' is correct but only because all its sentence constituents are not scope sensitive.

- (i) a. *weil Hans fast alle Artikel nicht gelesen hat*
 since Hans nearly all articles not read has
 'since for nearly all articles it holds that Hans has not read them'
- b. *weil Hans diesen Artikel nicht gelesen hat*
 since Hans this article not read has
 'since Hans has not read this article'

6 Just above the base position of manner adverbials, I would argue.

- (20) a. *weil hier wer was nicht beachtet hat*
 since here someone something not noticed has
 'since someone has not noticed something here'
- b. *dass wen was nicht erfreut hat*
 that someone.acc something.nom not pleased has
 'that something has not pleased someone'

How are resultatives positioned relative to sentence negation *nicht*? As to be expected given the observations so far, resultatives have to follow *nicht*.

- (21) a. *weil Paul die Sachen nicht unter das Klavier gelegt hat*
 since Paul the things not under the piano put has
- b. **weil Paul die Sachen unter das Klavier nicht gelegt hat*
 since Paul the things under the piano not put has
- c. *Paul hat die Tasse nicht leer getrunken*
 Paul has the cup not empty drunk
- d. **Paul hat die Tasse leer nicht getrunken*
 Paul has the cup empty not drunk

Compare (21b,d) with the examples (22a,b) containing a regular prepositional object and depictive predicate, respectively, which precede sentence negation *nicht*.

- (22) a. *Otto hat heute über die Euro-Krise nicht gesprochen*
 Otto has today about the Euro.crisis not talked
 'Otto did not talk about the Euro crisis today.'
- b. *weil Max die Milch heiß nicht trinken konnte*
 since Max the milk hot not drink could

Let us next have a short look at PPs with a non-specific indefinite nominal element.

- (23) a. *da Paul die Süßigkeiten nicht in eine Schachtel gelegt hat*
 since Paul the sweets not into a box put has
 'since Paul did not put the sweets into a box'

- b. *da Paul die Süßigkeiten in keine Schachtel gelegt hat*
 since Paul the sweets into no box put has
 'since Paul did not put the sweets into any box'
- c. **da Hans nicht mit einem Kollegen reden wollte*
 since Hans not with a colleague.dat to-talk wanted
- d. *da Hans mit keinem Kollegen reden wollte*
 since Hans with no colleague.dat To-talk wanted
 'since Hans did not want to talk with any colleague'

The resultative non-specific indefinite PP allows sentence negation with *nicht*, (23a). (23b) expresses sentence negation too. Here, it is expressed by *keine*, which forms a syntactic constituent with the following noun. Crucially, in the case of the prepositional object, sentence negation *nicht* cannot appear in front of the non-specific PP, (23c), since the prepositional object arguably does not belong to the verbal complex.

To conclude this section, a remark about the small clause analysis for resultative constructions (e.g., den Dikken 1995) is in order. According to this analysis, the resultative predicate and the constituent it predicates over build one constituent. For instance, (11a,b) would get assigned small clauses as in (24a,b).

- (24) a. Paul hat [_{sc} die Sachen unter das Klavier] gelegt.
 b. Max hat [_{sc} die Tasse leer] getrunken.

That the small clause analysis of resultatives is unlikely to be correct is already suggested by the data in (15). Here the small clause constituents would stay behind and the sentences should be fine. Furthermore, a small clause analysis would lead us to expect that the small clause could be moved to the prefield. The examples in (25) show that this prediction is not correct.

- (25) a. ??[Die Sachen unter das Klavier] hat Paul gelegt
 the things under the piano has Paul put
- b. *[Die Tasse leer] hat Max getrunken
 the cup empty has Max drunk

3 Incorporated Indefinites

In the preceding sections it was demonstrated that in German bare singular nominals, the XP-elements of Light Verb constructions, and resultative XPs are part of complex predicates. In this section, it will be argued that even more phrasal elements can be integrated. It will be shown that indefinite NPs may belong to the complex predicate in German. Thus, it will be argued that German does not just exhibit the phenomenon often called pseudo-incorporation in the literature. This notion refers to a close relationship between a nominal phrase and a verb such that the two seem to form one semantic predicate. In syntax, the nominal phrase is supposed to occur in a fixed position (Massam 2001). Up to now pseudo-incorporation has been reported to exist for a number of languages, most prominently Hindi (e.g., Dayal 2011), Hungarian (Farkas & de Swart 2003), Dutch (Booij 2008), and Niuean, an Oceanic language (Massam 2001), in addition see the papers in this volume. The question of whether the nominal phrase and the verb form a complex predicate in syntactic terms is usually answered in the negative, and sometimes left open. The present section focusses on the syntactic aspects of such close combinations of nominal phrases and verbs and argues that in German indeed incorporation takes place.

Let us start with the observation that a non-specific indefinite may follow a manner adverbial easily and that for other nominal arguments this ordering does not yield a good result if the adverbial is not stressed.

- (26) a. *Otto hat heute wunderbar eine charmante Mozart-Sonate gespielt*
 Otto has today beautifully a charming Mozart sonata played
 'Today Otto played a charming Mozart sonata beautifully.'
- b. *Otto hat heute wunderbar Mozart-Sonaten gespielt*
 Otto has today beautifully Mozart sonatas played
- c. ??*Otto hat im letzten Jahr wunderbar jede Mozart-Sonate*
 Otto has in-the last year beautifully every Mozart sonata
gespielt
 played
- d. ??*Otto hat heute wunderbar die letzte Mozart-Sonate gespielt*
 Otto has today beautifully the last Mozart sonata played

- e. ??*Otto hat im letzten Jahr wunderbar alle Mozart-Sonaten*
 Otto has in-the last year beautifully all Mozart sonatas
 / *die schönsten Mozart-Sonaten gespielt*
 the most-beautiful Mozart sonatas played

As argued in the preceding section, there is evidence that manner adverbials are base-generated adjacent to the right sentence bracket, i.e., to the complex predicate. Thus, the examples in (26a,b) suggest that non-specific indefinites may be part of the verbal complex. Note that the indefinite in (26a) contains an article and an attribute what makes it very likely that we are dealing here with a maximal projection. The fact that the examples (26c,d,e) with non-indefinites following the manner adverbials are not well-formed shows two things. First, universally quantified DPs and standard definite DPs cannot be part of the complex predicate, and, second, under normal intonation a manner adverbial like *wunderbar* does not like to scramble.

That indeed only indefinites which are non-specific can be part of the complex predicate is demonstrated by data like the following:

- (27) a. ??*Otto hat heute wunderbar eine bestimmte Mozart-Sonate gespielt*
 Otto has today beautifully a certain Mozart sonata played
- b. *Jeder hat heute wunderbar eine charmante Mozart-Sonate*
 everyone has today beautifully a charming Mozart sonata
gespielt. (only $\forall\exists$)
 played

With unstressed *wunderbar*, (27a) has the same grammatical status as (26c,d,e), and (27b) cannot have a reading which demands that everyone played the same sonata.

The fact that non-specific indefinite phrases are in principle possible and quantificational and referential phrases are ruled out in the position following the base position of manner adverbials gives support to the hypothesis that we are dealing here at least with an instance of pseudo-incorporation. According to the literature, a pseudo-incorporation language usually pseudo-incorporates NPs, but not DPs. This distinction makes sense. An NP delivers a predicate whose 'external' variable is not existentially bound until the NP enters the syntactic structure (cf., for example, Kamp & Reyle 1993). In an incorporation structure the verb takes care of this free variable. It is in a DP that the 'external' variable of the noun is already bound DP-internally. Here, it is the D^0 -element which performs the binding.

The next phenomenon to take note of concerns predicate fronting in German. As we have already seen (cf. (14), (17)), it is possible to fill the prefield of a verb-second clause with the non-finite main verb, leaving its canonical arguments behind in the middle field. As (17) shows this also is true for arguments which cannot be scrambled. However, as illustrated in (15), certain constituents cannot be left behind, which shows that they belong to the complex predicate. Given these facts, the data in (28) are, I believe, of great interest. (28a,b) demonstrate that if the indefinite follows an unstressed manner adverbial, it cannot be left behind when the main verb is moved to the prefield. This strongly suggests that an indefinite NP following a manner adverbial belongs to the complex predicate. Note that an indefinite may also precede a manner adverbial. In this case, the main verb may be moved to the prefield alone, (28c,d), the reason being that an indefinite preceding a manner adverbial does not belong to the complex predicate.

- (28) a. **Gespielt hat Otto heute wunderbar eine charmante Mozart-Sonate*
 played has Otto today beautifully a charming Mozart sonata
- b. **Gespielt hat Otto heute wunderbar Mozart-Sonaten*
 played has Otto today beautifully Mozart sonatas
- c. *Gespielt hat Otto heute eine charmante Mozart-Sonate wunderbar*
 played has Otto today a charming Mozart sonata beautifully
- d. *Gespielt hat Otto heute einige Mozart-Sonaten wunderbar*
 played has she today several Mozart sonatas beautifully

The data in (28a,b) show that incorporation of indefinites in German is not just pseudo-incorporation. According to Massam's (2001) seminal syntactic analysis, the following three properties of pseudo-incorporation are crucial: (i) the element in question is an NP and not a DP, (ii) the NP is the first element to be discharged by the predicate, and (iii) this NP stays in place since it does not have to move for case reasons, being just an NP. Thus, the pseudo-incorporated NP is a regular syntactic sister of V building with V the constituent V'. However, the ungrammaticality of the examples in (28a,b) cannot be due to the fact that the indefinite NPs do not move. We have seen that the movement of V to the prefield does not presuppose scrambling of its complements. Rather, (28a,b) constitute evidence that in German indefinite NPs which follow a manner adverbial are part of the predicate in syntax. A syntactically incorporated NP prohibits the predicate from behaving independently of this NP.

In passing we observe that, unsurprisingly, the indefinite nominals which the Duden (2009) counts as obligatorily belonging to the verbal complex have to be adjacent to the predicate, (29a,c), and we recall (cf. (7c,f)) that they cannot be left behind by movement of the predicate to the prefield, which is confirmed by (29b,d).⁷

- (29) a. *weil er gerne (mit Maria) Rad (*mit Maria) fährt*
 because he gladly with Maria bicycle with Maria rides
 'because he likes to ride bicycles (together with Maria)'
- b. **Gefahren ist er heute Rad*
 ridden has he today bicycle
 intended: 'He rode a bicycle today.'
- c. *weil er (zum Glück) einen Halt in Konstanz (*zum Glück) machte*
 since he luckily a stop in Konstanz luckily made
 'since he (luckily) made a stop in Konstanz'
- d. **Gemacht hat er zum Glück einen Halt in Konstanz*
 made has he luckily a stop in Konstanz

Let us now consider the interplay of sentence negation and indefinites. (30a,b) demonstrate that the indefinites which the Duden (2009) takes to be incorporated and which do appear without an article may follow sentence negation *nicht*. (30c,d) show that this also holds for non-specific plural indefinites without an article which seem to be quite regular arguments of their verbs.

- (30) a. *Er wird heute Abend nicht Karten spielen*
 he will tonight not cards play.INF
- b. *Er ist gestern nicht Rad gefahren*
 he has yesterday not bicycle ridden

⁷ In Zeller's (2001) approach, in which the distinction between NPs and DPs plays an important role, it is proposed that, for example, *Rad fahren* has the structure of a regular VP: [_{VP} [_{NP} N⁰] V⁰]. In order to capture that with respect to certain processes *Rad fahren* forms a unit, an additional principle of reanalysis is invoked, which allows such nouns (and particles, for that matter) when adjacent to the verb to be reanalysed as being adjoined to the verb.

It is clear that under this 'VP-assumption' the ungrammaticality of examples like (29b,d) cannot be accounted for, given that examples like in (14) or (17) are perfect.

- c. *Otto möchte heute nicht Hemden bügeln*
 Otto wants today not shirts to-iron
 ‘Otto does not want to iron any shirts today.’
- d. *Dieses Mal will Otto nicht Mozart-Sonaten spielen*
 this time wants she not Mozart sonatas to-play
 ‘This time Otto does not want to play Mozart sonatas.’

We can observe that the noun-verb combinations differ as to how natural they sound in this construction.

- (31) a. *Er will heute nicht Kartoffeln schälen*
 he wants today not potatoes to-peel
 ‘He does not want to peel potatoes today.’
- b. (?)*Er will heute nicht Birnen schälen*
 he wants today not pears to-peel
 ‘He does not want to peel pears today.’

Whereas (31a) immediately sounds good, one needs some time to approve of (31b). The reason seems to be that peeling potatoes is a typical activity in contrast to peeling pears. (31b) becomes better when one imagines a world or a situation in which peeling pears is more or less a common practice. The same applies to the following pair, in which the verbs differ.

- (32) a. *Maria muss heute nicht Blumen gießen*
 Maria has today not flowers to-water
 ‘Maria does not have to water any flowers today.’
- b. (?)*Maria muss heute nicht Blumen beobachten*
 Maria has today not flowers to-watch
 ‘Maria does not have to watch any flowers today.’

Since the ordering ‘*nicht*_{sentence negation}—NP_{plural}’ can be taken as evidence for the incorporated status of the NP, data like (31) and (32) reveal that for German NP-incorporation the same holds as for pseudo-incorporation in different languages (cf., e.g., Booij 2008; Dayal 2011): in a given context, the combination ‘verb and (pseudo-)incorporated NP’ denotes a typical activity, i.e., the NP can be considered to yield a proto-typical argument of the activity denoted by V. It is not surprising that German syntactic NP-incorporation should obey the

semantic restrictions imposed on pseudo-incorporation given that syntactic incorporation will induce semantic incorporation.

A further remark regarding the data in (31) and (32) is in order. The adequateness of a statement always depends on the context, and, therefore, in a neutral context (33a) is less marked than (33b).⁸

(33) a. *Heute Abend will ich nicht essen*
 tonight want I not to-eat
 'Tonight, I do not want to eat.'

b. *Heute Abend will ich nicht predigen*
 tonight want I not to-preach
 'Tonight, I do not want to preach.'

However, it remains true that 'out of the blue' (31b) and (32b) are particularly strongly marked; compare (34a) and (34b). In a neutral context, (34a) sounds much more natural than (34b) (= (31b)).

(34) a. *Er will heute keine Birnen schälen*
 he wants today no pears to-peel
 'He does not want to peel any pears today.'

b. *Er will heute nicht Birnen schälen*
 he wants today not pears to-peel
 'He does not want to peel pears today.'

If the sequence '*nicht*_{sentence negation} — NP_{plural}' presupposes the incorporation of the NP_{plural}, we expect that in this construction the verb alone cannot be moved to the prefield. This expectation is born out, (35a,c). To attain a grammatical variant with the positioning of only the predicate in the prefield the form with the negated article *kein* has to be used, (35b,d). As demonstrated above in (23d), if sentence negation is expressed by the form '*kein N*' this nominal phrase does not have to be incorporated. (However, it can be, cf. section 4.2; thus, in this regard it behaves like the non-negated form '*ein N*')

(35) a. **Schälen will er heute nicht Kartoffeln*
 to-peel wants he today not potatoes

⁸ I am grateful to Irene Heim for pointing these facts out to me.

- b. *Schälen will er heute keine Kartoffeln*
 to-peel wants he today no potatoes
 'He does not want to peel any potatoes today.'
- c. **Gießen muss Maria heute nicht Blumen*
 to-water has Maria today not flowers
- d. *Gießen muss Maria heute keine Blumen*
 to-water has Maria today no flowers
 'Maria does not have to water any flowers today.'

Let's briefly address a property of incorporated NPs worth mentioning. As can be seen in many examples above, incorporated NPs in German are marked for case and number. Note, however, that this fact is not that surprising given that in German attributive adjectives are marked for case and number and the predicative nominal phrases of a copular construction are marked for number. This shows that in German predicative elements in a non-argument position can be marked for case and number. Incorporated NPs are predicates, which, obviously, are in a non-argument position.

To conclude this section, let us mention a consequence for the verbs' subcategorisation properties. From the thesis of this section it follows that German verbs which take a nominal argument do not necessarily subcategorise for a DP but just for a nominal argument. This requirement can also be fulfilled by an NP. We may assume that not being a DP, such an NP has to be incorporated into the predicate which triggers the binding of the variable.⁹ For the semantics, the incorporation is only acceptable if the constructed complex predicate yields a property which is just short of being lexicalised, i.e., the NP-verb sequence has to denote a kind of typical activity in the context of use. Arguably, an indefinite which is not integrated but is a regular sentence constituent is a DP. We can assume that singular indefinites and bare plurals may have an empty D-head which triggers the (dynamic) existential binding of the 'external' variable of the noun.

⁹ Cf. Longobardi (2000, 581): "DPs can be arguments, NPs cannot."

4 Some Phenomena Revisited

In this section, four more or less well-known phenomena of German syntax will be discussed which, I believe, come closer to receiving an explanation under the assumption that in German there exists the phenomenon of NP-incorporation. Furthermore, the discussion of these phenomena will shed further light on NP-incorporation.

4.1 *Parenthetical Niches*

Let us start with the varying status of grammaticality of the sentences in (36) under standard intonation (i.e. scrambling of the manner adverbial under emphatic stress did not happen).

- (36) a. *Er hat ein Lied —so Maria— zu leise gesungen*
 he has a song according.to Maria too quietly sung
 ‘According to Maria, he sung a song too quietly.’
- b. **Er hat zu leise ein Lied —so Maria— gesungen*
 he has too quietly a song according.to Maria sung
- c. *Er möchte heute keine Lieder —so Maria— singen*
 he wants today no songs according.to Maria to-sing
 ‘According to Maria, he does not want to sing any songs today.’
- d. **Er möchte heute nicht Lieder —so Maria— singen*
 he wants today not songs according.to Maria to-sing

In a German clause, following each sentence constituent there is a so-called parenthetical niche, i.e., a position which can host a parenthetical. Interestingly, such a niche is not available following the indefinites in (36b,d). These indefinites occur after a manner adverbial and sentence negation *nicht*, respectively. The idea immediately comes to mind that the reason for the lack of such a niche is that the indefinites in (36b,d) are part of the complex predicate and that inside the complex predicate there are no parenthetical niches. Note that following a resultative or an integrated verbal form, we also do not find a parenthetical niche:

- (37) a. *Max hat alles* (—*so* *Maria*—) *unter den Flügel*
 Max has everything according.to Maria below the piano
 (*—*so* *Maria*—) *gelegt*
 according.to Maria put
 ‘(According to Maria,) Max put everything under the piano.’
- b. *weil Max das Buch* (—*übrigens freiwillig*—) *gelesen* (*—*übrigens*
 since Max the book by.the.way voluntarily read by.the.way
freiwillig—) *hat*
 voluntarily has
 ‘since Max read the book (—he did so voluntarily, by the way)’

The idea that inside the complex predicate there should be no parenthetical niches makes some sense. The building of the complex predicate involves the construction of a syntactically and semantically very close unit which cannot be interrupted by external material.

4.2 *The So-Called DP-PP-Split Construction*

The next phenomenon I would like to consider concerns the phenomenon of the so-called DP-PP-split, (38) (cf., e.g., Müller 1991; Pafel 1995; De Kuthy 2002; Schmellentin 2006).

- (38) a. *Über Mexiko¹ hat Max heute drei Bücher¹ gekauft*
 about Mexico has Max today three books bought
 ‘Today Max bought three books about Mexico.’
- b. *Von Peter¹ hat Maria einen Freund¹ / Freunde¹ begrüßt*
 of Peter has Maria a friend / friends greeted
 ‘Maria has greeted a friend / friends of Peter.’

With the DP-PP-split construction, it seems that a PP-constituent which originates inside a DP is moved to the left. However, note that the construction demands that the DP be adjacent to the verbal complex:

- (39) a. **Von Peter¹ hat heute ein Freund¹ Maria begrüßt*
 of Peter has today a friend.nom Maria.acc greeted
 intended: ‘Today a friend of Peter greeted Maria.’

- b. **Von Peter¹ hat wer einem Kollegen¹ Berlin gezeigt*
of Peter has someone a colleague Berlin shown
intended: 'Someone has shown a colleague of Peter Berlin.'

Thus, one cannot just postulate that the DP-PP-split involves movement of a PP out of a (non-scrambled) DP, i.e., a straightforward movement analysis cannot account for this construction. Therefore, Müller (1991) makes a more sophisticated proposal, which is adopted by Schmellentin (2006). Müller assumes that in the standard case a DP is a barrier for movement. Hence, in the DP-PP-split the DP must somehow have lost its barrier status. According to Müller, the loss of the barrier status is due to a process of abstract incorporation. He assumes that at the abstract level LF the nominal head of a DP may move to the verb, thereby cancelling the barrierhood of the DP. Abstract incorporation is only possible if certain structural prerequisites are fulfilled. These come down to the conditions that the DP must be a direct object or the subject of a verb which takes *sein* as the auxiliary (an 'ergative' subject) and that the DP must occur in its base position. Furthermore, there is an important lexical restriction which Müller observes; cf. the contrasts in (40). Müller does not try to explain the fact that the DP-PP-split construction is possible with some noun-verb combinations but not with others, however, he observes that the construction presupposes a tight relation between V and N, i.e., the construction is only possible when abstract incorporation results in a 'natural predicate'. This tight relation is, for example, assumed to be given between *(to) buy* and *book*, but not, at least not in neutral contexts, between *(to) photograph* and *book*. We will come back to the lexical restriction on the DP-PP-split construction.

- (40) a. *Über Richard Wagner hat Max heute ein Buch gekauft*
about Richard Wagner has Max today a book bought
'Max bought a book about Richard Wagner today.'
- b. **Über Richard Wagner hat Max heute ein Buch fotografiert*
about Richard Wagner has Max today a book photographed
- c. *Über die Antarktis hat Anna schon viele Filme gesehen*
about the Antarctic has Anna already many films seen
'Anna has already seen many films about the Antarctic.'
- d. **Über die Antarktis hat Anna schon viele Bücher gesehen*
about the Antarctic has Anna already many books seen

That Müller's theory of abstract incorporation has its shortcomings is demonstrated by the following two observations. First, as shown by (41), the split construction is not possible with just any old DP.¹⁰

10 The abstract incorporation approach would try to account for the deviance of the examples in (41) by the claim that the DPs are not in their base positions, i.e., it is assumed that in the unmarked case definite and quantified DPs have to leave the vP. Schmellentin (2006, 81) discusses (i) to show that a definite DP may allow the split. This definite DP is contrastively focussed. Schmellentin assumes that such a DP does not leave the vP.

- (i) *Über den Klimawandel hat Otto bloß den Artikel im ANzeiger gelesen*
 about the climate.change has Otto only the article in.the Anzeiger read
(und nicht den in der Abendzeitung)
 and not the.one in the Abendzeitung
 'Otto has only read the article about the climate change in the Anzeiger (and not the one in the Abendzeitung).'

The sentence is fine, although, I think, one should also represent the necessary accent on the constituent in the prefield. Yet, I doubt that the example in (i) is an instance of the split construction. Note that one also gets a well-formed example when the contrastively focussed definite is scrambled. This is unexpected under Schmellentin's (2006, 81) assumptions if in fact this were a split construction.

- (ii) *Über den KLImawandel konnte er bloß den Artikel im ANzeiger*
 about the climate.change could he only the article in.the Anzeiger
heute Morgen lesen
 this morning read
 'He could only read the article about the climate change in the Anzeiger this morning.'

Furthermore, the constituent in the prefield is interpreted as a frame setting topic, i.e., the meaning of, e.g., (i) can be paraphrased as 'As concerns the climate change, Otto has only read the article in the Anzeiger'. So it is reasonable to assume that in (i) and (ii), the *über*-phrase in the prefield and the direct object are just two independent sentence constituents.

The interpretation of the preposed PP as a frame topic is also to be found in (iii).

- (iii) *Von FRANKreich haben die Touristen nur PaRIS gesehen*
 of France have the tourists only Paris seen
 'Of France the tourists have only seen Paris.'

It is clear that in (iii) *von Frankreich* is an independent sentence constituent.

Thus, the interpretation of the PPs occurring in the examples of the text as frame topics should be avoided.

- (41) **Von Peter hat Maria den Freund /fast jeden Freund /die meisten
of Peter has Maria the friend /nearly every friend /most
Freunde begrüßt
friends greeted*

Second, the split is not possible with an adjunct PP, (42); only an argument PP may participate in this construction.

- (42) **Aus den 70er Jahren hat Max heute ein Buch gekauft
from the '70s has Max today a book bought
intended: 'Today, Max has bought a book from the '70s.'*

If the split construction just involved movement of a PP out of a non-scrambled accusative DP, one would expect (41) and (42) to be grammatical.

Given the perspective of the present article, I would like to take seriously the observation that the split construction is possible only if the constituent which remains in the middle field is an indefinite nominal which occurs adjacent to the predicate of the clause. Thus, the thesis in (43) will be pursued.

- (43) The split construction is only possible if the PP is licensed by a noun which is the head of an incorporated NP, i.e., the PP of the split construction is actually an argument of the complex predicate of the clause.

The facts about the split construction observed so far are in line with this thesis. This also holds for the finding that an adjunct-PP cannot enter the construction. The formation of a complex predicate and the unification of the theta-grams of its parts typically co-occur (see for a clarification section 5). Thus, the arguments of the predicates are inherited by the complex predicate. However, the information that a predicate participating in the complex predicate may be accompanied by a certain adjunct is not inherited. This makes sense; the newly formed predicate has its own regularities regarding adjuncts.

Also in line with (43) is the fact that the construction is only possible if the object follows a manner adverbial, (44a), it is not available if the object occurs to the left of a manner adverbial, (44b):

- (44) a. *Von Peter¹ hat Maria lauthals einen Freund¹
of Peter has Maria at.the.top.of.her.voice a friend
/Freunde¹ begrüßt
/ friends greeted
'Maria greeted a friend / friends of Peter at the top of her voice.'*

- b. **Von Peter¹ hat Maria einen Freund¹ / Freunde¹*
of Peter has Maria a friend / friends
lauthals begrüßt
at.the.top.of.her.voice greeted

Note that for those who assume, contrary to our assumptions, that manner adverbials are base-generated above the VP it would be uneconomic to blame the ungrammaticality of (44b) on a freezing effect induced by scrambling. In the likewise deviant (39a), the PP originates inside a non-scrambled subject, and in (39b) inside a non-scrambled object.

The PP of the split construction may also appear in the middle field, (45). Under the NP-incorporation thesis, the PP in the NP-PP-split construction is not an argument of the nominal phrase, but is an argument of the complex predicate. This means that it is a regular sentence constituent. Thus, we expect that it can also appear in the middle field. In a movement account, this is less expected since this account would ascribe properties of \bar{A} -movement to the movement of the PP, and \bar{A} -movement is not supposed to target the middle field.

- (45) a. *Anna hat über die Antarktis heute begeistert eine*
Anna has about the Antarctic today enthusiastically a
Sendung verfolgt
programme watched
‘Anna watched a programme about the Antarctic enthusiastically to-
day.’
- b. *Er hat über Wagner heute ein Buch gekauft*
he has about Wagner today a book bought

Furthermore, we expect that the nominal part of the split construction may fill the prefield. The integrated NP and the PP are independent of each other, and we know that the left branches of a complex predicate are possible fillers of the prefield.

- (46) *Ein Buch hat er heute über Wagner gekauft*
a book has he today about Wagner bought

In addition to the data in (41), the fact that in the split construction the main verb cannot be moved to the prefield without the indefinite constitutes the most crucial evidence in favour of (43).

- (47) a. **Begrüßt hat sie von Peter vorher einen Freund*
greeted has she of Peter before a friend
- b. *Einen Freund begrüßt hat sie von Peter vorher*
a friend greeted has she of Peter before
'She greeted a friend of Peter before.'
- c. **Gekauft hat er über Wagner heute ein Buch*
bought has he about Wagner today a book
- d. *Ein Buch gekauft hat er über Wagner heute*
a book bought has he about Wagner today
'He bought a book about Wagner today.'

The data in (47) cannot be accounted for in the abstract incorporation approach. The well-formedness of (46) shows that abstract incorporation would have to apply after reconstruction of the movement to the prefield. However, after this reconstruction there would be no difference between the good and the bad examples in (47) which the abstract incorporation approach could exploit for an explanation.

We may note here that the split construction is also possible when the indefinite is negated.

- (48) a. *Über Wagner möchte er heute kein Buch kaufen*
about Wagner wants he today no book to-buy
'A book about Wagner he does not want to buy today.'
- b. *Er möchte kein Buch über Wagner heute kaufen*
he wants no book about Wagner today to-buy
- c. **Über Wagner möchte er kein Buch heute kaufen.*

The grammaticality of (48a) indicates that *kein/e* NP_{Sg/Pl} may belong to the complex predicate. The form *kein/e* NP_{Sg/Pl} may also appear outside of the complex predicate; cf. (48b). However, if it does, the option for the split construction is lost; cf. (48c).

Let us now come back to the lexical restriction imposed on the split construction observed by Müller (1991) and illustrated in (40). Some interesting remarks on this issue can be found in Schmellentin (2006). Her central ideas are as follows: Nouns like *Buch* may have an argument structure. The argu-

ment structure must be activated, though. It is not present by default. A verb which possesses appropriate semantic features is capable of doing so. Thus, if the noun combines with such a verb, it becomes a relational noun with an argument structure. Then, the split construction becomes possible if the other conditions for the construction which Schmellentin assumes are fulfilled. Under this view, the examples in (40) become understandable. The verb *kaufen* is able to activate the argument structure of the noun *Buch*, but not the verb *photographieren*; the verb *sehen* can activate the argument structure of the noun *Film* but not that of the noun *Buch*.

Note that Schmellentin's (2006) explanation for the lexical restrictions on the split construction fits rather nicely with our analysis of the construction. In our view, the split construction presupposes that the PP is an argument of the complex predicate. The verb of an NP-verb combination which denotes a typical activity activates the argument structure of the noun. The complex predicate inherits the arguments of the indefinite NP. Thus, a PP which is licensed by a theta-role of the noun of such an NP-verb combination can figure in this construction.

4.3 *Subjects in a V-Projection Occurring in the Prefield*

The next phenomenon to be discussed upon which the thesis of NP-incorporation might shed some light concerns a curious fact of German syntax. Under very special conditions, the subject of a non-ergative verb may appear as part of a V-projection in the prefield: the subject must be a non-specific indefinite, (49a,b), and if an object appears in the clause, the object also has to be positioned in the prefield and has to be non-specific too, (49c,d). In contrast, the subject of an ergative verb appearing in a V-projection in the prefield is not subject to any of these restrictions, (49e).

- (49) a. *Ein Linguist gesprochen hat hier noch nie*
 a linguist spoken has here yet never
 'No linguist has ever spoken here.'
- b. **Dieser berühmte Linguist gesprochen hat hier noch nie*
 this famous linguist spoken has here yet never
 intended: 'This famous linguist has not spoken yet here.'
- c. **Ein Linguist t₁ gehalten hat [einen Vortrag / den besten Vortrag]₁*
 a linguist given has a talk /the best talk

- d. *Ein Linguist einen Vortrag / *den besten Vortrag gehalten hat hier*
 a linguist a talk / the best talk given has here
noch nie
 yet never
 'No linguist has ever given a talk / *the best talk here.'
- e. *Eine / die geeignete Taktik eingefallen ist dem Trainer heute*
 an / the appropriate tactic occurred is the coach.dat this
Nachmittag
 afternoon
 'A / the appropriate tactic occurred to the coach this afternoon.'

In light of the data in (49), it is tempting to speculate that the subject of a non-ergative verb may only appear inside a V-projection in the prefield if it is incorporated into the main predicate, i.e., if it forms a complex predicate with the verb. Under this assumption, (49b) is bad because a referential definite DP cannot be incorporated. (49c) is bad because NP-incorporation of the subject cannot be present since the trace of the scrambled object stands between the transitive subject and the verb. The variant of (49d) with the definite object is ungrammatical, since the definite object cannot be NP-incorporated and, as a consequence, the transitive subject cannot be incorporated either. The variant with the indefinite object is possible; here the non-specific indefinite object and the indefinite subject are incorporated. In principle, nothing in our approach prevents NP-incorporating of more than one indefinite.

4.4 *Weak Definites*

Finally I would like to mention that in German, 'weak definites' (Carlson, Sussman, Klein & Tanenhaus 2006) seem to occupy the same position as incorporated indefinites. Consider the following examples:

- (50) a. *Hans hat gestern intensiv die Zeitung gelesen*
 Hans has yesterday intensively the newspaper read
 'Hans read the newspaper intensively yesterday.'
- b. *Hans hat gestern die Zeitung intensiv gelesen*
 Hans has yesterday the newspaper intensively read
- c. *Hans hat nicht das Krankenhaus aufgesucht*
 Hans has not the hospital visited
 'Hans did not go to the hospital.'

- d. *Hans hat das Krankenhaus nicht aufgesucht*
 Hans has the hospital not went-to

(50a) has a ‘weak’ reading; this means for example that the sentence allows an interpretation according to which Hans could have read different newspapers although *die Zeitung* is in the singular. In this example *die Zeitung* follows a manner adverbial. In (50b) *die Zeitung* precedes the manner adverbial, and it no longer has a weak reading, i.e. (50b) is not appropriate to describe a situation in which Hans has read more than one newspaper. In (50c) *das Krankenhaus* follows sentence negation. (50c) has a weak reading; it means that Hans did not go to any hospital. If *das Krankenhaus* precedes sentence negation as in (50d), the weak reading of the definite is lost. The sentence means that Hans did not go to a specific hospital.

Carlson et al. (2006) observe that in English, weak definites share different properties with bare singulars. It is therefore of some interest that in German weak definites seem to be incorporated like the indefinite NPs studied in the present paper. This is confirmed by our ‘verb-preposing’ test.

- (51) a. *Aufgesucht hat Hans gestern das Krankenhaus*
 went-to has Hans yesterday the hospital
 ‘Hans went to the hospital yesterday.’
- b. *Das Krankenhaus aufgesucht hat Hans gestern*
 the hospital went-to has Hans yesterday
 ‘Hans went to the hospital yesterday.’

(51a) does not have a weak reading, i.e., the sentence only has the reading which refers to a specific hospital. In contrast, (51b) has the weak reading; it can mean that Hans went to hospital without referring to a specific hospital.

In the literature on the semantics of weak definites one finds proposals which shift their denotations to property-denoting before they are combined with the incorporating version of the verb, e.g., Schwarz (2014), and Klein, Gegg-Harrison, Sussman, Carlson & Tanenhaus (2008, 8) state “the hypothesis we would like to pursue is that the structures in English and other languages are a type of incorporation structure, at least in the semantically relevant sense.” The data in (50) and (51) suggest that in German, weak definites are also syntactically incorporated. See also Dayal (this volume) for arguments that English weak indefinites are pseudo-incorporated.

5 The Positioning of the Arguments of X⁰ of an Incorporated XP

The discussion in sections 1 and 4.2 demonstrated that NP-incorporation allows the external realisation of the PP-argument of the nominal when the valence of the nominal is inherited by the complex predicate. However, NP-incorporation does not enforce the external realisation of the argument of the nominal. This was already touched upon regarding the Light Verb constructions; cf. (6). Internally realised PP-arguments of an incorporated NP can also be seen in (52).

- (52) *Maria hat lauthals einen Freund / Freunde von Peter*
 Maria has at.the.top.of.her.voice a friend / friends of Peter
begrüßt
 greeted
 'Maria greeted a friend / friends of Peter loudly.'

The same can be shown to be true for a PP-argument of an AP appearing as the predicate of a copular construction. Let us first note that there is evidence that the predicative AP of a copular construction does belong to the verbal complex in the right sentence bracket (cf., however, for a different view Flösch 2007). Under normal intonation sentence negation has to precede the predicative AP, (53a), the AP cannot be scrambled (53b), and the subcategorising verb cannot be moved to the prefield without the AP, (53c).

- (53) a. *weil Hans (nicht) reich (*nicht) bleiben wird*
 since Hans not rich not stay will
 'since Hans will (not) stay rich'
- b. *weil Hans reich (*auch in Zukunft) bleiben wird*
 since Hans rich also in future stay will
 'since Hans will stay rich'
- c. **Bleiben wird Hans auch in Zukunft reich*
 stay will Hans also in future rich
 intended: 'Hans will stay rich also in future.'

(54a,b) demonstrate that a PP-argument of a predicative adjective can be realised internally or externally. However, a DP-argument of an incorporated adjective has to be realised externally, (54c,d).

- (54) a. *Das hat ihn (nicht) stolz auf seinen Sohn gemacht*
 this has him not proud of his son made
 'That did (not) make him proud of his son.'
- b. *Das hat ihn auf seinen Sohn (nicht) stolz gemacht*
 this has him of his son not proud made
 'That did (not) make him proud of his son.'
- c. *weil sie ihrem Mann (nicht) treu ist*
 since she her.dat husband not faithful is
 'since she is not faithful to her husband'
- d. **weil sie (nicht) treu ihrem Mann ist*
 since she not faithful her.dat husband is

A noun standardly licenses its arguments to the right and an adjective may license a PP-argument to the right as well. Thus, it seems that these circumstances are exploited in (6), (52) and (54a), where the arguments of the noun and the adjective are realized inside the complex predicate.

The DP-arguments of the head of an incorporated NP or of an incorporated PP have to occur internally, i.e. inside the complex predicate. These DPs need their case licensed by their subcategorising elements and N and P may only licence case to the right.

- (55) a. *Maria hat lauthals einen Freund / Freunde Peters*
 Maria has at.the.top.of.her.voice a friend / friends Peter.gen
begrüßt
 greeted
 'Maria greeted a friend / Peter's friends at the top of her voice.'
- b. **Maria hat Peters lautals einen Freund / Freunde*
 Maria has Peter.gen at.the.top.of.her.voice a friend / friends
begrüßt
 greeted
- c. *Paul hat die Sachen (nicht) unter das Klavier gelegt*
 Paul has the things not under the piano put
 'Paul did (not) put the things under the piano.'

- d. **Paul hat die Sachen das Klavier (nicht) unter gelegt*
 Paul has the things the piano not under put

The canonical licensing direction of an adjective in German is to the left. This can be recognized by the fact that an adjective in German licenses a DP-argument to the left. Thus, such an argument cannot occur inside the verbal complex, cf. (54c,d). However, an adjective may license its PP-argument to the right. This accounts for the option realised in (54a). Although not crucial for the present concerns, let me mention that I assume that the PP-argument in (54a) is base generated in its surface position. Thus what might be called ‘extraposition’ is not the result of movement but of base generation (cf. Haider 2010).

The data in (52), (54) and (55) suggest that the arguments which are realised inside the verbal complex are not arguments of the complex predicate but remain arguments of the heads of the incorporated NPs, APs or PPs. Importantly, there exists no incorporated VP, in which arguments could be realised internally. This can be seen in the following example.

- (56) *weil Max sich (damit) beschäftigt (*damit) haben (*damit) wird*
 since Max himself with.it concerned with.it have with.it will
 (damit)
 with.it
 ‘since Max will have kept himself busy (with it)’

The PP-argument of the verb *beschäftigt* can only be realised externally, either to the left in the middle field or ‘extraposed’ following the whole verbal complex. Again, I assume that the position of the extraposed constituent is a base generated position. This fact indicates that the incorporation of a verb necessarily triggers the unification of its complete θ -grid with the θ -grid of the governing verb. In contrast, the incorporation of an A, a N or a P allows that these heads manage their internal arguments by themselves. It are only their external arguments which necessarily have to be unified with the θ -grids of the selecting verbs. I consider the reason for this difference between incorporated V’s on the one hand and incorporated A’s, N’s or P’s on the other hand to lie in the fact that only in case of incorporation of V there is full categorical identity between the incorporated element and the incorporating one.

Even though the standard licensing direction of a German adjective is to the left, an incorporated adjective cannot license an argument to its left inside the verbal complex. Such an argument has to occur externally, (57). I speculate that

the reason is that any argument position of an incorporated head whose filler is supposed to be licensed to the left necessarily is unified with the θ -grid of the incorporating verb, whose canonical licensing direction is to the left.

- (57) *weil sie (*nicht) ihrem Mann (nicht) treu ist*
 since she not her.dat husband not faithful is

We expect the same to be true for an incorporated verb: Its non-incorporated arguments which are licensed to the left may not occur inside the verbal complex. This is demonstrated by the examples (26c,d,e) and by (58). (58a) comes without any presupposition. Here, we have sentence negation. In contrast, in (58b), in which *nicht* precedes the definite object, *nicht* can only be understood as constituent negation, i.e., the reading of (58b) can be paraphrased as ‘it was not the book that Max read (, he read something else)’.

- (58) a. *Max hat das Buch nicht gelesen*
 Max has the book not read
 ‘Max did not read the book.’
- b. *Max hat nicht das Buch gelesen*
 Max has not the book read
 ‘It was not the book that Max read.’

So, we observe that no incorporated head may license an argument to the left inside the verbal complex. Thus, there are two situations in which the unification of the argument positions of heads occurring in the verbal complex is unavoidable. The first one is when the governing verb incorporates another verb; the second one is when an incorporated A is going to licence an argument to the left.

There remains a big puzzle. It is constituted by an example like the following:

- (59) *Das Buch gelesen hat Max nicht*
 the book read has Max not

(59) has only the reading with sentence negation. Thus, (58b) cannot be thought to be the underlying structure of (59). As just observed, (58b) can only be understood with *nicht* as constituent negation.

Haider (1990) discusses examples like (58b) and (59). He assumes that a verbal projection counts as a maximal projection in the prefield but that its trace in the base position counts as a head-element. This allows that *nicht* in

(59) is interpreted as sentence negation since the trace of the constituent in the prefield is inside the verbal complex.

This account seems somehow to be ad hoc. Unfortunately we do not much better. Given our hypotheses we have to say that only an incorporated verb which on the surface is positioned inside the verbal complex, i.e. which on the surface occupies a position between the middle field and the postfield, has to realise all its arguments externally. A dislocated incorporated verb is free from this strict requirement; it only has to realise an external argument which is not incorporated outside its own projection. At this point I am not in a position to answer the question why there should exist this surface condition.

6 Summary

The present contribution argues that in German an indefinite NP specifying an argument position of the verb is part of the complex predicate. An indefinite DP (or any other DP) cannot be incorporated. The combination of 'NP + V' in German has similarities to the so called pseudo-incorporation constructions of different languages. However, whereas the studies of pseudo-incorporation constructions often either remain reluctant about the syntax of pseudo-incorporation or assume that the pseudo-incorporated NP is generated as a complement of the verb which is never moved from that position (Masam 2001), the thesis of the present paper implies that the very close semantic relationship between an NP and its verb is mirrored by a very close syntactic junction of these two items.

In addition to indefinite NPs, APs and PPs of resultative and copular constructions are argued to be part of the complex predicate in German. Thus, the underlying thesis of the paper is that German does not tolerate predicative XPs, i.e., XPs which denote properties, in argument positions.

The crucial diagnostics for the status of an XP as being part of the complex predicate have been the following:

- Under normal intonation, in the middle field the XP has to follow any manner adverbial.
- If its surface form allows it (i.e., the XP does not begin with a so-called indefinite article), the XP may be preceded by sentence negation expressed by *nicht*.
- In a verb-second clause, [V] alone cannot be positioned in the prefield; only [XP V] can.

The following properties of incorporated XPs have been found:

- Incorporated XPs may be moved to the prefield but they may not be scrambled.
- More than one XP may be incorporated. The ‘first’ incorporated NP has to relate to the lowest ranked argument position of the incorporating predicate. No argument position may be skipped.
- The realisation of an argument of a head X^0 of an incorporated XP, $X^0 \neq V^0$, is possible inside the complex predicate if X^0 licenses the argument to the right.
- Semantics approves the incorporation of XP into the complex predicate only if the resulting predicate expresses a typical activity.

Furthermore, some notorious phenomena of German syntax have been discussed, among them the so-called DP-PP-split and the appearance of non-ergative subjects inside a verb-projection in the prefield. It was argued that these phenomena become understandable once one realises that they crucially involve the incorporation of a nominal phrase.

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