

Split NPs

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1. Introduction.*

Discontinuous phrases have received much attention in the literature. German is interesting in that it allows the lower part of a noun phrase to be left dislocated. Compare (1a) to (1b):

- (1) (a) Ich habe keine Bücher gelesen.
I have no books read
'I have read no books.'
- (b) Bücher habe ich keine gelesen.
books have I none read
'As for books, I have read none.'

To establish some terminology, I refer to this construction as 'split NP', to the left nominal as 'split-off', and to the right one as 'source'.¹

To get the discussion off the ground, let us point out some basic properties of split NPs. For example, the split-off typically functions as a (contrastive) topic and the source forms a focus. These two parts are related by a "bridge intonation contour", where a rising pitch accent is on the stressed syllable of the split-off and a falling pitch accent on the stressed syllable of the source. For clarity, this is illustrated by rising and falling lines and capitalization in (2a) repeated from (1b). Importantly, the "higher" part of the DP, the source, cannot be moved, (2b), and both nominals do not seem to be syntactically related as the split-off can co-occur with a "complete" source, (2c) (^m = marked for some speakers).

- (2) (a) /Bücher habe ich KEI\ne gelesen.
books have I none read
- (b) * Keine habe ich Bücher gelesen.
none have I books read

* This paper is based on Roehrs (2006a: Chapter 4, Part II, Section 6; 2007), which is modified and extended here. After the completion of this paper, another interesting proposal appeared (Ott 2011). While I am not able to fully integrate this work here, it has led to some minor changes of the present paper, including some corrections.

¹ Some other names for this construction are 'split topicalization' (van Riemsdijk 1989) or 'split-topic' (Diesing 1992). I will be using the term split NP despite the fact that I fully adopt the DP-hypothesis. Also, since the construction is semantically relatively homogenous, I will provide only some translations where the split-off is usually introduced by *As for* ..., ... as exemplified in (1b).

- (c)^m Bücher habe ich nur Romane gelesen.
 books have I only novels read

To capture (2b), one might suggest that the split-off moves out of the source. In contrast to (2a), this would lead to a Left-Branch violation in (2b). However, such a movement account is immediately refuted by (2c) and other types of data. I will propose that split NPs involve the separate base-generation of a predicative split-off and an argumental source in a local domain, the VP. The source moves for case and the split-off undergoes subsequent movement to the left periphery. The semantic value of a proposed null noun in the source is calculated on the basis of the split-off under c-command. In order to constrain the derivations, I will formulate conditions on syntactic licensing and semantic identification. While this discussion focuses on the noun phrase, we will also take certain aspects of the clause into consideration.

The paper is organized as follows: in section 2, I discuss three basic types of accounts illustrating some well-known properties of this construction. We will see that there is evidence for both separate base-generation and movement. Section 3 describes some controversial data. After briefly critiquing some previous accounts, I show in section 4 that these paradoxical features follow from my hybrid approach involving both base-generation and movement. The discussion is then extended to sources embedded in complex nominals. Section 5 briefly addresses some further restrictions and returns to the somewhat marked type of data in (2c). The conclusion summarizes the main findings of this paper.

2. Previous Proposals and Illustrative Data

Ever since the seminal work of Fanselow (1988) and van Riemsdijk (1989), it has been well known that split NPs, that is, discontinuous DPs, have paradoxical properties in German. In what follows, I will divide the proposals of this construction into three basic types (see also van Hoof 2006 and references cited therein): movement out of the in-situ noun phrase, base-generation of two independent noun phrases, and a combination of the two approaches. I provide the basic proposals and concentrate on some of the data, which I give with their original judgments (for detailed arguments against the individual approaches, see the alternative analyses discussed).² In the course of the discussion, we will arrive at an apparent paradox: on the one hand, the source and the split-off seem to stand in a movement relation; on the other, they seem to involve two separate base-generations.

2.1. Movement out of the Noun Phrase

The following two subtypes of proposals argue that split NPs are the result of movement out of the source.

² In section 4.1, I briefly argue against a fourth type of analysis. Although I will accept Fanselow & Ćavar's (2002) empirical generalization, I will argue against their technical instantiation, which involves distributed deletion.

2.1.1. Movement out of NP

Van Riemsdijk (1989: 106) takes southern varieties of German as a point of departure. Assuming that the negative article consists in part of *ein* (for detailed discussion, see Roehrs 2012), we may find two instances of this element here:

- (3) Einen Wagen hat er sich noch keinen leisten können.
 a car has he REFL yet none afford could
 'As for cars, he has not been able to afford one yet.'

Assuming that noun phrases are NPs, van Riemsdijk argues that N' moves to Spec,CP. Since N' is a non-maximal projection in a phrasal position, NP has to be regenerated and a second determiner is introduced. The determiner can be overt or covert, depending on the dialect. Consider the two derivational steps for (3):

- (4) (a) [_{N'} Wagen]_i hat er sich noch [_{NP} keinen t_i] leisten können
 (b) [_{NP} Einen / Ø [_{N'} Wagen]]_i hat er sich noch [_{NP} keinen t_i] leisten können

Van Riemsdijk (1989: 118) further claims that *ein* is the unmarked nominal determiner. Thus, it follows that only *ein* can be introduced (p. 108). There is more evidence for movement of the split-off.

Van Riemsdijk (1989: 122) observes that the linear order of the adjectives in the split NP corresponds to the one without a split. Compare the sequences of adjectives in the unsplit examples in (5) to those in the split ones in (6):³

- (5) (a) ein neues amerikanisches Auto
 a new American car
 'a new American car'
 (b) * ein amerikanisches neues Auto
 a American new car
 (6) (a) Ein amerikanisches Auto kann ich mir kein neues leisten.
 an American car can I REFL no new afford
 (b) * Ein neues Auto kann ich mir kein amerikanisches leisten.
 an new car can I REFL no American afford

He shows the same for complements:

- (7) (a) eine Verurteilung dieses Tatbestandes durch den Präsidenten
 a condemnation of this state of affairs by the president
 'a condemnation of this state of affairs by the president'

³ The judgments in (5b) and (6b) are not uncontroversial and probably too strong (see, Fanselow & Ćavar 2002: 79-80, Ott 2011: 30).

- (b) * eine Verurteilung durch den Präsidenten dieses Tatbestandes
a condemnation by the president of.this state of affairs

- (8)(a) Eine Verurteilung dieses Tatbestandes wäre mir eine durch den
a condemnation of.this state of affairs would-have me one by the
Präsidenten lieber gewesen.
president dearer been
'I would have preferred a condemnation of this state of affairs by the
president.'

- (b) * Eine Verurteilung durch den Präsidenten wäre mir eine dieses
a condemnation by the president would-have me one of.this
Tatbestandes lieber gewesen.
state of affairs dearer been

By relating the (a)-examples to each other and contrasting them to the (b)-examples, we observe that only superficially adjacent elements can move to form the split-off (but see also section 4.2.1).

Finally, van Riemsdijk (1989: 113) shows that split NPs are subject to island constraints:

- (9)(a) Eine Lösung sagt er hat er eine bessere als ich.
a solution says he has he a better (one) than I
- (b) * Eine Lösung kenne ich keinen, der eine bessere hat als ich.
a solution know I noone who a better (one) has than I

The example in (9a) establishes the fact that the split-off can undergo long-distance topicalization. The ungrammaticality in (9b) follows if the relative clause is an island, which is well documented with other movement phenomena (e.g., *wh*-movement).

2.1.2. Movement out of DP

Adopting the DP-hypothesis, Bhatt (1990: 249-250) argues that NPs and DegPs containing adjectives may move out of the source (see also Pafel 1995):

- (10)(a) Autos hat er nur diese schnellen amerikanischen gemocht.
cars has he only these fast American liked
- (b) [_{NP} Autos]_i hat er nur [_{DP} diese [_{DegP} schnellen [_{DegP} amerikanischen [_{NP} t_i]]]
gemocht.
- (11)(a) Amerikanische Autos hat er nur diese schnellen gemocht.
American cars has he only these fast liked
- (b) [_{DegP} Amerikanische [_{NP} Autos]]_i hat er nur [_{DP} diese [_{DegP} schnellen [_{DegP} t_i]]]
gemocht.

Note already here that these examples involve a definite source (see section 3.2). Furthermore, movement out of the noun phrase is not compatible with the specifics of the Impoverishment account in Roehrs (2009, 2012) to explain the strong/weak alternation of adjective endings. Next, I illustrate data that seem to suggest that the source and the split-off are base-generated separately.

2.2. Two Base-generated Noun Phrases

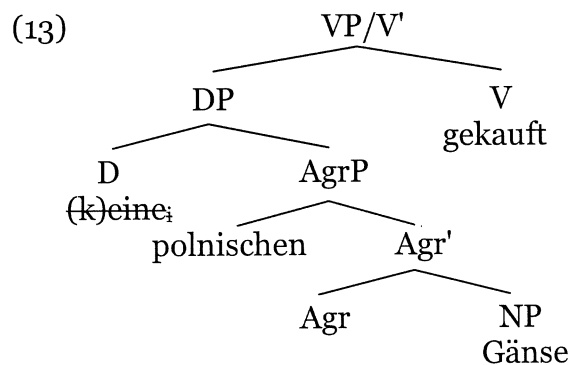
The following two subtypes of proposals argue that split NPs are formed from two noun phrases that do not stand in a movement relation with each other.

2.2.1. Base-generation of Two Noun Phrases in VP

Fanselow (1988: 99) notices that a verb can also be part of the topicalized element. Compare (12a) to (12b):

- (12)(a) Sie hat keine polnischen Gänse gekauft.
 she has no Polish geese bought
 'She has bought no Polish geese.'
- (b) [Polnische Gänse gekauft] hat sie keine.
 Polish geese bought has she none

If movement analyses are correct, then in (12b), the verb and part of the noun phrase must have moved as a constituent. For constituency to hold, one would have to assume that the determiner moves out of the verbal constituent before the remnant VP fronts:



However, while *ein* can, under certain conditions, move out of the VP by itself, it cannot strand the split-off in situ (capitalization indicates stress):

- (14)(a) Er hat gestern EIN frisches Brot gekauft.
 he has yesterday one fresh bread bought
 'He bought one fresh bread yesterday.'
- (b) Er hat EIN(E)S gestern (*frisches Brot) gekauft.
 he has one yesterday fresh bread bought

- (c) EIN(E)S hat er gestern (*frisches Brot) gekauft.
 one has he yesterday fresh bread bought

This raises the question of why the split-off has to move (cf. Haider 1990: 99, 102; Haider 1993: 228; van Riemsdijk 1989: 121). While an answer to this question is available (see section 4.3.1), the problem of movement of a non-constituent remains if an adjective is added to the stranded material; that is, if both the determiner and the adjective form part of the source, (15b):

- (15)(a) Er hat gestern nur EIN frisches deutsches Brot gekauft.
 he has yesterday only one fresh German bread bought
 'He bought only one fresh German bread yesterday.'
- (b) [Deutsches Brot gekauft] hat er gestern nur EIN frisches.
 German bread bought has he yesterday only one fresh

In other words, referring back to the tree diagram in (13), it is clear that a determiner and an adjective do not form a constituent to the exclusion of the lower part of the DP. As such, they cannot vacate the VP together before the latter undergoes movement to Spec,CP. Observing that both (12b) and (15b) are grammatical, we conclude that the split-off cannot have moved out of the source.

As a solution, Fanselow (1988: 103-6) proposes to base-generate two noun phrases in the VP: the source in the Specifier position of VP and the split-off as part of a verbal complex (also Krifka 1998: 101). Moving the NP or the verbal complex V, we derive (16a) and (17a) as (16b) and (17b), respectively:

- (16)(a) [Polnische Gänse] hat sie keine gekauft.
 Polish geese has she none bought
- (b) [_{NP} polnische Gänse]_i hat sie [_{VP} [_{NP} keine *pro*] [_V t_i gekauft]]
- (17)(a) [Polnische Gänse gekauft] hat sie keine.
 Polish geese bought has she none
- (b) [_V [_{NP} polnische Gänse] gekauft]_k hat sie [_{VP} [_{NP} keine *pro*] t_k]

Treating the two noun phrases as independent also accounts for the endings on the adjectives. Although both noun phrases agree in case, gender, and number (but see also section 5), the inflection on the adjective is different when the latter is split off:

- (18)(a) Ich habe keine bunten Blumen gekauft.
 I have no(ST) multi-colored(WK) flowers bought
 'I have bought no multi-colored flowers.'
- (b) Bunte Blumen habe ich keine gekauft.
 multi-colored(ST) flowers have I no(ST) bought

A strong ending on an unprecedented adjective is exactly what we expect if the two noun phrases are independent of each other. Moreover, this inflectional distribution even extends across the same category, such that several instances of adjectives or determiners may have different kinds of endings in the same sentence (cf. Haider 1993: 215 for similar data; (20) is inspired by Tappe 1989, see below). This is illustrated for adjectives in (19b) and determiners in (20):

- (19)(a) Ich habe keine großen bunten Blumen gekauft.
 I have no(ST) big(WK) multi-colored(WK) flowers bought
 'I have bought no big multi-colored flowers.'
- (b) Bunte Blumen habe ich keine großen gekauft.
 multi-colored(ST) flowers have I no(ST) big(WK) bought
- (20) So 'n Auto kann ich mir keins leisten.
 such a car can I REFL none(ST) afford

Let me point out here that separate base-generation of the two nominals is completely compatible with the discussion of inflections in Roehrs (2009, 2012).

2.2.2. Base-generation of One Noun Phrases in VP and the Other in Spec,CP

Haider (1990) argues that one noun phrase is generated in the VP and the other in Spec,CP. One argument in favor of this proposal is that when *welches* 'some' is involved, the split-off is ungrammatical in its apparent base-position, (21a), but grammatical in Spec,CP, (21b):

- (21)(a) Es gibt {ein / *welch(es)} Brot.
 there is a / some bread
 'There is a/some bread.'
- (b) Brot gibt es {ein(e)s / welches}.
 bread is there one / some

If we were to assume movement of the split-off out of the source, then (21a) and (21b) would essentially be the same since both would have (a copy of) the head noun following *welches*. However, the contrast follows straightforwardly if the split-off in (21b) is base-generated in Spec,CP without prior movement out of DP. Note that besides the noun, pre-nominal elements like adjectives cannot follow *welches* either, (22a). In contrast, post-nominal elements are possible, (22b-c):

- (22)(a) * Briefe haben wir nur welche kurze(n) gelesen.
 letters have we only some short read
- (b) Briefe haben wir nur welche von ihm gelesen.
 letters have we only some from him read

- (c) Briefe haben wir nur welche, die kurz waren, gelesen.
 letters have we only some that short were read

Below, I propose that the source contains a null noun. For the cases illustrated here, let us suggest that like certain other pronouns, *welches* can only select a null noun.⁴ While this selectional restriction rules out the presence of adjectives, which are part of AgrP, it allows post-nominal elements to occur, which are either in the complement position of the head noun or adjoined to NP.

2.3. A Combination of Base-generation and Movement out of the Noun Phrase

Adopting the DP-hypothesis, Tappe (1989: 173-4) argues that one DP is merged in Spec,CP and another in a lower position. The DP in Spec,CP has no NP complement and the NP of the lower DP is argued to move into the higher complement position inside Spec,CP. The crucial datum he observes is derived in (23b):

- (23)(a) So*('nen) Wagen kann ich mir keinen leisten
 such a car can I REFL none afford
- (b) [_{DP} so'nen [_{NP} Wagen]_i] kann ich mir [_{DP} keinen t_i] leisten

This proposal leads Tappe to revise standard assumptions about chains. Note though that (23a) is also grammatical when the DP is unsplit or when the negative article is absent: (*keinen*) *so'nen Wagen* '(no) such car'. Now, while the analysis of this type of nominal is admittedly not entirely clear (for some discussion, see Roehrs 2012), the assumption of movement into a complement position should be avoided if at all possible. Before summarizing the paradoxical facts from above, I will provide an example which illustrates the paradox between movement and base-generation within one and the same piece of data.

2.4. A Paradox in and of itself

Van Riemsdijk (1989: 115) discusses reconstruction effects in split NPs. Consider the following example:

- (24) Bücher von einander_i sind uns_i keine bekannt.
 books by one another are to us none known

Concretely, for the anaphor *einander* 'one another' to be bound, the topicalized element must be in a c-commanded position with regard to its antecedent *uns* 'us'. This

⁴ That this might be a selectional restriction can be gleaned from the fact that interrogative *welches* 'which' does allow an overt noun. This is exemplified with an echo question in (i):

- (i) (a) Es gibt welches Brot?
 there is which bread
 'There is which bread?'
 (b) Brot gibt es welches?
 bread is there which

constellation only holds if the topicalized element is below the antecedent, presumably its base position in the VP (for other reconstruction effects, see van Riemsdijk's paper). Recall that split NPs with *welch* 'some' have no grammatical basis in the lower position. Now, if we combine the reconstruction data above with *welch* and if the resulting example is grammatical, then we arrive at a paradox within one and the same datum. The following example, taken from Fanselow (1988: 103), presents a relevant instance:⁵

- (25)(a) Die Männer_i würden niemals (*welche) Bücher über einander_i schreiben.
 the men would never some books about one another write
 'The men would never write (some) books about one another.'
- (b) Bücher über einander_i würden die Männer_i niemals welche schreiben.
 books about one another would the men never some write

In (25b), the noun phrase containing the reciprocal must undergo reconstruction. However, as can be seen in (25a), this is not possible when *welche* is present.

2.5. Summary of the Paradoxical Data

Considering that regeneration to a full phrase inside Spec,CP is a very powerful process, perhaps too powerful, and that the DP-Hypothesis is now widely accepted, I reinterpret van Riemsdijk's data involving two indefinite determiners as an argument for separate base-generation. The first column in table 1 summarizes the properties indicating a movement analysis, the second column shows the properties indicating separate base-generation:

Table 1: Summary of the Different Properties of Split NPs

Movement	Separate Base-generation
sequence of adjectives	two determiners
sequence of complements/modifiers	non-constituents
Binding	unexpected strong/weak endings
Islands	<i>welch</i>

The next section summarizes the type of data that linguists do not seem to agree on.

⁵ As pointed out by Željko Bošković (p.c.), this paradox only holds if reconstruction to a position between the antecedent *die Männer* 'the men' and *welche* can be excluded (also, if reconstruction of this sort were possible, then this would raise the independent question of whether the split-off is actually base-generated in this site). To rule out certain ungrammatical cases, I argue below that both the split-off and the source must be base-generated in VP. Furthermore, note that the split-off cannot contain a null co-indexed pronoun (e.g., [*pro*_i/PRO_i *Bücher von einander*_i]). Presumably, this would make the split-off definite. As we will see below, this is not possible (for more general discussion on PRO in the noun phrase, see also Abney 1987: 89-91).

3. The Most Controversial Data

Three sets of data seem to be most controversial with regard to the relevant grammaticality judgments: the split-off part of the noun phrase can also occur in the Middlefield rather than just in Spec,CP; the source noun phrase can also be definite rather than just indefinite; and split NPs can also be in the inherent cases dative and genitive rather than just accusative and nominative.

3.1. Split NPs in the Middlefield

Grewendorf (1989: 27; 1991: 304) claims that the noun phrase does not have to appear in Spec,CP (see also Oppenrieder 1991: 66). In fact, Fanselow & Ćavar (2002: 67) provide an example with a multiply-split NP. Consider (26a) and (26b), respectively. Interestingly, more complex options seem to be possible with different degrees of acceptability; for instance, in a multiply-split NP, the topicalized element can also involve a verb, (26c):

- (26)(a) weil (Kleider) er (Kleider) immer dreckige anhat
because (clothes) he (clothes) always dirty wears
- (b) Bücher hat er damals interessante in den Osten keine mitnehmen dürfen.
books was he then interesting into the East none bring allowed-to
- (c) ? [Bücher gekauft] habe ich interessante eigentlich keine.
books bought have I interesting actually none

3.2. Indefiniteness of the Source

Van Riemsdijk (1989: 108), Grewendorf (1989: 30), and Haider (1990: 99) observe that the source is always indefinite. Although perhaps not entirely perfect, I believe that split NPs with a definite source are better than *wh*-extraction out of a definite noun phrase (cf. also Bhatt 1990: 250, Fehlisich 1986: 109):

- (27)(a) Ich habe immer nur die interessanten Bücher gelesen.
I have always only the interesting books read
'I have always read only the interesting books.'
- (b) (?) Bücher habe ich immer nur die interessanten gelesen.
books have I always only the interesting read
- (28)(a) Ich habe die Bücher über die Evolution gelesen.
I have the books about the evolution read
'I have read the books about the evolution.'
- (b) Worüber hast du {Ø / *die} Bücher gelesen?
about what have you Ø / the books read

Tappe (1989: 176) provides a similar contrast with possessors:⁶

(29)(a) ? Geld habe ich in Spanien nur Pauls ausgegeben.
 money have I in Spain only Paul's spent

(b) * Über wen wurde Pauls Beschwerde abgelehnt?
 about whom was Paul's complaint turned-down

Kniffka (1996: 65, 126) provides both grammatical and ungrammatical examples with definite sources.

3.3. Dative and Genitive

Some authors claim that split NPs are only grammatical in the nominative and accusative (Fanselow 1988: 102; Tappe 1989: 163). However, I find examples such as the following acceptable (cf. also Bhatt 1990: 245 footnote 13, 248). This is contrasted with extraction out of inherent-case marked noun phrases (Tappe 1989: 163). Compare (30a-b) and (30c):

(30)(a) Also Brot ähnelt das nun wirklich keinem!
 really bread resembles that now really none-DAT

(b) Lehrern hat er keinen geholfen.
 teachers has he none-DAT helped

(c) * Von Paul haben wir den Berichten nicht geglaubt.
 of Paul have we the-DAT reports not believed

Kniffka (1996: 33, 82) provides both constructed and attested examples where the relevant elements are in the oblique cases.

In this section, I have pointed out that there are three sets of data where we find no agreement in the literature. I will return to some of these points below.

4. A New Proposal

In this section, I briefly discuss and critique a fourth type of analysis. Following that, I provide my own hybrid proposal, which involves both separate base-generation and movement. Finally, I discuss cases where the source is embedded in a larger DP.

⁶ For the discussion of sources involving other possessives, see Roehrs (2006a: 288). Note that (29a) also exists in Yiddish, at least in the literary language (from Waletzky 1980: 260):

(i) finf hundert ki melkt er dem grafs (Yiddish)
 five hundred cows milks he the count's

4.1. Movement but not out of the Source

Fanselow & Ćavar (2002) show that while islands such as (31b) are observed (datum from Grewendorf 2002), others do not exhibit the relevant effect. The latter type is illustrated by these authors with a subject island, (32b):

(31)(a) Ich weiß nicht, wer aufrichtige Politiker kennt.
 I know not who sincere politicians knows
 'I don't know who knows sincere politicians.'

(b) * Politiker weiß ich nicht, wer aufrichtige kennt.
 politicians know I not who sincere knows

(32)(a) * An Maria haben mich keine Briefe erschreckt.
 to Mary have me no letters frightened

(b) Briefe an Maria haben mich keine erschreckt.
 letters to Mary have me no frightened

Similarly, they show that dative indirect objects can be split up and as seen in section 3.2, there is no definiteness effect, at least for some speakers. In order to account for this and the other paradoxical properties, Fanselow and Ćavar (2002) hypothesize that split NPs involve movement but crucially not out of the DP to be split up. As a technical implementation, they argue for a fourth type of account adopting the copy-and-delete approach to movement (Chomsky 1995). Moving the entire DP, they propose that deletion may affect both copies. Glossing over some of the details here, they suggest that the determiner is deleted in the higher copy and the head noun in the lower one. This derives (33a) as in (33b):

(33)(a) Wagen hat er sich noch k-einen leisten können.
 car has he REFL yet n-one afford could

(b) {~~einen~~ Wagen} hat er sich noch k- {einen ~~Wagen~~} leisten können

At first glance, this analysis of distributed deletion seems to receive strong confirmation from the fact that the deletion of the higher copy of the determiner may, under certain conditions, be suspended, deriving (34a) as in (34b):

(34)(a) Einen Wagen hat er sich noch k-einen leisten können.
 a car has he REFL yet n-one afford could

(b) {einen Wagen} hat er sich noch k- {einen ~~Wagen~~} leisten können

However, upon closer inspection, it turns out that both determiners do not have to be the same, (35a). In fact, when the determiner in the source is definite, the one in the split-off cannot be definite, (35b):

- (35)(a) Einen Wagen hat er sich nur diesen leisten können.
 a car has he REFL only this afford could
- (b) * {Diesen / Den } Wagen hat er sich nur diesen leisten können.
 this / the car has he REFL only this afford could

Now, if a copy-and-delete type of analysis were correct, we would expect the grammaticality judgments in (35) to be the reverse (Roehrs 2007). One might suggest then that this type of contrast could be handled by repair rules. However, in section 4.3.4, we will see that there is some indication that *ein* in (35a) is probably not due to some “late” insertion process. In view of this and some other issues (e.g., the licensing of Negative Polarity Items, see Bosse 2009: 278), I will opt for a different technical implementation.

Using these authors’ basic insight and basing the following account on earlier work by Fanselow, I propose that there is a division of labor between the syntax and the semantics. In particular, I will suggest that split NPs involve the separate base-generation of an argumental DP and a predicative part in the same local domain, the VP. The argumental part contains an empty noun (e_N). Both the argumental part and the predicate nominal undergo movement to the left. Arguing that the overt nominal in Spec,CP and e_N are predicates of the same type ($\langle e, t \rangle$), the “free” overt predicate in Spec,CP is closed off by interpreting it in the e_N of the argumental DP filling e_N with semantic content at the same time.

4.2. Movement but Separate Base-generation

As already briefly discussed in section 2.2.1, Fanselow (1988: 103-4) proposed that split NPs involve two noun phrases where one contains *pro* and both nominals are co-indexed:

- (36) [_{VP} [_{NP} keine *pro*_i] [_V [_{NP} polnische Gänse_i] gekauft]]
 none Polish geese bought

Fleshing out this proposal, Grewendorf (1989: 27-8) suggests that the “restructured” noun phrase in (36) is a result of reanalysis under adjacency where the second part of the split NP has become part of the verbal complex. Moreover, Grewendorf (1991: 304) argues that *pro* in the source must be identified by a strong ending (cf. Fanselow 1988: 101). However, we will see that adjacency does not have to hold and that a strong inflection is not a necessary condition on the licensing of split NPs. Rather than reanalysis and *pro*, I will propose that the source contains a null noun that needs to be syntactically licensed (i.e., c-commanded by the split-off) and semantically identified (i.e., reconstructed into by the split-off).

4.2.1. No Adjacency

If the two nominals in (36) were the result of reanalysis, then we would expect adjacency to hold. However, adjacency neither holds inside the noun phrase to be split up nor between the noun phrase and the following verb. In particular, the demonstrative reinforcer *da* ‘there’ in the source may intervene between the head noun, on the one

hand, and the von-phrase and the verb to be moved, on the other, (37a) (for the discussion of demonstrative reinforcers, see, e.g., Brugè 1996, Bernstein 1997, Roehrs 2010). When split, the reinforcer can only be part of the source. Compare (37b) and (37c):

- (37)(a) Ich habe nur die Bilder da von Maria angesehen.
 I have only those pictures there from Mary looked at
 'I have looked at only those pictures from Mary.'
- (b) * [Bilder_i da von Maria_j angesehen_k] habe ich nur die t_i t_j t_k.
 pictures there from Mary looked at have I only those
- (c) [Bilder_i von Maria_j angesehen_k] habe ich nur die t_i da t_j t_k.
 pictures from Mary looked at have I only those there

Note that, if adjacency inside the noun phrase to be split up were a relevant factor, we would expect the reinforcer to be part of the split-off (and not the source). I conclude that reanalysis is not involved here. Something similar can also be shown for intervening genitive noun phrases and, with more complex examples, for preposition phrases. In these cases, the nominal split-off is not adjacent to the topicalized verb. Let us consider this in more detail.

Genitive complements cannot usually be right-dislocated. Contrast (38a) with (38b). If so, then the topicalized elements involving the split-off and the verb in (38c) are not adjacent:

- (38)(a) Wir haben schon viele Bilder des Präsidenten gesehen.
 we have already many pictures of the president seen
 'We have already seen many pictures of the president.'
- (b) Wir haben schon viele Bilder gesehen (?*des Präsidenten).
 we have already many pictures seen of the president
- (c) ? [Bilder_i gesehen_k] haben wir schon viele t_i des Präsidenten t_k.
 pictures seen have we already many of the president

However, despite the lack of adjacency, the example is fairly acceptable. Second, unlike genitives, prepositional phrases can appear in the *Nachfeld*. Compare (39a) to (39b). Without another element present, the example in (39c) is ambiguous, which is indicated by parentheses on the two potential analyses:

- (39)(a) Er hat eine echt große Wut auf sie gekriegt.
 he has a really big rage against her gotten
 'He came to feel a really great rage against her.'
- (b) Er hat eine echt große Wut gekriegt auf sie.
 he has a really big rage gotten against her

- (c) [Wut_i gekriegt_k] hat er eine echt große t_i (t_k) auf sie (t_k).
 rage gotten has he a really big against her

Thus, this structure is not revealing with regard to adjacency. However, adding another verb allows us to disambiguate the relevant cases, (40c-d). Interestingly, (40d), which involves adjacency of the split-off and the verb in the base-position, seems to be somewhat worse than (40c), which does not:

- (40)(a) Er soll eine echt große Wut auf sie gekriegt haben.
 he is said a really big rage against her gotten to have
 ‘He is said to have felt a really great rage against her.’
- (b) Er soll eine echt große Wut gekriegt haben auf sie.
 he is said a really big rage gotten to have against her
- (c) ? [Wut_i gekriegt_k] soll er eine echt große t_i auf sie t_k haben.
 rage gotten is said he a really big against her to have
- (d) ?? [Wut_i gekriegt_k] soll er eine echt große t_i t_k haben auf sie.
 rage gotten is said he a really big to have against her

While this contrast is unexpected under reanalysis, the general grammaticality of (40c) shows again that adjacency cannot play an important role when topicalizing the split-off and the verb.

4.2.2. A Strong Ending is not a Necessary Condition

At first glance, one may claim that a strong inflection is necessary to license *pro* in the source. This can be seen from the alternation on *ein*-words, which exhibit a strong ending on *ein* ‘a/one’ under certain conditions. Compare the non-split (41a) and the split example (41b):

- (41)(a) Ich habe ein(*es) Brot.
 I have a(*ST) bread
 ‘I have a (loaf of) bread.’
- (b) Brot habe ich ein*(es) *pro*.
 bread have I one(ST).

Similarly, *lila*-type adjectives have an optional (strong) ending when the noun is overt but an obligatory ending when not:

- (42)(a) Ich habe lila(ne) Bücher.
 I have purple books
 ‘I have purple books.’
- (b) Bücher habe ich lila*(ne) *pro*.
 books have I purple

However, a weak inflection immediately preceding *pro* and indeclinable elements in general do not lead to ungrammaticality:

- (43)(a) Kleid habe ich immer nur dieses rote *pro* getragen.
 dress have I always only these(ST) red(WK) worn
- (b) Hemden habe ich immer nur Peters *pro* getragen.
 shirts have I always only Peter's worn
- (c) (?) Holz haben wir immer nur Dresdener *pro* verarbeitet.
 wood have we always only Dresden(INDECL) used

There are other indeclinable elements that can appear in the source: numerals like *zehn* 'ten' and modifiers like *genug* 'enough' and *ein paar* 'a couple'. In view of this state of affairs, a strong ending cannot be a necessary condition on the licensing of the null element.⁷ The true generalization that seems to emerge with regard to inflection is the following:

- (44) Generalization about Inflection in Split NPs
 If an element in the source is declinable, then the inflection is obligatory.

I will not pursue this line of investigation further here (for some remarks, see Roehrs 2006a, 2009). Let us simply conclude by stating that a strong inflection is not a necessary condition on the licensing of split NPs and, consequently, *pro* is not involved. Rather, I assume with Grimshaw (1991) that all noun phrases have a noun as the head of their extended projection. For the cases under discussion, I propose that this is the null noun *e_N* (for extensive discussion, see Panagiotidis 2002a,b; 2003a,b). Now, if the source DP contains a null element, then we expect certain syntactic and semantic restrictions to hold.⁸

⁷ As discussed in Roehrs (2009, 2012), unpreceded adjectives in the masculine and neuter genitive are exceptional in that they have a weak ending. When stranded in a split NP, we notice that, while not entirely perfect, this weak ending is better than a (constructed) strong one:

(i) Weins habe ich mich nur {?guten/*gutes} erinnert.
 wine have I REFL only good(WK/ST) remembered

This contrast seems to indicate that a strong ending is not a sufficient condition on the licensing of split NPs.

⁸ The assumption of a null noun easily captures the optional distribution of nominal complements:

(i) (a) Bücher über Chomsky habe ich keine gelesen.
 books about Chomsky have I none read
 (b) Bücher habe ich keine über Chomsky gelesen.
 books have I none about Chomsky read

In (ia), the overt noun takes the complement; in (ib), the null noun does (see also section 2.2.2 and Pafel 1995: 169).

4.3. Order Preservation and Semantic Reconstruction

In keeping with much recent work, I assume that “syntax does what it does” but that it is constrained by certain output conditions, that is, by conditions on linearizability and interpretability. In particular, I argue that Order Preservation and closing off of “free” predicates are required to rule out certain cases that arise in the present discussion of split NPs.

4.3.1. Order Preservation

Focusing mainly on the Scandinavian languages, Fox & Pesetsky (2005) develop a system that accounts for Holmberg’s Generalization and certain notable exceptions to it. Put simply, they assume that there are two Spell-out domains, VP and CP, and that the ordering of elements determined in one of these domains cannot be “revised” in the other. While I cannot fully discuss their proposal here, the crucial part of their analysis can be illustrated by the following Swedish data where, despite the fact that the verb has moved, the indirect object blocks the movement of the direct object, (45a). They suggest that this sentence is ungrammatical because the ordering statement established in the VP contradicts the one in the CP. Simplifying somewhat, this is stated in (45b) (the Swedish data are from pages 19, 21 of their article):

(45)(a) * Jag gav den_i inte [_{VP} Elsa t_i]. (Swedish)
 I gave it not Elsa

(b) Ordering Statements
 VP: IO < DO
 CP: DO < IO

In contrast, when the indirect object moves across the direct object, as in (46a), the relevant ordering statements in the VP and CP are the same and lead to a good derivation, (46b):

(46)(a) Vem_k gav du den_i inte [_{VP} t_k t_i].
 who gave you it not
 ‘Who did you not give it to?’

(b) Ordering Statements
 VP: IO < DO
 CP: IO < DO

In what follows, I will claim that German also exhibits a phenomenon that involves Order Preservation. However, German is different from the Scandinavian languages in a number of ways: among others, German does not obey Holmberg’s Generalization and it exhibits a certain faithfulness to the underlying order of certain elements, at least for the type of split NP under investigation.⁹

⁹ For these and other differences, see Müller (2001). As one consequence of these differences, I will not discuss for German the interaction between the verb and the objects with regard to linearizability. Also,

Consider the derivation of one of the key examples:

- (47) [Bilder von Maria angesehen] habe ich nur die da.
 pictures from Mary looked at have I only the there

With the discussion of section 4.2.2 in mind, I assume that the source contains the null noun e_N and that it is independently assembled. Following that, the verb merges with the source, *c(ategory)-selecting D*:

- (48)
- $$\begin{array}{c}
 V' \\
 \swarrow \quad \searrow \\
 DP \quad \quad V \\
 \text{die } e_N \text{ da} \quad \text{angesehen}
 \end{array}$$

Next, I propose that the predicative part, call it NP, is separately assembled and then merged in Spec,VP, (49a).¹⁰ Now, adopting Fox & Pesetsky (2005)'s proposal, I will assume that Spell-out applies at this point in the derivation and the ordering statement "NP < DP" is made, (49b):

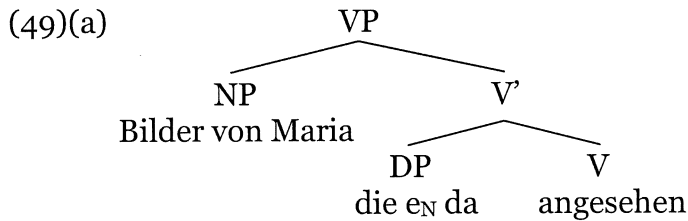
note that faithfulness to the underlying order of these elements may not be categorically strict, such that a certain reordering inside the VP might explain – what Fanselow & Čavar (2002) call – ‘Pull-splits’.

¹⁰ Merging the split-off in Spec,VP and the source below that (rather than the other way around) has some virtues (see also the main text below). For instance, with the source DP later moving out for case, this structure avoids Fanselow's (1988) problem of moving a complex head to Spec,CP, which is a phrasal position (cf. (17b)). Notice also that this type of data complicates other proposals involving separate base-generations, for example, Bosse's (2009) proposal linking split NPs to Restrictive Elliptical Appositives (Riemsdijk 1998b) as well as Ott & Nicolae's (2010) and Ott's (2011) accounts involving the breaking of a symmetric bare-predication structure.

Just briefly commenting on the latter, Ott proposes that the DP (source) and NP (split-off) are merged symmetrically. In order to become a legitimate syntactic object, this structure must be assigned a label. He proposes that this is only possible if either the NP or the DP raises bringing about an asymmetrical structure. He further proposes that the resulting structures are subject to the Generalized Aboutness Requirement (GAR): "Topic and comment must be such that the comment is about the topic." (p. 85) More specifically, if the NP raises, this movement breaks the symmetry and adheres to the GAR. In order to account for topicalizations that involve the verb (his mixed splits), he suggests that the DP moves out first breaking the symmetry. After that, the VP including the NP raises adhering to the GAR. As far as I can see, there are at least two issues.

First, in order to account for mixed splits, Ott is forced to allow the DP to raise (breaking the symmetry). Crucially, the subsequent VP movement is not tied to this DP movement. In other words, it should also be possible that just the NP moves higher than the DP (adhering to GAR), rather than the entire VP. To be clear, then, splits involving just NP have two derivations in Ott's system and mixed splits have one derivation. In the current proposal, this is different. Since the DP always moves, splits with NP involve only movement of NP and mixed splits involve movement of VP.

Second, allowing DP to move, Ott is forced to admit that syntactic arguments can be NPs (p. 92). However, a number of authors (e.g., Longobardi 1994) have argued that arguments are always DPs (see also Ott 2011: 68 fn. 17). The present proposal is fully in line with Longobardi's work and that of others.



- (b) Ordering Statement in VP
 NP < DP

Note incidentally that under current assumptions, theta-role assignment in (49a) can occur in a local fashion. This would not be the case if NP and DP switched their positions.

Continuing the derivation, the DP moves out of the VP to get case.¹¹ If the predicative part stays in-situ, (50a), then the ordering statement “DP < NP” is eventually made, (50b):

(50)(a) * ich habe nur [DP die e_N da]_i ... [VP [NP Bilder von Maria] [V' t_i angesehen]]

- (b) Ordering Statement in CP
 DP < NP

If the derivation stops here, then it is “filtered out” at PF due to two contradictory ordering statements: NP < DP in the VP vs. DP < NP in the CP. This poses problems for linearizability and the derivation goes bad in PF. However, syntax also has the option of moving NP or VP, which contains NP. Consider (51a) and (51b), respectively:

(51)(a) [NP Bilder von Maria]_k habe ich nur [DP die e_N da]_i ... [VP t_k [V' t_i angeschaut]]

- (b) [VP [NP Bilder von Maria] [V' t_i angeschaut]]_k habe ich nur [DP die e_N da]_i ... t_k

- (c) Ordering Statement in CP
 NP < DP

Let us assume that the relevant elements move to check some feature.¹² Importantly, these general derivational options will not lead to contradictory ordering statements at

¹¹ In the literature, there is a long tradition with regard to case movement of objects in scrambling languages. This is particularly relevant for proposals that adopt Kayne (1994), who postulates that all languages are SVO underlyingly. On this assumption, the underlying structure for split NPs in (49a) would have to be updated as follows:

(i) [VP NP [V' V DP]]

Note that the order of the split-off and the source in (i) is the same as in (49a). In order to derive the correct surface orders of the verb and the DP, the latter must move to the left. Often this movement is taken to be triggered by case considerations. For instance, Zwart (1997) argues that movement of object DPs for Case explains the absence of – what he calls – ‘clause shift’ in Dutch (see also Ruys 2008: 558-9 for certain interactions between object DPs and PPs). Alternatively, we could assume that the DP moves for focus (see Fanselow & Ćavar 2002: 85 but also Hoof 2006: 414). Whichever turns out to be correct, for convenience, I illustrate the VP as a head-final structure throughout.

PF and, consequently, these two derivations succeed. Proceeding with simpler examples, let us quickly review why some cases are ungrammatical:

- (52)(a) Ich habe eigentlich nicht viele Bücher gelesen.
 I have actually not many books read
 ‘I have actually read not many books.’
- (b) * [Viele e_N] habe ich eigentlich nicht Bücher gelesen.
 many have I actually not books read
- (c) * [Viele e_N gelesen] habe ich eigentlich nicht Bücher.
 many read have I actually not books
- (d) * [Bücher viele e_N gelesen] habe ich eigentlich nicht.
 books many read have I actually not
- (e) * [Bücher viele e_N] habe ich eigentlich nicht gelesen.
 books many have I actually not read
- (f) * Gelesen habe ich eigentlich nicht Bücher viele e_N.
 read have I actually not books many

Assuming, as we have all along, that there is no reordering inside VP, the ungrammatical examples in (52b-f) are explained as follows: the examples in (52b-c) are out due to contradictory ordering statements (cf. (50a) above). The remainder of the examples is out as the in-situ DP cannot check case and the derivation crashes.¹³

Having considered some syntactic conditions (for other syntactic considerations, see Roehrs 2009: 160-2), let us next turn to the question of how the semantic value of the empty noun in the source is determined.

4.3.2. Semantic Reconstruction

We know from examples like (53), that the split-off in derived position does not c-command the source in all the cases involving split NPs:

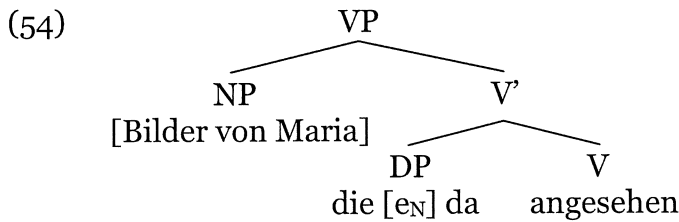
- (53) [Bücher gelesen] habe ich eigentlich nicht viele e_N.
 books read have I actually not many

Interestingly, the null noun e_N is c-commanded by the split-off in its underived position.¹⁴

¹² For instance, we could follow Fanselow & Ćavar (2002: 85) in that the split-off checks a topic/second focus feature. We should point out here that strictly speaking, topicalizations to the left periphery are not obligatory. This is certainly clear for dialects that also allow the split-off to surface in the Middlefield (section 3.1). Crucially though if the relevant movement to the left fails to occur, the resultant ungrammatical structure is filtered out by Order Preservation on the current analysis.

¹³ If it turns out that German allows Case to be valued by long-distance agreement, then the examples in (52d-f) could be ruled out due to the presence of the intervening split-off.

¹⁴ I thank Susi Wurmbrand for encouraging me to look in this direction.



However, rather than a purely syntactic account, I suggest an analysis that is partially semantic in nature. Let us consider each of the bracketed elements in (54) in turn, starting with the upper element.

Haider (1990: 108), Tappe (1989: 167), and Fanselow (1988: 105-6) argue that NP is a (complex) nominal predicate (rather than a second argumental DP). This has a number of advantages: first, there is no Theta-Criterion violation as the verb assigns its theta role only once in the course of the derivation, namely to the argumental source DP.

Second, it is well-known that singular countable nouns must be preceded by a determiner in argument position, (55a). If this is so, then the grammatical bare noun in (55b) must involve a predicate (cf. Haider 1990: 108 footnote 8):

- (55)(a) Ich habe *(ein) Buch gelesen.
 I have a book read
 'I read a book.'
- (b) Buch habe ich nur eins gelesen.
 book have I only one read

Third, only indefinite determiners may occur in predicate contexts, (56a). If the split-off is a predicate, then this immediately explains why only indefinite determiners can occur in the split-off, repeating (35a-b) here as (56b-c):

- (56)(a) Ich halte ihn für {einen / *den } guten Lehrer.
 I consider him (for) a / the good teacher
 'I consider him a good teacher.'
- (b) Einen Wagen hat er sich nur diesen leisten können.
 a car has he REFL only this afford could
- (c) * {Diesen / Den } Wagen hat er sich nur diesen leisten können.
 this / the car has he REFL only this afford could

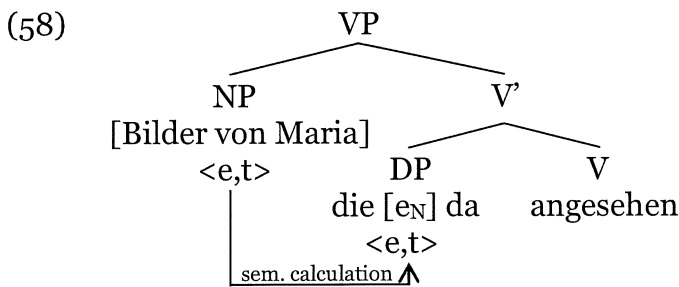
Turning to the source nominal, it is important to point out that, with the exception of the determiner in the source, all types of elements can in principle be part of the split-off (for some interesting restrictions, see section 5). I follow Heim and Kratzer (1998) in that the determiner is of type $\langle\langle e, t \rangle, e \rangle$ and that the determiner combines with an element of type $\langle e, t \rangle$ by Functional Application. Since determiners can directly combine with (null) nouns, I propose that the null noun e_N in the source is an empty predicate (of type $\langle e, t \rangle$) (cf. Fanselow 1988: 106, Panagiotidis 2003a: 425). Following

much discussion in the literature on null elements, I will make the natural assumption that empty elements have to be semantically specified in some way:

(57) Semantic Identification of e_N in DP

- (i) e_N is an empty predicate of type $\langle e, t \rangle$.
- (ii) Empty elements must be “filled” with content to be interpretable at LF.

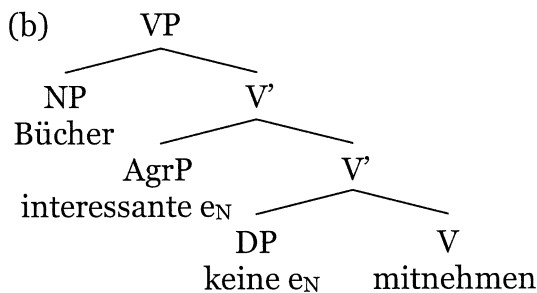
If these considerations are on the right track, then we can observe that the predicative NP and the null predicative e_N in the source DP are of the same semantic type ($\langle e, t \rangle$). Furthermore, we can state that there is an empty predicate that needs content and that there is an overt predicate that is “free”, that is, must be closed off. These two separate requirements complement each other perfectly. I propose, then, that the “filling” of the empty predicate noun with content can occur by an element of the same semantic type (but not necessarily the same syntactic category). More precisely, I propose that the calculation of e_N proceeds on the basis of the nominal predicate, when NP is in its base position as illustrated here:



Presumably, this calculation occurs after reconstruction (but other options are conceivable). In a sense, then, e_N is a property anaphor that is c-commanded by its antecedent. Note again that this c-command relation only holds in this constellation (but not if NP and DP switched their positions). I refer to this process as ‘semantic reconstruction’.

Interestingly, this calculation can proceed in a stepwise fashion. To see this, consider multiple splits again. I assume that the example in (59a) has the underlying structure in (59b):

- (59)(a) Bücher hat er damals interessante in den Osten keine mitnehmen dürfen.
 books was he then interesting into the East none bring allowed-to



As in the simple split, the DP part is merged with the verb first. Next, let us assume that there are two predicate nominals involved, where each is located in its own Specifier. In particular, the nominal with the overt noun projects an NP and the one with an adjective an AgrP that contains a (second) null noun. Observe that each null noun is c-commanded by another nominal element in the base/reconstructed position. The semantic value of the two null nouns is calculated in a stepwise fashion: first, NP is semantically reconstructed into AgrP and then AgrP into DP.

In order to derive the surface order in (59a), I suggest that the DP moves for case, AgrP Scrambles to the Middlefield and the NP moves to Spec,DP. These movements result in non-contradictory linearization statements. If this is on the right track, then cases like (60) are out due to contradictory ordering statements with regard to NP and AgrP:¹⁵

- (60) ?? Interessante habe ich Bücher eigentlich keine gekauft.
 interesting have I books actually none bought

Above we noted that c-command always holds when the relevant elements are in their base/reconstructed (but not derived) positions. In this constellation, all elements are in a very local domain, the VP. In what follows, we will see that not only the predicate split-off must be in a local domain with the source at some point in the derivation but that the null noun of the source must be close to the predicate split-off as well.

4.3.3. The Same Syntactic “Address”

In section 3.3, we saw that split NPs can, perhaps with some dialectal variation, be formed on nominals with inherent case. Consider the split of the simple genitive DP in (61a) and contrast it to the more complex cases in (61b-c), where the source is embedded in a larger DP:

- (61)(a) Weins habe ich mich eines guten erinnert.
 wine have I REFL a good-GEN remembered.
- (b) * Mannes habe ich immer nur die Autos eines jungen repariert.
 man have I always only the cars a young-GEN repaired
- (c) * Jungen Mannes habe ich immer nur die Autos eines repariert.
 young man have I always only the cars a-GEN repaired

These complex cases are severely ill-formed. The same can be shown for the dative:

- (62)(a) Also Brot ähnelt das nun wirklich keinem!
 really bread resembles that now really none-DAT
- (b) * Männern habe ich immer nur die Autos von jungen repariert.
 men have I always only the cars of young-DAT repaired

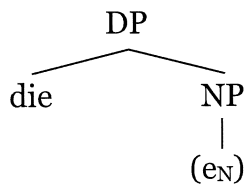
¹⁵ It is not clear to me why this example is not worse.

- (c) * Flecken habe ich immer nur die Autos mit vielen repariert.
 spots have I always only the cars with many-DAT repaired
- (d) * Roten Punkten habe ich immer nur die Bluse mit zwei getragen.
 red dots have I always only the blouse with two-DAT worn

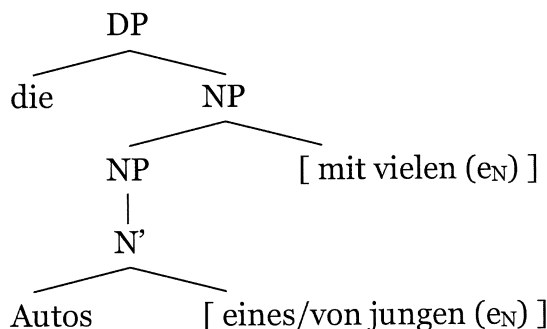
The question arises as to how to rule out the split NPs formed with embedded sources. In order to account for this, I propose that the predicative part must be semantically reconstructed into the closest empty noun. Below, we will define “closest” in terms of the same local “address” in the VP.

Above, simple discontinuous DPs were analyzed to have a source as in (63a). Turning to the complex DPs, we observe first that independent of the syntactic relation between the matrix DP and the embedded nominal, all examples, whether they involve complementation or adjunction, are ungrammatical. Consider now some of these examples and their respective structures in (63b) below. Specifically, the embedded nominals in (61b) and (62b) are complements of the matrix head noun and the embedded nominal in (62c) is an adjunct (I will mark the “origin” of the split-off with a null noun in parentheses):

(63)(a) Simple DP



(b) Complex DP – Complementation and Adjunction



Note that what these complex DPs have in common is that, in contrast to the simple DPs just discussed, they all have a matrix head noun that is overt or, more precisely, semantically not empty (Autos ‘cars’ in (63b)).¹⁶ Assuming that all “free” predicates have

¹⁶ Null nouns can occur in complex noun phrases under ellipsis, (ia). Importantly, the examples in the main text are also ungrammatical when the matrix noun is elided. Compare (62b) to (ib):

(i) (a) Ich habe die Autos von alten Leuten repariert und du die e_N von jungen e_N.
 I have the cars from old people repaired and you those from young
 ‘I repaired the cars of old people and you those of young ones.’

to be closed off at LF, I propose that the predicate part must reconstruct (in the sense above) into the matrix DP, that is, into the closest head noun. Note now that with each noun projecting its own phrase, only the matrix noun is, via its extended projection, in direct “contact” with the verb. The same holds for the predicate nominal. In other words, both the matrix DP and the split-off NP are part of the same verb phrase at some point. As such, they have the same positional “address” underlyingly (for discussion, see especially McGinnis 2004 but also Fanselow & Ćavar 2002: 78, footnote 10). If “closest” is defined this way and if we assume that only elements with the same address can enter into semantic reconstruction, then reconstruction can only occur into the null noun of a matrix DP but not into the null noun embedded in a larger DP. If the matrix noun is not empty as in the above cases, cf. (63b), then the predicate part cannot be closed off, leading to ungrammaticality. The idea of the same positional address has some other interesting applications.

To start off, if the requirement to have the same address is needed to rule out certain ungrammatical cases as just discussed, then the mechanism assigning these addresses provides an argument that the split-off must have been in the VP and undergone subsequent movement to the left. Conversely, if the split-off is base-generated in Spec,CP, then this should lead to problems. Consider the following example again:

- (64) (*) Bücher habe ich keine e_N gelesen.
 books have I no read

The split-off was not merged inside VP by assumption and hence does not have the same positional address as the source DP. With the above discussion in mind, this means that, although (64) is grammatical, this particular derivation is ruled out since *Bücher* ‘books’ cannot function as the semantic filler of the null noun. Consequently, the latter remains unfilled and cannot be interpreted at LF. Furthermore, the open predicate *Bücher* cannot be closed off. This leads to a bad derivation.

In a little more detail, recall that open, semantically unsaturated elements must be closed off. With the predicative split-off an open expression, I hypothesize that there are three potential ways to license it in a sentence: as discussed above, (i) the split-off could form the semantic value for the calculation of e_N and get licensed, as it were, in “proxy”. Furthermore, (ii) the split-off could be predicated of another (referential) noun phrase or (iii) the split-off itself could be the argument of another functor, for instance, a determiner. Crucially, however, there seem to be no null elements or other “free” (referential) noun phrases or functors available in (64) to salvage this particular derivation.

4.3.4. Some Further Extensions

This discussion naturally extends to a case discussed by Fanselow & Ćavar (2002). While a PP-complement cannot be split from the source, (65a), it can be topicalized when the head noun is split off as well, (65b):

-
- (b)*Männern habe ich immer nur die e_N von jungen e_N repariert.
 men have I always only the of young-DAT repaired

Note, however, that this null element is not semantically empty as it must be understood as the elided material. For expository purposes, I will simply stick to the discussion of unelided nouns in the matrix DP.

- (65)(a) * An Maria haben mich keine Briefe erschreckt.
to Mary have me no letters frightened
- (b) Briefe an Maria haben mich keine erschreckt.
letters to Mary have me no frightened

This type of example follows from the above discussion: unlike (65a), the example in (65b) involves a null noun that the split-off can reconstruct into.

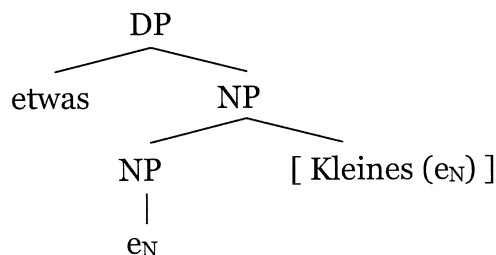
If this discussion is on the right track, then we have a prediction: if complex DPs with a non-empty (i.e., overt) matrix noun cannot be reconstructed into, as discussed above, then complex DPs with a semantically empty matrix noun should be grammatical (cf. footnote 14). This is borne out for split indefinite pronoun constructions, (66a-b). As discussed in detail in Roehrs (2008), these indefinite pronoun constructions involve concord: the ending *-s* is not a genitive inflection on adjectives, (66a), and dative inflection is overt on both elements in (66b):

- (66)(a) Tolles habe ich mir gestern eigentlich nichts gekauft.
nice have I (for) me yesterday actually nothing bought
- (b) Nettem ist Maria in letzter Zeit niemandem begegnet.
nice is Mary in recent time nobody met

Both Leu (2005) and Roehrs (2008) argue in detail that these constructions, when not split, involve two nominals each headed by an empty noun. Let us illustrate this type of split NP with a more complex example:

- (67)(a) Süßes habe ich gestern nur etwas Kleines gegessen.
sweet have I yesterday only something small eaten

(b) Indefinite Pronoun Construction



Recalling the above discussion, the split-off can only reconstruct into the closest, that is, matrix noun. Unlike the cases in the previous subsection, this noun is empty in (67b) and, consequently, can be reconstructed into.¹⁷ Note also that unlike regular adjectives,

¹⁷ If this is tenable, then we derive an(other) argument for the presence of a null noun in the matrix nominal of these indefinite pronoun constructions.

(68a), indefinite articles, (68b), and quantifiers/numerals, (68c), cannot be part of this construction:

- (68)(a) etwas Amerikanisches
 something American
 ‘something American’
- (b) * etwas ein Amerikanisches
 something an American
- (c) * etwas {einiges / ein(e)s}
 something some / one

Most likely, these are syntactic and/or semantic restrictions. Now, consistent with (68b), split NPs formed on the indefinite pronoun construction cannot involve an indefinite determiner in the split-off. Compare (69a) to (69b):

- (69)(a) (Ein) amerikanisches hat er sich nur eins leisten können.
 an American has he REFL only one afford could
 ‘As for American ones, he has been able to afford just one.’
- (b) (*Ein) Amerikanisches hat er sich etwas leisten können.
 an American has he REFL something afford could

Similar facts hold with negative elements such as *nichts* ‘nothing’.

If this is indeed a syntactic and/or semantic restriction, then in order to explain the ungrammaticality involving the indefinite determiner in (69b), *ein*, or rather its abstract feature bundle, must be present in narrow syntax. If so, the presence of *ein* in (69a) cannot be a “late” (i.e., PF) phenomenon. As to (68c), we discuss quantifiers and numerals in section 5 suggesting that they do not make good predicates.

Next, consider a case where two noun phrases have been split up in one and the same sentence. The related elements are marked in the same typographic way (the datum is taken from Fanselow & Ćavar 2002: 67):

- (70) **Sonaten** haben Frauen bislang nur wenige **welche** geschrieben.
 sonatas have women up to now only few some written

The proposal of the same local address prevents *Sonaten* ‘sonatas’ from being associated with *wenige* ‘few’ and *Frauen* ‘women’ with *welche* ‘some’.

Finally, Gary Milsark (p.c.) raises the question of why a pronoun cannot be in the source given that pronouns are determiners (Postal 1966) and that the source contains a null noun:

- (71)(a) Ich habe {die / welche / sie} gekauft.
 I have those / some / them bought
 ‘I have bought those/some/them.’

- (b) Bücher habe ich {die / welche / *sie} gekauft.
 Books have I those / some / them bought

Let us assume that unlike *die* ‘those’ and *welche* ‘some’, *sie* ‘they’ does not allow a predicate with the same local address to semantically reconstruct into its empty noun. To be clear, then, unlike *die* ‘those’, both non-interrogative *welche* and *sie* cannot take an overt but only a null noun. They differ in that the former allows semantic reconstruction into its null noun but the latter does not.

4.3.5. Accounting for the Paradoxical Properties

In section 2.5 above, I gave a partial summary of the properties of the split NP construction. With a more complete picture in place, recall that some of these characteristics implicate a movement analysis while others indicate base-generation. The present proposal solves this apparent paradox by way of a hybrid analysis involving both separate base-generations and subsequent movement, which needs to be licensed by syntactic and semantic conditions. I will now briefly illustrate how the individual properties can be captured in the current system.

I propose that the movement characteristics follow from movement of the split-off and the calculation of e_N . In particular, the island effects follow directly from movement. The sequence of the adjectives and complements/modifiers as well as the Binding facts are accounted for if we assume that e_N is semantically calculated on the basis of the material of the split-off. In other words, the split-off is interpreted in e_N and selectional restrictions and Binding can be “checked” after semantic reconstruction.

The base-generation properties follow from the presence of two noun phrases in the same local domain, the VP. Specifically, while the assumption of a predicative nominal derives the fact that only indefinite determiners can appear in the split-off, the postulation of an argumental DP containing e_N accounts for the fact that the non-interrogative use of *welch* ‘some’ cannot take an overt NP. The apparent cases of movement of non-constituents, the fact that adjectives in the split-off can have a strong inflection (although a weak one in the source), and the absence of certain island effects also follow from the construction of two independent nominals. Thus, syntactic and semantic processes, that is, the construction of two separate noun phrases and the calculation of e_N , derive all the relevant properties in this hybrid proposal.

5. Some Other Restrictions on Split NPs

There are some interesting restrictions on the formation of the source and the split-off. Starting with the latter, as noted by Bhatt (1990: 251), quantifiers and numerals cannot be part of the topicalized element:¹⁸

¹⁸ The example improves if the quantifier or the numeral receives heavy, contrastive stress (cf. van Hoof 2005). This seems to be different for sequences of – what looks like – two quantifiers, where stress cannot save the split of the two relevant elements:

- (i) (a) einige wenige Leute
 some few people
 (b)?Leute habe ich nur einige wenige gesehen.
 people have I just some few seen

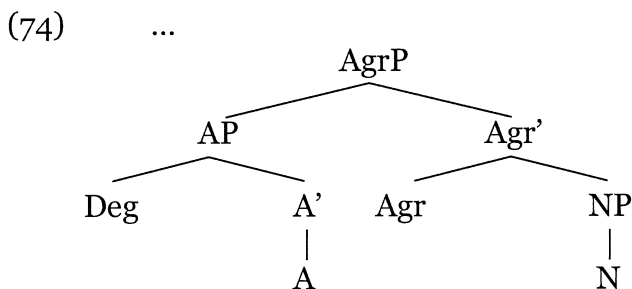
- (72)(a) diese {drei / wenigen} Hemden da
 these three / few shirts there
 ‘these three/few shirts’
- (b) * {Wenige / Drei} Hemden hat er immer nur diese da getragen.
 few / three shirts has he always only these there worn

This restriction probably has to do with the fact that quantificational elements do not make good predicates. In other words, I assume that semantic reconstruction is not possible in these cases.

Turning to the source, Haider (1992: 320) points out that degree words such as *sehr* ‘very’ cannot be stranded:

- (73)(a) drei sehr kostbare Vasen
 three very precious vases
 ‘three very precious vases’
- (b) Vasen besitzt er nur drei sehr kostbare.
 vases owns he only three very precious
- (c) * Kostbare Vasen besitzt er nur drei sehr.
 precious vases owns he only three very

It is by now a standard assumption that degree words are in the extended projection of adjectives (e.g., Corver 1997). For current purposes, I will simply assume that they are in the Specifier of the relevant adjective phrase. The latter is in the Specifier of AgrP:



If so, then (73c) is ruled out as the adjective and noun do not form a constituent to the exclusion of the degree word. In other words, recourse to syntactic structure allows us to account for this type of case.

Furthermore, M. Müller (1986: 37) and Fanselow (1988), among many others, point out some cases where the split-off does not agree with the source in morphological number. In particular, a singular noun split-off is, with some dialectal variation, compatible with a singular source but not at all with a plural one, (75a). In contrast, a

(c)*Wenige Leute habe ich nur einige gesehen.
 few people have I just some seen
 The same holds for *alle beide(n) Arbeiten* ‘(all) both works’ and similar combinations.

plural noun split-off is basically compatible with both a singular and a plural source, (75b) (see Fanselow & Ćavar 2002 for a more detailed discussion of these judgments):

- (75)(a) Hemd habe ich {%keines / *keine} getragen.
 shirt(NEUT) have I none(NEUT/PL) worn
- (b) Hemden habe ich {?keines / keine} getragen.
 shirts(PL) have I none(PL/NEUT) worn

While I cannot discuss all the intricacies of these patterns here, the different degrees of restrictiveness of the singular vs. the plural split-off in (75) is reminiscent of the following pattern, where (76b) is repeated from the introduction:

- (76)(a) * Romane habe ich nur Bücher gelesen.
 novels have I only books read
- (b) ^m Bücher habe ich nur Romane gelesen.
 books have I only novels read

Considering the examples in (75b) and (76b), the split-off involves a pluralized noun in the former and a more general kind noun, a hypernym, in the latter. Apparently, when the split-off forms the “superset” of the source, German more readily tolerates some unexpected patterns. I will tentatively follow Ott & Nicolae (2010) and Ott (2011) here, who propose that this is a pragmatic issue, such that topicalized elements set the relevant frame for the discourse (see footnote 10). Supersets seem to make good framesetters.

Finally, Ott (2011) makes cases like (76b) one of the main foci of his investigation. As he himself admits, these structures seem to be, at least for some speakers, marked (p. 113). Be that as it may, note that this type of case is not fatal for the present type of approach. It is clear that under current assumptions, these cases must involve a covert noun in the source (in addition to the overt noun). In other words, the source must involve two nouns. While this is admittedly a marked state of affairs, I am aware of at least three cases in German where a nominal can involve two nouns:

- (77)(a) Musiker-Komponist
 musician-composer
- (b) Sie Schwein
 you pig
- (c) Du bist vielleicht ein Bauer!
 you are PRT a farmer
 ‘You are really a peasant!’

The case in (77a) has peculiar, ill-understood properties and I will not comment on it further. However, (77b-c) might be more promising. In particular, (77b) involves morphological disagreement between the plural pronominal determiner and the

singular noun. To account for this, Roehrs (2006b) proposes that this DP involves two nominals, each containing a noun. The simplified structure is given in (78a). As for (77c), notice that the role noun here must involve an obligatory article and it has an emotive meaning. Roehrs (2012) proposes the structure in (78b), which involves the null predicate *ALS* ‘in the capacity of’ (cf. *du als Bauer* ‘you as a farmer’):

(78)(a) Sie [Schwein] e_N

(b) ein [ALS Bauer] e_N

Returning to the split NP above, we could tentatively suggest that this case involves a structure similar to (78). There are basically two options for the source: either we could assume that the null noun is in the embedding nominal, (79a), or in the embedded nominal, (79b). Presumably, either case would involve a null predicate (\emptyset = null plural article):

(79)(a) \emptyset [PRED Romane] e_N

(b) \emptyset [AS FOR e_N] Romane

Pending further investigations, I will leave the choice open here.

6. Conclusion

This paper discussed split NPs. After briefly discussing and critiquing some previous proposals and highlighting some paradoxical data, I illustrated my own hybrid proposal, where both the split-off and the source are merged in different positions of the same VP. This derived the facts which seemed to call for separate base-generations. Furthermore, establishing syntactic and semantic conditions, the movement facts were argued to follow from movement of the split-off and from calculating the semantic value of e_N in the source on the basis of the split-off. The latter process was labeled semantic reconstruction.

Table 2: Summary of the Properties of Split NPs and their Account

Movement	commentary	base-generation	commentary
sequence of adjectives	after semantic calculation of e_N	two determiners	two separate nominals
sequence of complements/modifiers	after semantic calculation of e_N	non-constituents	two separate nominals
Binding	after semantic calculation of e_N	unexpected strong / weak endings	two separate nominals
islands (relative clause)	movement of split-off	islands (subject)	two separate nominals
		<i>welch</i>	two separate nominals

Finally, the discussion was extended to some more complex cases and some other restrictions were briefly addressed.

More generally, one may wonder why split NPs of this type do not occur in all languages (van Hoof 2006). Panagiotidis (2002a,b; 2003a,b) argues that languages differ with regard to which empty nouns they make lexically available. For instance, while English has one (and e_N in some rare cases) at its disposal, German has only e_N . To speculate, one could suggest that other languages do not have this e_N and the lack of this construction in these languages would follow from this lexical gap. However, things might be more complicated than that. If ellipsis also involves a null noun, then we might want to capture Fanselow & Ćavar's (2002) correlation, according to which the presence of ellipsis in a language coincides with, or perhaps, is the precondition for, the possibility of split NPs in that language.

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