

# An extraction restriction with complement-less prepositions in British English but not dialectal German

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## 1. Introduction

This paper explores a potential parallel between two Germanic dialects regarding complement-less prepositions. For our purposes, “complement-less prepositions” means two very specific constructions: British English “Prepositional Object Gaps” and Northern German “*da*-drop.”

In British English [BrEng], inanimate pronominal complements of certain locative prepositions can be omitted under certain circumstances, as illustrated in (1):

- (1) a. This box has papers in (it). BrEng  
b. Your tie has a stain on (it).

In other varieties, e.g. North American English [NAmEng], the pronoun is obligatory, as indicated in (2):

- (2) a. The box has papers in \*(it). NAmEng  
b. Your tie has a stain on \*(it).

We will see that BrEng has not simply reassigned *in* and *on* to the class of optionally transitive prepositions. With prepositions of that class, such as *inside* in (3), pronoun omission is possible for all speakers of English:

- (3) This box has papers inside (it). AllEng

Rather, the omission of the pronouns in (1) is restricted in ways that the omission in (3) is not. Prepositional Object Gaps thus cannot simply be a case of optional phonological omission.

Similarly, in Low- and Middle-German Dialects (for simplicity, Northern German [NGer]), inanimate pronominal complements of certain prepositions can sometimes be omitted; namely the *da(r)-* proclitic of “Pronominaladverbien”, as in (4):

- (4) a. Heute habe ich die Zeit nicht (**da**)zu gehabt. NGer  
*today have I the time not (DA).for had*
- b. Im Sommer sollte man auch gelegentlich einen Wassernapf (**da**)neben stellen.  
*in summer should one also occasionally a water.bowl (DA).next.to put*

As discussed further in section 3, *da* is homophonous with the locative ‘there’, but in this context means *it/ them*. There is strong agreement that, as with Prepositional Object Gaps, *da*-drop is not simply a case of phonologically dropping *da*; nor a case of acquiring a new lexical item with the same content but missing the first syllable.<sup>1</sup>

In outline, the next two sections review the basic patterning of Prepositional Object Gaps and *da*-drop, before section 4 draws a direct comparison. Sections 5 and 6 present novel experimental evidence designed to further explore their syntactic structures. Section 7 then discusses the implications of our results for the question of whether these two complement-less P phenomena call for similar syntactic analyses. Section 8 concludes with some directions for further study.

## 2. Background on BrEng complement-less prepositions

The British English (BrEng) complement-less locative prepositions we are concerned with were first analyzed<sup>2</sup> by Griffiths & Sailor (2015a,b, 2017; Sailor & Griffiths 2017) (G&S) under the moniker Prepositional Object Gaps (POGs). As illustrated in (5), the pronoun (a) or gap (b) obligatorily corefers with an overt DP; while in BrEng, (a) and (b) are synonymous:

- (5) a. This film<sub>i</sub> has monsters in it<sub>i/\*j</sub>. AllEng  
     b. This film<sub>i</sub> has monsters in \_\_\_\_<sub>i/\*j</sub>. BrEng

This section introduces four essential features of POGs: (i) POGs generally require locative *have* or *with*; (ii) the most broadly accepted prepositions are *in* and *on*; (iii) the “missing” pronoun must be inanimate; and (iv) POGs are importantly different from other constructions involving complement-less prepositions.

First, POGs are best licensed in the context of locative *have*, as in (5) above, or *with*, as in (6) (Swan 1995:433):

- (6) the film<sub>i</sub> with monsters in (it<sub>i</sub>)

Beyond these particular predicates, POGs are degraded. In (7), for example, the existential (a) is bad, despite the apparent synonymy of (b) and (c) (G&S):

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<sup>1</sup> This has happened with one preposition, *mit*, and the results look completely different in terms of their syntactic and dialectal distribution—see the Appendix.

<sup>2</sup> This phenomenon has been observed in the descriptive literature (Swan 1995, Algeo 2006:197) and (foot)noticed by syntacticians (Belvin & den Dikken 1997:168, fn. 17, McIntyre 2005:5).

- (7) a. Don't watch that film<sub>i</sub>—there's a monster in \*(it<sub>i</sub>)!<sup>3</sup>  
 b. There's a monster in that film.  
 c. That film<sub>i</sub> has a monster in (it<sub>i</sub>).

Even verbs that can be roughly synonymous with *have* do not license POGs, as shown in (8) (Stockwell & Schütze 2019). Neither do non-locative uses of *have* (Ritter & Rosen 1997, Harley 1998, Myler 2016), as shown in (9):<sup>4</sup>

- (8) a. This lift<sub>i</sub> can have up to 14 people in (it<sub>i</sub>).  
 b. This lift<sub>i</sub> can hold/accommodate up to 14 people in \*(it<sub>i</sub>).  
 (9) a. For a film<sub>i</sub> to be successful, monsters have (got) to be in \*(it<sub>i</sub>)! [modal *have (got) to*]  
 b. The boiler<sub>i</sub> had its<sub>i</sub> tank collecting water in \*(it<sub>i</sub>). [experiencer *have*]  
 c. The film<sub>i</sub>'s director had there be lots of monsters in \*(it<sub>i</sub>). [causative *have*]

Second, regarding prepositions, POGs are possible with *in*, as above, and *on*, as in (10), throughout BrEng:

- (10) a. This box<sub>i</sub> has spots on (it<sub>i</sub>).  
 b. a package<sub>i</sub> without enough stamps on (it<sub>i</sub>)  
 c. pictures<sub>i</sub> with coffee stains on (them<sub>i</sub>)

The availability of POGs with other locative prepositions is subject to interspeaker variation (G&S).<sup>5</sup> With a view to encompassing the broadest range of BrEng speakers—as experimentally in section 5—we limit ourselves to *in* and *on* here.

Third, the corresponding “missing” pronoun must be inanimate. Accordingly, POGs are possible with *it* counterparts, as above, and with inanimate *them*, as in (11). POGs are impossible, however, with first and second person pronouns, as in (12), and third person animate pronouns, as in (13) (G&S):

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<sup>3</sup> Although this judgment has been uncontroversial among BrEng linguists, the naïve BrEng participants in the experiment discussed in section 5 did not uniformly share it. For the sentence in (i), their ratings ranged from 1 to 7, with a mean of 5.2 and a median of 5, and were unimodally distributed.

(i) [TV shows]<sub>i</sub> are more exciting when there are monsters in \_\_\_\_.

It might be relevant that in (i), unlike (7a), the gap is c-commanded by its antecedent. However, the ratings for (ii), in which the antecedent does not c-command the gap, were not much lower: the mean was 4.9, the median was 5. Thus, having the antecedent in the same sentence may also be important.

(ii) I agree with you about [that film]<sub>i</sub>, even though there are superheroes in \_\_\_\_.

<sup>4</sup> Additional licensing verbs are plausibly built from *have* (cf. Sailor & Griffiths 2017:10): (i) illustrates for *need*, which has been argued to contain possessive *have* (Harves & Kayne 2012); and (ii) for *get*, which has been claimed to be the inchoative of *have* (Kimball 1973, Emonds 1994:164, i.a.). As in (8b), roughly synonymous verbs fail to license POGs:

(i) This film<sub>i</sub> {needs/??requires/??demands} more monsters in \_\_\_\_.  
 (ii) The guestbook<sub>i</sub> {got/\*obtained/\*acquired} so many rude entries in \_\_\_\_ last year that it had to be thrown away.

<sup>5</sup> G&S (2017) assert that POGs are also licensed—with interspeaker variation—by *behind, inside, below, above, beyond, around, through, across, along, over, under, past, between, up* and *down*.

- (11) These boxes<sub>i</sub> have papers in (them<sub>i</sub>).
- (12) I/You have {poison/radioactive chemicals} in \*(me/you).
- (13) That guy<sub>i</sub> looks like he has ten pints of beer in \*(him<sub>i</sub>).

Finally, POGs differ from other constructions involving complement-less prepositions. There are environments—beyond just *have/with*-frames—where complement-less prepositions are possible in all Englishes—beyond just BrEng. Three distinct instances of prepositions with no overt complement are surveyed in (14)—‘projective’ prepositions (Svenonius 2010) (a), directional particles (b), and predicates of wearing (c):

- (14) a. There was a box on the table. Inside ((of) it) was fine Swiss chocolate.
- b. They fell in (the hole).
- c. John had a hat on. [N.B. ≠ John<sub>i</sub> had a hat on him<sub>i</sub>.]

### 3. Background on Northern German *da*-drop

#### 3.1. *Pronominaladverbien*

Turning to German, it can be observed that the weak neuter pronoun *es* ('it') cannot be the complement of spatial (or many other) prepositions.<sup>6</sup> Instead, an “R-pronoun” *da(r)* procliticizes to the prepositions. These combinations of the R-pronoun with various prepositions are called “Pronominaladverbien” (pronominal adverbs) (van Riemsdijk 1978, Gallmann 1997, Haider 2010, Koopman 2010, Abels 2012, Noonan 2017, i.a.). This phenomenon is illustrated in (15b), which could be used to convey the same message as (15a).

- (15) a. Fritz hat gestern an sein Auto gedacht.  
*F* *has yesterday about his car thought*  
 ‘Fritz thought about his car yesterday.’
- b. Fritz hat gestern {daran / \*an es} gedacht.  
*F* *has yesterday DA.about about it thought*  
 ‘Fritz thought about it [lit. thereabout] yesterday.’

With the masculine and feminine third person singular pronouns and the plural pronoun, the pronominal adverb alternates with the canonical order of preposition–pronoun if the referent is inanimate, per the pairs in (16a–d), but the pronominal adverb is excluded if the referent is human (16e–f) (Müller 2000, 2002). In fact the pronominal adverb is always degraded, if not outright ungrammatical, whenever the referent is animate.<sup>7,8</sup>

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<sup>6</sup> Most dialects have at least one exception: *ohne es* ‘without it’ is possible because *darohne* is mostly unattested.

<sup>7</sup> When pronominal adverbs are used as in (15) and (16) with the *da* portion representing a personal pronoun they are always stressed on the second syllable. The same orthographic form can also be pronounced with stress on *da*, which is then interpreted as a demonstrative pronoun.

<sup>8</sup> But see Thun (1985) for documentation that colloquially in some dialects and in earlier stages of the language human referents are attested.

- (16) a. Maria musste noch oft an ihren Lieblingsrock denken.  
*M had.to still often about her favorite.skirt think*  
‘Maria still had to often think about her favorite skirt.’
- b. Maria musste noch oft {daran /an ihn} denken.  
*M had.to still often DA.about about it(MASC) think*  
‘Maria still had to often think about it.’
- c. Maria musste noch oft an ihre Lieblingspuppen denken.  
*M had.to still often about her favorite.dolls think*  
‘Maria still had to often think about her favorite dolls.’
- d. Maria musste noch oft {daran /an sie} denken.  
*M had.to still often DA.about about them think*  
‘Maria still had to often think about them.’
- e. Maria musste noch oft an ihre Lieblingsschwester denken.  
*M had.to still often about her favorite.sister think*  
‘Maria still had to often think about her favorite sister.’
- f. Maria musste noch oft {an sie/\*daran} denken.  
*M had.to still often about her DA.about think*  
‘Maria still had to often think about her.’

While the pronominal adverb construction is available in all German dialects, it has two interesting properties in NGer, which are described in the remainder of this section: *da*-fronting and *da*-drop.

### 3.2.Da-fronting

The R-pronoun *da(r)* can optionally be displaced leftward from the preposition in NGer. This construction is referred to as the “Spaltungskonstruktion” (*split construction*) by Fleischer (2002); see also Müller (2000).<sup>9</sup> In the split construction, *da(r)* frequently appears sentence-initially, as in (17), but it can also show up in the middle field, as in (18):

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<sup>9</sup> The split construction is proscribed in standard German: “Heute gilt die Trennung der Pronominaladverbien nicht als hochsprachlich; sie ist umgangssprachlich, besonders norddeutsch:... *Da kann ich nichts für*. Hochsprachlich: *Dafür kann ich nichts*.” (Berger et al. 1972: 532) [‘Today the separation of the pronominal adverbs is not considered high-level language; it is colloquial, especially northern German’]. “Ein weiterer Fehler, wieder vor allem in der gesprochenen Sprache, ist die Aufsplittung des Pronominaladverbs” (Götze & Hess-Lüttich 2002: 301) [‘Another mistake, again especially in the spoken language, is the splitting of the pronominal adverb’].

- (17) a. Colloquial Northern German  
**Da** kommen sie viel billiger **bei** weg.  
*DA come.3PL they much cheaper by away*  
‘They come away much cheaper thereby.’
- b. North Saxon (Lindow et al. 1998:274)  
**(Dar)** kaamt se veel billiger **bi** weg.  
*DA come.3PL they much cheaper by away*  
‘They come away much cheaper thereby.’
- (18) a. Colloquial Northern German  
Sie kommen **da** viel billiger **bei** weg.  
*they come.3PL DA much cheaper by away*  
‘They come away much cheaper thereby.’
- b. East Pomeranian (Stübs 1938:140)  
Se sünd **doa** sehr besorgt **üm**.  
*they are DA very worried about*  
‘They are very worried about it.’

### 3.3. Da-drop

It is also possible to drop the otherwise obligatory *da(r)* morpheme in NGer, a construction that Fleischer refers to as “Präposition ohne overte Ergänzung” (*preposition without overt object*), which we call *da-drop*. Fleischer notes the optionality of *da(r)* in (19)—the two examples are drawn from the same page of a dialectal German source:

- (19) North Saxon (Feyer 1939:27)
- a. Ja, aver Hinnerk, man dröögtsik doch de Han'n nich **drin** af!  
*yes but H one dries self yet the hands not DA.in off*  
‘Well, Hinnerk, but one does not dry off one’s hands in it!’
  - b. Dat hangt anne Wand un lett witt, un man dröögtsik de Han'n **in** af.  
*that hangs on=the wall and looks white and one dries self the hands in off*  
‘It hangs on the wall and looks white, and one dries off one’s hands in it.’

In (19a), *da(r)* is phonologically reduced and appears in the pronominal adverb *drin*. In (19b), on the other hand, *da(r)* completely disappears, leaving only the preposition *in*.

### 3.4. Distribution of da-fronting and da-drop

According to Fleischer, the regions where *da*-fronting and *da*-drop occur are virtually co-extensive, as can be seen in Figures 1 and 2. Note that *da*-drop and *da*-fronting are possible only with consonant-initial prepositions in the lighter shaded areas, but with both vowel- and consonant-initial prepositions in the darker shaded areas. (Berlin and Potsdam are circled on these figures because of their relevance for the experiment described in section 6.)

Karte 1

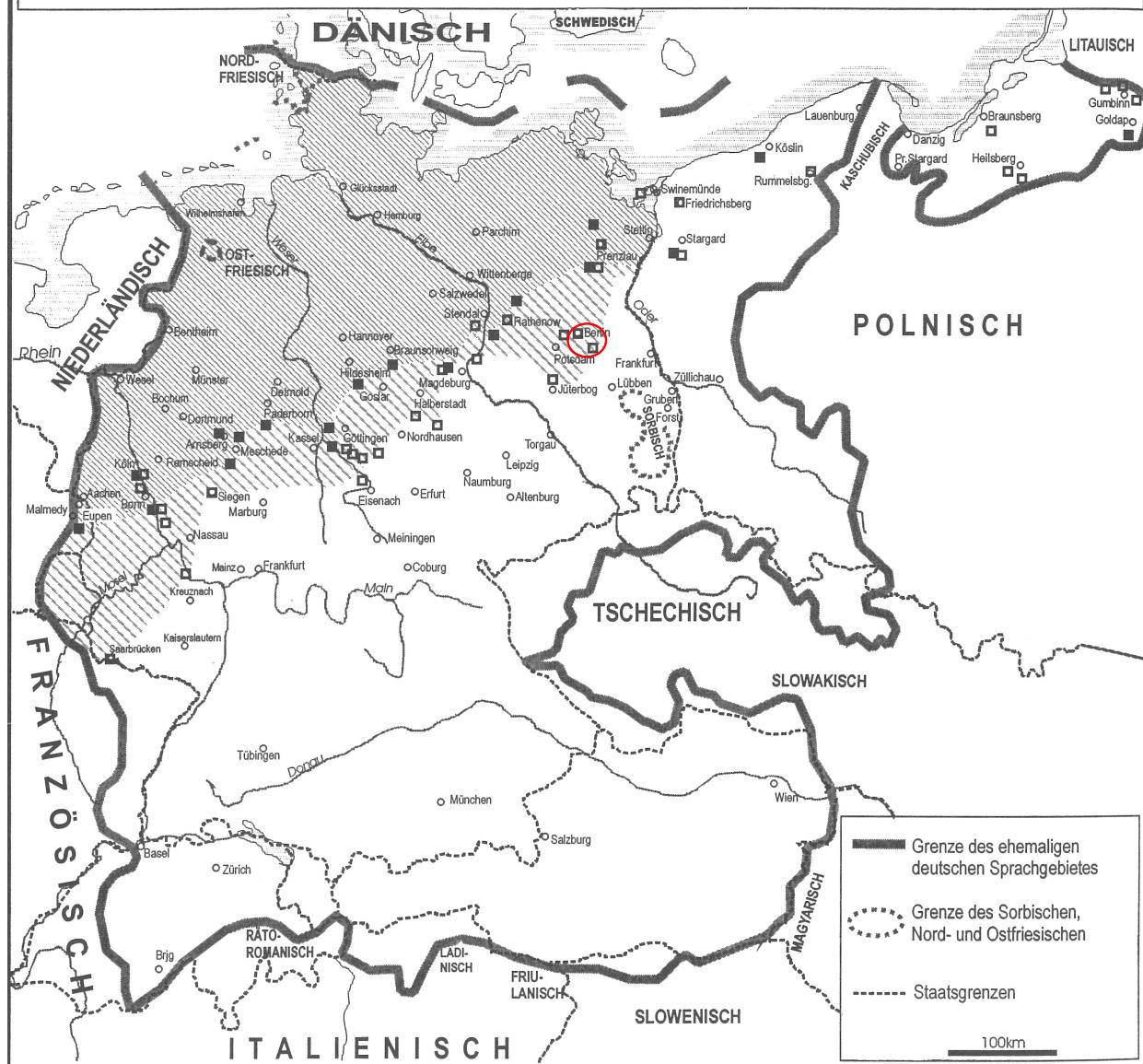
## Spaltungskonstruktion bei ‘da’

### vokalisch anlautende Präpositionen, südlichste Belegorte

**konsonantisch anlautende Präpositionen, südlichste Belegorte**

## **Spaltungskonstruktion bei allen Präpositionen**

**Spaltungskonstruktion nur bei konsonantisch anlautenden Präpositionen**



**Figure 1:** Attestation of *da*-fronting (with all Ps in darker shading, with only C-initial Ps in lighter shading). Berlin and Potsdam are circled. From Fleischer (2002).

## Präposition ohne overte Ergänzung

- vokalisch anlautende Präpositionen, südlichste Belegorte
- konsonantisch anlautende Präpositionen, südlichste Belegorte
- ▨ Präposition ohne overte Ergänzung bei allen Präpositionen
- ▨▨▨ Präposition ohne overte Ergänzung nur bei konsonantisch anlautenden Präpositionen



**Figure 2:** Attestation of *da*-drop (with all Ps in darker shading, with only C-initial Ps in lighter shading). Berlin and Potsdam are circled. From Fleischer (2002).

In modern colloquial German, *da*-fronting is more widespread than Figure 1 suggests. Fleischer's data are based on dialect atlases and dictionaries that rely on attested written examples, so the absence of a construction from a given source could be accidental, and speech may be more liberal than writing. In other words, his maps are conservative. By contrast, questionnaire studies, e.g. by Elspaß & Möller (2003ff.), while still showing a predominantly Northern distribution for *da*-fronting, find occasional attestations in even the southernmost states of Germany. It would thus be misleading to claim this is exclusively a Northern phenomenon.

The *da*-drop construction, on the other hand, is not found in southern dialects.

Furthermore, Oppenrieder (1991) states that not all speakers who accept *da*-fronting accept *da*-drop. Thus, there seems to be a one-way implication: all speakers who can *da*-drop can *da*-front, but not vice-versa. As an initial causal link between *da*-drop and *da*-fronting, Fleischer (2002:408) points out that if *da* can be fronted to first position, then another drop construction, namely Topic Drop (= dropping of Spec-CP), could explain why *da(r)* is absent from that first position in a V2 clause, resulting in a V1 order, as in (20B):

- (20) A: Wie ist's mit Bruckner?  
*how is.it with B*

- B: Ø Kenn ich eigentlich nicht so viel **von.**  
*know I actually not so much about*

(Negele 2012:119)

But there remain many examples that exclude this analysis because the first position (XP preceding the finite verb) is filled.<sup>10</sup> These include the standard German examples in (21) collected by Oppenrieder (1991) to make this point, and the dialect examples in (22) and (23) from Fleischer:

- (21) a. der Otto Flasnöcker kann ein Lied **von** singen  
*the O. F. can a song about sing.INF*  
 ‘Otto Flasnöcker can tell you a thing or two about it.’ [idiom; lit. ‘sing a song about it’]
- b. ...dann sind sie abends oft so müde, daß sie sich überhaupt nicht mehr  
*then are they evenings often so tired that they self at.all not more*  
**zu** auftraffen, dann sich auch noch mal um ihre Kinder zu kümmern  
*to bring then self also again about their children to care* (Breindl 1989:146)  
 ‘...then they are often so tired in the evenings that they no longer can bring themselves to do it at all: to also take care of their children once again.’
- (22) Hamburgish (Saltveit 1983: 323)  
 Also büst du wedder nich **bi** wesen.  
*so are you again not at been*  
 ‘So you weren’t there again.’

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<sup>10</sup> Such examples have been independently attested in corpus analyses by several authors: Breindl (1989), Negele (2012), Jürgens (2013), Otte-Ford (2016), Freywald (2017).

- (23) Brandenburgish (Lademann 1956: 338)

- a. Der hät den janßen Noamiddach **bei** tuejeracht.  
*he has the whole afternoon at spent*  
'He spent the whole afternoon at it.'
- b. Der hät lange **föä** jespäält.  
*he has long for played*  
'He [an organ grinder] played [music] for a long time for it [a penny].'

In (21a), the subject of the clause occupies first position. Similarly, in (22) and (23), first position is overtly filled. In (21b), *da*-drop occurs in an embedded clause where Topic Drop is not possible. Thus, Topic Drop cannot explain the absence of *da(r)* in (21)–(23) and cannot explain any general correlation between a speaker's allowing *da*-fronting and *da*-drop. Nonetheless, the geographic overlap discussed above suggests there could be such a link, a possibility we return to in section 7.

#### 4. Comparison

Having introduced the BrEng POG construction in section 2 and the NGer *da*-drop construction in section 3, this section draws a comparison of the two phenomena. While they share broad distributional and descriptive similarities, there seem to be deeper syntactic and semantic differences, as detailed below.

Starting with the similarities, we can observe that both complement-less preposition constructions are dialectically restricted and that there is considerable regional and interspeaker variation as to which prepositions they occur with. Another similarity is that the omission of the proform is restricted to inanimates. (For the German *da*, this is trivial since it can only refer to inanimates.)

Turning to the differences, the omitted proform in German is homophonous with the locative proform, while in English, this is not the case. Further, the BrEng POG construction shows a semantic restriction on the prepositions: only locative/spatial prepositions allow the omission of the proform. In contrast, NGer has a phonological restriction: for many speakers, *da*-drop is possible only with consonant-initial prepositions.

Another difference between the two constructions concerns the predicate. In BrEng, the predicate must be *have* or *with* (or something built on those) to allow pronoun omission; see (8), repeated in (24):

- (24) a. This lift<sub>i</sub> can have up to 14 people in (it<sub>i</sub>).  
b. This lift<sub>i</sub> can hold/accommodate up to 14 people in \*(it<sub>i</sub>).

In German, on the other hand, the literal translation of a relevant sentence with *have* and a small clause is rather marked (25a); *da*-drop seems virtually impossible in that environment (25b), and *da*-fronting is out of the question (25c, d):

- (25) a. ?Das Hotel hat einen Golfplatz daneben.  
*the hotel has a golf.course DA-next.to*  
‘The hotel has a golf course next to it.’
- b. ??Das Hotel hat einen Golfplatz **neben**.  
*the hotel has a golf.course next.to*
- c. \*Das Hotel hat **da** einen Golfplatz **neben**.  
*the hotel has DA a golf.course next.to*  
(this string allows *da* to receive only the interpretation ‘there’, not ‘it’)
- d. \***Da** hat das Hotel einen Golfplatz **neben**.  
*DA has the hotel a golf.course next.to*  
(this string allows *da* to receive only the interpretation ‘there’, not ‘it’)

We are not certain what is responsible for this pattern.

The final set of differences concerns the interaction of proform omission with movement in the two constructions. While in NGer, it seems that omission depends on the possibility of separating the proform from the preposition, BrEng shows the opposite pattern: there, the pronoun cannot be overtly separated from the preposition, as shown in (26):

- (26) a. \*Them<sub>j</sub>, these boxes have papers in t<sub>j</sub>.  
b. \*These boxes <them<sub>j</sub>> have <them<sub>j</sub>> papers <them<sub>j</sub>> in t<sub>j</sub>.

The omission of the proform also interacts with the displacement of other constituents. In BrEng, the object of the predicate cannot be extracted if the pronoun is dropped, as will be shown in section 5. In NGer, on the other hand, *da*-drop does not inhibit movement of that object, as will be shown in section 6. Sections 5 and 6 present new experimental data on the interaction of object extraction and proform omission in BrEng and NGer, respectively. Section 7 provides an analysis of the data.

Table 1 summarizes the similarities and differences between BrEng POGs and NGer *da*-drop.

TABLE 1: CONDITIONS ON OMISSION OF P COMPLEMENTS IN BRENG AND NGER

	BrEng	NGer
<i>Variability</i>		
Dialectally restricted	yes	yes
Speaker ] variation in prepositions	yes	yes
Regional ]		
<i>Properties of proform &amp; antecedent</i>		
Omission restricted to inanimates	yes	yes
Proform homophonous with locative	no	yes
Omission restricted to locative Ps	yes	no
Predicates built on <i>have/with</i>	required	not required
<i>Interaction with movement</i>		
Option to separate proform from P	no (see (26))	yes (required?)
Omission blocks extraction of object?	yes (§5)	no (§6)

## 5. Object extraction and POGs: New data

Based on native speaker intuitions, Stockwell & Schütze (2019) suggested that A-bar movement of the object is impossible with POGs (27):

- (27) What<sub>j</sub> does this shirt have  $t_j$  on \*(it)? BrEng

At the same time, they reported that there is no such restriction with other complement-less prepositions (28), cf. section 2.4:

- (28) a. What<sub>j</sub> does this box have  $t_j$  inside?  
b. [What kind of hat]<sub>j</sub> does Mary have  $t_j$  on?

Here we report a pilot experiment confirming the intuitions in (27) and (28) that A-bar movement of the object is impossible only with POGs.

### 5.1 Method

The participants were 60 speakers from England, recruited via Amazon Mechanical Turk.<sup>11</sup> They were paid US\$5 for their participation, which took approximately 10 minutes. They were tasked with providing acceptability ratings on a 1–7 Likert scale (7=best) of target sentences containing the configuration  $DP_i \text{ HAVE} \dots \text{in/on } \{it/\text{them}_i \text{ vs. } \emptyset\}_j$ . The experiment employed a 2×3 design: the prepositional complement was either i) an overt pronoun or ii) null; the sentence structure involved either a) no extraction; b) A-bar extraction of the direct object; or c) A-bar extraction of a non-object—the subject or an adjunct.<sup>12</sup> Five types of A-bar movement structures were tested: two types of *wh*-interrogatives (*which/what N, how much/many N*), restrictive relatives, topicalization structures, and *it*-clefts. There were four token sets for each of these types. Each of the 20 target items thus consisted of a 6-tuple of sentences, exemplified for *which N wh*-interrogatives in (29). In addition there were 28 filler sentences,<sup>13</sup> for a total of 48 items to be rated (each participant saw only one member of each 6-tuple).

- (29) a. Those jeans have stains on them/∅. [no extraction]  
b. [What stains]<sub>j</sub> do those jeans have  $t_i$  on them/∅? [object extraction]  
c. [Which jeans]<sub>j</sub>  $t_j$  have stains on them/∅? [subject extraction]

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<sup>11</sup> In addition to meeting the Amazon Mechanical Turk criterion of Location = United Kingdom, participants had to answer Yes to the following two questions:

(i) Did you live in England from birth until (at least) age 13?  
(ii) Did you speak English in the home?

<sup>12</sup> The adjuncts tested included *sometimes*, *usually*, and *often*—translation equivalents of three of the frequency adverbials used in the German experiment described in section 6.

<sup>13</sup> The fillers included one sentence that is grammatical in BrEng but not in most other Englishes (*Have you any idea how dangerous that is?*), which participants had to rate at least 4 out of 7; sentences (i) and (ii) of fn. 3 and another similar to (ii); eight ungrammatical catch trials, twelve grammatical catch trials, and four miscellaneous trials. The grammatical catch trials included nine that were like (14c) with a final preposition (which might be prescriptively disfavored, like the targets with null pronouns). Participants could make no more than two errors on catch trials, where an error was defined as a rating greater than 4 on an ungrammatical item or less than 4 on a grammatical item—data from an additional seven participants was excluded on this basis.

## 5.2 Results

The mean ratings for the 20 target 6-tuples are summarized in Table 2.

TABLE 2: MEAN RATINGS BY CONDITION

Structure	i) Overt pronoun	ii) Null pronoun	Difference
a) No extraction	6.40	5.46	0.94
b) Object extraction	4.46	3.21	<b>1.25</b>
c) Non-object extraction	6.02	5.43	0.59

As is evident, numerically the null pronoun condition is always rated lower than the corresponding overt pronoun condition, and this difference is largest in object extraction. Consistent with the hypothesis that POGs are ungrammatical just when the object is extracted, only this condition is rated below 4 (the midpoint of the scale) and more than a full point below its counterpart with an overt pronoun.

To what extent are these patterns in the global means representative of the behaviour of the five constructions considered separately? See tables 3A–3E.

TABLE 3A: MEAN RATINGS BY CONDITION:  
*WHICH/WHAT N* QUESTIONS

Structure	i) Overt pronoun	ii) Null pronoun	Difference
a) No extraction	6.48	5.43	1.05
b) Object extraction	5.20	3.63	<b>1.57</b>
c) Subject extraction	6.28	5.93	0.35

TABLE 3B: MEAN RATINGS BY CONDITION:  
*HOW MUCH/MANY* QUESTIONS

Structure	i) Overt pronoun	ii) Null pronoun	Difference
a) No extraction	6.35	5.50	0.85
b) Object extraction	6.00	4.28	<b>1.72</b>
c) Subject extraction	5.08	4.50	0.58

TABLE 3C: MEAN RATINGS BY CONDITION:  
RELATIVE CLAUSES

Structure	i) Overt pronoun	ii) Null pronoun	Difference
a) No extraction	5.93	5.50	0.43
b) Object extraction	4.78	3.45	<b>1.33</b>
c) Subject extraction	6.48	5.60	0.88

TABLE 3D: MEAN RATINGS BY CONDITION:  
TOPICALIZATION

Structure	i) Overt pronoun	ii) Null pronoun	Difference
a) No extraction	6.53	5.75	<b>0.78</b>
b) Object extraction	2.25	2.03	0.22
c) Adjunct extraction	6.35	5.83	0.52

TABLE 3E: MEAN RATINGS BY CONDITION:  
*IT-CLEFTS*

Structure	i) Overt pronoun	ii) Null pronoun	Difference
a) No extraction	6.70	5.13	<b>1.57</b>
b) Object extraction	4.08	2.68	1.40
c) Subject extraction	5.90	5.30	0.60

Across all five construction types, POGs are always rated lower than their counterparts with overt pronouns. Moreover, object extraction with a null pronoun is always the lowest-rated of the six conditions, and below the 4.0 midpoint in four out of the five constructions. However, the pattern whereby the decrement in acceptability from overt to null pronoun is greatest for object extraction is not maintained for Topicalization or *It*-clefts, so we examine these in more detail.

For Topicalization, it appears that object extraction with both overt and null pronouns may have been subject to a floor effect, with most item means below 2.5 and some below 2.0. We suspect that, out of context, the lack of anything explicit to contrast with the topicalized object made these sentences very awkward, despite our best efforts, as in (30b).

- (30) a. Cinema popcorn often has too much salt on it/Ø.
- b. [Too much salt]<sub>i</sub>, cinema popcorn often has *t<sub>i</sub>* on it/Ø.
- c. Often<sub>j</sub>, cinema popcorn *t<sub>j</sub>* has too much salt on it/Ø.

As a result, we exclude the Topicalization data from further discussion.

In the *it*-cleft condition, examination of item means revealed that three of the four items followed the overall patterns observed in Table 2 above, while one item showed an extreme degradation in the rating for object extraction with the overt pronoun, making it actually worse than with the null pronoun. Obviously we would hope to explore in follow-up work whether this was more than a random glitch; for the moment we assume that it was just that, and exclude that item from further analysis. Table 3E' shows the means across the remaining three 6-tuples.

TABLE 3E': MEAN RATINGS BY CONDITION  
THREE /T-CLEFT ITEMS

Structure	i) Overt pronoun	ii) Null pronoun	Difference
a) No extraction	6.63	5.00	1.63
b) Object extraction	4.33	2.50	<b>1.83</b>
c) Subject extraction	5.63	5.57	0.06

Before looking at this POG data in more detail, let us return briefly to the contrast between object extraction with POGs versus with optionally transitive prepositions like *inside* and the particle use of *on* in *have DP on* meaning ‘be wearing DP’. We tested these using the 6-tuple in (31) and two triplets like (32), respectively.

- (31) a. This drawer has money inside it/Ø.<sup>14</sup>
- b. What; does this drawer have  $t_i$  inside it/Ø?
- c. [Which drawer]<sub>j</sub>  $t_j$  has money inside it/Ø?
- (32) a. The performer has a costume on.
- b. [What costume]<sub>i</sub> does the performer have  $t_i$  on?
- c. [Which performer]<sub>j</sub>  $t_j$  has a costume on?

A simple examination of the means in Tables 3A, 3B, 3C and 3E' vs. Tables 4 and 5 provides strong *prima facie* evidence that the latter two constructions do not degrade like POGs when their objects are extracted.

TABLE 4: MEAN RATINGS FOR (31) BY CONDITION

Structure	i) Overt pronoun	ii) Null pronoun	Difference
a) No extraction	6.70	6.70	0
b) Object extraction	6.42	6.43	-0.01
c) Subject extraction	6.65	6.60	0.05

TABLE 5: MEAN RATINGS OF TWO ITEMS LIKE (32) BY CONDITION

Structure
a) No extraction
b) Object extraction
c) Subject extraction

---

<sup>14</sup> The null symbol here is not intended to endorse any particular analysis of the intransitive use of the preposition; we adopt it purely for notational convenience.

### 5.3 Analysis

Having excluded Topicalization and one *it*-cleft item, the remaining items containing POGs were interrogatives (8 items: 4 *which/what N* and 4 *how much/many* questions) and declaratives (7 items: 4 relative clauses and 3 *it*-clefts), whose means are shown in Table 6 and plotted in Figure 1. What we would like to know about these data is the following: given that null pronouns are always rated lower than their overt pronoun counterparts, are null pronouns in object extraction sentences rated even worse than one would expect by virtue of that main effect, plus whatever effect object extraction generally has in the relevant type of sentence? This is the essence of how Sprouse (e.g., Sprouse & Villata 2021) argues that degradation should be identified as the result of a genuine grammatical constraint in need of theoretical explanation: a configuration is judged substantially worse than the sum of the components that are shown to independently degrade ratings on sentences of the relevant type. Such a scenario manifests itself as an interaction between (in our case) two independent factors: whether the pronoun complement to the preposition is overt or null and whether the extraction is from object versus subject position.<sup>15</sup>

TABLE 6: MEAN RATINGS OF PAIRED CONDITIONS  
INTERROGATIVES (8 ITEMS) DECLARATIVES (7 ITEMS)

Structure	i) Overt pronoun	ii) Null pronoun	Difference	i) Overt pronoun	ii) Null pronoun	Difference
a) No extraction	6.41	5.46	0.95	6.23	5.29	0.94
b) Object extraction	5.60	3.95	<b>1.65</b>	4.59	3.04	<b>1.55</b>
c) Subject extraction	5.68	5.21	0.47	6.11	5.59	0.52

<sup>15</sup> We cannot do full justice to Sprouse's logic here, but it generally relies on an assumption that seems problematic in light of our data, namely that the degradation contributed by each factor to the target sentence type is independent of all other factors. In Tables 3A, 3B, and 3E', the degradation due to a null pronoun is considerably less when the subject is extracted than in the baseline condition where there is no extraction. Absent an explanation for this difference, it is not obvious which structure provides a better estimate of the expected effect of null pronouns on object extraction. We suggest the comparison of subject vs. object extraction is the most straightforward to interpret, in that the sentences being compared are maximally similar: both involve a Wh-operator of the same type in Spec-CP (*which/what N*, *how much N*, *how many N*, or *O<sub>Pre</sub>*) and a semantic property (interrogation, focus, restrictive modification) not found in the no-extraction condition.

But there could be other, subtler confounds that cut the empirical pie differently. For example, we did not control for the extent to which the sentence would be acceptable (and retain the same meaning) if the entire PP were omitted (in all dialects). Among our stimuli we find the full range, whose endpoints are illustrated in (i).

- (i) a. Expensive dresses usually have fancy embroidery (on them).  
 b. I saw that the new play has that famous actress \*(in it).

When the pronoun complement to the preposition is null, then to the extent one can deaccent the preposition (which is sentence final in all our stimuli except for some of the Topicalization items), one can "hear" the sentence as if the entire PP were omitted, which might alleviate the degradation associated with POGs for sentences like (ia) but would obviously be of no benefit to sentences like (ib). It is plausible that prosodic differences among the three structures differentially affect deaccenting and thus, indirectly, pronoun drop acceptability. In fact, the authors' ratings of PP optionality on a 5-point scale correlated significantly or marginally (sometimes positively, sometimes negatively) with acceptability ratings in each of the six conditions for the data in Table 6, with  $r^2$  ranging from 0.15 to 0.31. We hope to explore this in future work.

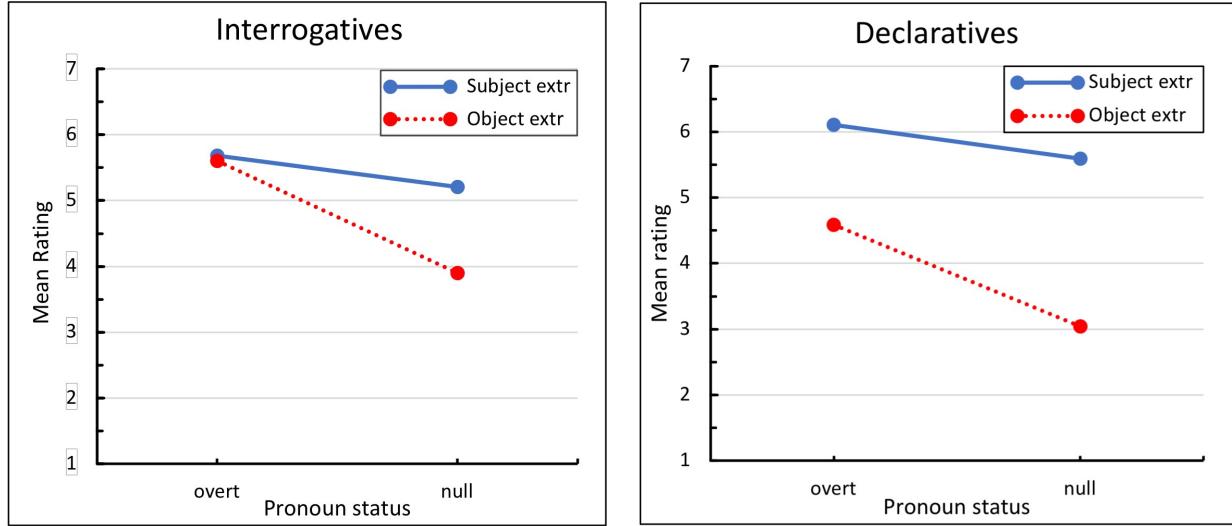


Figure 1: Condition means for subject and object extraction from Table 6

## 6. Object extraction and *da*-drop: New data

This section reports a second experiment, which finds no evidence for an analogous restriction on object extraction in NGer *da*-drop.

### 6.1 Method

The participants analyzed were 34 speakers from the Berlin/Brandenburg region recruited from the University of Potsdam subject pool,<sup>16</sup> from whom we collected acceptability ratings on a 1–7 Likert scale (7=best) of the final (**boldface**) sentence in a multi-sentence two-person dialog. They were paid 10€ for their participation, which took approximately 30 minutes. That target sentence either contained a *da* fronted to the Mittelfeld or omitted *da*, and contained one of the following eight consonant-initial prepositions: *zu, bei, für, von, gegen, hinter, vor, neben*.<sup>17</sup> The experiment employed a 2×2 design: *da* was either i) overt or ii) omitted (Ø); the sentence structure involved A-bar extraction of either a) the direct object or b) a non-object (subject or AdverbP). Two types of A-bar extraction were tested: matrix topicalization (i.e., fronting to first position in a V2 declarative clause), which applied to direct objects and AdverbPs, and restrictive relativization, which applied to direct objects and subjects. The 16 target dialogs thus involved 4-tuples of final sentences. In addition there were 32 filler dialogs (among which 10 had final sentences designated as grammatical catch items and 7 had final sentences designated as

<sup>16</sup> Of the original 39 subjects, five were excluded because they did not self-identify as native speakers of German from the Berlin/Brandenburg region or they gave three or more anomalous scores on catch trials. An anomalous score was defined as either a score on a grammatical sentence that was lower than some score the participant gave on an ungrammatical catch trial, or a score on an ungrammatical sentence that was higher than some score the participant gave on a grammatical catch trial. We did not exclude participants who stated that they did not speak Berlin/Brandenburg dialect day-to-day themselves; doing so would have shrunk the subject pool in half, but comparing them to active dialect speakers could prove interesting in future research.

<sup>17</sup> In these dialects, vowel-initial prepositions are strongly dispreferred in this construction, so we could not test the closest counterparts to BrEng *in/on* (*in/auf*). Also, *mit* was avoided—see the Appendix.

ungrammatical catch items), for a total of 48 items to be rated (each participant saw only one member of each target 4-tuple). A target dialog exemplifying topicalization is shown in (33):

- (33) A: Was sind die Nebenwirkungen der Tabletten?  
*what are the side.effects of.the tablets*
- B: Das ist bei jedem unterschiedlich. ...  
*that is for everyone different*
- a. **Aber einen Ausschlag kann man da/Ø häufig  $t_i$  von bekommen.** [object top.]  
*but a rash can one DA/Ø often from get*
- b. **Aber häufig kann man da/Ø  $t_j$  einen Ausschlag von bekommen.** [AdvP top.]  
*but often can one DA/Ø a rash from get*

The stimuli were presented in Standard German orthography, rather than attempting to represent dialectal pronunciation (as in Henneberg 2017), since people are not accustomed to reading the latter.

## 6.2 Results

The condition means are summarized in Tables 7 and 8 and plotted in Figure 2.

TABLE 7: MEAN RATINGS BY CONDITION:  
 MATRIX TOPICALIZATION

Structure	i) da overt	ii) da dropped	Difference
a) Object fronted	4.56	3.13	1.43
b) AdvP fronted	4.71	3.68	1.03

TABLE 8: MEAN RATINGS BY CONDITION:  
 RELATIVE CLAUSES

Structure	i) da overt	ii) da dropped	Difference
a) Object relativized	3.56	2.65	0.91
b) Subject relativized	4.28	2.70	1.58

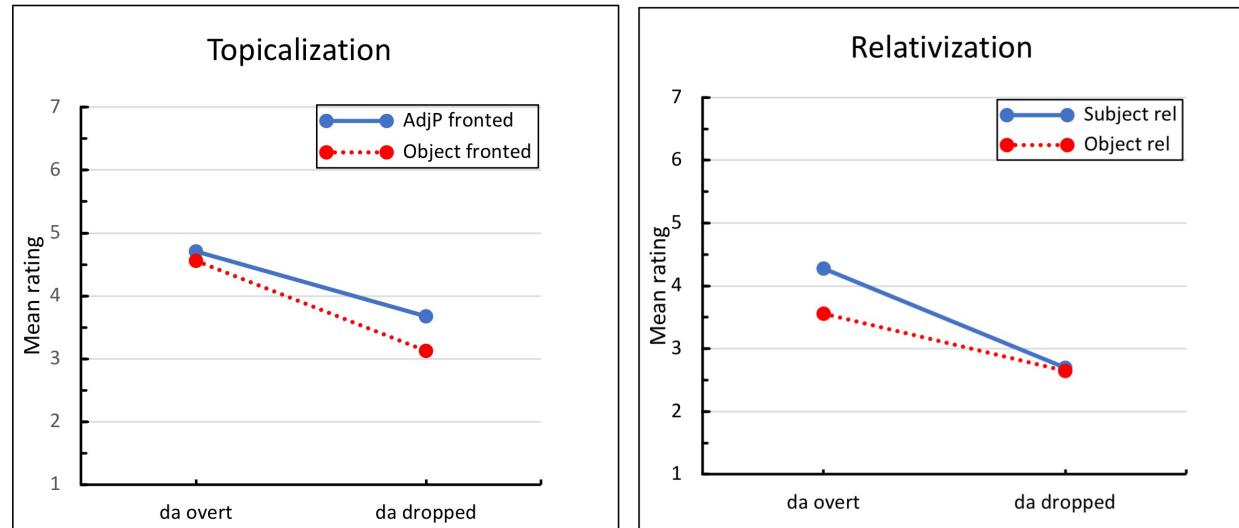


Figure 2: Condition means from Tables 7 and 8

Here we see potential interactions in opposite directions for the two clause types, with the larger occurring in relative clauses and showing subject extraction more degraded by *da*-drop than

object extraction, which (if real) would be the opposite of the pattern observed for English. (The pattern in Table 7 has no direct counterpart in the English data: the only condition where we fronted adverbials was the English “Topicalization” construction, which is semantically and syntactically very different from that in German and whose data were uninterpretable due to a floor effect.) Before making much of the apparent greater difficulty of subject relativization combined with *da*-drop seen in Table 8, however, it should be noted that the critical stimuli were long sequences of sentences where the judgement hinged on the presence/absence of the same very short word (*da*) in each case. It would be desirable to conduct a follow-up experiment where participants read the sentences out loud, to rule out artifacts that could arise from skipping *da* when it is present, or subconsciously inserting it when it is absent.

## 7. Towards an analysis of the extraction facts

This section presents an idea for how to derive the difference between English POGs and German *da*-drop with respect to object extraction. In overview, we claim that the object extraction restriction with BrEng POGs would follow if the pronominal complement of the preposition A-bar moves to the left of the object for silencing. The restriction would not follow on G&S’s previous A-movement analysis of POGs. As it happens, A-movement *qua* scrambling could explain why there is no such extraction restriction in NGer.

### 7.1 The object extraction restriction with BrEng POGs

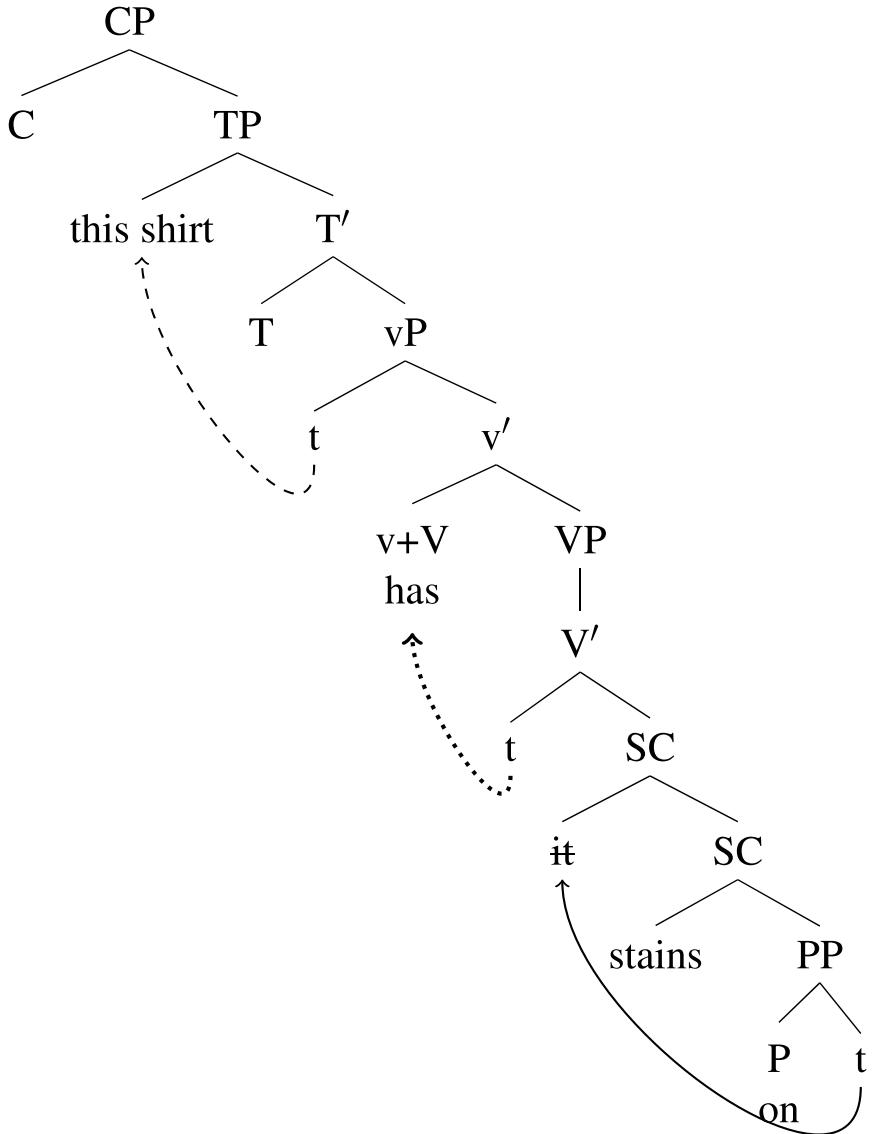
Our analysis involves three crucial assumptions. The first of these is that pronominal complements of P need to move in order to be silenced. Circumstantial evidence for this comes from the co-extension of *da*-drop and *da*-fronting in NGer. We take their co-extension as suggestive that *da*-drop is contingent on *da*-fronting. Further, we extend this suggestion to BrEng POGs in assuming that the complement of P moves for silencing. There are precedents in the literature for the claim that certain elements must move in order to delete; for example, Chomsky’s (1973, 1977) classic analysis of Comparative Deletion. See also the analyses in Johnson (1991), Fitzpatrick (2006), and Schirer (2008).

More precisely, with respect to POGs, we stipulate that *it* A-bar moves to the edge of the small clause (SC) complement of locative *have* in order to be silenced; (34) illustrates:<sup>18</sup>

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<sup>18</sup> We use different arrows to indicate different kinds of movement: solid for A-bar movement, dashed for A-movement, and dotted for head movement.

- (34) This shirt has stains on.

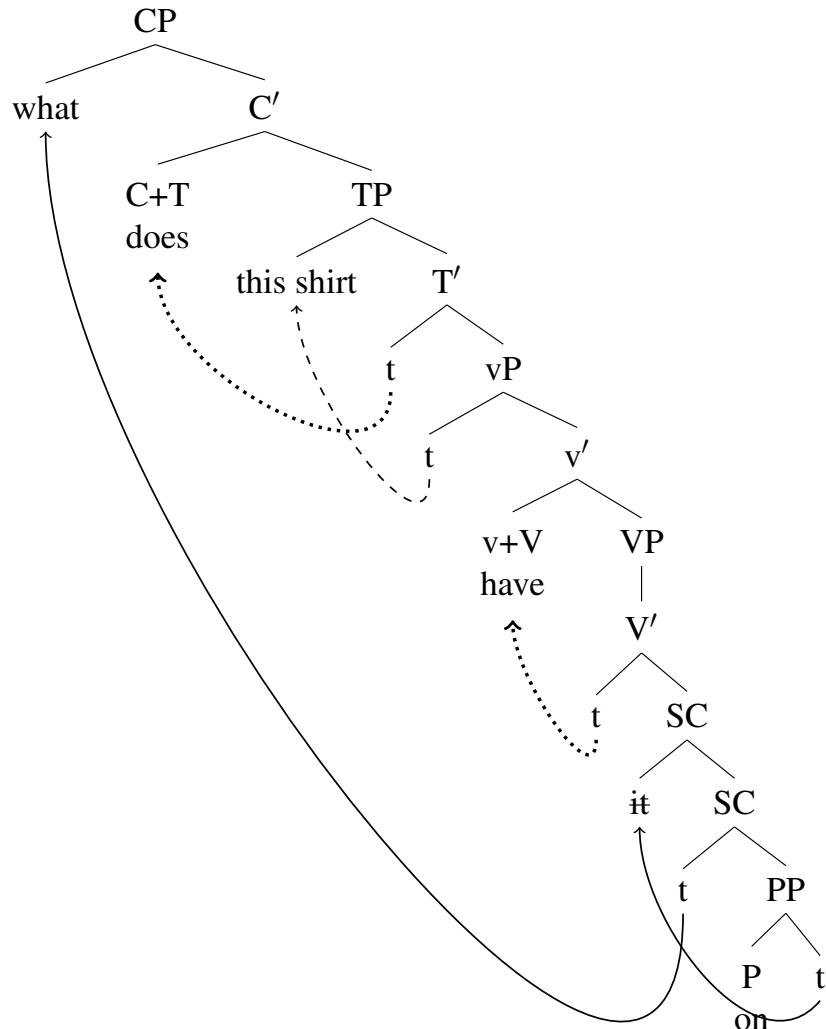


Our second assumption is that crossing A-bar dependencies are ungrammatical. That is, we adopt Pesetsky's (1982) Path Containment Condition. Crossing, in contrast to nested, A-bar dependencies yield ungrammaticality in a range of structures. The crossing vs. nested 'i' and 'j' dependencies in (35) illustrate this for *tough-movement* combined with *wh-movement*. Compare also the relative acceptability of the nested vs. crossing *wh-island* violations in (36):

- |  |                                  |
|--|----------------------------------|
| (35) a. *[Which sonata] <sub>i</sub> is [this violin] <sub>j</sub> easy [OP <sub>j</sub> PRO to play $t_i$ on $t_j$ ]?<br>b. [Which violin] <sub>j</sub> is [this sonata] <sub>i</sub> easy [OP <sub>i</sub> PRO to play $t_i$ on $t_j$ ]? | <i>crossing</i><br><i>nested</i> |
| (36) a. *Who <sub>i</sub> do you know [CP [what subject] <sub>j</sub> PRO to talk to $t_i$ about $t_j$ ]?<br>b. ?[What subject] <sub>j</sub> do you know [CP who <sub>i</sub> PRO to talk to $t_i$ about $t_j$ ]?                          | <i>crossing</i><br><i>nested</i> |

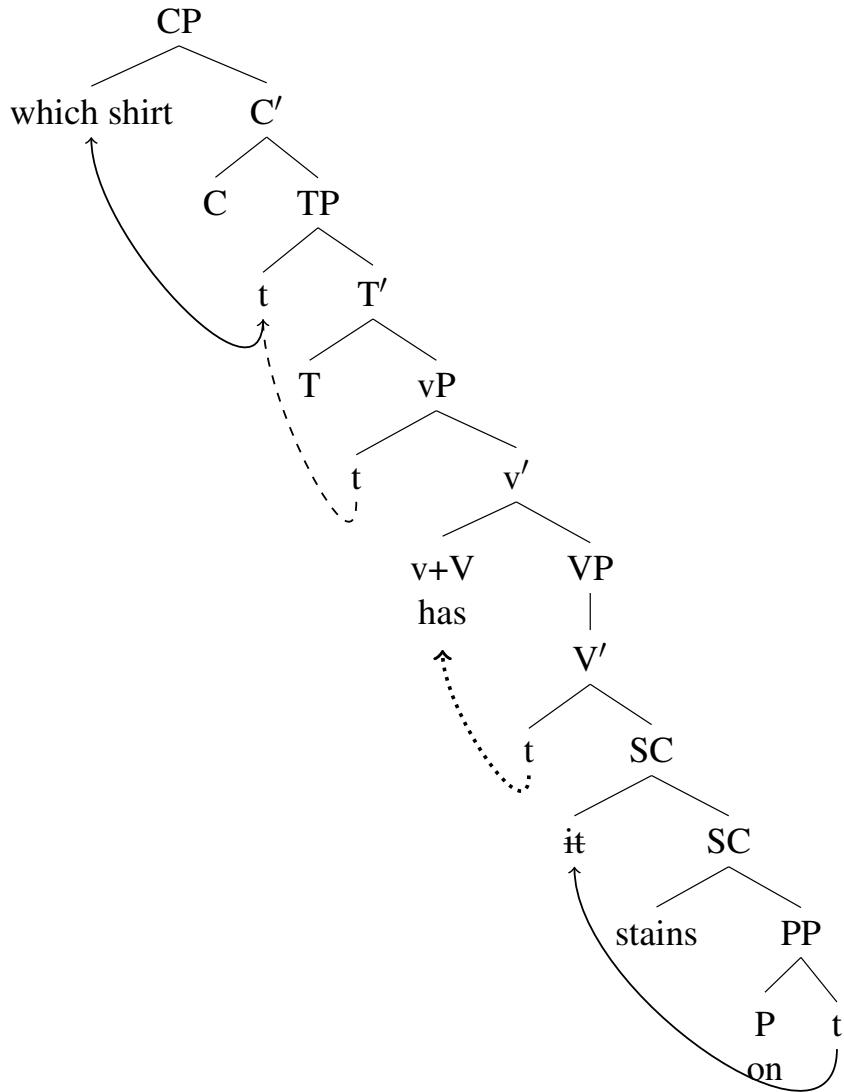
Applied to POGs, A-bar movement of the “object” from the specifier of SC, combined with A-bar movement of *it*, creates crossing A-bar dependencies. Hence (37) is ungrammatical:

(37) \*What does this shirt have on?



A-bar movement of subjects and adverbs from above SC, on the other hand, does not intersect with A-bar movement of *it*. Hence (38) is grammatical:

(38) Which shirt has stains on?



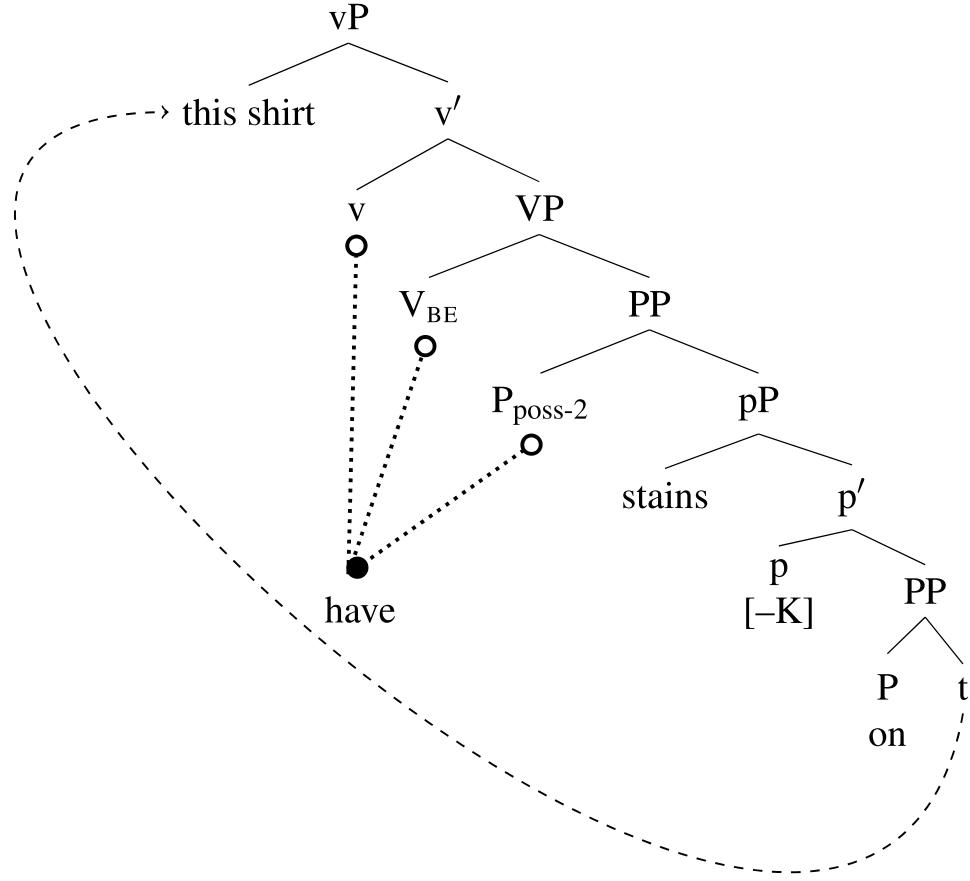
## 7.2 Comparison with G&S's analysis of POGs

Our analysis in terms of A-bar movement contrasts with G&S's analysis involving A-movement. G&S propose that POGs are derived by A-movement of the complement of P to subject position, as in (39):<sup>19</sup>

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<sup>19</sup> In other words, for G&S POGs are in a Case alternation with the existential: *There are monsters in this film.*

(39) This shirt has stains on. [G&S analysis]



The object extraction restriction would not be expected on this A-movement analysis. Crossing of an A-chain and an A-bar chain is not excluded, as shown in (40):<sup>20</sup>

(40) Who(m)<sub>i</sub> does John<sub>j</sub> strike <sub>i</sub>t as (being) <sub>j</sub>t selfish?



### 7.3 No object extraction restriction with NGer da-drop

With the assumptions presented above for BrEng, we argue that the availability of scrambling is the reason why there is no analogous object extraction restriction with *da*-drop in NGer. Our third crucial assumption here is that German local scrambling does not count as A-bar movement. This assumption is founded on German local scrambling having several A-movement

<sup>20</sup> Stockwell & Schütze (2019) argue further that the structure in (39) makes incorrect predictions regarding variable and anaphor binding. In (i), for example, since Principle A should be satisfiable prior to A-movement, (ib) should be able to convey the same (trivial) thing as (ia). Instead, (ib) is as bad as (ic) with an overt pronoun:

- (i) a. Of course [my car]<sub>i</sub> is in the picture of itself.  
 b. \*Of course [the picture of itself]<sub>j</sub> has [my car]<sub>i</sub> in <sub>j</sub>t.  
 c. \*Of course [the picture of itself]<sub>j</sub> has [my car]<sub>i</sub> in it<sub>j</sub>.

properties. As shown in (41) and (42), for example, scrambling feeds with binding relationships (Haider 2010):

- (41) a. \*dass man Peter<sub>i</sub> Peters<sub>i</sub> Vater <sub>t</sub> nicht übergeben hat  
*that one Peter(ACC) Peter's father(DAT) not surrendered has*  
 ('that one has not surrendered Peter to Peter's father')
- b. dass man [den Hut des Polizisten<sub>i</sub>] dem Polizisten<sub>i</sub> <sub>t</sub> nicht übergeben hat  
*that one [the hat of.the policeman](ACC) [the policeman](DAT) not surrendered has*  
 'that one has not surrendered the policeman's hat to the policeman'
- (42) a. dass wer den Schülern<sub>i</sub> einander<sub>i</sub> zeigen wird  
*that someone the students(DAT) each.other(ACC) show will*  
 'that someone will show the students each other' [base order, IO > DO]
- b. dass wer die Schüler<sub>i</sub> einander<sub>i</sub> <sub>t</sub> zeigen wird  
*that someone the students(ACC) each.other(DAT) show will*  
 'that someone will show the students to each other' [scrambled order, DO > IO]

In (41a), scrambling triggers a Condition C violation. (41b) shows the opposite: scrambling can obviate a Condition C violation. (42b) shows that scrambling can enable the direct object to bind the reciprocal *einander*, which is the indirect object.

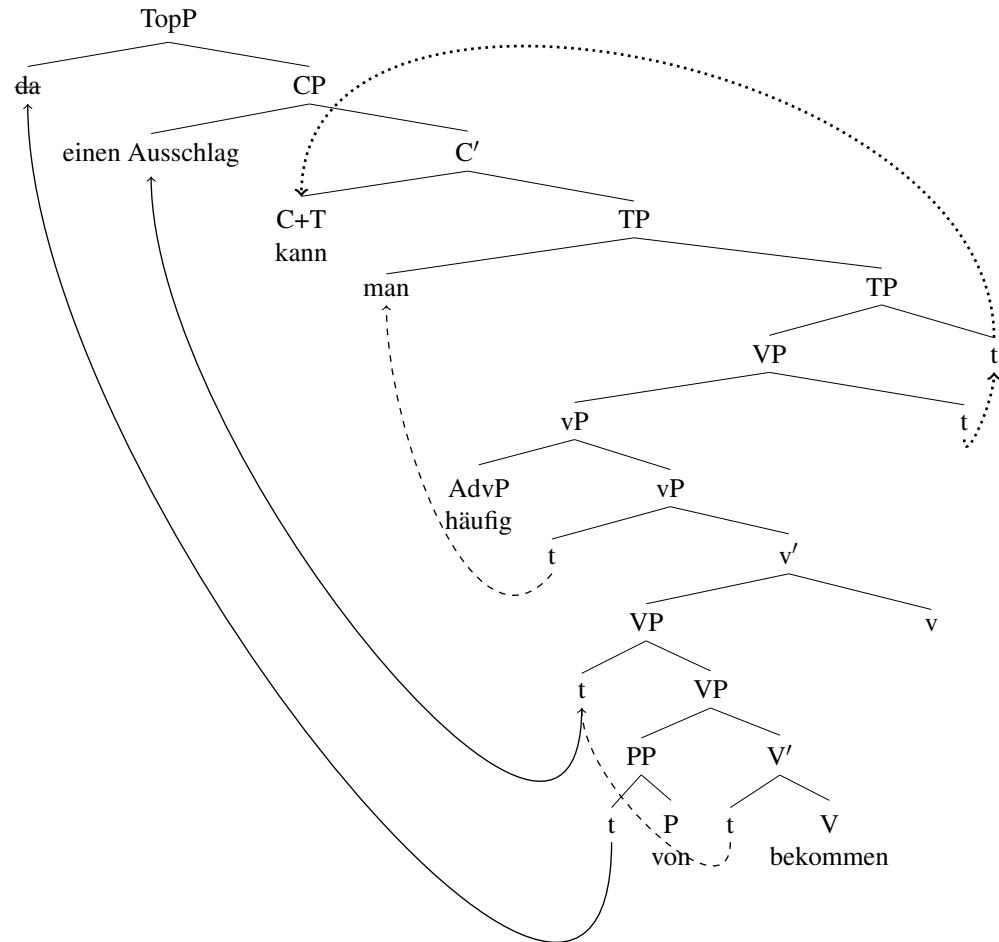
In the rest of this section, we show that the option of scrambling the object will avoid crossing A-bar dependencies. In order to determine the position of the dropped *da* in the German examples, we can first of all observe that the dropped *da* is topical in the sense that it finds its antecedent in a preceding sentence. The antecedent must presumably be sufficiently prominent in order for the discourse to be coherent. Given this topicality of *da*, we assume that it has to reach the left periphery (specifically, Rizzi's (1997) TopicP that is above FocP) in order to be silenced. We consider this movement to be A-bar movement since it targets the C-domain of the clause. The assumption that *da* needs to move in order to be silenced is supported by the fact that only speakers who can *da*-front can *da*-drop.

With the assumptions about *da*-topicalization and scrambling in place, the fact that objects in NGer can freely extract in *da*-drop constructions follows without further ado. In (43), the *da* and object A-bar dependencies would cross, if object A-bar movement launched directly from its base position. Instead, the object can scramble past *da* before A-bar moving, creating nested A-bar dependencies:<sup>21</sup>

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<sup>21</sup> In the NGer trees we use Spec-CP, the traditional label for first position in a V2 clause. In Rizzi's terms, this would correspond to Spec-FocP when it is targeted by a *wh*-phrase; in other cases, which projection it corresponds to might depend *inter alia* on the interpretation. What is crucial for us is that *da* always targets a higher position, which for concreteness we take to be Rizzi's higher TopP, above FocP.

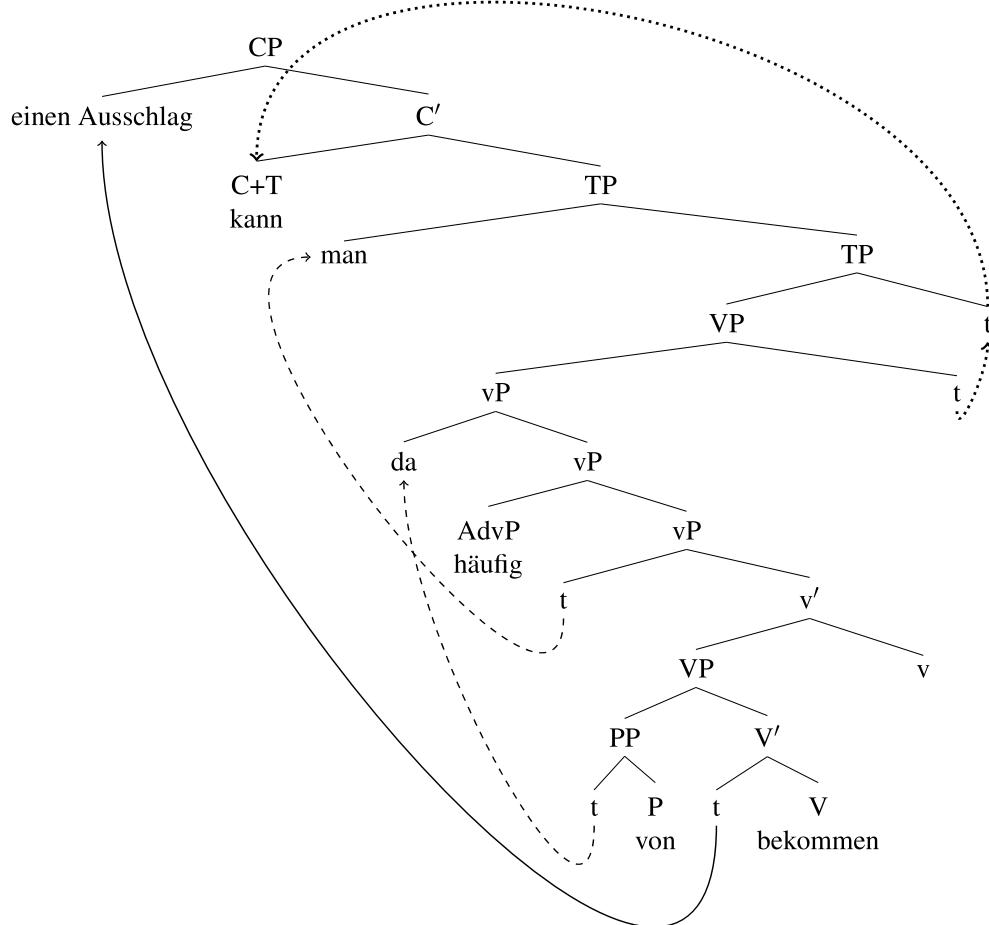
- (43) Einen Ausschlag kann man häufig von bekommen.  
*a rash can one often from get*



Since there is no crossing A-bar dependency of object extraction and *da*-topicalization, the resulting structure is fine.

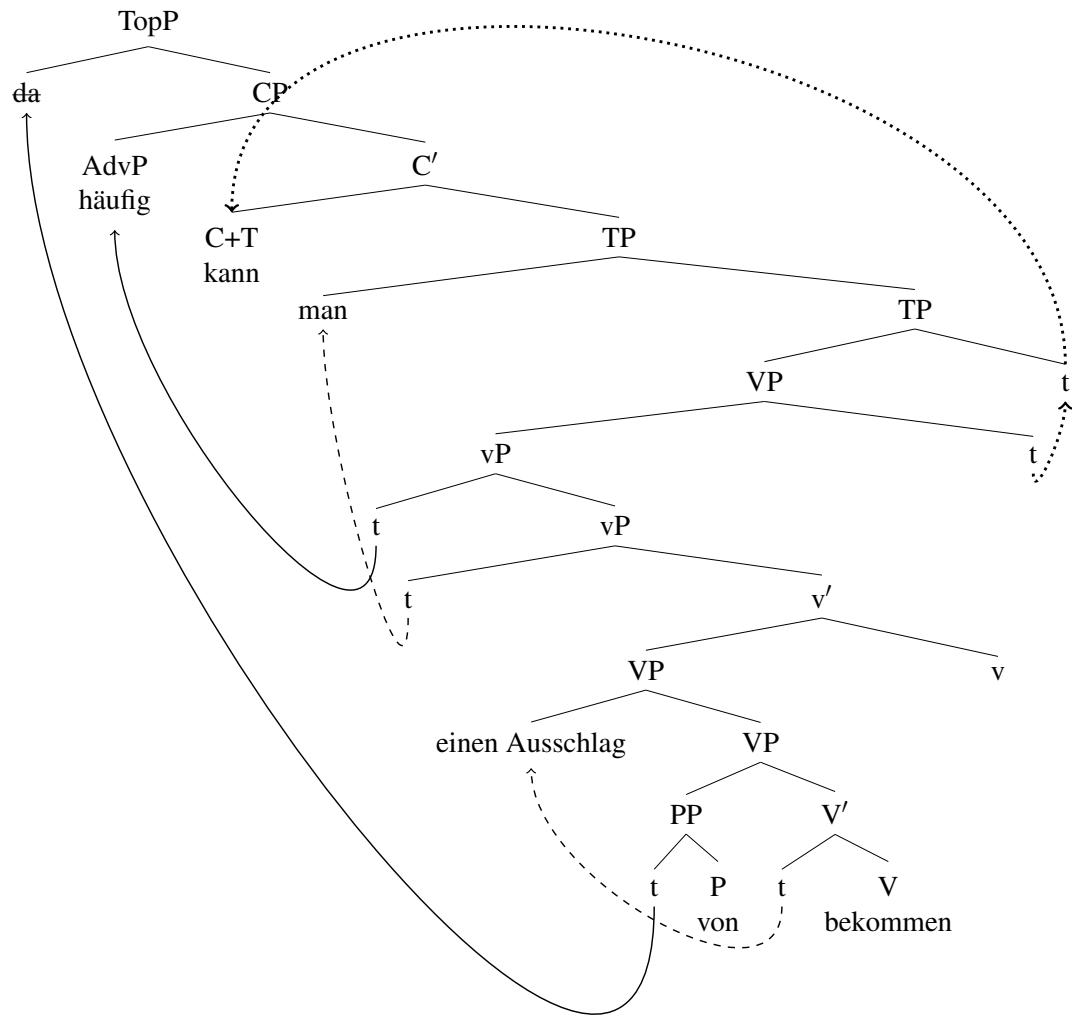
In (44), the counterpart with *da*-fronting to the Mittelfeld instead of *da*-drop, the object need not scramble; we assume *da* fronts by scrambling, which is allowed to cross the A-movement-like raising of the weak subject *man* to Spec-TP. The scrambling path of *da* would also be allowed to cross A-bar movement of the subject or AdvP to Spec-CP, e.g. if they were relativized.

- (44) Einen Ausschlag kann man **da** häufig von bekommen.  
*a      rash            can one DA often from get*



For subject and adjunct extraction combined with *da*-drop, we assume that subjects and adverbs can A-bar move directly from their base position, as depicted in (45):

- (45) Häufig kann man einen Ausschlag von bekommen.  
*often can one a rash from get*



Just as before with object extraction, there are no crossing A-bar dependencies in (45). Consequently, the structure is expected to be grammatical.

#### 7.4 Interim summary

In this section, we have presented an analysis of the difference between BrEng and NGer with respect to object extraction in constructions where a proform is omitted. In the BrEng POG construction, extracting the object is ungrammatical, while the NGer *da*-drop construction allows object extraction.

The analysis presented above is based on the following three assumptions.<sup>22</sup> First, we assume that pronominal complements of P need to move in order to be silenced. In BrEng, the pronoun A-bar moves to the edge of *have*'s small clause complement, while in NGer, *da* A-bar moves to Spec-TopP. Second, we follow Pesetsky (1982) in assuming that crossing A-bar dependencies cause ungrammaticality. Finally, we assume that German has A-scrambling that can change the word order prior to A-bar movement; BrEng does not have this movement.

Because in BrEng the object is base-generated higher than the prepositional phrase, the pronoun has to A-bar move past the object to the edge of the small clause in order to be deleted. After this, the object can no longer A-bar move to a higher position without creating a crossing A-bar dependency.

In NGer, the basic construction does not involve a small clause. Here, the object is base-generated lower than the PP. A-bar movement of the object from its base position to Spec-CP would violate the condition on crossing A-bar dependencies if the proform moved directly to a higher Spec-TopP. However, the option of A-scrambling can move the object past the PP first.

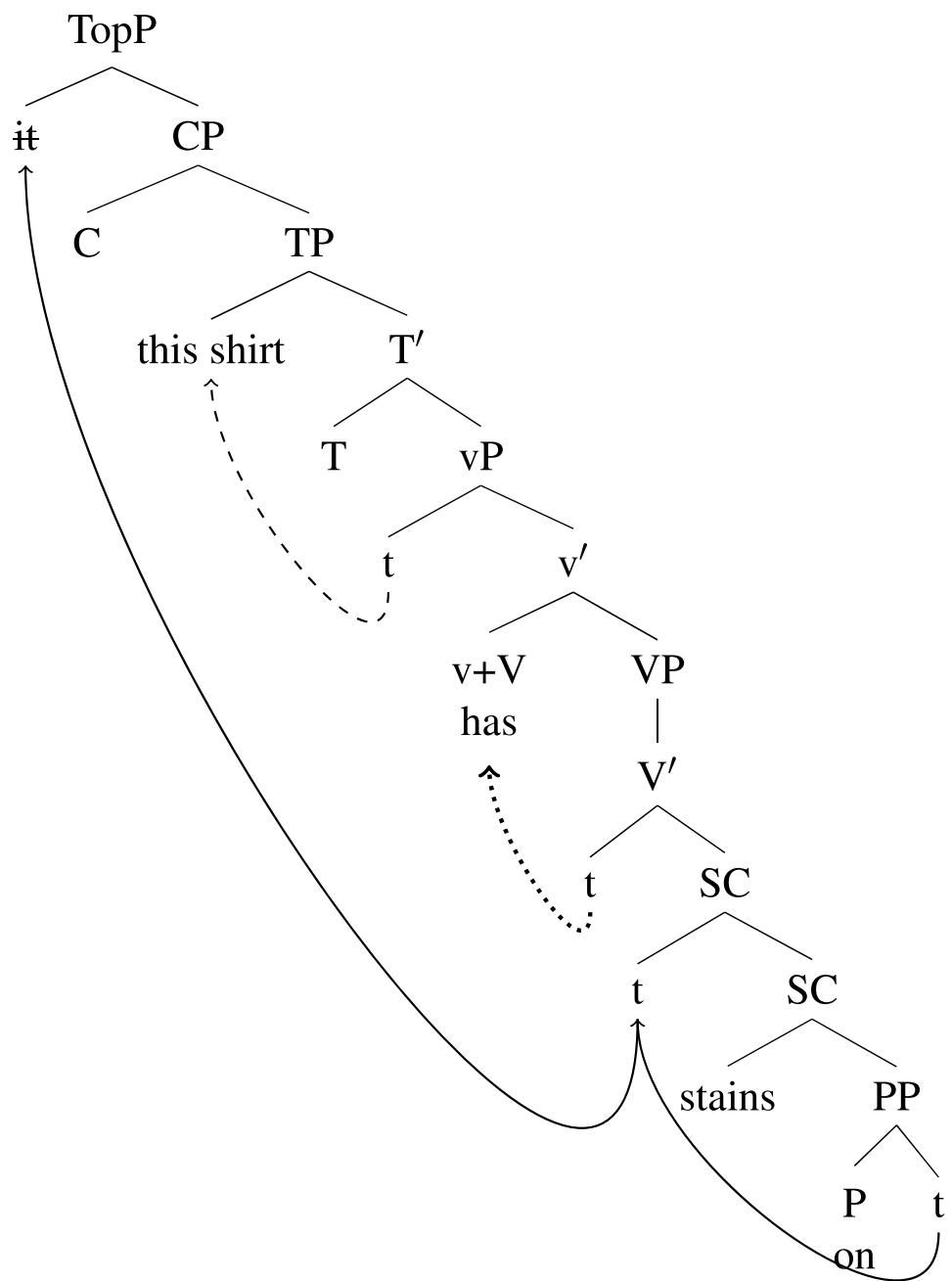
In fact, with one additional assumption the two cases could be given a more unified treatment. Suppose that in BrEng the small clause constitutes a phase. Then we could assume that the pronoun in BrEng, like *da* in NGer, must eventually move to Spec-TopP in order to delete; however, due to the Phase Impenetrability Condition, it must first reach the edge of the small clause phase in order to escape it. Plausibly assume further that the surface position of the object of the POG sentence, i.e., the subject of the small clause, is the Spec of the small clause phase head. (Either it is generated there or it A-moves there for Case or EPP reasons.) Then it is ready to undergo further A-bar movement directly since it is already in the phase edge.

The derivations shown above would continue as follows. (34) would proceed with *it* moving from the edge of the small clause to Spec-TopP in order to delete, as in (46); no illegal crossing paths are created thereby. The ungrammatical (37) already has crossing A-bar dependencies; attempting to move *it* to Spec-TopP, which following Rizzi would be higher than the landing site for interrogative *wh*-phrases (Spec-FocP), would create a second instance of illegal crossing. In (38), A-bar movement of *it* to a landing site above the landing site of *which shirt* will result in nested A-bar dependencies, as in (47), preserving grammaticality, and likewise if *which shirt* were replaced with an adverbial interrogative that originated above the small clause. Thus, the extraction difference between the languages boils down to the fact that the POG construction crucially involves a small clause, which on the semantic conception of phasehood should be expected to behave as a phase.

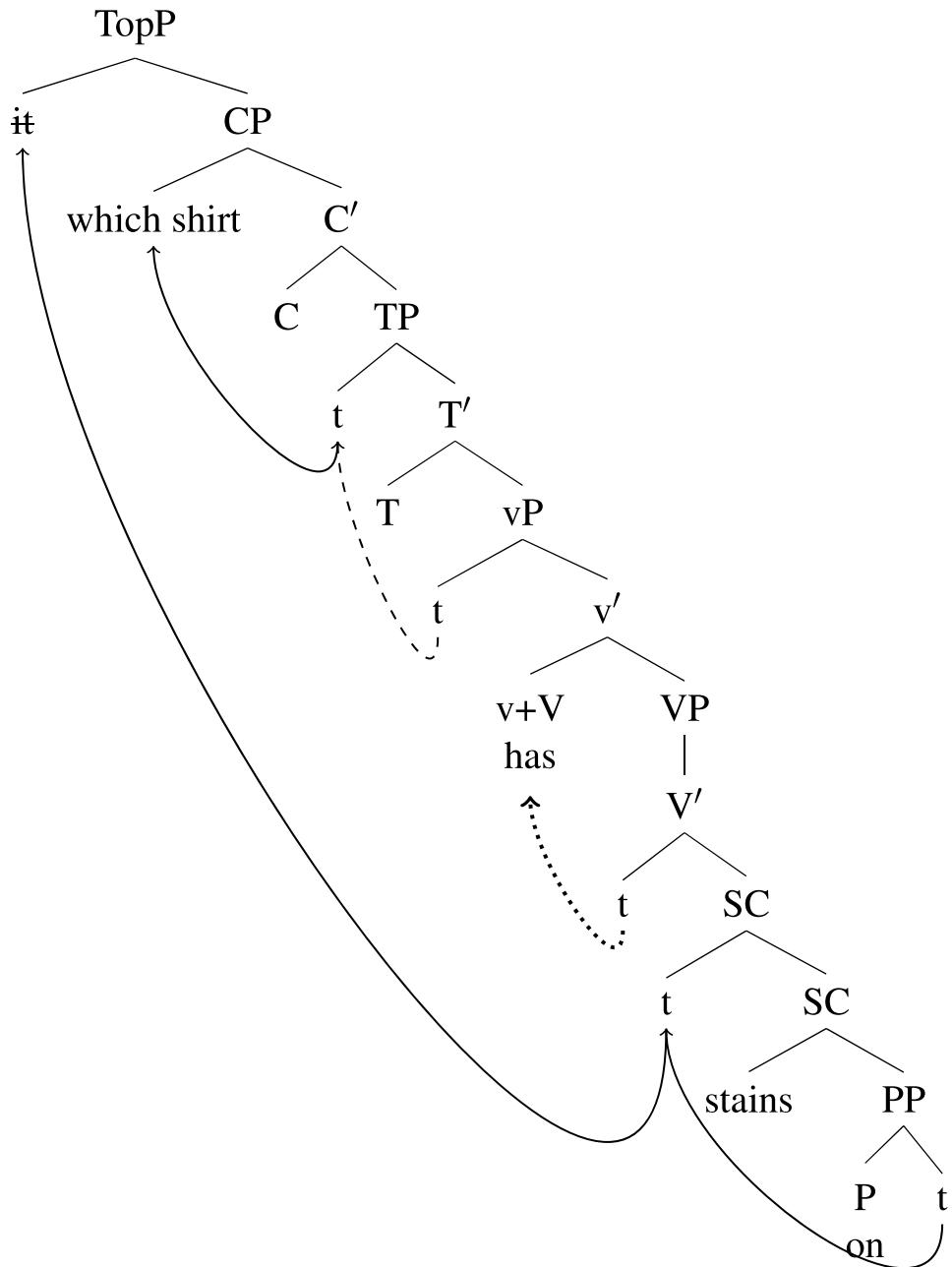
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<sup>22</sup> Additionally, we assume vP is not a phase (Grano & Lasnik 2018; Keine 2020a,b; Mendes & Ranero 2021). Although we show the subject *man* scrambling to adjoin to TP in (43) and (45), such ‘Wackernagel’ movement is generally thought to be restricted to weak, pronoun-like subjects, if it happens at all in German. Full DP subjects are usually assumed to stay in Spec-vP. If vP were a phase, the need for *da* to move through its edge to get to Spec-TopP could potentially create crossing A-bar dependencies when the subject is relativized. Since we found no significant degradation in that condition, we assume vP is not a phase.

(46) This shirt has stains on.



(47) Which shirt has stains on?



## 8. Further directions

Overall, it seems clear that BrEng POGs and NGer *da*-drop require different syntactic analyses. Still, their (modest) similarities raise the question whether common properties of the related languages have facilitated the emergence of these two omission constructions. We conclude with some observations regarding potentially relevant phenomena in diachrony and in related languages.

### 8.1. Diachrony

The history of complement-less prepositions could shed further light on their analysis. We know almost nothing about the historical origins of POGs or *da*-drop, and whether they happened independently in (earlier) German and English.<sup>23</sup> More is known about *da*-fronting in the history of both languages.

Allen (1980) and van Kemenade (1987) show that Old English had some properties in common with dialectal German: the locative proform ‘there’ could also serve as an inanimate 3<sup>rd</sup> person pronominal proclitic complement to adpositions (48), and in both functions it could strand those adpositions by moving to the left edge of VP (49a) or to the left periphery (49b,c). (Allen refers to this as scrambling; van Kemenade calls it A-bar movement.)

- (48) Awyrwala grædignysse of ðinre heortan, and aplanta **þaeron** þa soðan lufe  
*uproot greediness from your heart and plant therein the true love*

- (49) a. Be þæm þu meaht ongietan ðæt þu **þær** nane myrhðe **on** næfdest  
*by that you might perceive that you there no joy in not.had*  
‘By that, you could understand that you found no joy in that.’

- b. þæt **ðær** nan cinu **on** næss gesewen  
*that there no chink in not.was seen*  
‘that no chink was seen in it’

- c. ac **ðær** comon munecas **to** on ðæs mannes foðsiðe  
*but there came monks to at the man’s death*  
‘but monks came to it when the man died’

However—and perhaps more surprisingly—personal pronouns could also move away from the preposition of which they were the complement, to the same two landing zones: (50a), (50b,c). This is different from what we saw with POGs in (26).

- (50) a. þa sendon hig **hym** hyra leorningcnyhtas **to** mid þam herodianiscum  
*then sent they him their apprentices to with Herod’s men*  
‘Then they sent to him their apprentices with Herod’s men.’

- b. þæt **him** eal middangeard **to** beh  
*that him all world to bowed*  
‘that all the world bowed to him’

- c. ac **him** com fyr **to** færlice ehsynes  
*but him came fire to suddenly visibly*  
‘but suddenly a light came to him visibly’

We do not know if there was ever a time when some P+pronoun combinations could be expressed only using *there*+P (cf. German (15)), such that prepositional complement drop would have been unambiguously *there*-drop. But if so, and if that is when dropping arose, then

<sup>23</sup> Visser (1963:535) cites half a page of complement-less prepositions, but offers no discussion of what factors may have been licensing complement omission, or indeed whether the relevant prepositions were simply optionally transitive at the time.

whatever analysis was posited for complement-less preposition sentences would have had to change once *there+P* ceased to be productive. It seems plausible that the counterparts of *it/them*, true personal pronoun complements to P, were more restricted in their behavior than *there*.<sup>24</sup> This could have forced a reanalysis of the complement-less preposition construction that induced the additional restrictions found in modern BrEng but not NGer (e.g., the restriction to *have/with* etc.). The reanalysis may simply have failed in North American English. Müller (2000) argues that, while R-pronouns (*therat, therewith, therefore*) were still well-attested in Shakespeare, they ceased to be productive after 1400. He proposes a theory on which their disappearance is tied, among other things, to the loss of Wackernagel movement of pronouns.

As for the history of German, Müller (2000) cites Paul (1919, §139) and Lockwood (1968) for the claim that while pronominal adverbs were attested in Old High German, the possibility of separating *da(r)* from the preposition was an innovation that emerged in Middle High German, as illustrated in the following example from the works of Walther von der Vogelweide (c. 1170–c. 1230):

- (51) **Dâ** mugent ir alle schouwen wol ein wunder **bî**.  
*DA could.2PL you all see PRTC a miracle at*  
 ‘You all could see a miracle in this.’

However, Fleischer (2008) claims this was already attested in Old Low German (see also Russ 1982), as in this example from the *Heliand* (9<sup>th</sup> century), and abundant in Middle Low German:

- (52) Tho forun thar thiē liudi to  
 dann gingen **da** die Leute **zu**  
*then went DA the people to*  
 ‘Then the people went to it.’

Fronting of *da(r)* continued to be well attested everywhere through the 16<sup>th</sup> century, but after that became geographically restricted to Northern Germany.

*Da*-drop is less well documented historically. Fleischer (2008) can find clear examples only with *mit* (see the Appendix) in the Old German period. In Middle Low German other clear cases emerge, such as the following (from *Reynke de vos*, 1498):

- (53) De quam ghelopen myt ereme wocken, / Dar se des dages hadde by gheseten  
 die kam gelaufen mit ihrem Spinnrocken da sie des Tages hatte **bei** gesessen  
*she came running with her distaff as she the.GEN day.GEN had at sat*  
 ‘She came running with her distaff, since she had sat by it all day.’

In High German, cases not involving *mit* remain rare throughout all periods; one such is from a letter by Goethe (to Sophe v. La Roche in 1775):

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<sup>24</sup> Indeed, German is suggestive in this regard. In NGer, proform *da* can occupy first position in a V2 clause (cf. (17a)), but object *es* cannot (other object pronouns may be degraded to varying degrees):

(i) \*Es habe ich gesehen.  
*it have I seen*

- (54) Ich weiß kein Wort **von**. (Paul 1919:159)  
*I know no word of*  
 ‘I don’t know a word about it.’

## 8.2 Other dialects and languages

Further insights could come from further comparative analysis. Stranding of prepositions under *da*-fronting is attested elsewhere in Germanic, as the examples in (55)–(57) show:

- (55) a. Dutch (Zwaarts 1997: 1092)  
**Daar** staat iemand achter.  
*DA stands someone behind*
- b. Ik wilde **daar** niet **op** wachten. (Hoekstra 2001: 781)  
*I wanted DA not for wait.*  
 ‘I didn’t want to wait for it.’
- (56) a. Festlandnordfriesisch (North Frisian) (Walker 1990: 23)  
**Deer** wiitj ik nint **foon**.  
*DA know I nothing of*
- b. Saterfriesisch (East Frisian) (Fort 2001: 418)  
**Deer** weet iek iks **fon**.  
*DA know I nothing about*
- (57) a. Old Danish (c. 1500) (Falk & Torp 1900: 315)  
**ther** bedher ieg **om**  
*DA ask I for*
- b. Jutlandic Danish (Jensen 1971: 19)  
 en dunk, og **der** drak de **af**  
*a pitcher and DA drank they from*

However, Fleischer (2002) is hard-pressed to find any Germanic languages besides German that display (the counterpart of) *da*-drop.<sup>25</sup> The only candidates he puts forward are Jutlandic Danish (58) and North Frisian (59):

- (58) sådan en stor stykke noget stiv gullig papir med en klat rød lak **på** (Jensen 1971: 33)  
*such a big piece of some stiff golden paper with a blood red blob on*

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<sup>25</sup> A reviewer suggests that BrEng-style POGs are attested in Afrikaans, e.g.

(i) Die boks het papiere in.  
*the box has papers in*

(We have not independently verified whether all the criteria discussed in section 2 are met.) Afrikaans allows R-pronouns, but they are not compatible with POGs (cf. (25a)):

(ii) \*Die boks het papiere daarin.  
*the box has papers DA.in*

- (59) Ik hee en Dååler **far** deen, wen't ä wān weer  
*I have.SBJV a dollar for given if=it not been was*  
 ‘I would have given a dollar for it, if it had not been (true).’
- (Grünberg n.d.)

Intriguingly, Fleischer reports there was one German dialect (spoken in Cattenstedt, Nordharz, Eastphalian) that was described by Damköhler (1927: 37) as dropping *da(r)* just in the presence of the verbs *have*, *give* and *get* (and only before the preposition *of*):

- (60) a. Jif mek wat **fon**.  
*give me some of*  
 ‘Give me some of it.’
- b. Ek wil wat **fon** hebn.  
*I want.to some of have*  
 ‘I want to have some of it.’
- c. Dû drist nischt **fon**.  
*you get nothing of*  
 ‘You get none of it.’

## Appendix: *Mit*—A preposition like no other

Fleischer (2000, 2002) notes that there are many non-Northern dialects where *da*-fronting and *da*-drop are possible only with *mit*, including High Alemannic, Low Alemannic, Swabian, East Franconian, Upper Saxon, and Silesian: “In all these dialects the stranding construction and the orphan preposition construction [da-drop] are totally unknown with prepositions other than *mit*” (2000: 138); see (61), (62). (He even cites some descriptions of those dialects that suggest the form *damit* has virtually ceased to be used.) He concludes on this basis that these constructions when applied to *mit* may call for a different analysis. For this reason we have avoided any examples involving *mit* in the discussion in the main text.

- (61) Zurich Swiss German (High Alemannic) (Fleischer 2002:152)  
 etz mus i die Tabäle usenèe und **da** han i Müe **mit**  
*now must I this chart take.out and DA have I trouble with*  
 ‘Now I must take out this chart and I am having trouble with it.’
- (62) Colmarien (Alsatian) (Muller 1983:260)  
 ï nimm d’ rüet un schlâ-di **mit**.  
*I take the rod and hit you with*  
 ‘I take the rod and hit you with it.’

van Riemsdijk (1975:196–7) already noted that in Zurich Swiss German *mit* and its negative *ooni* ‘without’ (63) license omission of inanimate complements while no other prepositions do. (64) is an example van Riemsdijk considers idiomatic, with the understood complement being context-dependent but lacking a linguistic antecedent; Standard German would not use *damit* here.

- (63) yaʒ nyyt maye **ooni** (van Riemsdijk 1975)  
*you.can nothing do without*  
 ‘You can’t do anything without it.’

- (64) *i3 daz mit* (zervis)?  
*is that with service*  
 ‘Is the tip included?’
- (van Riemsdijk 1975)

Zurich Swiss German lacks an R-pronoun built on *ooni* (cf. fn. 6); combined with the scarcity of *damit* in Southern dialects, Fleischer suggests that “*da*-fronting” cannot be literally correct as an analysis for examples like (61), and hence the dropping of a fronted *da* also cannot be the correct analysis for examples like (62). Rather, in these Southern dialects, there is no grammatical source with *da* in situ in the PP, so one must posit a silent resumptive proform, and base-generate the overt *da* outside the PP in examples like (61), (62) and (63). This would fit with Fleischer’s observation that (only) Southern dialects are where one finds *da*-doubling, as in (65)<sup>26</sup>:

- (65) Bernese Swiss German
- (Greyerz & Bietenhard 1981:87)
- Da** hani gar nüüt **dergäge!**  
**da** hab=ich gar nichts **dagegen**  
*DA have.I at.all nothing DA.against*  
 ‘I have nothing against it at all.’

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<sup>26</sup> What remains mysterious is why only *mit* (and sometimes *ohne*) allows the resumptive to be silent, thereby letting doubling masquerade as fronting.

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