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

Richard Stockwell  
Christ Church, University of Oxford  
richard.stockwell@chch.ox.ac.uk

Carson T. Schütze  
University of California, Los Angeles  
cschutze@humnet.ucla.edu

Anke Himmelreich  
Goethe-Universität Frankfurt am Main  
himmelreich@lingua.uni-frankfurt.de

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).  
b. Your tie has a stain on (it).

BrEng

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).  
b. Your tie has a stain on *(it).

NAmEng

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.
   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.¹

In outline, the next two sections review the basic patterning of Prepositional Object Gaps and da-drop, before section 4 compares them directly. 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 further directions.

2. Background on BrEng complement-less prepositions

The British English (BrEng) complement-less locative prepositions we are concerned with were first analyzed² 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 has monsters in it.¹
   b. This film has monsters in.¹

This section introduces four essential features of POGs: (i) POGs are licensed by 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 licensed in the context of a predicate like locative have, as in (5) above, or with, as in (6) (Swan 1995:433):

   (6) the film with monsters in (it)

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

¹ This has happened with one preposition, mit, and the results look completely different in terms of their syntactic and dialectal distribution—see the Appendix.
² 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—there’s a monster in *(it)!  
   b. There’s a monster in that film.  
   c. That film has a monster in (it).

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):  

(8) a. This lift can have up to 14 people in (it).  
   b. This lift can hold/accommodate up to 14 people in *(it).

(9) a. For a film to be successful, monsters have (got) to be in *(it)!  
   b. The boiler had its tank collecting water in *(it).  
   c. The film’s director had there be lots of monsters in *(it).

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

(10) a. This box has spots on (it).  
   b. a package without enough stamps on (it)  
   c. pictures with coffee stains on (them)

The availability of POGs with other locative prepositions is subject to interspeaker variation (G&S). 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):

(11) These boxes have papers in (them).

(12) I/You have {poison/radioactive chemicals} in *(me/you).

(13) That guy looks like he has ten pints of beer in *(him).

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3 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 3.83 and a median of 3.5. (It might be relevant that in (i), unlike (7a), the gap is c-commanded by its antecedent.)

4 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 has needing/requiring/demanding more monsters in (it).
(ii) The guestbook got*obtained/acquired so many rude entries in (it) last year that it had to be thrown away.

5 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.
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 had a hat on him.]

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. 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.7,8

(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.’

6 Most dialects have at least one exception: ohne es ‘without it’ is possible because darohne is mostly unattested.
7 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.
8 But see Thun (1985) for documentation that colloquially in some dialects and in earlier stages of the language human referents are attested.
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 D.A.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 D.A.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).9 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):

(17) a. Colloquial Northern German
    Da kommen sie viel billiger bei weg.
    DA come.3pt. 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.3pt. 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.3pt. DA much cheaper by away
    ‘They come away much cheaper thereby.’

9 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 Aufsplitterung des Pronominaladverbs” (Götze & Hess-Lüttich 2002: 301) [‘Another mistake, again especially in the spoken language, is the splitting of the pronominal adverb’].
b. East Pomeranian (Stübs 1938:140)
   Sünd doa sehr besorgt ūm.
   ‘They are DA 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 dröögt sik 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 dröögt sik 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.)

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.
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).
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).
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?
\hspace{25} \textit{how is it with B}

\hspace{25} B: Ø Kenn ich eigentlich nicht so viel \textit{von}.
\hspace{25} \textit{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. 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 \textit{von} singen
\hspace{25} \textit{the O. F. can a song about sing.INF}
\hspace{25} ‘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 zu auftraffen, dann sich auch noch mal um ihre Kinder zu kümmern
\hspace{25} \textit{then are they evenings often so tired that they self at all not more to bring then self also again about their children to care} (Breindl 1989:146)
\hspace{25} ‘…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)
\hspace{25} Also büst du \textit{wedder nich bi wesen}.
\hspace{25} \textit{so are you again not at been}
\hspace{25} ‘So you weren’t there again.’

\[(23)\] Brandenburgish (Lademann 1956: 338)
\hspace{25} a. Der hät den janßen Noamiddach \textit{bei} tuejeracht.
\hspace{25} \textit{he has the whole afternoon at spent}
\hspace{25} ‘He spent the whole afternoon at it.’

b. Der hät lange \textit{foä} jespätlt.
\hspace{25} \textit{he has long for played}
\hspace{25} ‘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

\^10\ Such examples have been independently attested in corpus analyses by several authors: Breindl (1989), Negele (2012), Jürgens (2013), Otte-Ford (2016), Freywald (2017).
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 can have up to 14 people in (it).
b. This lift can hold/accommodate up to 14 people in *(it).

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) NGer
c. *Das Hotel hat da einen Golfplatz neben. (this string allows da to receive only the interpretation ‘there’, not ‘it’) NGer
d. *Da hat das Hotel einen Golfplatz neben. (this string allows da to receive only the interpretation ‘there’, not ‘it’) NGer

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, these boxes have papers in tj.
   b. *These boxes <themj> have <themj> papers <themj> in tj.

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>
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<tr>
<th>TABLE 1: CONDITIONS ON OMISSION OF P COMPLEMENTS IN BRENG AND NGER</th>
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<td>Speaker variation in prepositions</td>
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<td>Omission restricted to inanimates</td>
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<td>Predicates built on have/with</td>
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<td>Interaction with movement</td>
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<td>Option to separate proform from P</td>
</tr>
<tr>
<td>Omission blocks extraction of object?</td>
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</tbody>
</table>

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, does this shirt have tj on *(it)?             BrEng

There is no such restriction with other complement-less prepositions (28), cf. section 2.4:

(28) a. What, does this box have tj inside?
   b. [What kind of hat]j does Mary have tj on?

Here we report a pilot experiment confirming the intuition in (27) that A-bar movement of the object is impossible with POGs.
5.1 Method

The participants were 18 speakers from the British Isles, skewed toward the Southeast, from whom we collected acceptability ratings on a 1–7 Likert scale (7=best) of target sentences containing the configuration DP, HAVE…in/on {it/them} vs. Ø. 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 adverb). Three types of A-bar movement structures were tested: wh-interrogatives, restrictive relatives, and topicalization structures. Each of the 12 target items thus consisted of a 6-tuple of sentences, exemplified for wh-interrogatives in (29); in addition there were eight filler sentences, for a total of 20 items to be rated (each participant saw only one member of each 6-tuple).

(29)  a. This shirt has stains on it/Ø. [no extraction]
    b. What, does that shirt have it on it/Ø? [object extraction]
    c. [Which shirt] j has stains on it/Ø? [subject extraction]

5.2 Results

The condition means are summarized in Table 2, and the statistics in Table 3. The analysis showed significant main effects of prepositional complement (null rated worse than overt) and object extraction (rated worse than no extraction), but no significant difference between subject/adverb extraction and no extraction. Crucially there was a significant interaction between prepositional complement and object extraction: object extraction shows a greater degradation than no extraction when the complement is null versus when it is overt. There is no such interaction between prepositional complement and subject/adject extraction. That is, although (29a) and (29c) are rated somewhat worse when it is omitted, (29b) is rated much worse when it is omitted, suggesting a grammatical violation on top of a general slight dispreference for POGs.

<table>
<thead>
<tr>
<th>Table 2: Mean ratings by condition</th>
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<tr>
<td>Structure</td>
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<tr>
<td>------------------------------------</td>
</tr>
<tr>
<td>a) No extraction</td>
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<tr>
<td>b) Object extraction</td>
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<tr>
<td>c) Non-object extraction</td>
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</tbody>
</table>

11 The adverbs tested, sometimes and usually, were translation equivalents of some of the frequency adverbials used in the German experiment described in section 6.
12 The fillers included two sentences that are grammatical in BrEng but not in most other Englishes, which participants had to rate at least 3 out of 7; one grammatical sentence like (14c) with a final preposition (which might be prescriptively disfavored), which participants had to rate at least 4; four ungrammatical catch trials, all of which had to receive ratings lower than the participant’s mean rating; and the sentence discussed in fn. 3.
13 The experiments presented in this and the next section are intended only as pilots. For various reasons, some of which are explicitly discussed, we would want to refine them considerably before unreservedly endorsing the results. For this reason, the statistical analysis is limited to traditional ANOVAs: applying more state-of-the-art statistics would imply the data were of higher quality than we believe them to be.
<table>
<thead>
<tr>
<th>Source</th>
<th>$F_1$</th>
<th>df</th>
<th>$p$</th>
<th>$F_2$</th>
<th>df</th>
<th>$p$</th>
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<tbody>
<tr>
<td>Non-obj extr. vs. No extraction</td>
<td>&lt; 1</td>
<td>1,17</td>
<td>ns</td>
<td>&lt; 1</td>
<td>1,11</td>
<td>ns</td>
</tr>
<tr>
<td>Obj. extr. vs. No extraction</td>
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<td>1,17</td>
<td>.001***</td>
<td>30.01</td>
<td>1,11</td>
<td>.001***</td>
</tr>
<tr>
<td>Pronoun overt vs. Ø</td>
<td>34.03</td>
<td>1,17</td>
<td>.001***</td>
<td>66.65</td>
<td>1,11</td>
<td>.001***</td>
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<tr>
<td>Interaction Obj/No extr. vs. Overt/Ø</td>
<td>8.20</td>
<td>1,17</td>
<td>.011*</td>
<td>8.13</td>
<td>1,11</td>
<td>.016*</td>
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<tr>
<td>Interaction Non-obj/No extr. vs. Overt/Ø</td>
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<td>1,17</td>
<td>ns</td>
<td>&lt; 1</td>
<td>1,11</td>
<td>ns</td>
</tr>
</tbody>
</table>

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, 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. 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 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 (30):

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14 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.

15 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.
(30) 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
but a rash can one DA/Ø often from get [object top.]
but often can one DA/Ø a rash from get [AdvP top.]

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 4 and 5, and the statistics in Tables 6 and 7. The analysis found significant main effects of *da* (omission is rated worse than presence) and extraction (object topicalization is rated worse than AdverbP topicalization and object relativization is rated worse than subject relativization16). There were no significant interactions.

There was a marginal interaction (by subjects only) in relative clauses, such that subject relativization plus *da*-drop is rated especially bad. Since there were only eight items in this condition, one might wonder if significance by items would emerge with more items. However, it should be noted that the 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.

| TABLE 4: MEAN RATINGS BY CONDITION: MATRIX TOPICALIZATION | Table 5: Mean ratings by condition: relative clauses |
| Structure | i) da overt | ii) da dropped | Difference | Structure | i) da overt | ii) da dropped | Difference |
| a) Object fronted | 4.56 | 3.13 | 1.43 | a) Object relativized | 3.56 | 2.65 | 0.91 |
| b) AdvP fronted | 4.71 | 3.68 | 1.03 | b) Subject relativized | 4.28 | 2.70 | 1.58 |

| Table 6: ANOVAs (Matrix Topicalization) |
| Source | $F_1$ | df | $p$ | $F_2$ | df | $p$ |
| AdvP vs. Obj. Topicalized | 5.43 | 1,33 | .026* | 3.76 | 1,7 | .094 |
| *da* vs. Ø | 27.14 | 1,33 | .001*** | 19.94 | 1,7 | .003** |
| Interaction AdvP/Obj vs. *da*/Ø | <1 | 1,33 | ns | 1.04 | 1,7 | .34 |

16 Significant by subjects, marginal or nonsignificant by items.
Table 7: ANOVAs (Relative Clauses)

<table>
<thead>
<tr>
<th>Source</th>
<th>$F_1$</th>
<th>df</th>
<th>$p$</th>
<th>$F_2$</th>
<th>df</th>
<th>$p$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Subj vs. Obj. Relativized</td>
<td>5.92</td>
<td>1,33</td>
<td>.021*</td>
<td>1.62</td>
<td>1,7</td>
<td>.24</td>
</tr>
<tr>
<td>$da$ vs. $Ø$</td>
<td>35.59</td>
<td>1,33</td>
<td>.001***</td>
<td>28.21</td>
<td>1,7</td>
<td>.001***</td>
</tr>
<tr>
<td>Interaction Subj/Obj vs. $da$/Ø</td>
<td>3.73</td>
<td>1,33</td>
<td>.062</td>
<td>1.37</td>
<td>1,7</td>
<td>.28</td>
</tr>
</tbody>
</table>

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; (31) illustrates:\(^{17}\)

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\(^{17}\) We use different arrows to indicate different kinds of movement: solid for A-bar movement, dashed for A-movement, and dotted for head movement.
(31) 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 (32) illustrate this for tough-movement combined with wh-movement. Compare also the relative acceptability of the nested vs. crossing wh-island violations in (33):

(32) a. *[Which sonata] is [this violin] easy [OP, PRO to play t_i on t_j]?
    b. [Which violin] is [this sonata] easy [OP, PRO to play t_i on t_j]?

(33) a. *[Who, do you know [CP [what subject] PRO to talk to t_i about t_j]]?
    b. *[What subject], do you know [CP who, PRO to talk to t_i about t_j]?

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 (34) is ungrammatical:
(34) *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 (35) is grammatical:
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 (36):\(^{18}\)

\(^{18}\) In other words, for G&S POGs are in a Case alternation with the existential: *There are monsters in this film.*
(36) 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 (37).

(37) Who(m) does John strike as (being) t_i 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

Stockwell & Schütze (2019) argue further that the structure in (36) 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], is in the picture of itself.
b. *Of course [the picture of itself], has [my car], in t_i.
c. *Of course [the picture of itself], has [my car], in it_i.
properties. As shown in (38) and (39), for example, scrambling feeds with binding relationships (Haider 2010):

(38) a. *dass man Peter$_i$ Peters$_i$ Vater $t$ 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$_i$] dem Polizisten$_i$ $t$ 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’)

(39) a. dass wer den Schülern$_i$ einander$_i$ 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$_i$ einander$_i$ $t$ 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 (38a), scrambling triggers a Condition C violation. (38b) shows the opposite: scrambling can obviate a Condition C violation. (39b) 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 (40), 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:

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20 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 targetted 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.
(40) Einen Ausschlag kann man häufig von bekommen.

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

In (41), 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.
(41) 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 (42):
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. 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. (31) would proceed with it moving from the edge of the small clause to Spec-TopP in order to delete, as in (43); no illegal crossing paths are created thereby. The ungrammatical (34) 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 (35), 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 (44), 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.

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 (40) and (42), 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.
(43) This 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. 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 3rd person pronominal proclitic complement to adpositions (45), and in both functions it could strand those adpositions by moving to the left edge of VP (46a) or to the left periphery (46b,c). (Allen refers to this as scrambling; van Kemenade calls it A-bar movement.)

(45) Awyrtwala græдignysse of ðīnre heortan, and aplanta þæron þa soðan lufe
uproot greediness from your heart and plant therein the true love

(46) a. Be þæm þu meaht ongietan ｄæt þu þær nane myrhdde 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 næs gesewen
that there no chink in not.was seen
‘that no chink was seen in it’

c. ac ðær comon munecas to on ðæs mannès foðsîde
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: (47a), (47b,c). This is different from what we saw with POGs in (26).

(47) a. þa sendon hig hym hyra leorningenytas 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

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22 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 \( \text{there} + \text{P} \) ceased to be productive. It seems plausible that the counterparts of \textit{it/them, true personal pronoun complements to P, were more restricted in their behavior than \textit{there}.}^{23} \text{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 \textit{have/with} etc.).} \text{The reanalysis may simply have failed in North American English. Müller (2000) argues that, while R-pronouns (\textit{thereat, 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.}

\text{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 \textit{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):}

\begin{align*}
\text{(48) Dâ mungent ir alle schouwen wol ein wunder bî.} \\
\text{DA} \text{could.2PL you all see PRTC a miracle at} \\
\text{‘You all could see a miracle in this.’}
\end{align*}

\text{However, Fleischer (2008) claims this was already attested in Old Low German (see also Russ 1982), as in this example from the \textit{Heliand (9th century)}, and abundant in Middle Low German:}

\begin{align*}
\text{(49) Tho forun thar thi liudi to} \\
\text{dann gingen da die Leute zu} \\
\text{then went DA the people to} \\
\text{‘Then the people went to it.’}
\end{align*}

\text{Fronting of \textit{da(r)} continued to be well attested everywhere through the 16th century, but after that became geographically restricted to Northern Germany.} \text{Da-drop is less well documented historically. Fleischer (2008) can find clear examples only with \textit{mit} (see the Appendix) in the Old German period. In Middle Low German other clear cases emerge, such as the following (from \textit{Reynke de vos}, 1498):}

\begin{align*}
\text{(50) De quam ghelopen myt ereme wocken, / Dar se des dages hadde by gheseten} \\
\text{die kam gelaufen mit ihrem Spinnrocken da sie des Tages hatte \textit{bei} gesessen} \\
\text{\textit{she came running with her distaff as she the GEN day. GEN had at sat} \\
\text{‘She came running with her distaff, since she had sat by it all day.’}
\end{align*}

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

\begin{align*}
\text{(51) Ich wei\ss kein Wort \textit{von}.} \\
\text{I know no word of} \\
\text{‘I don’t know a word about it.’}
\end{align*}

\text{Paul 1919:159}

\text{23 Indeed, German is suggestive in this regard. In NGer, proform \textit{da} can occupy first position in a V2 clause (cf. (17a)), but object \textit{es} cannot (other object pronouns may be degraded to varying degrees):}

\begin{enumerate}
\item \text{*Es habe ich gesehen.} \\
\text{\textit{it have I seen}}
\end{enumerate}
8.2 Other dialects and languages

Further insights could come from further comparative analysis. Are complement-less prepositions attested in other Englishes or Germanic languages/dialects? Fleischer (2002) is hard-pressed to find any Germanic languages besides German that display (the counterpart of) da-drop. The only candidates he puts forward are Jutlandic Danish (52) and North Frisian (53):

(52) 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

(53) Ik hee en Dååler far deen, wen’t å vän weer (Grünberg n.d.)
I have a dollar for given if it not been was
‘I would have given a dollar for it, if it had not been (true).’

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):

(54) 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 Alemanic, 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 (55), (56). (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.

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24 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

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(55) Zurich Swiss German (High Alemannic)  
(56) Colmarien (Alsatian)  
(57) van Riemsdijk (1975:196–7) already noted that in Zurich Swiss German mit and its negative ooni ‘without’ (57) license omission of inanimate complements while no other prepositions do. (58) 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.

(58) is that with service  
‘Is the tip included?’

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 (55), and hence the dropping of a fronted da also cannot be the correct analysis for examples like (56). 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 (55), (56) and (57). This would fit with Fleischer’s observation that (only) Southern dialects are where one finds da-doubling, as in (59).

(59) Bernese Swiss German  
(60) What remains mysterious is why only mit (and sometimes ohne) allows the resumptive to be silent, thereby letting doubling masquerade as fronting.
Trigg, Marta Wierzba, David Willis, and Masaya Yoshida. This research was supported by a UCLA Faculty Academic Senate Grant to the second author.

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