



# Explaining Siewierska's generalization

Peter Hallman<sup>1</sup>

Received: 15 October 2019 / Accepted: 1 June 2020 / Published online: 29 April 2021  
© The Author(s) 2021

## Abstract

This article presents an explanation for a cross-linguistic gap observed by Anna Siewierska: morphologically unmarked indirect objects may alternate with prepositional marking in what is sometimes called a 'dative' or 'prepositional-dative' ditransitive frame, but never with actual dative case marking. 'Dative', to the extent it alternates with accusative, is always expressed as a preposition. I show firstly that German, which has a robust dative case paradigm, also displays a double object alternation in which the erstwhile dative DP occurs in a prepositional phrase, meaning both accusative (in English) and dative (in German) indirect objects alternate with prepositional encoding. I construct an analysis in which the the indirect object may be generated as either a DP (which receives dative in German and accusative in English) or a PP in the same theta position. This characterization of the double object alternation does not admit an alternation between dative and accusative case on the indirect object, capturing Siewierska's generalization. The analysis also extends to 'symmetric' passive languages, in which either object in the double object construction can be raised to subject in the passive. Some current perspectives on this phenomenon make such languages exceptions to Siewierska's generalization, but not the analysis proposed here.

**Keywords** Double object alternation · Passive · Object symmetry · Inherent case · German

## 1 Introduction

This article seeks to explain a typological pattern observed by Siewierska (1998) to the effect that although accusative encoding of an indirect object often alternates productively with prepositional encoding, as in the English double object alternation, it never

---

This research was supported by the Austrian Science Fund (FWF): #P27384.

---

✉ Peter Hallman  
peter.hallman@ofai.at

<sup>1</sup> Austrian Research Institute for Artificial Intelligence, Freyung 6/6, 1010 Vienna, Austria

alternates with dative case encoding. I add here based on an examination of German double object constructions that although dative does not alternate with accusative, it does alternate with prepositional encoding, like accusative does in English. I present a syntactic analysis of this cross-linguistic gap that also addresses a potential challenge to Siewierska's generalization presented by object-symmetric languages, that is, languages in which either object may be raised to subject in passive constructions. The resulting analysis accommodates both symmetric languages as well as asymmetric languages of both the German type (with a dative indirect object) and the English type (with an accusative indirect object), and identifies the parameters that distinguish these types.

## 2 Setting the stage

I use the phrase 'double object frame' to refer to a verb complement frame consisting of two direct DP ('Determiner Phrase') arguments, as in (1). 'Direct' here means not introduced by any adpositional material such as a preposition. Both objects in the English double object frame are morphologically unmarked, except as pronouns, where they are morphologically distinguished from subjects in the paradigm referred to as 'accusative'. Following Harley (1995, 1997, 2002, 2012), Harley and Jung (2015), Beck and Johnson (2004), Beavers (2011) and others, I assume such constructions are causative alternants of an underlying possessive predicate and refer to *Mary* as the agent, *the collector* as the recipient, and *the pictures* as the theme.

- (1) Mary sold the collector the pictures.

In this construction, the first nominal constituent following the verb is promoted to subject in the passive.

- (2) The collector was sold the pictures.

I use the term 'periphrastic' to refer to the alternant of the double object frame in which the recipient occurs in a prepositional phrase headed by *to*, as shown in (3a), and the theme promotes to subject in the passive, as shown in (3b). This frame is periphrastic in the sense that the recipient is encoded as such by an adposition.

- (3) a. Mary sold the pictures to the collector.  
b. The pictures were sold to the collector.

Many languages display a double object frame similar in form to English except that the two objects are differentially case marked. In German, as a case in point, the recipient argument receives dative case while the theme argument receives accusative case, as shown in (4). The subject receives nominative case. In German, the case of a DP is primarily reflected in the morphological form of the determiner in D. I follow the convention in German linguistics of citing examples in the form of a subordinate clause, to prevent alternations in grammatical function from being confounded with topicalization, which is largely limited to root clauses.

- (4) weil Maria dem Sammler die Bilder verkauft hat  
*because Maria(.NOM) the.DAT collector the.ACC pictures sold has*  
 'because Maria sold the collector the pictures'

Passivization does not affect dative case, nor does it affect the canonical word order, as (5) shows. The recipient still canonically precedes the theme in the passive, but the theme functions as the subject in that it receives nominative case and controls agreement on the finite verb, visible in (5) as the plural inflection *-en* on the auxiliary *werden* 'become', a dedicated auxiliary for verbal passives in German (den Besten 1985, 1989; see also Thráinsson 1979; Andrews 1982, 1990; Zaenen et al. 1985; Schütze 1997 on similar configurations in Icelandic).

- (5) weil dem Sammler die Bilder verkauft wurden  
*because the.DAT collector the.NOM pictures sold became.PL*  
 'because the collector was sold the pictures'

The recipient argument surfaces with dative case in German but accusative case in English. Across languages, therefore, dative is found in some languages in contexts where accusative is found in others. Yet, Siewierska's generalization, sketched briefly in Sect. 1, dictates that dative never alternates with accusative within a language. Why should this be so? What parameter is at work and what syntactic mechanisms enforce it? I begin addressing this issue by describing Siewierska's generalization in more detail.

### 3 Siewierska's generalization

In a sample of 270 languages, Siewierska (1998) identifies 38 that exhibit a clearly identifiable alternation between a double object frame and what she calls an 'oblique' frame, as illustrated by the English pair in (1) and (3a). But among the 270, she remarks, "no language which has dative marking of recipients, i.e. marking which does not double up as either allative or some type of locative marking, exhibits alternative patient-like encoding of recipients in ditransitive clauses" (p. 180). This means that in every language in which a recipient participates in an alternation between patient encoding and oblique encoding, the oblique encoding is an allative (i.e., 'to') or locative (i.e., 'at') preposition, never a dative case paradigm distinct from the morphemes that encode allative or locative meaning in the language in question.

This means that there is no language in which a DAT-ACC case frame like German alternates with an ACC-ACC frame like English, as illustrated by the paradigm in (6). In (6a), repeated from (4), dative marks the recipient argument, and this argument cannot be encoded accusative (6b), nor raised to subject in the passive (6c) (compare with English (1) and (2) respectively). According to Siewierska, neither (6b) nor (6c) are grammatical in any language in which (6a) is grammatical (where dative is characterized by being differentially marked from accusative and unaffected by passivization, as (5) shows).

- (6) a. weil Maria dem Sammler die Bilder  
*because Maria(.NOM) the.DAT collector the.ACC pictures*  
 verkauft hat  
*sold has*  
 ‘because Maria sold the collector the pictures’
- b. \*weil Maria den Sammler die Bilder  
*because Maria(.NOM) the.ACC collector the.ACC pictures*  
 verkauft hat  
*sold has*  
 (‘because Maria sold the collector the pictures.’)
- c. \*weil der Sammler die Bilder verkauft wurde  
*because the.NOM collector the.ACC pictures verkauft became.SG*  
 (‘because the collector was sold the pictures’)

‘Patient-like’ encoding refers to the syntactic and morphological behaviour typical of patients (themes in my terminology), including morphological accusative case (typically unmarked in the languages Siewierska surveys) and the potential to raise to subject in the passive. Siewierska’s generalization says that dative does not alternate with accusative. But accusative alternates with what I call ‘periphrastic’ (i.e., prepositional, allative or locative) encoding. Siewierska concludes that periphrastic encoding in languages like English, i.e. *to*-phrases, which alternate with accusative, does not correspond to dative in languages like German, which does not alternate with accusative. Siewierska continues her remarks cited above with the conclusion: “Thus it appears that the term dative-shift is truly a misnomer” (p. 180). ‘Dative shift’ is a common term for a transformation that relates the periphrastic frame in (3a) to the double object frame in (1). On the basis of her typological generalization, Siewierska rejects the idea that allative *to*-phrases in English are on some level on par with dative case, encoding dative in a language without a dative inflectional paradigm. Rather, the English ‘double object alternation’ (the alternation between (1) and (3a)) does not involve dative case in either frame. Siewierska does not reject the notion that (1) is derived from (3a), she just emphasizes that it is wrong to refer to it as ‘dative shift’, since the *to*-phrase in (3a) is not dative. By the same token, it is incorrect to refer to the periphrastic frame in (3a) as the ‘dative’, ‘prepositional-dative’ or ‘*to*-dative’ frame.

I have more to say about the derivational relatedness of the periphrastic and double object frames in Sect. 4. The following section discusses the double object frame in German in more detail and seeks to demonstrate that in German, the DAT-ACC double object frame also alternates with a periphrastic frame, like in English. This observation reinforces Siewierska’s point that English *to*-phrases are not on par with dative DPs in German. Rather, they are on par with PPs in the German periphrastic frame. Section 5 then presents a syntactic analysis of the relation between the two ditransitive frames in German and English that has Siewierska’s generalization as a consequence. Section 6 looks at ‘symmetrical’ double object languages, in which either object may raise to subject in the passive. Some analyses of these languages make them exceptions to Siewierska’s generalization, but I show that on the analysis developed in Sect. 5 they are not. Finally, Sect. 7 considers the consequences of the analysis proposed here for a broader set of data in German and beyond.

#### 4 The double object alternation in German

As mentioned previously, double object constructions in German exhibit a similar canonical word order to English but mark the recipient argument in the dative case, and this case appears to be syntactically inert, in the sense that it cannot be shed in the course of passivization. On the other hand, many double object verbs in German exhibit an alternation with a periphrastic frame headed by the preposition *an* 'at', which assigns accusative case to its object. I present a number of examples below to impress upon the reader that the alternation is reasonably productive, though it has not been described as a double object alternation in German to my knowledge. These examples are constructed for the purpose of illustrating the phenomenon (a few based on attested examples but modified for parallelism). All have been confirmed by native German speakers, who agree that the sentences below are all grammatical, though the two frames may prefer different information structural contexts (see Bresnan et al. 2007; Rappaport Hovav and Levin 2008; Bresnan and Nikitina 2010 on this matter in English). Some of the examples contain hyphenation that does not reflect standard orthography, but is added to facilitate glossing.

- (7) a. weil Maria dem Sammler die Bilder verkauft hat  
*because Maria the.DAT collector the.ACC pictures sold has*  
 'because Maria sold the collector the pictures'  
 b. weil Maria die Bilder an den Sammler verkauft hat  
*because Maria the.ACC pictures at the.ACC collector sold has*  
 'because Maria sold the pictures to the collector'
- (8) a. weil die Akademie Maria den Preis verliehen hat  
*because the academy Maria(.DAT) the.ACC prize awarded has*  
 'because the academy awarded Maria the prize'  
 b. weil die Akademie den Preis an Maria verliehen hat  
*because the academy the.ACC prize at Maria(.ACC) awarded*  
*hat*  
*has*  
 'because the academy awarded the prize to Maria'
- (9) a. weil ich Maria die Briefe weiter/zurück-gegeben habe  
*because I Maria(.DAT) the.ACC letters further/back-given*  
*habe*  
*have*  
 'because I forwarded/gave back Maria the letters'  
 b. weil ich die Briefe an Maria weiter/zurück-gegeben habe  
*because I the.ACC letters at Maria(.ACC)*  
*weiter/zurück-gegeben habe*  
*further/back-given have*  
 'because I forwarded/gave back the letters to Maria'
- (10) a. weil der Verlag Maria das Buch geschickt hat  
*because the publisher Maria(.DAT) the.ACC book sent has*  
 'because the publisher sent Maria the book'

- b. weil der Verlag das Buch an Maria geschickt  
*because the publisher the.ACC book at Maria(.ACC) sent*  
 hat  
*has*  
 ‘because the publisher sent the book to Maria’
- (11) a. weil der Priester dem Fürsten den Kelch gereicht hat  
*because the priest the.DAT prince the.ACC goblet passed has*  
 ‘because the priest passed the prince the goblet’  
 b. weil der Priester den Kelch an den Fürsten gereicht  
*because the priest the.ACC goblet at the.ACC prince passed*  
 hat  
*has*  
 ‘because the priest passed the goblet to the prince’
- (12) a. weil Maria dem Roten Kreuz €500 gespendet hat  
*because Maria the.DAT Red Cross €500(.ACC) donated has*  
 ‘because Maria donated the Red Cross €500’  
 b. weil Maria €500 an das Rote Kreuz gespendet  
*because Maria €500(.ACC) at the.ACC Red Cross donated*  
 hat  
*has*  
 ‘because Maria donated €500 to the Red Cross’
- (13) a. weil Maria Moritz die Anfrage weiter-geleitet  
*because Maria Moritz(.DAT) the.ACC inquiry further-passed*  
 hat  
*has*  
 ‘because Maria passed on (to) Moritz the inquiry’  
 b. weil Maria die Anfrage an Moritz weiter-geleitet  
*because Maria the.ACC inquiry at Moritz(.ACC) further-passed*  
 hat  
*has*  
 ‘because Maria passed the inquiry on to Moritz’
- (14) a. weil die Großmutter den Kindern ihr Haus  
*because the grandmother the.DAT children her.ACC house*  
 vererbt hat  
*bequeathed has*  
 ‘because the grandmother bequeathed the children her house’  
 b. weil die Großmutter ihr Haus an die Kinder  
*because the grandmother her.ACC house at the.ACC children*  
 vererbt hat  
*bequeathed has*  
 ‘because the grandmother bequeathed her house to the children’

- (15) a. weil Maria einer Studentin ihre Wohnung vermietet  
*because Maria a.DAT student.FEM her.ACC apartment rented*  
 hat  
*has*  
 ‘because Maria rented a student (out) her apartment’  
 b. weil Maria ihre Wohnung an eine Studentin  
*because Maria her.ACC apartment at a.ACC student.FEM*  
 vermietet hat  
*rented has*  
 ‘because Maria rented her apartment to a student.’
- (16) a. weil der Käufer dem Treuhänder den Betrag  
*because the buyer the.DAT trustee the.ACC amount*  
 überwiesen hat.  
*transferred has*  
 ‘because the buyer transferred the trustee the amount’  
 b. weil der Käufer den Betrag an den Treuhänder  
*because the buyer the.ACC amount at the.ACC trustee*  
 überwiesen hat  
*transferred has*  
 ‘because the buyer transferred the amount to the trustee’
- (17) a. weil der Arzt vielen Patienten nicht zugelassene  
*because the doctor many.DAT patients non approved.ACC*  
 Medikamente verabreicht hat  
*medication administered has*  
 ‘because the doctor administered many patients unapproved medication’  
 b. weil der Arzt nicht zugelassene Medikamente an  
*because the doctor non approved.ACC medication at*  
 viele Patienten verabreicht hat  
*many.ACC patients administered has*  
 ‘because the doctor administered unapproved medication to many patients’
- (18) a. weil der Konzern dem Kunden die falschen  
*because the company the.DAT customer the.ACC wrong*  
 Produkte geliefert hat  
*products delivered has*  
 ‘because the company delivered the customer the wrong products’  
 b. weil der Konzern die falschen Produkte an den  
*because the company the.ACC wrong products at the.ACC*  
 Kunden geliefert hat  
*customer delivered has*  
 ‘because the company delivered the wrong products to the customer’

- (19) a. weil Maria ihrem Nachbarn die Geschichte  
*because Maria her.DAT neighbor the.ACC story*  
weiter-erzählt hat  
*further-told has*  
‘because Maria told her neighbor the story’
- b. weil Maria die Geschichte an ihren Nachbarn  
*because Maria the.ACC story at her.ACC neighbor*  
weiter-erzählt hat  
*further-told has*  
‘because Maria told the story to her neighbor’
- (20) a. weil die Steuerbehörde dem Pensionisten die  
*because the tax office the.DAT retiree the.ACC*  
Überzahlung rückerstattet hat  
*overpayment reimbursed has*  
‘because the tax office reimbursed the retiree the overpayment’
- b. weil die Steuerbehörde die Überzahlung an den  
*because the tax office the.ACC overpayment at the.ACC*  
Pensionisten rückerstattet hat  
*retiree reimbursed has*  
‘because the tax office reimbursed the overpayment to the retiree’
- (21) a. weil die Firma dem Auftragnehmer das Geld  
*because the company the.DAT contractor the.ACC money*  
aus-gezahlt hat  
*out-paid has*  
‘because the company paid out (to) the contractor the money’
- b. weil die Firma das Geld an den Auftragnehmer  
*because the company the.ACC money at the.ACC contractor*  
aus-gezahlt hat  
*out-paid has*  
‘because the company paid the money out to the contractor’

Not all verbs with a recipient argument admit both frames. Some, such as *geben* ‘give’ and *schenken* ‘gift’, i.e., ‘to give as a gift’ exclude the periphrastic frame, as (22) illustrates. The fact that *geben* excludes the periphrastic frame has probably obfuscated the productivity of the alternation in German.<sup>1</sup>

<sup>1</sup> Sometimes prefixed and unprefixed forms of a verb admit different complement frames, as in the case of *weiter-* or *zurückgeben* ‘pass on’ or ‘give back’ (9), which admit the periphrastic frame that underlying *geben* ‘give’ excludes (22b). The data in (7)–(21) contain both prefixed and unprefixed verbs that display both frames, indicating that verb morphology does not strictly determine a verb’s complement frame. Accordingly, the analysis I present in Sect. 5 does not connect frame selection with verb morphology. However, Susi Wurmbrand (p.c.) points out a subgeneralization about the verb prefix *ver-*: if a bare verb alternates with a *ver-*prefixed counterpart under roughly the same meaning, they divide the labor of licensing the two frames between them: *V* occurs with the double object frame and *ver-V* with the periphrastic frame, hence the complementarity between (22) and (i) below. Verbs prefixed with *ver-* that allow both frames either have a bare counterpart with a different meaning (e.g., *verkaufen* ‘sell’ in (7) vs. *kaufen* ‘buy’) or do not have a bare counterpart at all (e.g., *verabreichen* ‘administer’ in (17)). The complementarity between (22) and (i) therefore appears to be a blocking interaction between derivationally related lexical items.



- (22) a. weil Maria ihrer Schwester das Kleid gegeben /  
*because Maria her.DAT sister the.ACC dress given /*  
 geschenkt hat  
*gifted has*  
 'because Maria gave/gifted her sister the dress'
- b. \*weil Maria das Kleid an ihre Schwester gegeben /  
*because Maria the.ACC dress at her.ACC sister given /*  
 geschenkt hat  
*gifted has*  
 ('because Maria gave/gifted the dress to her sister')

Crucially for the present purposes, when both complement frames are available to a given verb, they show two salient characteristics of constructional relatedness that indicate that they are distinct surface representations of the same underlying argument structure. One such characteristic is that the dative DPs in the a-examples in (7)–(21) are in complementary distribution with the PP counterparts in the b-examples, as (23) illustrates. This suggests that the dative DP and the PP counterpart are on some level the same argument, which therefore cannot be expressed twice in the same context.

- (23) \*weil Maria dem Sammler die Bilder an das  
*because Maria the.DAT collector the.ACC pictures at the.ACC*  
 Museum verkauft hat  
*museum sold has*  
 (\*'because Maria sold the collector the pictures to the museum')

The other characteristic of constructional relatedness is that the dative arguments in the a-examples above are subject to the same selectional restrictions as their PP counterparts in the b-examples. Whenever both frames are available, the restrictions on one are found in the other. Specifically, the recipient argument must be a potential possessor. It need not necessarily be animate, but if inanimate, it must be capable of possessing the theme. Because a museum can possess pictures, *Museum* can occur both as a dative and periphrastic recipient of *verkaufen* 'sell', as (24) shows. But since the North Sea cannot be understood as a possessor of pictures, it cannot occur as a dative object in (25a), nor as a periphrastic object in (25b).

---

Footnote 1 continued

- (i) a. \*weil Maria ihrer Schwester die Wohnung vergeben / verschenkt  
*because Maria her.DAT sister the.ACC apartment given / gifted*  
 hat  
*has*  
 ('because Maria gave/gifted her sister the apartment')
- b. weil Maria die Wohnung an ihre Schwester vergeben /  
*because Maria the.ACC apartment at her.ACC sister given /*  
 verschenkt hat  
*gifted has*  
 'because Maria gave/gifted the apartment to her sister'

- (24) a. weil Maria dem Museum die Bilder verkauft hat  
*because Maria the.DAT museum the.ACC pictures sold has*  
 ‘because Maria sold the museum the pictures’  
 b. weil Maria die Bilder an das Museum verkauft  
*because Maria the.ACC pictures at the.ACC museum sold*  
 hat  
*has*  
 ‘because Maria sold the pictures to the museum’
- (25) a. #weil Maria der Nordsee die Bilder verkauft hat  
*because Maria the.DAT North Sea the.ACC pictures sold has*  
 (#‘because Maria sold the North Sea the pictures’)  
 b. #weil Maria die Bilder an die Nordsee verkauft  
*because Maria the.ACC pictures at the.ACC North Sea sold*  
 hat  
*has*  
 (#‘because Maria sold the pictures to the North Sea’)

In principle, the phrases *das Museum* ‘the museum’ and *die Nordsee* ‘the North Sea’ can name locations, as in the English *I’ll see you at the museum* or *We spent the summer at the North Sea* and their German counterparts. But the fact that the former but not the latter is a possible indirect object of *sell* indicates that these phrases do not function as location arguments in (24) and (25), but rather as recipient arguments, for which *das Museum* ‘the museum’ is qualified but not *die Nordsee* ‘the North Sea’. That is, the dative argument of *verkaufen* ‘sell’ is a recipient (a kind of possessor). The contrast between (24) and (25) shows that the periphrastic argument is a recipient as well. The dative and periphrastic arguments of *verkaufen* bear the same theta role.

A closer look at the preposition *an* ‘at’ reinforces the claim that in the b-examples above, *an* marks the same theta role as dative marks in the a-examples, meaning the pairs are alternative encodings of the same underlying argument structure. In certain periphrastic constructions, *an* indeed seems to have a locative use. But in this use, it does not alternate with dative in the double object frame, reinforcing the point that alternating *an* marks a recipient and is constructionally related to dative.

Rappaport Hovav and Levin (2008) argue that certain *to*-phrases in English are ambiguous between a recipient role and a location role, but that this ambiguity is a lexical idiosyncrasy of certain verbs and not the basis of the alternation between the double object frame and the periphrastic frame. The paradigm case of such a verb is *send*. The *to*-phrase associated with *send* can contain either a human (26a) or non-human (26b) DP, but, as Green (1974), Oehrle (1976) and others point out, only the human *to*-phrase alternates with a double object frame, as (27) demonstrates. (27b) is only acceptable if *London* is construed as a personification implying a human referent, not the location so named. (26b) is not subject to this restriction.

- (26) a. Mary sent a letter to John.  
 b. Mary sent a letter to London
- (27) a. Mary sent John a letter.  
 b. #Mary sent London a letter.

On the basis of this and other observations, Bowers (1981) and Hallman (2015) analyze (26a) as derivative of (27a). Example (26b), however, is a basic locative construction describing change of location, rather than change of possession. The expression *send X to Y* is therefore structurally ambiguous. It may be parsed as a locative construction in which *X* is the theme and *Y* a location, or as a change-of-possession construction syntactically related to *Send YX*, where *Y* is the recipient and *X* the theme.

Data from German support these conclusions and reinforce the claim that the *an*-phrase in the examples above is not a locative phrase but a recipient phrase syntactically related to the corresponding dative DP. The German counterpart to (27b), shown in (28a) is as infelicitous as its English counterpart; it is only sensible if *London* is construed as a personification implying a human referent (i.e., the personnel in London). Crucially, the periphrastic counterpart with *an* is infelicitous in exactly the same way, supporting the view that the dative phrase in (28a) and the periphrastic phrase in (28b) bear the same theta role. Since the recipient theta role is incompatible with a city name in the dative, it is incompatible with it in the *an*-phrase as well.

- (28) a. #weil Maria London einen Brief geschickt hat  
       *because Maria London(.DAT) a.ACC letter sent has*  
       (#‘because Maria sent London a letter’)
- b. #weil Maria einen Brief an London geschickt hat  
       *because Maria a.ACC letter at London(.ACC) sent has*  
       (‘because Maria sent a letter to London’)

In German, *schicken* ‘send’ may also be construed locatively with a place-name argument, but then the place name occurs in a prepositional phrase headed by *nach*—allative ‘to’ in German, as (29a) illustrates. The preposition *nach* is not compatible with a human object, as (29b) shows. See Levin (2008) for similar remarks on Russian and Hebrew, and Citko (2011) on Polish.

- (29) a. weil Maria einen Brief nach London geschickt hat  
       *because Maria a.ACC letter to London(.DAT) sent has*  
       ‘because Maria sent a letter to London’
- b. #weil Maria einen Brief nach Moritz geschickt hat  
       *because Maria a.ACC letter to Moritz(.DAT) sent has*  
       (‘because Maria sent a letter to Moritz.’)

A comparison of German and English supports the idea that the English phrases *send to Moritz* and *send to London* exemplify different constructions, one a change-of-possession construction and the other a change-of-location construction. If the double object frame encodes change-of-possession, then (28a) is ruled out because *London* cannot function as a recipient. If (28b) is ruled out because the *an*-phrase encodes the same theta role as dative in the double object frame, then an argument that is acceptable as a dative recipient should be acceptable in place of *London* in (28b). The pair in (10) shows that this is so, reformulated in (30) parallel to (28),

- (30) a. weil Maria Moritz einen Brief geschickt hat  
       *because Maria Moritz(.DAT) a.ACC letter sent has*  
       ‘because Maria sent Moritz a letter’

- b. weil Maria einen Brief an Moritz geschickt hat  
*because Maria a.ACC letter at Moritz(.ACC) sent has*  
 ‘because Maria sent a letter to Moritz’

Since *schicken* ‘send’ may be construed as a locative structure, location-denoting expressions built with the preposition *an* ‘at’ may occur with the locative construal of *schicken* ‘send’, leading in a limited range of contexts to a situation similar to the ambiguity in English in the interpretation of *to* as recipient encoding or location encoding. For example, the phrases *at the beach* and *at the front* are constructed in German with *an*, as the a-examples below show. And *an* shows up in constructions describing movement to the location so named, as the b-examples show.

- (31) a. weil die Kinder a-m Strand sind  
*because the.NOM children at-the.DAT beach are*  
 ‘because the children are at the beach’  
 b. weil die Mutter die Kinder an den Strand  
*because the.NOM mother the.ACC children at the.ACC beach*  
 geschickt hat  
*sent has*  
 ‘because the mother sent the children to the beach’
- (32) a. weil die Soldaten an der Front sind  
*because the.NOM soldiers at the.DAT front are*  
 ‘because the soldiers are at the front’  
 b. weil der General die Soldaten an die Front  
*because the.NOM general the.ACC soldiers at the.ACC front*  
 geschickt hat  
*sent has*  
 ‘because the general sent the soldiers to the front.’

But location-denoting phrases that are not built with *an* ‘at’ do not use *an* in change-of-location constructions with *schicken* ‘send’ either.

- (33) a. weil die Kinder i-m Haus sind  
*because the.NOM children in-the.DAT house are*  
 ‘because the children are in the house’  
 b. weil die Mutter die Kinder in-s Haus  
*because the.NOM mother the.ACC children in-the.ACC house*  
 geschickt hat  
*sent has*  
 ‘because the mother sent the children into the house’
- (34) a. weil die Soldaten auf dem Berg sind  
*because the.NOM soldiers on the.DAT mountain are*  
 ‘because the soldiers are on the mountain’

- b. weil der General die Soldaten auf den  
*because the.NOM general the.ACC soldiers on the.ACC*  
 Berg geschickt hat  
*mountain sent has*  
 'because the general sent the soldiers onto the mountain'

As a general rule, then, a locative preposition can be used in a change-of-location construction describing movement to that location. Occasionally, this preposition is *an*, as in (31) and (32), but not generally, as (33) and (34) show. On the other hand, *an* is used to mark recipients generally, as in (35a), independently of whether a locative construction can be constructed in the same terms (35b).

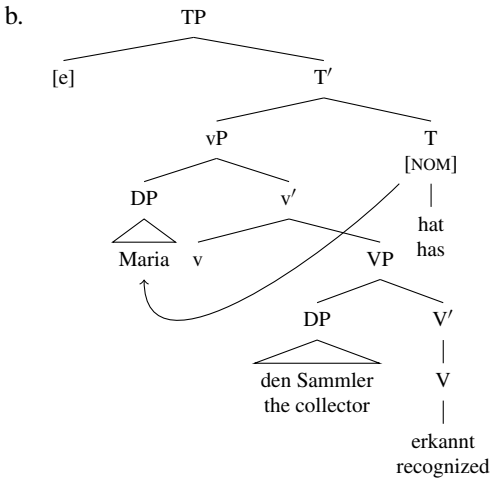
- (35) a. weil Maria die Bilder an den Sammler  
*because Maria(.NOM) the.ACC pictures at the.ACC collector*  
 verkauft hat  
*sold has*  
 'because Maria sold the pictures to the collector'
- b. \*weil die Bilder a-m Sammler sind  
*because the.NOM pictures at-the.DAT collector are*  
 (\*'because the pictures are at the collector')

These facts suggest that recipient *an*-phrases are syntactically distinct from locative *an*-phrases, and only the former are constructionally related to dative recipients. This conclusion of course raises the question of what the relation is. In the following section, I present an analysis of the double object alternation in German and English that addresses this issue and captures Siewierska's generalization.

## 5 Analysis: external and internal voice alternations

I assume that transitive verbs are syntactically complex along the lines postulated by Chomsky (1995), Harley (1995), Kratzer (1996) and others. The agent is base generated in the specifier position of a light verbal head 'little-*v*', whose complement is the projection of a verbal root whose specifier hosts the theme, as illustrated in (36b) for the transitive sentence in (36a). Following Chomsky (2000, 2001, 2004) and others, I assume the Agree relation extends from a probe to the closest potential goal in the probe's *c*-command domain and that nominative case is the morphological reflex of the Agree relation between T[ense] and its goal, as signified by the arrow in (36b).

- (36) a. weil Maria den Sammler erkannt hat  
*weil Maria(.NOM) the.ACC collector recognized has*  
 'because Maria recognized the collector'



In English, Agree typically goes hand in hand with raising of the goal to the probe, putting the subject in [spec,TP], unless a placeholder subject fills the subject position in its stead as in existential-*there* constructions. In German, the nominative-marked subject may remain in situ (den Besten 1985; Haider 1993, 2006; Wurmbrand 2006). The arrow in the tree above represents the Agree relation licensing nominative on the subject; the feature [NOM] under T represents the nominative licensing potential of T. Movement (obligatory in English, optional in German) is not shown. Also, I place the verbal root in V, though it might be associated post-syntactically with the v-V complex formed by head movement at a later stage in the derivation, along the lines of the Distributed Morphology theory (Halle and Marantz 1993; Harley 2007, 2012). The tree above depicts the base structure for the German sentence in (36a), but it is intended to capture the base structure for its English translation there, too, modulo superficial differences in the directionality of headedness, DP raising, verb movement and the expression of tense (perfect in German vs. preterit in English). The CP layer containing *weil* ‘because’ is not shown, since it is not involved in case- or theta-assignment.

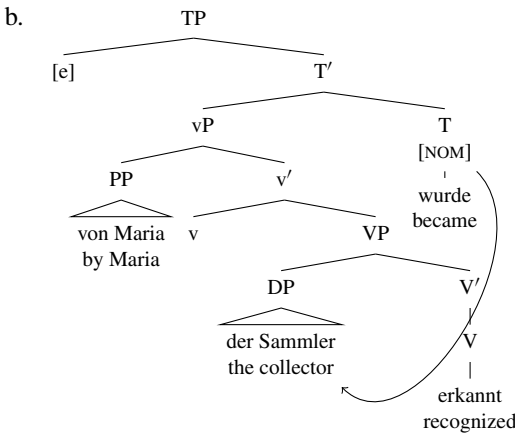
Little-*v* is typically analyzed as a probe licensing accusative case on an object (Chomsky 2000 and elsewhere; see Ura 1996; Collins 1997; McGinnis 1998 on double object constructions in particular). Nothing I say about German or English in this section conflicts with this view. However, the facts about symmetric object languages that I discuss in Sect. 6 point to the necessity for a theory of accusative case which divorces it from any specific syntactic locus. I anticipate the conclusions of that discussion by positing a default accusative-assigning mechanism: if a predicate-internal DP reaches PF (the surface level of representation ‘phonological form’) with an unvalued case feature, that feature is valued to [ACC]. Unlike accusative, nominative case is licensed by a specific probe, T, under Agree (as is dative, as I describe below).

Roberts (1987), Bruening (2013) and others argue in detail that English *by*-phrases in the passive encode the external argument of the corresponding active, based on selectional regularities similar to what I discussed above for dative DPs and *an*-phrases in German ditransitive constructions. They conclude that *by*-phrases adjoin to vP and

that *by* is semantically transparent—it merely passes the external theta role to its DP complement. Hasegawa (1988), Goodall (1997), Mahajan (1994), Collins (2018) and Angelopoulos et al. (2020) analyze these selectional regularities as the result of a shared base position: the *by*-phrase is base generated in [spec,vP] in passives, just where the external argument DP is generated in actives. I show below that the latter view offers some mileage in pinning down the source of Siewierska's generalization, once we view the double object alternation as an 'internal' passive construction, as do Perlmutter and Postal (1984) and Larson (1988), though my analysis differs from theirs in important details.

I propose therefore that the base structure for both the German passive sentence in (37a) and its English translation there (again modulo certain systematic differences) is that diagrammed in (37b), where, since the external argument receives case internal to the *von/by* phrase, it is not visible to the Agree relation extending from T, which finds and assigns nominative case to the theme instead. This nominative DP raises to [spec,TP] optionally in German and obligatorily in English.

- (37) a. weil der Sammler von Maria erkannt wurde  
*because the.NOM collector from Maria.DAT recognized became*  
 'because the collector was recognized by Maria'

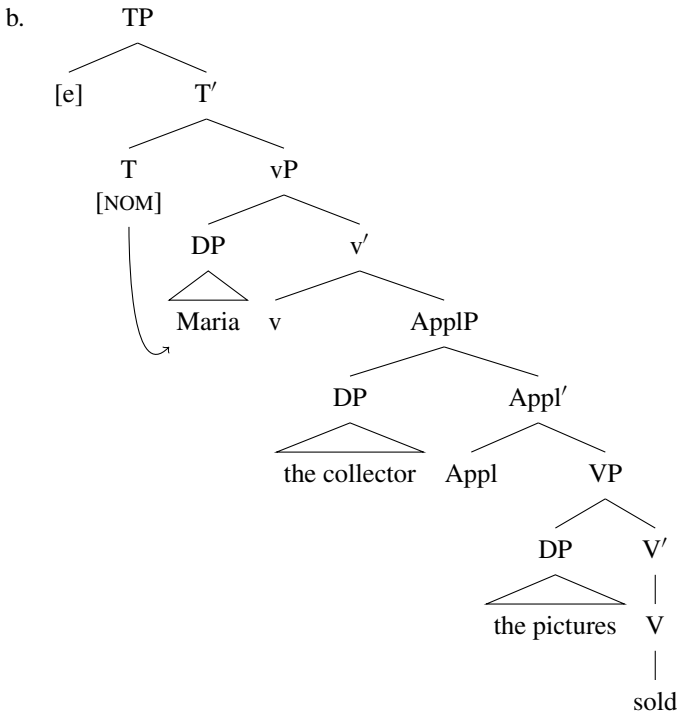


According to this analysis, the main difference between active and passive structures is that the agent is generated in a PP in the latter. The transference of nominative case to the next highest DP is a consequence: because the agent is case-valued internal to the PP, it is not a potential goal for the nominative probe, which therefore probes past it and finds the theme. This PP can be elided, generating the 'short passive' (the passive without the *by*-phrase). On this analysis, passivization correlates not with withdrawal of objective Case but with demotion of the agent into a PP. As a consequence of demotion of the agent, nominative moves down to the next highest DP. This DP does not receive accusative Case, not because its accusative has been withdrawn, but because it has received nominative from T before the pre-spell-out point at which accusative is assigned by default. It is crucial to this analysis that T *must* agree with the highest DP in

its domain if there is one,<sup>2</sup> assigning nominative case to that DP. If Agree were optional, that DP could receive default accusative instead, being predicate internal, contrary to fact. In English, the nominative-licensed theme raises to the subject position [spec,TP], where it precedes the *by*-phrase. This word order is available in German as well, as is the word order generated in (37b). I turn to the double object construction in English and German with these tools in hand.

Following Bowers (1993), Marantz (1993), Collins and Thráinsson (1996), Bruening (2001), Harley (2002, 2012), Harley and Jung (2015), and others, I attribute the basic predicate structure in (38b) to the double object frame shown in English (38a). This tree is like the monotransitive construction in (36b) except that a recipient argument is introduced in the specifier of ApplP ('Applicative Phrase'), which occurs between vP and VP. In the active, the agent receives nominative from T as before. Both objects receive accusative case by the default rule discussed above.

(38) a. Maria sold the collector the pictures.



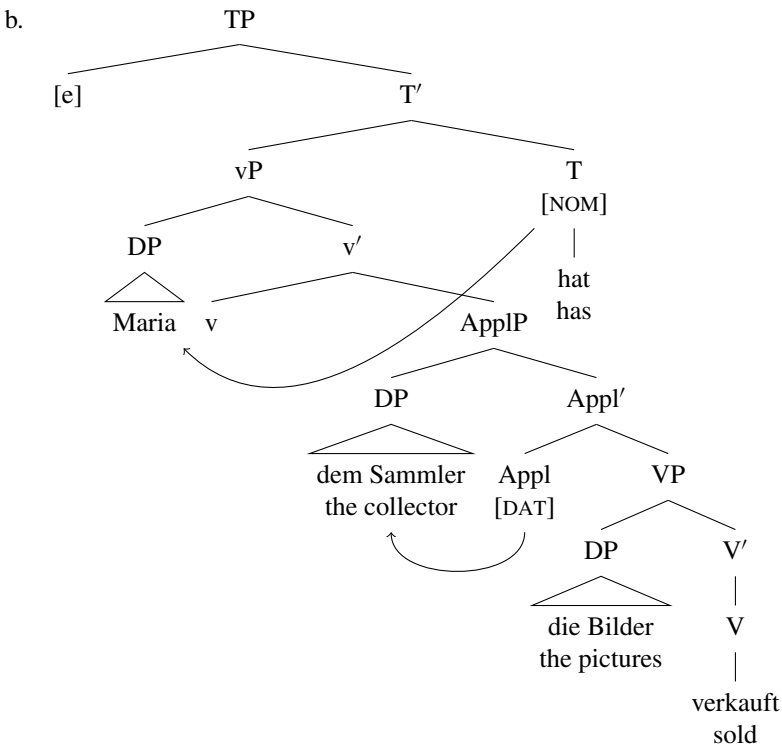
<sup>2</sup> For German, this requirement should not be construed as requiring there to be a highest DP. German allows 'impersonal' passives of intransitive verbs, as in (i). In these cases, T fails to find a highest DP to agree with. No nominative element appears and default agreement obtains.

- (i) weil getanzt wurde  
*because danced became*  
 'because there was dancing'



McGinnis (1998), Cuervo (2003b), Anagnostopoulou (2003), Woolford (2006), McFadden (2006) and McIntyre (2006) claim for a variety of languages that dative case is assigned to the recipient argument in its base position within ApplP. The notion that dative is assigned configurationally in change-of-possession constructions has a precedent predating the split-VP hypothesis in works by Fanselow (1987), Czepluch (1988), Wegener (1991) and others. Following this lead, I propose that German is fundamentally the same as English, except that the recipient in [spec,ApplP] receives dative case directly from Appl in the spec-head relation. That is, Appl assigns case to its own semantic dependent—the recipient. The agent receives nominative from T and the theme receives accusative again by default.

- (39) a. weil Maria dem Sammler die Bilder  
*because Maria(.NOM) the.DAT collector the.ACC pictures*  
 verkauft hat  
*sold has*  
 ‘because Maria sold the collector the pictures’



In the passive of (39a), mentioned in (5) and repeated in (40) below, the theme *die Bilder* ‘the pictures’ receives nominative case and controls agreement on the finite auxiliary *wurden* ‘became’. This means that the dative recipient *dem Sammler* ‘the collector’ does not function as an intervenor for the Agree relation between T and the theme that transmits nominative case.

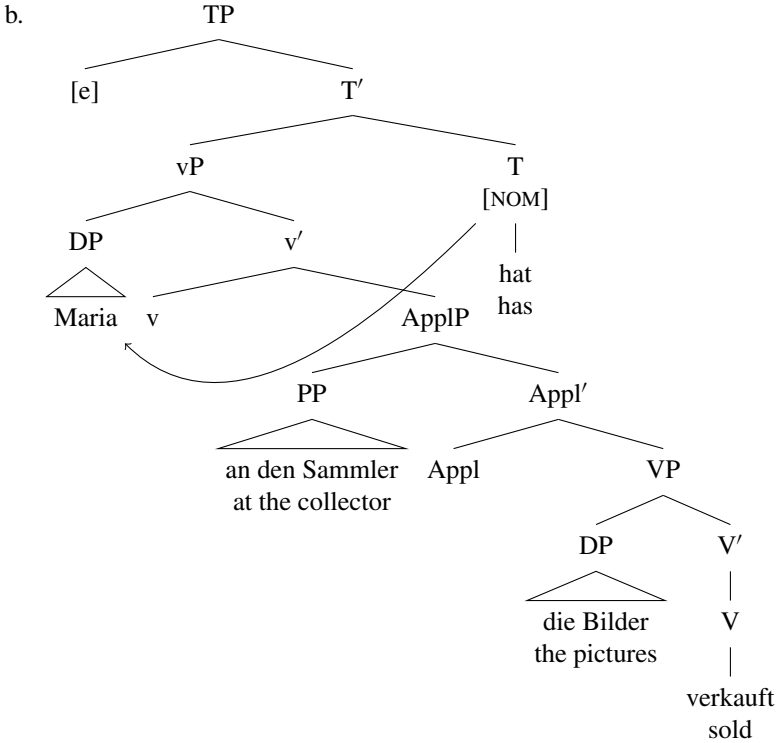
- (40) weil dem Sammler die Bilder verkauft wurden  
*because the.DAT collector the.NOM pictures sold became.PL*  
 ‘because the collector was sold the pictures’

That the dative DP is invisible to the probe T is expected, since the dative DP is already case-valued by the time T is merged, much like the agent in the *von*-phrase in the passive, which receives case from *von* ‘by’. Dative DPs have been observed to induce ‘defective intervention’ effects in some languages, such as Icelandic (Chomsky 2000; Holmberg and Hróarsdóttir 2004). There, a dative DP does not disrupt case assignment to a lower DP but may disrupt transfer of agreement features from the lower DP to the case assigning probe. In German, however, dative DPs disrupt neither case assignment nor feature transfer and so are not intervenors for  $\phi$ -agreement chains in any sense (Broekhuis 2007). On the assumption that case-saturated DPs are not visible to  $\phi$ -Agree relations that emerge later in the derivation, neither the dative recipient nor the periphrastically encoded agent are eligible for case, which makes them transparent to the Agree relation between T and lower unsaturated DPs.

As described in detail in Sect. 4, the recipient argument in German can alternatively appear in a prepositional phrase headed by *an* ‘at’, in which case the recipient DP receives accusative case from *an*. The selectional regularities described there indicate that dative and periphrastic recipients bear the same theta role. Recall, too, that when we control for the ambiguity of the English periphrastic marker *to* with the homophonous allative preposition, the selectional regularities observed in German apply to English as well. That is, the grammaticality of *I sent the letter to London* does not militate against a uniform base structure for the double object and periphrastic frames (in spite of *#I sent London the letter*) if we allow for the possibility that the DP-PP frame of some verbs (including *send*) is structurally ambiguous between a change-of-possession construction syntactically related to the double object frame and a locative construction unrelated to the double object frame. These structures are differentiated by the choice of preposition in German (*an* vs. *nach* or other allative preposition) but morphologically neutralized in English.

Drawing on the intuition expressed by Perlmutter and Postal (1984) and Larson (1988) that the double object alternation is a kind of ‘internal passive’, I model the double object alternation after the analysis of passive (or what one might call ‘external passive’) shown above in (37b). The recipient may be base generated in [spec,AppIP] either in the form of a bare DP, as shown in (39b) (dative in German and accusative in English), or in the form of a prepositional phrase (headed by *an* ‘at’ in German and *to* in English), as diagrammed in (41b). I assume that *an* and *to* in this usage are semantically vacuous, like their counterparts *von* and *by* in the external passive. The agent receives case under Agree from T, the recipient receives case from the preposition, and the theme receives default accusative in both languages. Here again, (41b) is intended to represent the base structure of both the German sentence in (41a) and its English translation there, and abstracts away from various surface differences between the two languages.

- (41) a. weil Maria die Bilder an den Sammler  
*because Maria(.NOM) the.ACC pictures at the.ACC collector*  
 verkauft hat  
*sold has*  
 'because Maria sold the pictures to the collector'



The word order generated in (41b) is a possible surface word order in German, as is the order in which the theme DP precedes the recipient PP. I assume the latter is derived by raising of DP above PP. Word order in German is subject to a variety of conditions including definiteness, animacy, quantifier scope and prosody (Diesing 1992; Büring 2001; Frey 2001; Heck 2001; Pafel 2005, among many others) which, according to the analysis in (41b), condition raising of DP above PP as well as other transformations. In English, the DP-PP order is obligatory. This suggests that what is optional in German is obligatory in English. I leave the examination of conditions on surface word order in German and their relation to the more restricted English pattern for another occasion.

The internal passive shown in (41b) may of course co-occur with the ‘external’ passive, so that both the agent and the recipient are expressed in PPs, as (42) illustrates.

- (42) weil die Bilder von Maria an den Sammler  
*because the.NOM pictures by Maria(.DAT) at the.ACC collector*  
 verkauft wurden  
*sold became.PL*  
 ‘because the pictures were sold by Maria to the collector’

According to this analysis, German and English are uniform in terms of the structure underlying the double object frame and the periphrastic frame. These differ in whether the recipient is generated as a DP or a PP. This is just the distinction that differentiates the ‘external’ active and passive, in which the agent is base generated as a DP or a PP respectively. This common basis for change-of-possession constructions in the two languages is schematized in (43a), where the braces indicate that either DP or PP is generated in this position. Nothing I have said above militates against the conventional analysis of change-of-location constructions as structures in which a theme occurs in the specifier of VP whose complement is the PP designating the location, as schematized in (43b). The pairs in (7)–(21) display the structure in (43a) with the choice of DP and PP as specifier of ApplP in the a- and b-examples respectively. The change-of-location construction in (29a), on the other hand, displays the structure in (43b). In both structures, the ‘external’ passive arises by choosing PP in [spec,vP].

- (43) a. [<sub>VP</sub> {DP,PP} [<sub>ApplP</sub> {DP,PP} [<sub>VP</sub> DP ]]] [change of possession]  
 b. [<sub>VP</sub> {DP,PP} [<sub>VP</sub> DP [<sub>V'</sub> PP ]]] [change of location]

Another consideration that supports the distinction between (43a) and (43b) and the analysis of the b-examples in (7)–(21) (with *an*-phrases) as internal passives is that the *an*-phrases in these examples are systematically optional in German, just like *von* ‘by’-phrases in passives. As remarked above, a *von*-phrase hosting an agent may be dropped, to yield what is often called the ‘short’ passive illustrated in (44a). Recipient *an*-phrases share this property; ellipsis of an *an*-phrase represents a ‘short internal’ passive, illustrated in (44b). The possibility of dropping a PP is not, however, typical of locative PPs, as the unambiguously locative examples in (45) demonstrate.

- (44) a. weil Maria (von dem Sammler) erkannt wurde  
*because Maria (by the collector) recognized became*  
 ‘because Maria was recognized (by the collector)’  
 b. weil Maria die Bilder (an den Sammler) verkauft hat  
*because Maria the pictures (at the collector) sold has*  
 ‘because Maria sold the pictures (to the collector)’
- (45) a. weil Maria die Schlüssel \*(auf den Tisch) gelegt hat  
*because Maria the keys \*(on the table) laid has*  
 ‘Because Maria put the keys \*(on the table)’  
 b. weil Maria \*(auf den Berg) gestiegen ist  
*because Maria \*(on the mountain) climbed is*  
 ‘because Maria climbed \*(the mountain)’

These observations reinforce the claim that recipient *an*-phrases are different from locative PPs and bear a resemblance to *von*-phrases hosting agents in the passive. This resemblance in turn reinforces the idea that the periphrastic change-of-possession frame is an internal passive, for which the double object frame is the corresponding internal active.

A reviewer of the present work points out that the *an*-phrases that I call recipients pattern with locative prepositional phrases in accepting directional modifiers like *direkt* 'directly'. *Direkt* can modify a directional PP as in (46a) or an *an*-phrase naming a recipient as in (46b), modeled after (14b) above.

- (46) a. weil die Großmutter die Lebensmittel direkt in den  
*because the grandmother the groceries direct in the*  
 Kühlschrank gestellt hat  
*refrigerator put has*  
 'because the grandmother put the groceries directly (or straight/right)  
 in the refrigerator'
- b. weil die Großmutter das Haus direkt an die Enkelkinder  
*because the grandmother the house directly at the grandchildren*  
 vererbt hat  
*bequeathed has*  
 'because the grandmother bequeathed the house directly to the  
 grandchildren'

It is clear that *direkt* and similar words are PP modifiers; neither instance of *direkt* in (46) can be separated from the following PP preserving meaning. The literature on PP modifiers does not treat the meaning of modifiers of directional PPs in great detail. Zwarts (1997) claims that stative locative prepositional phrases denote sets of vectors—oriented paths extending from one point of reference to another—so that *above the door* denotes a set of vectors extending from the door upward. He claims that the modifier *directly* or *right* as in *directly/right above the door* restricts the set of vectors that *above the door* denotes to ones that are very short. But even the clearly locative example in (46a) does not seem to assert as part of its meaning that the path the groceries took to the refrigerator was short. Rather, it asserts that the groceries did not come to rest in any third location between their starting location (for example, in the grocery bags) and the refrigerator. This schema for the meaning of *direkt* in (46a) extends to (46b) with the modification that the latter describes change of possession rather than change of location. (46b) asserts intuitively that the house did not come into the possession of any third party between being possessed by the grandmother and by her grandchildren. This assertion is informative because one might have expected the house to come into the possession of the grandmother's children first.

The remarks above point to the conclusion that *direkt* deals in alternatives, much like focus particles like *nur* 'only'. *Nur* may also adjoin to a PP, as the examples in (47) show.

- (47) a. weil die Großmutter die Lebensmittel nur in den  
*because the grandmother the groceries only in the*  
 Kühlschrank<sub>F</sub> gestellt hat  
*refrigerator put has*  
 ‘because the grandmother put the groceries only in the refrigerator’
- b. weil die Großmutter das Haus nur an die Enkelkinder<sub>F</sub>  
*because the grandmother the house nur at the grandchildren*  
 vererbt hat  
*bequeathed has*  
 ‘because the grandmother bequeathed the house only to the grandchildren’

*Nur* does not have scope at the level of the PP, but rather, according to Rooth (1985, 1992, 1996) and others, at the level of the VP. There, it denotes a relation between the denotation of VP and a set  $C$  of alternatives to VP, asserting that if any member of  $C$  holds, it is the VP-denotation itself, i.e., no alternatives to VP are true. The PP-adjacent position of *nur* in (47) serves to focus-mark the DP in the PP (notated by the subscript  $F$ ), which restricts the alternatives in  $C$  to those that differ from the VP denotation only in the value of the focus-marked position. Consequently, (47a) asserts that the grandmother put the groceries nowhere other than in the refrigerator, and (47b) asserts that the grandmother bequeathed the house to no one other than the grandchildren.

Below I sketch a parallel analysis of *direkt*, still assuming a causative semantics for change of location and change of possession, where little-*v* denotes the cause relation and the complement of little-*v* describes the caused state. A null BE heads V in the state description [<sub>VP</sub> the groceries BE [<sub>PP</sub> in the refrigerator]] and a null HAVE heads the Appl+V complex in [<sub>AppIP</sub> [<sub>PP</sub> to the grandchildren] HAVE [<sub>VP</sub> the house]] (recall that I claim that the preposition *to/an* is vacuous in change-of-possession constructions). In the surface structure, *directly* (= *direkt*) modifies a PP and focus marks its complement DP, as shown in (48). At LF, it modifies the result state description—VP in the locative construction, shown in (49a) and AppIP in the possessive construction, shown in (49b).

- (48) a. [<sub>VP</sub> the groceries BE [<sub>PP</sub> directly [<sub>PP</sub> in the refrigerator]]]  
 b. [<sub>AppIP</sub> [<sub>PP</sub> directly [<sub>PP</sub> to the grandchildren]] HAVE [<sub>VP</sub> the house]]
- (49) a. [<sub>VP</sub> directly [<sub>VP</sub> the groceries BE [<sub>PP</sub> in the refrigerator<sub>F</sub>]]]  
 b. [<sub>AppIP</sub> directly [<sub>AppIP</sub> [<sub>PP</sub> to the grandchildren<sub>F</sub>] HAVE [<sub>VP</sub> the house]]]

*Direkt* itself denotes a relation between a proposition  $\phi$  (the denotation of VP/AppIP) and a set  $C$  of alternatives to  $\phi$ , and asserts that  $\phi$  holds prior to any alternative in  $C$ , as defined in (50). As a result of focus marking, the alternatives for the locative construction in (46a) are ‘the groceries are in  $x$ ’ for some place  $x$  and for the possessive construction ‘ $x$  has the house’ for some possessor  $x$ . The locative sentence in (46a) asserts, then, that the grandmother caused it to be the case that the groceries were in the refrigerator before being anywhere else, and the possessive construction in (46b) asserts that the grandmother caused it to be the case that her grandchildren had the house before anyone else had the house. The usual trajectory of inheritance dictates that the grandchildren would eventually come into possession of

the house anyway, but we would have expected their parents to own it first. The use of *direkt* in (46b) denies this expectation.

(50)  $[[\textit{direkt}(C)(\phi)]] = \phi \ \& \ \neg\exists\psi \in C \ [\psi \text{ prior to } \phi]$

Again, the position of *direkt* adjacent to the PP in the surface structure only serves to mark the focused constituent, where the ‘gap’ occurs in the set of alternatives to the proposition argument of *direkt*. In all likelihood, this analysis of *direkt* requires some refinement. The aim of these remarks is to show that a purely vector-based analysis of *direkt* does not seem to be warranted even for the unambiguously locative example in (46a). Analyses of locative *direkt* (in phrases like *direkt über der Tür* ‘directly above the door’) where it restricts a set of vectors to short ones do not obviously carry over to (46a), where something more complex seems to be happening, specifically, something more akin to what is happening in focus particle constructions like (47a). An analysis of *direkt* that makes it a kind of focus particle extends readily to its use with recipient *an*-phrases in examples like (46b).

Returning now to Siewierska's generalization, if a language were to display an alternation between an accusative and a dative recipient, it would mean that Appl assigns dative to its specifier optionally. In the absence of dative assignment, the specifier of ApplP would receive case from whatever mechanisms the language has at its disposal for the assignment of accusative. Siewierska observes that this does not happen; Appl cannot optionally withhold dative case to a DP specifier. Whether Appl assigns dative to a DP specifier or not is parametrically specified for the language. But this parameter is unrelated to the alternation between the double object frame and the periphrastic frame, which takes the form of an optionality in whether the recipient is base generated as a DP (with dative in German) or a PP. This alternation is an ApplP-internal instance of the active/passive alternation. The investigation of German above also reinforces Siewierska's point that recipient *to*-phrases in English are not comparable to dative recipient DPs in German. Rather, they are comparable to *an*-phrase recipients in German. The alternation between the double object frame and the periphrastic frame is independent of the distribution of dative case. The grammatical properties in (51)–(52) summarize this analysis of German and English ditransitive constructions. Siewierska's generalization results from the point in (52), that dative cannot be withheld.

- (51) Properties common to German and English:
- a. DP alternates with PP in [spec,vP] and [spec,ApplP], with P selected by v/Appl.
  - b. T licenses nominative on the highest DP in its domain under Agree.
  - c. A predicate-internal DP with an unvalued case feature is valued accusative before spell-out.
- (52) German-specific property:  
DP in [spec,ApplP] receives dative case obligatorily.

In the following section, I turn to ‘symmetric object’ languages. Case-based analyses of the phenomenon they represent make them exceptions to Siewierska's

generalization. I show that from the perspective of the analysis described above for English and German, this is not so.

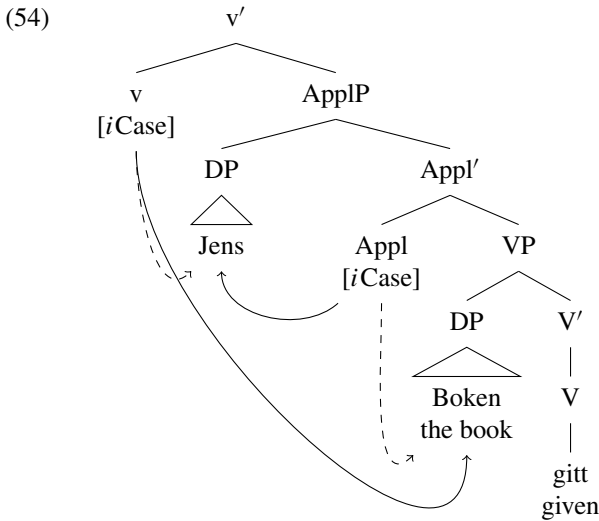
## 6 Symmetric double object languages

In some languages, when a double object construction is externally passivized (that is, the subject is demoted to PP and an object raises to subject in its place), either object may be raised to subject (Ura 1996; McGinnis 1998; Anagnostopoulou 2003; Bissell Doggett 2004; Haddican 2010; Haddican and Holmberg 2012, 2019; Holmberg et al. 2019). Norwegian and Swedish are a well-studied case in point, illustrated for Norwegian in (53) (Holmberg and Platzack's 1995 example 7.69, p. 215). Some dialects of English behave in this way as well; see especially Haddican (2010). The phenomenon is often referred to as 'symmetric' passivization.

- (53) a. Jon ble gitt boken.  
       *Jon was given book.DEF*  
       'Jon was given the book.'
- b. Boken ble gitt Jon.  
       *book.DEF was given Jon*  
       Lit. 'The book was given Jon.'

Haddican and Holmberg (2019) and Holmberg et al. (2019) claim that this pattern results from an optionality in the direction of case assignment by Appl. Appl may assign case upward to its specifier the recipient, represented by the solid arrow extending from Appl in (54), or downward to the theme in a lower position, represented by the dashed arrow extending from Appl in (54). In each case, little-*v* assigns accusative to the other argument; the solid arrow extending from *v* accompanies the other solid arrow, the dashed arrow the other dashed arrow. Case assignment is modeled as checking of an uninterpretable feature of the DP against an interpretable feature '[*i*Case]' of the case assigning head. This tree amalgamates Holmberg et al.'s trees (28) and (29) (p. 689).





When Appl assigns case downward, it case-licenses the lower theme. Its own specifier, the recipient, receives case from little-v. Passivization involves withdrawal of the interpretable case feature from little-v, triggering promotion of the recipient to subject. This derives the pattern seen in (53a), also seen in standard English. In the other case, Appl assigns case upward to its own specifier, the recipient. The theme then receives case from little-v. Once again, withdrawal of little-v's potential to assign accusative results in promotion of its erstwhile goal to subject, this time the theme, deriving (53b).

Somewhat similar analyses are proposed by Citko (2011) and Haddican and Holmberg (2014), which differ in that the case that Appl assigns upward in (54) is assigned downward by a higher head that occurs in between little-v and ApplP. On these accounts, too, the recipient's case is able to be licensed locally by a head independent of little-v, so that little-v assigns case to the theme instead, paving the way for promotion of the theme to subject when little-v's case assigning potential is withdrawn in the passive.

According to these analyses, the recipient's case can be licensed at a derivational stage prior to merger of little-v, rendering the recipient inert as a potential goal for little-v. I refer to this situation as 'local case assignment to the recipient', meaning the recipient's case assigner is more local to the recipient than little-v is. In the symmetrical languages, local assignment of case to the recipient is optional. When the recipient gets local case, little-v assigns case to the theme. When little-v's case assigning potential is withdrawn in the passive, the theme raises to subject. When the recipient does not get local case, it gets case from little-v instead (however the theme gets case). Then, when little-v's case assigning potential is withdrawn in the passive, the recipient raises to subject.

Crucially, in the symmetrical passive languages, the two objects display the same case morphology in the active. There is no morphological contrast between the two objects on par with the dative-accusative contrast in German. Rather, both objects share the morphological encoding of direct objects. Suppose there were a language like Norwegian displaying the optionality in (54) but which looked morphologically like German, that is, in which the case that Appl assigns belonged to a different morphological paradigm than the case that little-*v* assigns. Call the former ‘dative’ and the latter ‘accusative’. In this case, assignment of case to the recipient by Appl would yield the DAT-ACC pattern with theme promotion to subject in the passive, just as seen in German. But assignment of case to the theme by Appl, as represented by the dotted lines in (54), would yield a pattern in which the theme bears dative case and the recipient accusative. This pattern is not attested in any language to my knowledge. It follows that the putative optionality of upward vs. downward assignment of dative case by Appl is not attested in any language that actually differentially marks recipients and themes.

More generally, the notion that local case assignment to the recipient may be optionally withdrawn in languages like Norwegian is in conflict with Siewierska’s generalization. Siewierska observes that when themes are patient-encoded and recipients are morphologically distinguishable from themes, the differential encoding of recipients never alternates with patient encoding. But the characterization of Norwegian in (54) lets the local case of the recipient (assigned by Appl) alternate with patient encoding (accusative assignment by little-*v*). If this analysis is correct, it means that Siewierska’s generalization only holds in languages that do not morphologically differentiate the local case of the recipient and the case little-*v* assigns, i.e., that do not differentiate dative and accusative.

In terms of the analysis sketched in (54), the restriction required to enforce Siewierska’s generalization would take the form of the principle that Appl may assign case downward only if the case paradigm it assigns is identical to the case paradigm that little-*v* assigns. It is unclear what syntactic mechanism might be responsible for this principle, particularly in a framework where inflectional morphology is post-syntactic so that syntactic procedures operate independently of surface morphological facts (Halle and Marantz 1993).

In contrast to the case assignment approach described above, McGinnis (1998, 2001a, b) and Anagnostopoulou (2003, 2005) argue that the facts of Norwegian and similar languages result from mechanisms available to these languages that obviate minimality. In principle, they claim, the mechanism that passes a theme up to subject position in the passive cannot reach past a recipient argument, when one is present. The recipient is a minimal candidate for raising to subject itself, and so intervenes in the Agree relation targeting the theme. What characterizes the languages that allow promotion of the theme to subject over the recipient in the passive is that in these languages, a predicate-internal escape hatch is available to the theme that is equidistant with the recipient to the probe. As a result, the order recipient > theme fails to ‘lock in’ in the domain with the escape hatch (AppIP here), so that the theme may be targeted by higher licensing operations.

Assuming that passivization affects the accusative-assigning potential of little-*v*, as these analyses do, the locality approach faces a case assignment dilemma that the

case-based approach described above—problematic as it is for other reasons—does not have. Suppose in active double object constructions in Norwegian, little-*v* licenses accusative case on the recipient and Appl licenses accusative on the theme (as the dashed lines represent in (54)). Then withdrawal of the case licensing potential of little-*v* in the passive leads to promotion of the recipient to subject while the theme is still case licensed by Appl. But now consider the derivation of the theme passive. If the theme moves to an escape hatch above the recipient, for example an ‘outer’ specifier of ApplP, where it is closer to little-*v*, we would still expect its trace in [spec,VP] to receive accusative case from Appl, case-licensing the chain so formed. Then, withdrawal of little-*v*'s ability to license case should still only affect the recipient. If, on the other hand, the theme is for some reason no longer case-licensed by Appl when it moves to the escape hatch, but rather by little-*v*, to which it is now closer, we explain why it raises to subject in the passive but are left without a source of case for the recipient, which is not in the c-command domain of the other case licenser, Appl, nor accessible to little-*v* because of the now intervening theme.

However, in the analysis I have presented in Sect. 5, both instances of accusative case in active double object constructions in double accusative languages like Norwegian have the same source: default case-valuation. The ‘disappearance’ of accusative case on either a recipient or a theme in passive constructions need not be accounted for in terms of case withdrawal on this account. Rather, it is an epiphenomenon of the fact that in consequence of demotion of the agent into a PP, T probes beyond the agent and assigns nominative to one of the internal arguments prior to the point at which default case is assigned. The other argument receives accusative from the default mechanism as usual (if it has not already received dative by virtue of being in [spec,ApplP] in a dative language like German).

A locality approach with default accusative case explains why only double accusative languages like Norwegian can appear to violate Siewierska's generalization, in the sense that either the recipient or the theme may raise to subject in the passive, giving the impression that the local case assigned to the recipient when the theme raises to subject alternates with accusative when the recipient itself raises. The reason is that there is in fact no local case assigner for the recipient in these languages. If there were, it might assign a case in a different paradigm than the source for accusative occurring on the theme. In the default case analysis, the two object cases have the same source—the default case mechanism—and therefore reflect the same morphological paradigm. As soon as a language has a distinct case assigner for recipients (Appl) than for themes (default case), then only the theme will promote to subject and the two cases may be morphologically distinct, as in German.<sup>3</sup> This analysis therefore

<sup>3</sup> Nothing in this analysis *requires* the two cases to be morphologically distinct. In fact, standard Dutch does not morphologically distinguish the case of the recipient from that of the theme, yet exhibits the same passivization pattern as German, where only the theme may be promoted to subject in the passive, as the pattern in (i) illustrates (Broekhuis et al.'s 2015 example (115), p. 444). These data lend themselves to an analysis that gives local dative case to the recipient and default accusative to the theme, though the two are not morphologically distinguished.

- (i) a. Jan gaf de kinderen een cadeautje.  
*Jan gave the children a present*  
 ‘Jan gave the children a present.’

explains why a language like German cannot violate Siewierska's generalization but a language like Norwegian can appear to do so. In the analysis presented here, the recipient never bears a local case in Norwegian. Rather, like the theme, it only ever bears default accusative.

Haddican and Holmberg (2019) argue that Anagnostopoulou's (2003, 2005) locality analysis is based on a false empirical premise. Her analysis is motivated in the first instance by a correlation between the possibility of theme passivization over the recipient and the possibility of theme>recipient word order in actives, primarily across Swedish and Danish. The grammaticality of the theme passive in Swedish in (55a) (Anagnostopoulou's 2003 example (182b), p. 124), she claims, is fed by the possibility of theme>recipient word order in the object shift example in (55b) (her example (187b), p. 127). In Danish, on the other hand, the ungrammaticality of the theme>recipient order in object shift contexts like (56b) (her example (186f), p. 127) blocks the derivation of the theme passive in (56a) (her example (186b), p. 126).<sup>4</sup>

(55) Swedish

- a. Medaljen förärades Johan.  
*medal.DEF was.presented Johan*  
 Lit. 'The medal was presented Johan.'
- b. Han gav den honom inte.  
*he gave it him not*  
 Lit. 'He did not give it him.'

(56) Danish

- a. \*Bogen blev vist Sofie.  
*book.DEF was shown Sophie*  
 (Lit. 'The book was shown Sophie.')
- b. \*Peter viste den hende jo.  
*Peter showed it her indeed*  
 (Lit. 'Peter showed it her.')

Haddican and Holmberg (2019) point out that although this correlation holds roughly across languages, it does not hold across individual speakers. In a large grammaticality magnitude estimation experiment on Norwegian, they found that the acceptability of inversion of the recipient and theme seen in (57) (Haddican and Holmberg's (8b), p. 95) varied across speakers, and, crucially, individual speakers' acceptance of (57) did not predict their acceptance of theme passivization illustrated

---

Footnote 3 continued

- b. Er werd de kinderen een cadeautje gegeven.  
*there was the children a present given*  
 'A present was given to the children.'
- c. \*De kinderen werden een cadeautje gegeven.  
*the children were a present given.'*  
 ('The children were given a present.')

<sup>4</sup> Anagnostopoulou cites (55a) from Holmberg and Platzack (1995, ex. 7.75, p. 218), (55b) as a personal communication from Anders Holmberg parallel to similar data in Hellan and Platzack (1999, p. 131), (56a) from Vikner (1989, ex. 40b, p. 150), and (56b) from Vikner (1989, ex. 45f, p. 151).

in (53b). This should be impossible if the derivation of (53b) prerequisites the object inversion seen in (57).

- (57) %Elsa ga den ham ikke.  
*Elsa gave it him not*  
 Lit. 'Elsa did not give it him.'

Further, object shift across negation is only available to unstressed pronouns in Mainland Scandinavian (Hellan and Platzack 1999, p. 127), while the theme passive seen in (53b) is available to full DPs. So even in Swedish, if the passive structure in (55a) were derived from the object shift structure illustrated in (55b), the impossibility of full DP themes in (55b) would be expected to prohibit full DP themes in (55a), contrary to fact. Further, in Swedish, where inversion of two objects seen in (55b) is more productive than in Norwegian, theme passivization is *less* productive: it is only available in the context of compound verbs containing an incorporated preposition such as *för* 'for' in (55a). Simplex verbs like *ge* 'give' only very marginally allow theme passivization, as (58) demonstrates (Holmberg and Platzack 1995, ex. 7.80a, p. 220).

- (58) ??Den här boken har inte getts Johan.  
*the here book.DEF has not been.given Johan*  
 (Lit. 'This book has not been given Johan.')

I take these observations to refute the idea that the predicate-internal inversion of the theme and recipient is a necessary precursor to theme passivization. They show instead that two different mechanisms are involved in the two constructions, and neither is a precursor to the other. But they do not militate against an analysis that relates the possibility of inversion in the passive to the (in)visibility of the recipient to the mechanism that raises the theme (either to a predicate-edge position in object shift contexts or the subject position in passives). Suppose raising of an object to subject in the passive in Norwegian is not restricted by minimality. That is, the nominative probe T may look down into its domain and establish an Agree relation with any DP with an unvalued case feature. In languages like Norwegian, where both objects are assigned case by default at spell-out, both objects are potential goals for T, as is of course the external argument in active constructions. As far as object case goes, standard English is like Norwegian. The difference between standard English and Norwegian, then, is that Agree is subject to minimality in English but not Norwegian, so that only the higher of the two objects can be promoted to subject in the passive, namely the recipient.<sup>5</sup> Object shift in Norwegian is a separate operation that only targets pronouns. Whether

<sup>5</sup> A reviewer asks what might determine the choice of recipient or theme raising to subject in passives in a language in which Agree is not restricted by minimality, and whether the factors at work are similar to the factors at work in the double object alternation. Corpus research by Bresnan et al. (2007), Rappaport Hovav and Levin (2008) and Bresnan and Nikitina (2010) demonstrates that the double object alternation in English is generally put to use to align the linear order of arguments with a hierarchy of features in which pronouns supercede definites/animates, which supercede indefinite/inanimates, which supercede non-referential material like idiom chunks. Object shift in Mainland Scandinavian is clearly subject to a grammaticalized high definiteness requirement, which, as I mentioned above, raising to subject is not. I am not familiar with similar work on recipient vs. theme raising in symmetric passive languages. Standard examples like (53b) suggest that animacy is not a crucial factor either. The analysis I have proposed

it, too, is unrestricted by minimality varies from speaker to speaker, according to the experimental results of Haddican and Holmberg (2019).

It is crucial to this analysis of symmetric passivization that the external argument is not accessible to the default accusative case assignment mechanism. If the agent could receive default case in a language in which Agree is not sensitive to minimality, then T could probe past an agent in active constructions and assign nominative to an internal argument, triggering raising of the internal argument to subject, while the agent (and the other internal argument) receives default accusative case, a pattern that is to my knowledge not attested. Raising of an internal argument to subject is contingent on demotion of the agent, i.e., passivization. What blocks this pattern in the analysis I have proposed here is that default case is not available to an agent. The stipulation that default case is only available within the predicate makes it impossible for the agent to receive case if T assigns nominative to something other than the agent, unless the agent itself is demoted into a prepositional phrase, where it receives case from the preposition. Passivization is a way of giving case to an external argument when T targets an internal argument. This analysis therefore crucially requires that default accusative is restricted to a syntactic domain that excludes the external argument in [spec,vP], definable as  $v'$ , or the *c*-command domain of *v*, or as vP if specifiers are not dominated by the category they are specifiers of, as Kayne (1994) claims. Note that this way of blocking raising of internal arguments in active contexts is not easily reconcilable with the theory of dependent case marking as described by Marantz (1991), Baker (2015) and others. There, a DP receives accusative case if it is *c*-commanded by a clausemate DP, as objects always are but never subjects. But if an internal argument could raise past an external argument (in a language in which Agree is not restricted by minimality), that external argument would receive accusative case by the dependent case rule, being now *c*-commanded by the raised internal argument. The idea that accusative case is assigned by default in the domain to which the external argument is external correctly predicts that the external argument can never receive default accusative, and therefore must occur in a PP whenever an internal argument raises to subject, even in symmetric double object languages.

Although the analysis presented here does not make inversion under object shift a prerequisite for theme passivization, it is still more similar to the locality-based analysis of symmetric object languages than to the case-based approach. The idea is that languages vary parametrically in whether Agree relations are sensitive to minimality, that is, whether they can ‘see past’ a potential goal. I have endeavoured to show that a case-based solution essentially makes Norwegian an exception to Siewierska’s generalization, which in turn raises the question of why such putative exceptions only arise in double object constructions with symmetrical case marking, as in the mainland Scandinavian languages, and not in differentially marked constructions, as in German. According to the analysis proposed here, there are no exceptions to Siewierska’s generalization.

---

Footnote 5 continued

here makes the choice of recipient or theme raising in passive truly optional, but we might still expect a preference for minimality-respecting transformations as well as discourse pragmatic factors to play a role in facilitating one or the other in a given speech context, as they do in the double object alternation.

## 7 Remarks on additional case frames

The analysis constructed above of symmetric and asymmetric double object languages is an analysis of change-of-possession ditransitives and how they differ from locative constructions. But other multiple object constructions are attested in German that display a wider variety of case frames than what I have discussed above. In addition to the DAT-ACC frame seen in change-of-possession constructions, which alternates with a periphrastic frame with *an* 'at', some verbs occur in a case frame in which the first object receives accusative and the second dative (59a), others with a frame in which the first object receives accusative and the second genitive (59b), and others with two accusative objects (59c) (examples cited from Alexiadou et al. 2014—their example (10), p. 8—who cite them from Beermann 2001; see also Lenerz 1977; Höhle 1982; Fanselow 1991, 2000; Haider 1993; Sternefeld 2006).

- (59) a. Er hat den Patienten der Operation unterzogen.  
*he.NOM has the.ACC patient the.DAT operation subjected*  
 'He subjected the patient to the operation.'
- b. Man hat den Mann des Verbrechen-s  
*one(.NOM) has the.ACC man the.GEN crime-GEN*  
 beschuldigt.  
*accused*  
 'One has accused the man of the crime.'
- c. Sie hat die Schüler das Lied gelehrt.  
*she.NOM has the.ACC students the.ACC song taught*  
 'She taught the students the song.'

I assume these patterns represent syntactic articulations of the predicate distinct from the ApplP-VP complex that derives change-of-possession constructions. Assuming that each internal argument is generated as the specifier of a distinct head within the predicate—call the higher head  $V_1$  and the lower  $V_2$ —and that the verb is introduced in  $V_2$  and raises successively to  $V_1$  and little-*v*, then [unterzieh-] $_{V_2}$  'subject' assigns dative case to the specifier of  $VP_2$  and [beschuldig-] $_{V_2}$  'accuse' assigns genitive. Meinunger (2006) claims that 'low' datives as seen in (59a) are actually PPs whose preposition is incorporated into the verb, where it appears as a verb prefix (*unter-* 'under' in *unterzogen*, which is literally 'pulled under'). Nothing I have claimed here is incompatible with this possibility.<sup>6</sup> The accusative on the theme in (59c) could be assigned by the  $V_2$  as well or by the default accusative assigning mechanism.

Although we are dealing here with multiple object verbs, which warrants an articulated predicate structure accommodating multiple objects in distinct syntactic

<sup>6</sup> It is worth pointing out in this connection that the dative DP in (59a) translates into English as a *to*-phrase, and therefore the idea that dative DPs in German correspond to *to*-phrases in English is correct in some contexts. But the correspondence only holds for dative objects of verbs like *unterziehen* 'subject s.o. to s.t.', *zuschreiben* 'attribute s.t. to s.o.' and others, all of which show basic ACC-DAT word order, unlike the basic DAT-ACC word order of change-of-possession constructions. These constructions therefore do not undermine Siewierska's point that dative recipient DPs in German are not on par with *to*-phrase recipients in English. The data reviewed here indicate instead that German *an*-phrase recipients are on par with English *to*-phrase recipients, though *to* may correspond to dative in other contexts.



projections, the dative DP in (59a) does not alternate with an *an*-phrase, as (60) demonstrates. This suggests that the alternation is sensitive not to dative case but to the context underlying change of possession, namely ApplP. I surmise that ApplP is not present in constructions like (59a) that do not support a periphrastic alternant.

- (60) \*Er hat den Patienten an die Operation unterzogen.  
*he.NOM has the.ACC patient at the.ACC operation subjected*  
 ('He subjected the patient to the operation.')

The absence of ApplP is presumably also at the root of the absence of an alternation with *an* in monotransitive constructions that take a dative object, like (61), which I assume has, like (59a) above, a dative-assigning VP<sub>2</sub> but no VP<sub>1</sub>.<sup>7</sup>

- (61) a. Maria hat ihrem Nachbarn geholfen.  
*Maria(.NOM) has her.DAT neighbor helped.*  
 'Maria helped her neighbor.'  
 b. \*Maria hat an ihren Nachbarn geholfen.  
*Maria(.NOM) has at her.ACC neighbor helped.*  
 ('Maria helped her neighbor.')

Another frame in which dative case occurs that is of interest for the present purposes is that of verbs that alternate with a form prefixed with *be-*. For example, *jemandem raten/someone.DAT advise* 'to advise someone' alternates with *jemanden beraten/someone.ACC advise*, with roughly the same meaning. Similarly, *jemandem drohen/someone.DAT threaten* 'to threaten someone' alternates with *jemanden bedrohen/someone.ACC threaten*, and *jemandem lauschen/someone.DAT listen* 'to

<sup>7</sup> Two additional case frames that warrant further investigation are the frame associated with dative experiencers and that associated with dative 'external possessors'. The phrase *meinem Bruder* 'my.DAT brother' in (ia) (den Besten's 1985 example (25b), p. 32) is interpreted as an experiencer. Such datives are argued to be base generated above the (nominative) theme in den Besten (1985), Haider (1993, 2006), Wurmbrand (2006), and elsewhere. As such, they bear a resemblance to the present analysis of recipients in double object constructions. Yet, these datives do not alternate with *an*-phrases, a fact that is presumably related to the fact that they bear a different theta role, even if the syntactic structure they are generated in is similar to that of recipients. Oblique experiencers are perhaps specifiers of a 'flavor' of Appl distinct from that which licenses possessors, one that does not have a periphrastic alternant. Similarly, the phrase *der Mami* 'the.DAT mom' in (ib) (Lee-Schoenfeld's 2006 example (2a), p. 104) is interpreted as an affected 'external possessor' (of the car in question) yet, like an experiencer, cannot be expressed in an *an*-phrase. Some analyses of this phenomenon generate the external possessor as an 'internal possessor', i.e., as a specifier of the corresponding possessee (*das Auto* 'the.ACC car' in (ib)) (Szabolcsi 1984; Landau 1999; Lee-Schoenfeld 2006). This view explains why they do not alternate with *an*-phrases: only specifiers of ApplP do so. Other analyses make them specifiers of their own light verb projection (Pylkkänen 2002, 2008; Cuervo 2003a; Brandt 2006, to mention a few). McFadden (2006) assimilates all dative arguments to an underlying ApplP. If this is the right approach, projections hosting affected possessors must also represent a different flavor of Appl than what is found in change-of-possession constructions.

- (i) a. dass meinem Bruder deine Geschichten nicht gefielen  
*that my.DAT brother your.NOM stories not pleased*  
 'that my brother didn't like your stories'  
 b. Mein Bruder hat der Mami das Auto zu Schrott gefahren.  
*my.NOM brother has the.DAT mom the.ACC car to scrap driven*  
 'My brother totaled mom's car (totaled the car on mom).'



listen intently to someone' with *jemanden belauschen/someone.ACC listen* 'to eavesdrop on someone', among other examples. This alternation affects a recipient in at least the case of *jemandem etwas schenken/someone.DAT something.ACC gift* 'gift someone something', which alternates with *jemanden beschenken/someone.ACC gift* 'gift someone (with something)'. Sometimes the DP that becomes accusative in the *be*-form occurs in a prepositional phrase in the base form, as in *etwas auf den Lastwagen laden/something.ACC on the.ACC truck load* and *den Lastwagen beladen/the.ACC truck load* corresponding to 'load something on the truck' and 'load the truck (with something)' respectively, or *in dem Haus wohnen/in the.DAT house live* and *das Haus bewohnen/the.ACC house occupy* corresponding to 'live in the house' and 'occupy the house'. For other verbs there is no case alternation, as in *jemanden grüßen/someone.ACC greet* or *begrüßen* 'greet someone' and *jemanden schützen/someone.ACC protect* or *beschützen* 'protect someone'. While the variety of frames the bare verbs display and occasional deviations in meaning between the base and *be*-derivatives compromise a transformational analysis of the relation between the two verb forms, the *be*-forms at least all have in common that they do not license dative case. That accusative occurs instead is a natural consequence of the idea that accusative is a default object case on the present analysis. Are these examples, then, exceptions to Siewierska's generalization?

Siewierska discusses languages in which the double object alternation is marked by a verbal affix, i.e., applicative constructions, citing the Indonesian example in (62) from Chung (1976, her examples (45a) and (46a), p. 54). The verbal suffix *-kan* occurs in the double object frame in (62b), complementary to the preposition *kepada* 'to' that marks the recipient in the periphrastic frame in (62a).

- (62) a. Mereka mem-bawa daging itu kepada dia.  
*they TRANS-bring meat the to him*  
 'They brought the meat to him.'
- b. Mereka mem-bawa-kan dia daging itu.  
*they TRANS-bring-BEN him meat the*  
 'They brought him the meat.'

Siewierska endorses Baker's (1988) claim that (62b) is derived from (62a) by incorporation of the preposition, so that the indirect object relation is marked in both examples, albeit differently. This situation bears an abstract resemblance to the *be*-verbs whose direct object occurs in a PP in the bare counterpart, such as *auf den Lastwagen laden* 'load onto the truck' and *den Lastwagen beladen* 'load the truck', which appears amenable to an analysis in which the preposition *auf* 'onto' disappears from its adnominal position and reappears in the form of the verb prefix *be-*, leaving its erstwhile DP complement to receive default accusative. In the cases where dative alternates with accusative in the *be*-counterpart, on some level dative itself manifests itself as the *be*- prefix instead.

Siewierska's generalization is unaffected by these observations as long as it is understood to prohibit an alternation between dative and accusative *in the same context*. It is common, as in English and German, for a double object frame to alternate with a periphrastic frame in the same context, i.e., without any corresponding change in the

morphology of the verb or other components of the sentence. But it is not observed that dative ever alternates with accusative in the same context. To the extent we find alternations between dative and accusative, such as the *be*-alternation in German, it is accompanied by a change in the context, in this case *be*-marking.

It is tempting to analogize the *be*-alternation to the applicative alternation in (62) by claiming that dative arguments of verbs like *raten* ‘advise’ (and for that matter accusative arguments of verbs like *grüßen* ‘greet’) are introduced by a covert preposition, and this preposition alternatively manifests itself as the verb prefix *be-*. However, allowing a null preposition to assign dative case would undermine Siewierska’s generalization unless restricted in crucial ways. We have observed that both accusative (in English) and dative (in German) DPs alternate with PPs (*to-* and *an-*phrases respectively). If a PP could be headed by a covert P that assigns dative, then in principle an alternation could arise between an accusative DP and a PP with a covert P assigning dative, which on the face of it would look like an alternation between accusative and dative. But Siewierska observes that this does not happen. This points to the conclusion that there are no covert prepositions.

The notion that dative is assigned by a covert preposition has been proposed to accommodate cases of what appears to be dative raising to nominative in passives, a situation which is puzzling from the perspective of Siewierska’s generalization. Larson (1988) cites the following paradigm in Japanese from Shimizu (1975) (Larson’s example (45), p. 365). The dative recipient in (63a) may appear as a nominative subject in the passive (63b) but not as an accusative object in the active, as (63c).

- (63) a. Taroo-ga Hanako-ni kotzutsumi-o okuru.  
*Taro-NOM Hanako-DAT package-ACC send*  
 ‘Taro sends Hanako a package.’
- b. Hanako-ga Taroo-ni kotzutsumi-o okurar-eru.  
*Hanako-NOM Taro-by package-ACC send-PASS*  
 ‘Hanako is sent a package by Taro.’
- c. \*Taroo-ga Hanako-o kotzutsumi-o okuru.  
*Taro-NOM Hanako-ACC package-ACC send*  
 (‘Taro sends Hanako a package.’)

That dative in (63a) does not alternate with accusative, as (63c) shows, is in line with Siewierska’s generalization. But in order for the dative argument in (63a) to raise to nominative in (63b), it would have to shed its dative case in the course of the derivation. This is just what is impossible in German, as (6c) shows, for which reason dative is said to be an ‘inherent’ case in that language. Alexiadou et al. (2014) claim that dative case in the active (63a) is assigned by a covert preposition, which is incorporated into the verb in the passive, triggering raising of the DP to nominative. They further argue that German itself has raising of dative to nominative in passive constructions with the auxiliary *bekommen* ‘get’ as illustrated in (64b) (their example (22a), p. 12). They take the auxiliary *bekommen* ‘get’ to result from incorporation of a null preposition introducing the dative indirect object into the ordinary passive auxiliary *werden* ‘be’, resulting in promotion of the indirect object to subject.

- (64) a. Wir schenkten dem Mann ein Buch.  
*we gifted the.DAT man a.ACC book*  
 'We gave the man a book.'
- b. Der Mann bekam ein Buch geschenkt.  
*the.NOM man got a.ACC book gifted*  
 'The man was given a book.'

On this view, Japanese and German display raising of dative to nominative in passive contexts, but never of dative to accusative in active contexts. These considerations raise the question of why an alternation between dative case and a structural case is restricted to passive contexts. One answer that has a precedent in the literature on the alternation in (64) is that the cases of passivization in question do not actually involve raising of the dative argument to nominative, but rather base generation of the nominative recipient as an external argument. A sketch of an analysis along these lines is shown in (65). Abstraction over a covert dative pronoun in [spec,AppIP] shown there must be restricted to passive contexts and to only certain dative arguments, including recipients. The fact that the abstraction takes place at the level of vP, where passivization is morphologically cashed out, and that different dative arguments have different syntactic loci, as discussed above, makes this network of restrictions plausible. In German, only the auxiliary *bekommen* selects a predicate derived in this fashion; in Japanese this vP requires no special auxiliary.

- (65) Der Mann bekam [<sub>VP</sub>PASS  $\lambda x$  [<sub>AppIP</sub>  $\text{him}_x$  [<sub>VP</sub> ein Buch  
*the.NOM man got him.DAT a.ACC book*  
 geschenkt]]]  
*gifted*  
 'The man was given a book.'

Evidence has been offered both for (Haider 1984, 1985; Vogel and Steinbach 1998) and against (Wegener 1985; Reis 1985; Fanselow 1987; Webelhuth and Ackerman 1994; Zifonun et al. 1997) non-derivational analyses of the relation between dative double object constructions and *bekommen* passives. The remarks above contribute to this debate by offering the observation that an analysis along the lines of (65) reconciles the apparent alternation between dative and nominative with the fact that no alternation between dative and accusative is observed: the dative and nominative variants are not actually transformationally related. This approach eschews null prepositions, which is advantageous since these potentially undermine Siewierska's generalization. Whether this approach will stand up to further scrutiny, and if not, how a true dative-nominative alternation can be reconciled with Siewierska's generalization, remains to be seen.

## 8 Conclusion

This article has investigated the source of a cross-linguistic gap noticed by Anna Siewierska, that no language displays an alternation between dative and accusative encoding of recipients in double object constructions. I have claimed that this gap implicates a cross-linguistic universal that dative case cannot be withdrawn in a given

syntactic context. Yet, both dative and accusative recipients alternate with periphrastic encoding marked by a preposition, in which case the recipient DP receives the case assigned by the preposition. This, I have argued, results from the possibility of generating the recipient as a PP in the recipient theta position, on par with certain analyses of passive constructions. German has a reasonably productive double object alternation, where dative recipients alternate with periphrastic encoding just like English accusative recipients do, demonstrating that the alternation between the double object frame and the periphrastic frame is not sensitive to the case of the recipient. Lastly, I have claimed that symmetrical passivization, in which a theme may be raised to subject over a recipient, does not indicate that the recipient bears (unmarked) dative case in that configuration, since then the possibility of raising the recipient to subject (which is available in symmetrical languages) would represent an alternation between dative encoding of the recipient and patient encoding—the encoding that is withdrawn or not assigned in the passive. That is just the situation that Siewierska shows is not attested. I claim instead that what characterizes the symmetrical languages is a lack of strict minimality in the licensing of nominative case. The system proposed here ensures that no language displays an alternation between dative and accusative recipients.

**Acknowledgements** I am grateful to András Bárány, Friedrich Neubarth and Antonia Rothmayr for discussions of the German data reported here, and to Elizabeth Bogal-Allbritten, Lars Hellan and Peter Svenonius for discussions on Norwegian, as well as to audiences at the 22nd Germanic Linguistics Annual Conference in Reykjavík and the 7th Cambridge Comparative Syntax Conference. I am especially grateful to three anonymous reviewers and to Susi Wurmbbrand for their invaluable guidance, and to the Austrian Science Fund (FWF) for its financial support (Grant #P27384). All errors are my own.

**Funding** Open access funding provided by Austrian Science Fund (FWF).

## Declarations

**Conflict of interest** The author declares that he has no conflict of interest.

**Open Access** This article is licensed under a Creative Commons Attribution 4.0 International License, which permits use, sharing, adaptation, distribution and reproduction in any medium or format, as long as you give appropriate credit to the original author(s) and the source, provide a link to the Creative Commons licence, and indicate if changes were made. The images or other third party material in this article are included in the article's Creative Commons licence, unless indicated otherwise in a credit line to the material. If material is not included in the article's Creative Commons licence and your intended use is not permitted by statutory regulation or exceeds the permitted use, you will need to obtain permission directly from the copyright holder. To view a copy of this licence, visit <http://creativecommons.org/licenses/by/4.0/>.

## References

- Alexiadou, Artemis, Berit Gehrke, and Florian Schäfer. 2014. The argument structure of adjectival participles revisited. *Lingua* 149: 118–138.
- Anagnostopoulou, Elena. 2003. *The syntax of ditransitives*. Berlin: Mouton de Gruyter.
- Anagnostopoulou, Elena. 2005. Holmberg's generalization and cyclic linearization: Remarks on Fox and Pesetsky. *Theoretical Linguistics* 31: 95–110.
- Andrews, Avery. 1982. The representation of Case in Modern Icelandic. In *The mental representation of grammatical relations*, ed. Joan Bresnan, 427–503. Cambridge, Mass.: MIT Press.

- Andrews, Avery. 1990. Case structures and control in Modern Icelandic. In *Syntax and semantics vol. 24: Modern Icelandic syntax*, eds. Joan Maling and Annie Zaenen, 187–234. San Diego: Academic Press.
- Angelopoulos, Nikos, Chris Collins, and Arhonto Terzi. 2020. Greek and English passives and the role of by-phrases. *Glossa* 5 (1): 90–129.
- Baker, Mark. 1988. *Incorporation*. Chicago: University of Chicago Press.
- Baker, Mark. 2015. *Case: Its principles and its parameters*. Cambridge: Cambridge University Press.
- Beavers, John. 2011. An aspectual analysis of ditransitive verbs of caused possession in English. *Journal of Semantics* 28: 1–54.
- Beck, Sigrid, and Kyle Johnson. 2004. Double objects again. *Linguistic Inquiry* 35 (1): 97–123.
- Beermann, Dorothee. 2001. Verb semantics and double object constructions, Available at <https://www.meertens.knaw.nl/books/progressinggrammar/beermann.pdf> edn. In *Progress in grammar*, eds. Marc van Oostendorp and Elena Anagnostopoulou. Amsterdam: Meertens Institute Electronic Publications in Linguistics (MIEPiL).
- Doggett, Bissell, and Teal. 2004. *All things being unequal: Locality in movement*. MIT: PhD diss.
- Bowers, John. 1981. *The theory of grammatical relations*. Ithaca, NY: Cornell University Press.
- Bowers, John. 1993. The syntax of predication. *Linguistic Inquiry* 24 (4): 591–656.
- Brandt, Patrick. 2006. Receiving and perceiving datives (cipients) – a view from German. In *Datives and other cases: Between argument structure and event structure*, ed. Daniel Hole, André Meinunger, and Werner Abraham, 103–139. Amsterdam: John Benjamins Publishing Company.
- Bresnan, Joan, and Tatiana Nikitina. 2010. The gradience of the dative alternation. In *Reality exploration and discovery: Pattern interaction in language and life*, ed. Linda Uyeche, and Lian-Hee Wee, 161–184. Stanford: CSLI Publications.
- Bresnan, Joan, Anna Cueni, Tatiana Nikitina, and Harald Baayen. 2007. Predicting the dative alternation. In *Cognitive foundations of interpretation*, ed. Gerlof Boume, Irene Krämer, and Joost Zwarts, 69–94. Amsterdam: Royal Netherlands Academy of Science.
- Broekhuis, Hans. 2007. Object shift and subject shift. *Journal of Comparative Germanic Linguistics* 10 (2): 109–141.
- Broekhuis, Hans, Norbert Corver, and Riet Vos. 2015. *Syntax of Dutch: Verbs and verb phrases*, vol. 1. Amsterdam: Amsterdam University Press.
- Bruening, Benjamin. 2001. QR obeys superiority: Frozen scope and ACD. *Linguistic Inquiry* 32 (2): 233–273. <https://doi.org/10.1162/00243890152001762>.
- Bruening, Benjamin. 2013. By phrases in passives and nominals. *Syntax* 16: 1–41.
- Büring, Daniel. 2001. Let's phrase it! Focus, word order, and prosodic phrasing in German double object constructions. In *Competition in syntax*, ed. Gereon Müller, and Wolfgang Sternefeld, 69–105. Berlin: Mouton de Gruyter.
- Chomsky, Noam. 1995. *The minimalist program*. Cambridge, Mass.: MIT Press.
- Chomsky, Noam. 2000. Minimalist inquiries: The framework. In *Step by step: Essays on minimalist syntax in honor of Howard Lasnik*, eds. Roger Martin, David Michaels, and Juan Uriagereka, 89–155. Cambridge, Mass.: MIT Press.
- Chomsky, Noam. 2001. Derivation by phase. In *Ken Hale: A life in linguistics*, ed. Michael Kenstowicz, 1–52. Cambridge, Mass.: MIT Press.
- Chomsky, Noam. 2004. Beyond explanatory adequacy. In *Structures and beyond: The cartography of syntactic structures*, ed. Adriana Belletti, Vol. 3, 104–131. Oxford: Oxford University Press.
- Chung, Sandra. 1976. An object-creating rule in Bahasa Indonesia. *Linguistic Inquiry* 7 (1): 41–87.
- Citko, Barbara. 2011. *Symmetry in syntax: merge, move, and labels*. Cambridge: Cambridge University Press.
- Collins, Chris. 1997. *Local economy*. Cambridge, Mass.: MIT Press.
- Collins, Chris. 2018. Is the passive by-phrase an adjunct? Unpublished manuscript available at <https://ling.auf.net/lingbuzz/004032>.
- Collins, Chris, and Höskuldur Thráinsson. 1996. VP internal structure and object shift in Icelandic. *Linguistic Inquiry* 27: 391–444.
- Cuervo, Maria. 2003a. *Datives at large*. MIT, Cambridge, Mass: PhD diss.
- Cuervo, Maria. 2003b. Structural asymmetries but same word order. In *Asymmetry in grammar*, ed. Anne Marie DiSciullo, 117–144. Amsterdam: John Benjamins Publishing Company.
- Czepluch, Hartmut. 1988. Kasusmorphologie und Kasusrelationen: Überlegungen zur Kasustheorie am Beispiel des Deutschen. *Linguistische Berichte* 116: 275–310.

- den Besten, Hans. 1985. The ergative hypothesis and free word order in Dutch and German. In *Studies in German grammar*, ed. Jindrich Toman, 23–64. Dordrecht, Holland: Foris Publications.
- den Besten, Hans. 1989. *Studies in West Germanic syntax*. Amsterdam: Rodopi.
- Diesing, Molly. 1992. Bare plural subjects and the derivation of logical representations. *Linguistic Inquiry* 23 (3): 353–380.
- Fanselow, Gisbert. 1987. *Konfigurationsalität*. Tübingen: Gunter Narr Verlag.
- Fanselow, Gisbert. 1991. *Minimale Syntax*. Groningen: Groninger Arbeiten zur Germanistischen Linguistik.
- Fanselow, Gisbert. 2000. Optimal exceptions. In *The lexicon in focus*, ed. Barbara Stiebels, and Dieter Wunderlich, 173–210. Berlin: Akademie Verlag.
- Frey, Werner. 2001. About the whereabouts of indefinites. *Theoretical Linguistics* 27: 137–161.
- Goodall, Grant. 1997. Theta-alignment and the *by*-phrase. In *Chicago Linguistic Society* 33, 129–139. Chicago: Chicago Linguistic Society.
- Green, Georgia. 1974. *Semantics and syntactic regularity*. Bloomington, Indiana: Indiana University Press.
- Haddican, Bill, and Anders Holmberg. 2014. Four kinds of object asymmetry. In *Complex visibles out there: Proceedings of the Olomouc Linguistics Colloquium 2014: Language use and linguistic structure*, eds. Ludmila Veselovská and Markéta Janebová, 145–161. Olomouc: Palacký University.
- Haddican, Bill, and Anders Holmberg. 2019. Object symmetry effects in Germanic: Evidence for the role of case. *Natural Language and Linguistic Theory* 37: 91–122.
- Haddican, William. 2010. Theme-goal ditransitives and theme passivisation in British English. *Lingua* 120: 2424–2443.
- Haddican, William, and Anders Holmberg. 2012. Object movement symmetries in British English dialects: Experimental evidence for a mixed case/locality approach. *Journal of Comparative Germanic Linguistics* 15: 189–212.
- Haider, Hubert. 1984. Mona Lisa lächelt stumm: Über das sogenannte deutsche ‘Rezipientenpassiv’. *Linguistische Berichte* 89: 32–42.
- Haider, Hubert. 1985. The case of German. In *Studies in German grammar*, ed. Jindrich Toman, 65–102. Dordrecht, The Netherlands: Foris Publications.
- Haider, Hubert. 1993. *Deutsche Syntax generativ*. Tübingen: Narr Verlag.
- Haider, Hubert. 2006. Mittelfeld phenomena. In *The Blackwell companion to syntax*, ed. Martin Everaert, and Henk van Riemsdijk, 204–274. Oxford: Blackwell.
- Halle, Morris, and Alec Marantz. 1993. Distributed morphology and the pieces of inflection. In *The view from building 20*, eds. Kenneth Hale and Samuel Jay Keyser, 111–176. Cambridge, Mass.: MIT Press.
- Hallman, Peter. 2015. Syntactic neutralization in the double object construction. *Linguistic Inquiry* 46: 389–424.
- Harley, Heidi. 1995. *Subjects, events and licensing*. MIT, Cambridge, Mass: PhD diss.
- Harley, Heidi. 1997. If you *Have*, you can Give. In *Proceedings of WCCFL XV*, eds. Brian Agbayani and Sze-Wing Tang, 193–207. Somerville, Massachusetts: Cascadilla Press.
- Harley, Heidi. 2002. Possession and the double object construction. In *Yearbook of linguistic variation*, eds. Pierre Pica and Johan Rooryck, 31–70. Amsterdam: John Benjamins Publishing Company. <https://doi.org/10.1075/livy.2.04har>.
- Harley, Heidi. 2007. The bipartite structure of verbs cross-linguistically, or, why Mary can’t exhibit John her paintings.
- Harley, Heidi. 2012. Lexical decomposition in modern syntactic theory. In *The Oxford handbook of compositionality*, ed. Worlfram Hinzen, Edouard Machery, and Markus Werning, 328–350. Oxford: Oxford University Press.
- Harley, Heidi, and Hyun Kyoung Jung. 2015. In support of the P<sub>HAVE</sub> analysis of the double object construction. *Linguistic Inquiry* 46: 703–730.
- Hasegawa, Nobuko. 1988. Verb raising and the affectedness condition. In *WCCFL 7: The proceedings of the seventh West Coast Conference on Formal Linguistics*, ed. Hagit Borer, 99–113. Stanford, California: CSLI Publications.
- Heck, Fabian. 2001. Quantifier scope in German and cyclic optimization. In *Competition in syntax*, ed. Gereon Müller, and Wolfgang Sternefeld, 175–209. Berlin: Mouton de Gruyter.
- Hellan, Lars, and Christer Platzack. 1999. Pronouns in Scandinavian languages: An overview. In *Clitics in the languages of Europe*, ed. Henk van Riemsdijk, 123–142. Berlin: Mouton de Gruyter.
- Höhle, Tilman. 1982. Explikationen für normale Betonung und normale Wortstellung. In *Satzglieder im Deutschen*, ed. Werner Abraham, 75–153. Tübingen: Narr Verlag.



- Holmberg, Anders, and Thorbjörg Hrósarsdóttir. 2004. Agreement and movement in Icelandic raising constructions. *Lingua* 114 (5): 651–673.
- Holmberg, Anders, and Christer Platzack. 1995. *The role of inflection in Scandinavian syntax*. New York: Oxford University Press.
- Holmberg, Anders, Michelle Sheehan, and Jenneke van derWal. 2019. Movement from the double object construction is not fully symmetrical. *Linguistic Inquiry* 50 (4): 677–722.
- Kayne, Richard. 1994. *The antisymmetry of syntax*. Cambridge, Mass.: MIT Press.
- Kratzer, Angelika. 1996. Severing the external argument from its verb. In *Phrase structure and the lexicon*, ed. Johan Rooryck, and Laurie Zaring, 109–137. Dordrecht: Kluwer Academic Publishers.
- Landau, Idan. 1999. Possessor raising and the structure of VP. *Lingua* 107: 1–37.
- Larson, Richard. 1988. On the double object construction. *Linguistic Inquiry* 19 (3): 335–391.
- Lee-Schoenfeld, Vera. 2006. German possessor datives: Raised and affected. *Journal of Comparative Germanic Linguistics* 9 (2): 101–142.
- Lenerz, Jürgen. 1977. *Zur Abfolge nominaler Satzglieder im Deutschen*. Tübingen: Narr Verlag.
- Levin, Beth. 2008. Dative verbs: A crosslinguistic perspective. *Linguisticae Investigationes* 31: 285–312.
- Mahajan, Anoop. 1994. ACTIVE passives. In *WCCFL 13: The proceedings of the Thirteenth West Coast Conference on Formal Linguistics*, eds. Paul Aranovich, William Byrne, Susanne Preuss, and Martha Senturia, 286–301. Stanford, California: CSLI Publications.
- Marantz, Alec. 1991. Case and licensing. In *Eastern States Conference on Linguistics*, ed. Germán Westphal, Benjamin Ao, and Hee-Rahk Chae, 234–253. Cornell Linguistics Club: Cornell University, Ithaca, NY.
- Marantz, Alec. 1993. Implications of asymmetries in double object constructions. In *Theoretical aspects of Bantu grammar 1*, ed. Sam A. Mchombo, 113–151. Stanford University: CSLI Publications.
- McFadden, Thomas. 2006. German inherent datives and argument structure. In *Datives and other cases: Between argument structure and event structure*, ed. Daniel Hole, André Meinunger, and Werner Abraham, 49–77. Amsterdam: John Benjamins Publishing Company.
- McGinnis, Martha. 1998. *Locality in A-movement*. Massachusetts Institute of Technology, Cambridge, Mass: PhD diss.
- McGinnis, Martha. 2001a. Phases and the syntax of applicatives. In *Proceedings of the North East Linguistic Society 31*, eds. Minjoo Kim and Uri Strauss, 333–349. Amherst, Mass.: GLSA Publications.
- McGinnis, Martha. 2001b. Variation in the phase structure of applicatives. In *Linguistic variation yearbook*, ed. Pierre Pica, Vol. 1, 105–146. Amsterdam: John Benjamins Publishing Company.
- McIntyre, Andrew. 2006. The interpretation of German datives and English have. In *Datives and other cases: Between argument structure and event structure*, ed. Daniel Hole, André Meinunger, and Werner Abraham, 185–212. Amsterdam: John Benjamins Publishing Company.
- Meinunger, André. 2006. Remarks on the projection of dative arguments in German. In *Datives and other cases: Between argument structure and event structure*, ed. Daniel Hole, André Meinunger, and Werner Abraham, 79–101. Amsterdam: John Benjamins Publishing Company.
- Oehrle, Richard. 1976. *The grammatical status of the English dative alternation*. MIT, Cambridge, Mass: PhD diss.
- Pafel, Jürgen. 2005. *Quantifier scope in German*. Amsterdam: John Benjamins Publishing Company.
- Perlmutter, David, and Paul Postal. 1984. The 1-advancement exclusiveness law. In *Studies in relational grammar 2*, ed. David Perlmutter, and Carol Rosen, 81–125. Chicago: University of Chicago Press.
- Pylkkänen, Liina. 2002. *Introducing arguments*. MIT, Cambridge, Mass: PhD diss.
- Pylkkänen, Liina. 2008. *Introducing arguments*. Cambridge, Mass.: MIT Press. <https://doi.org/10.7551/mitpress/9780262162548.001.0001>.
- Hovav, Rappaport, and Malka, and Beth Levin. 2008. The English dative alternation: The case for verb sensitivity. *Journal of Linguistics* 44: 129–167.
- Reis, Marga. 1985. Mona Lisa kriegt zu viel. *Linguistische Berichte* 96: 140–155.
- Roberts, Ian. 1987. *The representation of implicit and dethematized subjects*. Dordrecht, Holland: Foris Publications.
- Rooth, Mats. 1992. A theory of focus interpretation. *Natural Language Semantics* 1 (1): 117–121.
- Rooth, Mats. 1996. Focus. In *The handbook of contemporary semantic theory*, ed. Shalom Lappin, 271–297. Oxford: Blackwell Publishers.
- Rooth, Mats E. 1985. *Association with focus*. PhD diss: University of Massachusetts, Amherst.
- Schütze, Carson. 1997. *Infl in child and adult language: Agreement, case and licensing*. MIT, Cambridge, Mass: PhD diss.

- Shimizu, M. 1975. Relational Grammar and promotion rules in Japanese. In *Proceedings of the eleventh regional meeting of the Chicago Linguistic Society*, eds. Robert Grossman, L. James San, and Timothy Vance, 529–535. Chicago: University of Chicago.
- Siewierska, Anna. 1998. Languages with and without objects: The Functional Grammar approach. *Languages in Contrast* 1: 173–190.
- Sternefeld, Wolfgang. 2006. *Syntax*, vol. II. Tübingen: Stauffenburg Verlag.
- Szabolcsi, Anna. 1984. The possessor that ran away from home. *The Linguistic Review* 2: 89–102.
- Thráinsson, Höskuldur. 1979. *On complementation in Icelandic*. New York: Garland Publishing.
- Ura, Hiroyuki. 1996. *Multiple feature-checking: A theory of grammatical function splitting*. MIT, Cambridge, Mass: PhD diss.
- Vikner, Sten. 1989. Object shift and double objects in Danish. *Working Papers in Scandinavian Syntax* 44: 141–155.
- Vogel, Ralf, and Markus Steinbach. 1998. The dative: An oblique case. *Linguistische Berichte* 173: 65–90.
- Webelhuth, Gert, and Farrell Ackerman. 1994. German idioms: An empirical approach. *Studies in the Linguistic Sciences* 24: 455–472.
- Wegener, Heide. 1985. *Der Dativ im heutigen Deutsch*. Tübingen: Narr Verlag.
- Wegener, Heide. 1991. Der Dativ—ein struktureller Kasus? In *Strukturen und Merkmale syntaktischer Kategorien*, ed. Gisbert Fanselow, and Sascha Felix, 70–103. Tübingen: Gunter Narr Verlag.
- Woolford, Ellen. 2006. Lexical case, inherent case, and argument structure. *Linguistic Inquiry* 37 (1): 111–130.
- Wurmbrand, Susi. 2006. Licensing case. *Journal of Germanic Linguistics* 18 (3): 175–236.
- Zaenen, Annie, Joan Maling, and Hoskuldur Thráinsson. 1985. Case and grammatical functions: The Icelandic passive. *Natural Language and Linguistic Theory* 3: 441–483.
- Zifonun, Gisela, Ludger Hoffmann, and Bruno Strecker. 1997. *Grammatik der deutschen Sprache*. Berlin: Mouton de Gruyter.
- Zwarts, Joost. 1997. Vectors as relative positions: A compositional semantics of modified PPs. *Journal of Semantics* 14: 57–86.

**Publisher's Note** Springer Nature remains neutral with regard to jurisdictional claims in published maps and institutional affiliations.