

Turkish partitive constructions and (non-)exhaustivity

Turkish exhibits explicit partitive constructions as *hayvan-lar-dan beş fil* (animal-PL-ABL five elephant ‘five elephants from / of the animals’) with two overt nouns, one for the superset (animal) and one for the subset (elephant). These explicit partitive constructions show optional accusative case marking on the subset denoting noun in direct object position, i.e. Differential Object Marking (DOM). In an earlier paper (von Heusinger, Kornfilt & Kizilkaya 2019), we argue that the results of a grammaticality judgment task described in that paper can be interpreted as showing that accusative case marking of explicit partitives encodes specificity. However, the results are also compatible with an interpretation of the accusative-marked partitives as definite expressions, encoding definiteness, i.e. exhaustivity. In the present paper we present a follow-up acceptability judgment task that shows that these partitives can easily be interpreted as indefinite, i.e. as non-exhaustive expressions. These original results also support the more general assumption of von Heusinger & Kornfilt (2005) that accusative case marking in Turkish encodes specificity rather than definiteness.

Notes: This work developed from a collaboration with Semra Kizilkaya and Elyesa Seidel, whom we would like to thank for their valuable input, and Elyesa Seidel and Maximilian Hörl for supporting us with the statistical analyses. We also would like to thank the audiences of the *Workshop Definiteness, possessivity, and exhaustivity: Formalizing synchronic and diachronic connections* at the 50th Annual Meeting of the Societas Linguistica Europaea (SLE 2017), 10 – 13 September 2017, University of Zurich, and of the *PARTE Workshop*, University of Venice; November 13, 2017, for their comments. Further, we would like to thank the editors, Giuliana Giusti and Petra Sleeman, for their constructive criticism and the wonderful work they have done for this edited volume, and an anonymous reviewer for very helpful and detailed comments and suggestions. We feel a significant debt of gratitude to Elisabeth Stark, who took a lot of time to comment on an earlier version of the paper. She made many very valuable comments and suggested a more coherent structure that allows us to present the main insight in a more accessible way. All remaining errors are ours. The research of the (alphabetically) first author has been funded by the Deutsche Forschungsgemeinschaft (DFG, German Research Foundation) – Project-ID 281511265 – SFB “Prominence in Language” in the project B04 “Interaction of nominal and verbal features for Differential Object Marking” at the University of Cologne, Department of German Language and Literature I, Linguistics. Kornfilt’s participation in this research has been supported by a Humboldt fellowship for international collaboration, as well as by Syracuse University.

1 Introduction

Turkish has different types of partitive constructions. In this paper we focus on what we call *explicit partitive constructions*, i.e. partitives that show lexical nouns for the superset as well as the subset. In (1) the partitive *meyve-ler-den üç elma* ('three apples from / of the fruits') consists of the DP *meyve-ler-den* expressing the superset and the DP *üç elma* expressing the subset. The two DPs stand in the relation of part-whole on the level of referents, without lexical identity between the two nouns; therefore, this construction qualifies as a proper partitive construction. The whole construction can take any argument position in the sentence. If it takes the direct object position, it can be differentially object-marked by the accusative suffix $-(y)I$,¹ as in (2) vs. (1).

- (1) Meyve-ler-den üç elma ye-di-m.
 fruit-PL-ABL three apple eat-PST-1.SG
 'I ate three apples of the fruits.'²
- (2) Meyve-ler-den üç elma-yı ye-di-m.
 fruit-PL-ABL three apple-ACC eat-PST-1.SG
 'I ate three apples of the fruits.'

Following work on Differential Object Marking in Turkish (Johanson 1977, Erguvanlı 1984, Dede 1986, Enç 1991, Kornfilt 1997, von Heusinger & Kornfilt 2005), we assumed in earlier work that accusative-case marked explicit partitives in object position, e.g. (2), denote a specific referent, while unmarked explicit partitives, e.g. (1), denote a nonspecific referent (von Heusinger, Kornfilt & Kizilkaya 2019). In an acceptability judgment task, we tested the acceptance of accusative case marked and unmarked explicit partitives in specificity vs. non-specificity inducing contexts. In the scopal context (3), we found a statistically significant interaction: Accusative case marked partitives were more acceptable in the scopally

¹ We use citation forms that conform to relevant traditions in Turkological as well as generative literature: Capital letters for vowels whose ultimate shape depends on vowel harmony, and for consonants whose shape depends on (de)voicing rules; parentheses around segments which are deleted after relevant segments. Thus, here, /s/ in $-(s)I(n)$ and /y/ in $-(y)I$ are deleted after a consonant; /n/ in $-(s)I(n)$ is deleted in word-final position. The vowel /I/ undergoes both backness and rounding harmony.

² We use the uncommon plural form for "fruit", to signal the reading that there are different kinds of fruit in this example (and in other relevant examples elsewhere in the paper), with apples being one of them. Note that the Turkish noun *meyve* has the plural suffix *-ler*.

specific, i.e. wide scope, interpretation (i) than in the scopally non-specific, i.e. narrow scope, interpretation (ii). For unmarked partitives we found the reverse pattern. The effect was strongest for inanimate nouns (see von Heusinger, Kornfilt & Kizilkaya 2019).

(3) Scopal context

Bütün müdür-ler okutman-lar-dan bir asistan(-ı)
 All director-PL instructor-PL-ABL an assistant(-ACC)
 kutla-dı.
 congratulate-PST

‘All directors congratulated an assistant from amongst the instructors.’

i) scopally specific: All of them congratulated İlhan.

ii) scopally non-specific: Füsün congratulated İlhan, Ömer congratulated Emre, Cahit congratulated Demir.

We interpreted the results as confirming the general claim that accusative case marking of indefinite direct objects encodes specificity and lack of the case marker encodes non-specificity. However, this interpretation contradicts the observation that direct objects without overt indefinite markers are interpreted as definite when the accusative case is overtly marked and as indefinite or incorporated if there is no case marker (see Section 2.2). With respect to the reported experiment, we were not able to exclude the option that accusative case marked partitives are definite, i.e. exhaustive, rather than indefinite specific (and thus non-exhaustive). This option was also suggested to us by two reviewers of a pre-publication version of von Heusinger & Kornfilt (2017). They claimed that the exhaustive reading (ii) is the only available or at least the strongly preferred reading of examples such as (4).³

³ Reviewer 1 notes: “However, what is also significant is that in (10) [= (4)], in which the head noun bears the ACC marker, there is a very strong interpretation of the ‘exhaustive’ reading of the head. One of the readings, if not the most salient one, of (10) [= (4)], is one in which there were three apples in the set of fruits to start out with and that the speaker ate them all.” Reviewer 2 makes a similar claim: “The translation “I ate three (specific) apples of the (set of) fruits” for (10) [= (4)], is not felicitous either; the sentence signifies ‘I ate the three apples from among the fruit’, with the implication, without additional context, – both in English and in Turkish – that there were exactly three apples and that the speaker ate all of them. Just as the accusative definite article in German *Ich habe den Kuchen gegessen* [‘I ate the cake’] as against *Ich habe vom Kuchen gegessen* [‘I ate of the cake’] implies that the whole cake – not just a part of it – was eaten, the presence of the Turkish accusative suffix in (10) [= (4)], normally implies the eating of the complete set of apples; this is not implied (though not excluded either) when uttering (9) [= (4) without accusative case marker].”

- (4) Meyve-ler-den üç elma-yı ye-di-m.
 fruit-PL-ABL three apple-ACC eat-PST-1.SG
 (i) 'I ate three apples of the fruits.' (and there might be more apples)
 (ii) 'I ate the three apples of the set of fruits.' (and there are no more apples)

Thus, (4) would only express that the speaker ate all the apples contained in the set of fruits (4) expresses that the speaker ate *all three apples*. The exhaustive and thus definite reading in (4) would support the more general claim that Differential Object Marking contributes to the definiteness of the direct object (Öztürk 2005).

In countering the views just expressed, we argue in this paper that the accusative case marking in partitive constructions as (4) does not express exhaustivity, but specificity, see Hypothesis 1 (H1). Alternatively, and following reviewer 2 in footnote 3, one could make the weaker claim that there is not a semantic exhaustivity effect, but a pragmatic one, namely, an *exhaustivity implicature*. However, we do not think that the weaker claim is correct, either. Therefore, we formulated also Hypothesis 2.

- H1 Accusative case-marked partitives do not have a semantic exhaustivity effect
 H2 Accusative case-marked partitives do not trigger an exhaustivity *implicature*.

To be clear: We do not claim that the accusative-marked partitive construction in (4) is incompatible with an exhaustive reading, i.e. we do not claim that it expresses a non-exhaustivity constraint. What we are claiming is that Differential Object Marking is neutral with respect to exhaustivity and thus is also neutral with respect to encoding definiteness. We rather want to uphold our claim (von Heusinger & Kornfilt 2005, 2017 and von Heusinger, Kornfilt & Kizilkaya 2019) that accusative case marking of direct objects encodes specificity, see discussion in Section 2.2.

Our paper is structured as follows: After this introduction, in Section 2, we provide an overview of partitive constructions in Turkish and argue that explicit partitives, as in (4), qualify as proper partitive constructions. We further give a short overview on the condition of differential accusative marking (DOM) in Turkish and discuss the interaction of partitivity and accusative case marking. In Section 3 we present the design and contents of an acceptability task and the results of the questionnaire as well as a discussion of the results. Section 4 summarizes our findings, and we discuss their implication for a more general theory of partitives and differential accusative marking in Turkish.

2 Partitive constructions, DOM and specificity in Turkish

Turkish is a nominative-accusative language with case suffixes. It shows Differential Case Marking, i.e. overt structural case marking vs. the lack of an overt structural case suffix, for the direct object with respect to its accusative marking as well as for the subject in nominalized argument embedded sentences with respect to its genitive marking (see Kornfilt 2008, 2020 for Differential Subject Marking). Differential Object Marking (DOM) follows information structural properties, the Referentiality Scale and the Animacy Scale, see Section 2.2 for the particular conditions. Since Enç (1991), DOM in Turkish has been taken in the literature to be closely related to partitivity and specificity. In von Heusinger & Kornfilt (2005), we have argued that partitive constructions in direct object positions are not necessarily morphologically accusative case marked and that partitivity and specificity are independent linguistic categories. We claim that accusative case marking of indefinite noun phrases and of explicit partitive noun phrases in direct object position encode specificity, and in this paper, we defend this view against the assumption that accusative case marked explicit partitives encode definiteness. In Section 2.1, we provide a brief overview of different partitive constructions in Turkish and argue that explicit partitive constructions are proper partitives with two overt nouns. In Section 2.2, we then summarize the main conditions for DOM in Turkish, and in Section 2.3, we discuss the original examples of Enç (1991) that suggest that all partitives in direct object position are accusative case marked. We argue that this is an overgeneralization, since some partitives show differential accusative marking. This raises the issue of whether differential accusative marking depends on definiteness or specificity.

2.1 Partitive constructions in Turkish

Partitivity, i.e. a part-whole relation, can be expressed by different linguistic means, such as partitive pronouns or partitive case markers (see Giusti & Sleeman 2021, this volume, Ihsane & Stark 2020, and Ihsane 2020 for an overview). In the following, we focus on partitives or partitive constructions as they were introduced and discussed by Jackendoff (1977), Hoeksema (1996), de Hoop (2003), Ionin et al. (2006), Koptjevskaja-Tamm (2006) and Falco & Zamparelli (2019). Giusti & Sleeman (2021, this volume, ex. (40)) call complex structures, as in (5), “proper partitive constructions” or “true partitives”. These structures are characterized by a part-whole relation between an indefinite subset, expressed by the

quantifier *many*, and a definite superset, expressed by the noun phrase *the girls I know* in (5):

- (5) many of the girls I know

Falco & Zamparelli (2019: 1) provide a somewhat more general definition of a partitive construction: “The partitive construction is a noun phrase, like the subject of (1b) [= (6b)], which is used to refer to a subset or subpart of another referent, the *antecedent*, typically one which has been previously introduced in the discourse, as in (1a) [= (6a)].”

- (6) a [Twenty students]_i took the exam.
 b [Two of {them_i/ the students_i/ these students_i}]_j c_i got top grades.

In the following, we use *partitive construction* or *partitives* as terms for this kind of noun phrase consisting of an expression denoting a superset (*them, these students*) and an expression denoting a subset of it (*two students*). The subset expression typically consists of a quantifier or a numeral with an empty noun. Falco & Zamparelli (2019: 24) provide the following structure for the English example (7):

- (7) a two of the pens
 b [_{DP} two N_e [_{PP} of [_{DP} the [_{NP2} pens]]]]

Partitive constructions follow certain semantic restrictions (Hoeksema 1996, Chierchia 1997, Barker 1998, Zamparelli 1998, Falco & Zamparelli 2019): (i) the subset expression must be indefinite (with certain exceptions), (ii) the superset expression must be definite (or specific), (iii) the superset expression must be plural (if it is headed by a count noun), and (iv) the expressed relation is a part-of relation.

Turkish, like other Turkic languages, provides a broad variety of elements denoting the subset in explicit partitive constructions, as in (8)-(11) (von Heusinger & Kornfilt 2017 for a comprehensive overview).⁴ (8a-b) correspond most closely to the notion of “true”, “proper” or “canonical partitive” with a quantifier *bazılan* (‘some’) as a subset and a definite noun phrase *meyvelerden* (‘of the fruits’) in the ablative (8a) or *meyvelerin* (‘of the fruits’) in the genitive (8b). There is no difference

⁴ Göksel & Kerslake (2005: 476): “partitive construction: a composite noun phrase (made up of a modifier noun phrase followed by a head noun phrase) used to express part of a whole, or to select one or more items from a type or set; the modifier has either ablative or genitive case marking, and the head may or may not have a 3rd person possessive suffix.”

in meaning between the use of the ablative or the genitive in this construction (see Kornfilt 1997, Göksel & Kerslake 2005, von Heusinger & Kornfilt 2005).

- (8) a Meyve-ler-den bazı-lar-ın-ı ye-di-m.
 fruit-PL-ABL some-PL-3.SG-ACC eat-PST-1.SG
 ‘I ate some of the fruits.’
 b Meyve-ler-in bazı-lar-ın-ı ye-di-m.
 fruit-PL-GEN some-PL-3.SG-ACC eat-PST-1.SG
 ‘I ate some of the fruits.’

Note that Turkish does not have a definite article. The combination of an indefinite article or an indefinite pronoun with the superset results in ungrammaticality. Luraghi & Kittilä (2014: 55) observe that many instances of markers of partitive constructions derive from (case) markers of separation, as the ablative, or from case markers for possession, as the genitive. Most Turkic languages have both sources of their partitive construction: the genitive and the ablative.⁵ Instead of the quantifier *bazılar* (‘some’), one can also use a numeral, as in (9a-b). Note that in constructions with quantifiers and numerals the nominal agreement morpheme, otherwise encoding agreement between a possessee and a possessor and showing up in this context in its default value of 3.SG, is obligatory,⁶ which by itself triggers structural case marking, here accusative case (see von Heusinger & Kornfilt 2017 for discussion).

⁵ Yakut (Sakha) has a specialized partitive case; see Stachowski & Menz (1998) and Baker & Vinokurova (2018).

⁶ von Heusinger & Kornfilt (2017) attribute this to a morpho-syntactic constraint which requires that nominal phrases must have an overt nominal head. Where there is no such head, a default, 3.sg. nominal agreement marker is inserted into the head position, to provide such an overt head. The pronoun-like properties of the nominal agreement marker require the presence of overt structural case, given that pronouns are high in specificity hierarchies cross-linguistically; see, for example, the Definiteness Scale in Aissen (2003: 437). Please note that in this usage, there is no genuine agreement relationship between the subset expression with this default nominal agreement morphology and the ablative superset, given that, in contrast to the genitive, the ablative does not require (morphological and thus syntactic) agreement with a subset; this can be seen in examples where the subset does have an overt nominal head; e.g.:

- (i) Meyve-ler-den altı elma(*-sın-ı /*-ların-ı) ye-di-m.
 fruit-PL-ABL six apple(-3.SG-ACC/-3.PL-ACC) eat-PST-1.SG
 ‘I ate six apples of the fruits.’

See also the contrast between the ablative and genitive partitive constructions in (10) and (11) in the text.

- (9) a Meyve-ler-den alti-sin-1 ye-di-m.
 fruit-PL-ABL six-3.SG-ACC eat-PST-1.SG
 ‘I ate six of the fruits.’
 b Meyve-ler-in alti-sin-1 ye-di-m.
 fruit-PL-GEN six-3.SG-ACC eat-PST-1.SG
 ‘I ate six of the fruits.’

We also find constructions with classifier (-like) expressions such as *tane* ‘item’, which can exhibit the default nominal agreement marker and therefore the accusative case marker *-(y)I*, as in (10), when the partitive construction is a direct object. However, it can also stand without the default nominal agreement marker (and without an accusative marker) if the superset is expressed by ablative case, as in (11a),⁷ but not if the superset is expressed by a genitive, as in (11b), since the genitive always requires agreement on the subset expression.⁸

- (10) a Meyve-ler-den üç tane-sin-i ye-di-m.
 fruit-PL-ABL three item-3.SG-ACC eat-PST-1.SG
 ‘I ate three (specific entities) of the (set of) fruits.’
 b Meyve-ler-in üç tane-sin-i ye-di-m.
 fruit-PL-GEN three item-3.SG-ACC eat-PST-1.SG
 ‘I ate three (specific entities) of the (set of) fruits.’
- (11) a Meyve-ler-den üç tane ye-di-m.
 fruit-PL-ABL three item eat-PST-1.SG
 ‘I ate three (non-specific entities) of the (set of) fruits.’
 b *Meyve-ler-in üç tane ye-di-m.
 fruit-PL-GEN three item eat-PST-1.SG

Turkish also allows for the generalized partitive (or bare / naked partitive), where the ablative is in direct object position (Kornfilt 1996a). These constructions are not discussed in what follows.

⁷ von Heusinger & Kornfilt (2017) assume that this classifier-like element can undergo head movement into the nominal head position of the partitive expression, so as to satisfy the “overt nominal head constraint” referred to in the previous footnote, when that position is empty. This results in expressions such as (11a). When the constraint is satisfied by the insertion of a default 3.sg agreement marker, as in (10a), the obligatory accusative marker is exhibited, as mentioned in the previous footnote. See also Sağ (2019) for a discussion of optional classifiers in Turkish.

⁸ This is a general requirement of the genitive and is not limited to partitive constructions; it is found in possessive expressions as well as in nominalized embedded clauses (see Kornfilt 2003a and 2009, among others).

- (12) Meyve-ler-den ye-di-m.
 fruit-PL-ABL eat-PST-1.SG
 ‘I ate of the fruits.’ (= ‘I ate some of the fruits.’)

Most interestingly, Turkish also allows, as a direct object, an ablative partitive construction with two overt, lexically not identical full nouns, i.e. with a full noun in the subset expression such as *üç elma* (‘three apples’). In this construction, the subset may take accusative case, as in (13b), or not, as in (13a). This construction is not possible with a genitive superset, as in (14a-b).

- (13) a Meyve-ler-den üç elma ye-di-m.
 fruit-PL-ABL three apple eat-PST-1.SG
 ‘I ate three apples of the (set of) fruits.’
 b Meyve-ler-den üç elma-yı ye-di-m.
 fruit-PL-ABL three apple ACC eat-PST-1.SG
 ‘I ate three apples of the (set of) fruits.’
- (14) a *Meyve-ler-in üç elma ye-di-m.
 fruit-PL-GEN three apple eat-PST-1.SG
 b *Meyve-ler-in üç elma-yı ye-di-m.
 fruit-PL-GEN three apple ACC eat-PST-1.SG

The discussion of the Turkish partitive constructions shows that the subset expression either has to have a nominal head, as in (13), or the “default agreement marker”, as in (8)-(11) in the position of the nominal head, i.e. as the head of the subset expression (see von Heusinger & Kornfilt 2017). This situation seems to be different from Romance, Germanic or Slavic languages, where a nominal in the subset expression is not very frequent (see Seržant 2020: 9–10 for a corpus search for Russian) or is less acceptable (see Falco & Zamparelli 2019: 38 for discussion). Falco & Zamparelli (2019: 40ff) discuss a particular kind of partitives with two overt nouns (“double-noun partitives”)⁹ and report that the judgments of such examples are controversial. Cardinaletti & Giusti (2006) judge the Italian equivalents as ungrammatical, but Falco and Zamparelli report that judgments of the English example in (15a) in crowd-source data show that they are (partly) acceptable.

⁹ See Sauerland & Yatsushiro (2017) for a comprehensive discussion of double-noun partitives in Japanese.

- (15) a ^{ok}I only got two packages of the mail you sent me.
 b [?]I read two novels of the books you gave me.

They also observe that in these constructions, the NP of the subset nominal should be a lexical hyponym (or maybe meronym) of the superset (packages is a subset of mail; but not the other way around). It seems that this lexical relation of hyponym-hyperonym is crucial to this kind of construction (this was also pointed out to us by Elisabeth Stark, p.c.).

With respect to the Turkish partitive construction with two full nouns, Falco & Zamparelli 2019: 4; 48) suggest the possibility of analyzing these ablative partitives as “among”-partitives, rather than as exemplifying a genuine partitive construction. Elisabeth Stark (p.c.) has made the same suggestion. Giusti & Sleeman (2021, this volume, ex. (43)) and Giusti (2021, this volume) discuss “among-partitives” as “circumstantial partitives” and assume that the partitive preposition *of* is replaced by another preposition, such as *among* or *out of* that is not assigned by the partitive quantifier. In such constructions, a definite subset *these girls* is felicitous, as in (16a):

- (16) a. these girls out of the children who were at the party
 b. many girls out of the children who were at the party

We do not think that the Turkish partitive constructions with two full nouns are “among-partitives”. First, Turkish does have an “among”-construction which includes a P-like element, *arasından* ‘from between, from among’, which however is not used in our partitive constructions. Second, the ablative can also appear with generalized, bare or “naked” partitives, as in (12). Third, a prepositional phrase would not be felicitous in the direct object position of the verb ‘to eat’. Fourth, the superset expression in Turkish ablative partitives can consist not only of a count noun, as in the examples above, but also of a mass noun, as in (17). Clearly, this is not an “among”-construction and cannot be translated as such: ‘*Ali drank two glasses from among the wine.’

- (17) Ali şarap-tan iki bardak iç-ti-Ø.
 Ali wine-ABL two glass drink-PST-3.SG
 ‘Ali drank two glasses of the wine.’

Summarizing, we think that there is simply no grammatical constraint that prohibits the partitive construction with two full nouns described above in Turkish. Furthermore, the presentation of the different partitive constructions in Turkish suggests that such a double noun partitive is an explicit form for all partitives.

Partitives without such a head noun which is modified by a quantifier, numeral or an adjective are obligatorily marked by the default nominal 3.sg agreement suffix.

In the following, we will use “explicit partitive construction” or “explicit partitive” for this constructions, cf. (18). This stands in an appropriate descriptive and theoretical contrast to “implicit partitives” (also “covert partitives”, see Seržant 2021, § 2.3; Falco & Zamparelli 2019: 6), where the definite superset is only implicitly recoverable from the context, as in (19):

- (18) a. Geçen haftasonu hayvanat bahçesine yeni hayvan-lar_i ekle-n-di.
 last weekend to the zoo new animal-PL add-PASS-PST
 ‘Last week, new animals were added to the zoo.’
 b. [Hayvan-lar-dan_i beş fil(-i)]_{jci} besle-di-m.
 animal-PL-ABL five elephant(-ACC) feed-PST-1.SG
 ‘I fed five elephants of the animals.’
- (19) a. Geçen haftasonu hayvanat bahçesine yeni hayvan-lar_i ekle-n-di.
 last weekend to the zoo new animal-PL add-PASS-PST
 ‘Last week, new animals were added to the zoo.’
 b. [Beş fil(-i)]_{jci} besle-di-m.
 five elephant(-ACC) feed-PST-1.SG
 ‘I fed five elephants.’

In summary, as illustrated by the examples we have seen so far, the subset expression of partitive constructions is the head of such constructions, given the head-final syntax of Turkish. Partitive constructions are marked with case, depending on their syntactic function in a sentence. Of central interest for us is the fact that in direct object position, the accusative marking (DOM) is determined by the interaction of semantic and morphological constraints.

2.2 DOM, definiteness and specificity

Differential Object Marking (DOM) in Turkish is often associated in the literature with definiteness or with specificity (Johanson 1977, Erguvanlı 1984, Dede 1986, Enç 1991, Kornfilt 1997, von Heusinger & Kornfilt 2005). The definiteness view is supported by the contrast between a noun in the direct object position without a determiner or an indefinite marker, cf. (20a), and its case-marked counterpart in (20b). The bare noun (phrase) does not introduce a referential argument and is semantically interpreted as non-referential, i.e. a “pseudo-incorporated” noun

(phrase),¹⁰ which forms a complex predicate with the verb, informally speaking; cf. (20a). A noun in direct object position without an indefinite determiner, but with the accusative case suffix *-(y)I*, is unambiguously interpreted as a definite, cf. (20b). With demonstratives or possessives, direct objects always receive overt accusative case.

- (20) Referential options for the direct object in preverbal position
- | | | | | |
|----|-------|--------------------------|--------------------------|-------------------------|
| a. | (Ben) | elma | ye-di-m. | “(pseudo-)incorporated” |
| | | I | apple eat-PST-1.SG | |
| | | ‘I was apple-eating.’ | | |
| b. | (Ben) | elma-yı | ye-di-m. | definite |
| | | I | apple-ACC eat-PST-1.SG | |
| | | ‘I ate the apple.’ | | |
| c. | (Ben) | bir elma | ye-di-m. | indef. non-specific |
| | | I | an apple eat-PST-1.SG | |
| | | ‘I ate an apple.’ | | |
| d. | (Ben) | bir elma-yı | ye-di-m. | indef. specific |
| | | I | a apple-ACC eat-PST-1.SG | |
| | | ‘I ate a certain apple.’ | | |

For noun phrases with the indefinite article *bir*, the picture is somewhat different: Case marking of indefinite direct objects cannot signal definiteness, it rather signals specificity. An indefinite direct object without accusative case is interpreted as non-specific, cf. (20c), while an indefinite direct object with accusative case is interpreted as specific, cf. (20d) (see Sezer 1972, Erguvanlı 1984, Dede 1986, Enç 1991, Erguvanlı & Zimmer 1994, Kornfilt 1997, Aydemir 2004, von Heusinger & Kornfilt 2005, Öztürk 2005, Kornfilt & von Heusinger 2009, Özge 2011).

The contrast between (20a) and (20b) suggests that accusative case expresses definiteness. At first glance, this observation seems to be corroborated by the contrasts in (21), where we have noun phrases without an indefinite determiner. The noun phrase modified by a numeral in (21a) is interpreted as indefinite if there is no accusative case, but with accusative case, as in (21b), it is interpreted as definite. Also, the plural noun phrase without accusative case in (21c) is interpreted

¹⁰ We are using the term “pseudo-incorporated” as a neutral term (rather than as a technical term), because we don’t want to take a stand with respect to the debate in the literature about whether a bare noun that is (almost) obligatorily confined to the position adjacent to and preceding the verb has undergone head-incorporation (an option entertained as a possibility in Kornfilt 2003b) or whether such a noun is actually a *phrase* which is fixed in this position, as posited by Massam (2001) and Öztürk (2005). See Seidel (2019) for a comprehensive overview.

as indefinite, and its case-marked corresponding form as definite.¹¹ However, if we add the indefinite modifier *bazı* ('some') in (21e), case marking in addition to the plural signals specificity.

- (21) a. (Ben) üç elma ye-di-m
I three apple eat-PST-1.SG
'I ate three apples.'
- b. (Ben) üç elma-yı ye-di-m
I three apple-ACC eat-PST-1.SG
'I ate the three apples.'
- c. (Ben) elma-lar ye-di-m
I apple-PL eat-PST-1.SG
'I ate apples.'
- d. (Ben) elma-lar-ı ye-di-m
I apple-PL-ACC eat-PST-1.SG
'I ate the apples.'
- e. (Ben) bazı elma-lar-ı ye-di-m
I some apple-PL-ACC eat-PST-1.SG
'I ate some specific apples.'

We can observe a clear contrast between the accusative case-marked and the unmarked direct object. In the absence of indefinite markers, this contrast is often assumed to express definiteness. However, once we use indefinite markers like the indefinite article *bir* or indefinite quantifiers like *bazı* 'some', we see that this contrast cannot be related to definiteness, but rather to specificity, as shown by a possible continuation with "but the other apples I did not touch".

Summarizing this brief review of different views on the function of accusative case marking of direct objects, we can say that some data suggest that case marking signals definiteness and other data suggest that it signals specificity.

11 Example (20c) is not very natural without an appropriate context. However, if we have a richer context as in (i), the direct object with plural marking and without case marking is much more natural:

- (i) Bütün ömr-üm boyunca kırmızı elma-lar ye-di-m,
all life-1.SG during red apple-PL eat-PST-1.SG
fakat bugün ilk kere sarı elma-lar ye-di-m.
but today first time yellow apple-PL eat-PST-1.SG
'My whole life I ate red apples, but today I ate yellow apples for the first time.'

In what follows, we will take partitives as an additional test field. As reported in Section 1, some experts believe that accusative case marking of explicit partitives yields an exhaustive reading, i.e. that it signals definiteness. However, we dispute this claim, and we will present in Section 3 a questionnaire test whose results support our view that accusative case marking of explicit partitives is related to specificity. But before we turn to the experiments, we define the notion of specificity as we will use it.

As just mentioned in the previous section, DOM in Turkish is associated with specificity (see Erguvanlı 1984, Dede 1986, Enç 1991, Kornfilt 1997, Aydemir 2004, von Heusinger & Kornfilt 2005, among others). However, there are different kinds of specificity, and the literature is not always very clear about which kind is assumed to be determined by DOM. Here we follow Fodor & Sag (1982) and von Heusinger (2002, 2019) and assume that there are three main types of specificity: (i) referential specificity, (ii) scopal specificity, and (iii) epistemic specificity.

The term *referential specificity* is used for the contrast between different indefinite noun phrases in opaque contexts. For example, the intensional verb *aramak* ('to look for') creates an opaque context with respect to its direct object, as in (22).

- (22) a Zeynep parti için bir elbise ara-dı-Ø.
 Zeynep party for a dress look.for-PST-3.SG
 'Zeynep looked for a dress (or other) for the party.'
- b Zeynep parti için bir elbise-yi ara-dı-Ø.
 Zeynep party for a dress-ACC look.for-PST-3.SG
 'Zeynep looked for a (particular) dress for the party.'

Indefinites in these positions can either get a referentially specific reading, a reading according to which the object is determined and identified by the speaker, or they can get a referentially non-specific reading. There is a clear semantic contrast between these two readings: the referentially specific reading allows for an existential inference ('there is an object of that kind'), while the non-referential or non-specific reading does not allow for this. The referentially specific reading is consistent with the continuation (i) that there is such an object, while the referentially non-specific reading is consistent with the continuation (ii) that there is no such object. It is claimed that the accusative case marked indefinite *bir elbise-ye* ('a dress') in (22b) encodes the referentially specific reading, while the unmarked indefinite encodes the referentially non-specific reading.

The term *scopal specificity* describes the contrast between readings of indefinite noun phrases in the scope of (extensional) operators such as *all* and *every*. The indefinite noun phrase might have wide scope or narrow scope with respect

to that operator. An accusative case marked indefinite direct object typically exhibits wide scope, and the unmarked indefinite direct object exhibits narrow scope.

- (23) a Bütün oyuncu-lar bir kostüm dene-di.
 all player-PL a costume try-PST¹²
 ‘All actors tried a costume (or other).’
 b Bütün oyuncu-lar bir kostüm-ü dene-di.
 all player-PL a costume-ACC try-PST
 ‘All actors tried a (particular) costume.’

The third type of specificity is generally known under the term *epistemic specificity*, which refers to the contrasts found in contexts without any other operators and that are triggered by the mere option of a referential intention (Fodor & Sag 1982, Farkas 1994). In this context, the specific vs. non-specific contrast is not reflected in truth conditions and is said to be of arguably pragmatic nature (Heim 1991, but see von Heusinger 2002, Kamp & Bende-Farkas 2019 for a different view). The epistemic specific reading is consistent with a continuation that asserts the knowledge of the speaker about the identity of the referent, while the non-specific reading is consistent with a continuation that expresses the ignorance of the speaker. Following the literature, we assume that the case marked indefinite encodes epistemic specificity and the unmarked indefinite encodes epistemic non-specificity.

- (24) a Mustafa bir sandalye satın al-dı-Ø.
 Mustafa a chair buy-PST-3.SG
 ‘Mustafa bought a chair.’
 b Mustafa bir sandalye-yi satın al-dı-Ø.
 Mustafa a chair-ACC buy-PST-3.SG
 ‘Mustafa bought a chair.’

In an acceptability judgment task, von Heusinger & Bamyacı (2017a, 2017b) tested the felicity of i) a specific or ii) a non-specific continuation in a) a transparent context for testing epistemic specificity, b) a context with the universal quantifier

¹² In Turkish, in most stylistic levels, there is no plural third person agreement marking on the predicate of tensed clauses, if the overt third person plural subject is marked with the plural suffix. (When a third person plural subject is not overt, i.e. when it is *pro*, the full third person agreement marker on the predicate is obligatory.) In such instances, we do not gloss for agreement on the predicate. For some additional information, see Kornfilt (1991) and (1996b), among others.

for testing scopal specificity, and c) an intensional contexts for testing referential specificity. They found that overt DOM clearly expresses referential specificity, as sentences of type (22b) with the overt accusative marker clearly preferred a referentially specific interpretation. For scopal specificity, they found that overtly accusative-marked indefinites show wide scope and unmarked indefinites show narrow scope. But for neutral contexts, cf (24), they did not find an effect of accusative case marking on specificity. The results of an unpublished replication of this experiment supports the findings reported here, but also shows a significant effect of accusative-case marking for specificity in neutral contexts ($\beta=-0.89$, $SE=0.33$, $p=0.007$). We take this as support for the assumption that accusative case marking encodes all three types of specificity.

DOM in Turkish also depends on animacy. In an acceptability judgment study, Krause & von Heusinger (2019) tested the acceptability of indefinite direct objects with and without accusative case marking in simple transparent contexts. The indefinite direct objects in the experimental sentences denoted entities belonging to three animacy categories (human, animal, and inanimate). The results show a significant main effect of animacy and revealed that the acceptability of DOM depends on the animacy categories (see Krause & von Heusinger 2019: 181–183 for a Linear Mixed Effects (*lme*) analysis).

We have seen that there is an inconsistency with respect to the function of the accusative case when it is found on direct objects: It seems that direct objects without an indefinite determiner are definite with case and indefinite without case. This, however, cannot be the (sole) contribution of the case marker, as for direct objects with an indefinite determiner, case marking signals specificity, rather than definiteness. We have shown that case marking encodes referential and scopal specificity, and in one experiment also epistemic specificity. Finally, we have mentioned empirical evidence that animacy is also a determining factor for accusative case marking: human direct objects prefer case marking, while inanimates prefer to be expressed by noun phrases which are unmarked for case. We will also see this animacy effect in our questionnaires, discussed in Section 3.

2.3 Partitivity, specificity and case marking

Before we can discuss the (non-)exhaustivity of explicit partitive constructions, we have to discuss the relation between partitivity, specificity and case marking. Enç (1991) combines the observation that accusative case marking, i.e. Differential Object Marking (DOM), is closely related to specificity with the observation that partitives often (and in her view always) take accusative case when they are direct objects. She argues in her seminal paper (Enç 1991) that case signals

specificity, which, according to her view, is based on partitivity. She illustrates this claim by offering examples that we repeat as (25). (25a) introduces a set of children, out of which the case-marked direct object *iki kız* in (25b) selects two girls. In other words, the specific direct object *iki kız* is an implicit partitive, and the specificity is explained by the discourse givenness of the set out of which the indefinite direct object selects one element (i.e. here, a subset consisting of two entities). The unmarked direct object *iki kız* in (25c), however, is not linked to the set of children, i.e. it refers to a set of girls not included in the set of children introduced in (25a):

- (25) a. (Enç 1991: #16; Enç's translation, our glosses)
 Oda-m-a birkaç çocuk gir-di-Ø.
 room-1.SG-DAT several child enter-PST-3.SG
 'Several children entered my room.'
- b. (Enç 1991: #17; Enç's translation, our glosses)
 İki kız-ı tanı-yor-du-m.
 two girl-ACC know-PROG-PST-1.SG
 'I knew two girls.'
- c. (Enç 1991: #18; Enç's translation, our glosses)
 İki kız tanı-yor-du-m.
 two girl know-PROG-PST-1.SG
 'I knew two girls.'

Enç (1991: 10) argues, based on (26), that case marking is obligatory not only for implicit partitives, as in (25b), but for explicit partitives, as well. The numeral *ikisini* in (26a) exhibits an agreement marker *-(s)I(n)* as well as the accusative marker *-(y)I*, while the form *ikisi* without case (but with the same agreement marker) is ungrammatical, as seen in (26b).

- (26) a. (Enç 1991: #129a; Enç's translation, our glosses)
 Ali kadın-lar-dan iki-sin-i tanı-yor-du-Ø.
 Ali woman-PL-ABL two-3.SG-ACC know-PROG-PST-3.SG
 'Ali knew two of the women.'
- b. (Enç 1991: #129b; Enç's translation, our glosses)
 *Ali kadın-lar-dan iki-si tanı-yor-du-Ø.
 Ali woman-PL-ABL two-3.SG know-PROG-PST-3.SG

To summarize, Enç (1991) argues that accusative case expresses specificity and is based on partitivity. She argues that case marking of an indefinite direct object always signals a partitive reading, which has to be interpreted as specific, and

that likewise a specific object is partitive and therefore must be overtly marked as accusative. Öztürk (2005) even goes a step further in assuming that overt case is the bearer of referentiality.

While we agree with the judgments in (25) – (26), we disagree with both authors on their analyses and argue that neither of these views can be correct. While Enç's approach was an important step forward in understanding the syntax and semantics of structural case in Turkish, there are some important modifications to be made.

First, we have shown (Kornfilt & von Heusinger 2009, von Heusinger & Kornfilt 2017) that the correlation claimed by Enç to hold between case marking, partitivity, and specificity is not valid. This is already illustrated by the contrast between the accusative case marked explicit partitive in (2) and its counterpart without accusative marking in (1). Second, the subset denoted by partitive expressions can be interpreted as specific or non-specific; see examples in (27) from English, where the continuation (i) forces the specific reading and continuation (ii) the non-specific reading.¹³

- (27) a. One of the students has cheated in the exam.
 (i) I know who.
 (ii) I do not know who.
 b. Every student has to read one of the novels of Orhan Pamuk.
 (i) ...namely, *The White Castle*.
 (ii) ...each student can choose one.
 c. Ann wants to marry one of the two nice Norwegians.
 (i) ...namely, Lars.
 (ii) ...either one would do.

Third, the ungrammaticality of the subset expression *iki-si*, which is unmarked for accusative in (26b), follows from a more general constraint that requires the 3.sg agreement marker *-(s)I(n)* (whether used as a default nominal marker, as in our examples, or as a genuine agreement marker elsewhere) to be followed by morphological case (see von Heusinger & Kornfilt 2005, also mentioned earlier in this paper, in footnote 6); thus, the ill-formedness of such examples is independent from partitivity – again, contra Enç (1991).

To summarize, Enç's claim of a correlation between (structural) case marking, partitivity, and specificity has initiated very interesting research, but we see that

¹³ Note that these examples do not allow us to decide whether English indefinites are underspecified with respect to specificity or whether they are ambiguous. Note further that in (27c), both readings are presuppositional.

her claim is not fully correct, once we take more data into consideration. While partitive constructions show typical behavior for specific indefinites, partitivity and specificity are two independent semantic-pragmatic categories. They both contribute to a restriction of the set of referents associated with the descriptive content of the respective subset, but they differ in that partitive indefinites are existential indefinites, which allow for scope interactions and specificity contrasts, as in (27). Specific indefinites are referentially anchored and always show wide scope behavior or epistemic determined referents.

Furthermore, not all partitives are overtly case-marked when they are in positions of structural Case (such as the position of direct object of a transitive verb, or the position of canonical subject in a finite clause), and the obligatoriness of case marking for subsets that are expressed without a lexical noun as their head depends on the presence of a “default agreement marker” (e.g. the suffix *-(s)I(n)* in example (26a)), which occupies the position of the lexical head of the partitive construction.¹⁴

3 Experiment and results

3.1 Experimental design

To test the two hypotheses with respect to the exhaustivity of accusative case marked explicit partitives in direct object position repeated below, we designed

¹⁴ There is additional evidence that one should not link partitivity too closely to accusative marking, as other cases can host a partitive reading as well (such examples can be found in Nakipoğlu 2009: 1255, ex (4)).

- (i) a. Bahçe-de beş ağaç var-dı-Ø.
garden-LOC five tree exist-PST-3.SG
'There were five trees in the garden.'
- b. Çocuk-lar bir ağaç-a tırman-mış-tı-Ø.
child-PL one tree-DAT climb-PRFCT.PART-PST-3.SG
'Children had climbed on one (of the) tree(s).'
- c. Kuş-lar iki ağaç-ta yuva yap-mış-tı-Ø.
bird-PL two tree-LOC nest make-PRFCT.PART-PST-3.SG
'Birds had made their nests in two (of the) trees.' (The parentheses are ours.)

The locative 'two trees' in (ic) expresses a subset of the 'five trees' in (ia), as does the dative 'one tree' in (ib), thus expressing an implicit partitive reading.

an acceptability judgment task, so as to test the compatibility of the partitive construction with a non-exhaustive meaning.¹⁵

- H1 Accusative case-marked partitives do not have a semantic exhaustivity effect
 H2 Accusative case-marked partitives do not trigger an exhaustivity *implicature*

We constructed examples with a context where we had *n* items of the same kind in the superset, say five apples in a set of different kinds of fruit, or eight elephants in a set of animals, see (28b). Then we continued with the target sentence (28c) with less than *n* items, say three apples in the subset, or, as in this example, five elephants (out of eight). If accusative case-marked direct objects expressed an exhaustive reading, informants should judge examples such as (28c-i) as incoherent or at least as less coherent than examples where the subset expresses exactly *n* items. We also had the continuation sentence (28c-ii) without accusative case marking following the context sentences (28a-b). If case marking signaled exhaustivity, we would expect that the rating for accusative case-marked partitives should be worse than for unmarked partitives.

- (28) a. Geçen haftasonu hayvanat bahçesine yeni hayvan-lar
 last weekend to the zoo new animal-PL
 ekle-n-di-Ø.
 add-PASS-PST-3.SG
 ‘Last week, new animals were added to the zoo.’
- b. Aralarında bir çok zürafa ve sekiz fil var-dı-Ø.
 among them many giraffe and eight elephant exist-PST-3.SG
 ‘There were, among them, many giraffes and eight elephants.’
- c-i. Hayvan-lar-dan beş fil-i besle-di-m.
 animal-PL-ABL five elephant-ACC feed-PST-1.SG
 ‘I fed five (specific) elephants of the animals.’
- c-ii. Hayvan-lar-dan beş fil besle-di-m.
 animal-PL-ABL five elephant feed-PST-1.SG
 ‘I fed five (non-specific) elephants of the animals.’

Test items were small discourses consisting of three sentences, two context sentences and a target sentence. The first context sentence introduced a set with a general description, e.g. *araba* ‘cars’, as in (29a). The second sentence named

¹⁵ We would like to thank Semra Kizilkaya and Elyesa Seidel for their help in creating the test items and constructing the electronic questionnaire. Special thanks to Elyesa for providing us with the statistical analysis.

two sets from the general set, at least one set with an explicit number, as *Bunlardan üçü Passat(tı)* ('three of those were Passats(.PST)) in (29b). The target sentence then introduced the partitive construction using a numeral lower than the one in the second sentence, as in *iki Passatı* ('two Passats-ACC'), forcing a non-exhaustive reading. The alternative continuation (29c-ii) had the same phrase, but without accusative: *iki Passat* ('two Passats').

- (29) a. Ay sonunda galeri-de beş araba
 at the end of month showroom-LOC five car
 kal-mış-tı-Ø.
 stay-PRFCT.PART-PST-3.SG
 'At the end of the month, five cars were left in the showroom.'
- b. Bunlardan üç-ü Passat, gerisi Mercedes-ti-Ø.
 of those three-AGR Passat remainder Mercedes-PST-3.SG
 'Three of those were Passats, and the remainder were Mercedeses.'
- c-i. Araba-lar-dan iki Passat-ı sat-tı-m.
 car-PL-ABL two Passat-ACC sell-PST-1.SG
 'I sold two (specific) Passats.'
- c-ii. Araba-lar-dan iki Passat sat-tı-m.
 car-PL-ABL two Passat sell-PST-1.SG
 'I sold two (non-specific) Passats.'

We constructed 6 examples with nouns denoting sets of humans, as in (30), 6 items with non-human animate sets, as in (28), and 6 items with inanimate sets, as in (29):

- (30) a. Bu sabah ver-diğ-im İngilizce dersine bütün
 this morning give-NOM-1.SG to the English lesson all
 öğrenci-ler katıl-dı.
 student-PL participate-PST
 'All students participated in the English class that I gave this morning.'
- b. Bunlardan 14-ü kız, 16-sı erkek-ti-Ø.
 of those fourteen-AGR girl sixteen-AGR boy-PST-3.SG
 'Of those, 14 were girls, and 16 were boys.'
- c-i. Öğrenci-ler-den beş kız-ı seç-ti-m.
 student-PL-ABL five girl-ACC choose-PST-1.SG
 'I chose five (specific) girls of the students.'
- c-ii. Öğrenci-ler-den beş kız seç-ti-m.
 student-PL-ABL five girl choose-PST-1.SG
 'I chose five (non-specific) girls of the students.'

We tested the reaction of our participants to sentences like the one in (30c-i), i.e. with accusative case marking, vs. sentences like the one in (30c-ii), i.e. without accusative case marking, and constructed thus two lists via Latin Square, with 18 items, 9 with accusative and 9 without accusative case marking. We added to each of the two lists 18 differently structured items, among which we had 12 controls, i.e. 6 coherent discourses, as in (31), and 6 incoherent discourses, as in (32). We added 6 discourses with a violation of a conversational implicature, like in (33), to test how informants react to these violations. For each of these groups we had sentences with human, with animate and with inanimate arguments. All control items had a structure similar to that of the corresponding test items. They consisted of three sentences, the first setting the scene, the second introducing explicitly a set and the third referring back to the set in different ways. The coherent control items used an explicit anaphoric noun phrase to refer back to the antecedent establishing coreference, as in (31).

(31) Coherent control items

- a. Bu sabah ayakkabı dolab-ım-ı düzenle-di-m.
 this morning shoe cabinet-1.SG-ACC organize-PST-1.SG
 ‘I organized my shoe cabinet this morning.’
- b. İhtiyac-ım ol-ma-yan altı çift eski-miş ayakkabı-yı
 need-1.SG be-NEG-AN six pair old-PRFCT.PART shoe-ACC
 ayır-dı-m.
 sort out-PST-1.SG
 ‘I sorted out six pairs of worn-out (old) shoes that I didn’t need.’
- c. Eşyalar-ım-dan ayrıl-a-ma-dığ-ım için, onlar-ı
 ware-1.SG-ABL leave-ABIL-NEG-INDIC.NOM-1.SG for they-ACC
 at-a-ma-dı-m
 throw.away-ABIL-NEG-PST-1.SG.
 ‘I couldn’t throw them away, because I cannot part from my things.’

The source of the incoherence in discourses like (32) is the bare, “(pseudo-) incorporated” direct object in the last sentence, i.e. (32c); this usage runs counter to the fact that the discourse has introduced a definite, specific pigeon (in (32b)). Therefore, the pragmatically very strong anaphoric reference to the previously introduced pigeon is infelicitously expressed by a bare noun in (32c); such an anaphoric reference should have been expressed by a case-marked (definite) direct object.

(32) Incoherent control items

- a. Pazar yerin-de güvercin-ler var-dı.
 market place-LOC pigeon-PL exist-PST
 ‘There were pigeons at the market place.’

- b. Çocuklar yavaşça yaklaş-ıp aralarındaki tek beyaz
 child-PL slowly come near-IP among them only white
 güvecin-i tut-ma-yı planla-mış-lar-dı.
 pigeon-ACC catch-NOM-ACC plan-PRFCT.PART-PL-PST
 ‘The children had planned to slowly come near them and to catch
 the only white pigeon among them.’
- c. Sonunda güvercin tut-tu-lar.
 in the end pigeon catch-PST-3.PL
 ‘In the end, they caught pigeons (lit.: they pigeon-caught).’

There was a third set of items that consisted of discourses violating a scalar implicature. The first sentence provides a frame, the second introduces a list of objects, and by Gricean Maxims raises an exhaustivity implicature, namely that there are no other objects. The third sentence introduces objects with a definite possessive reading that were however not mentioned in the list introduced in the second sentence. Thus the definite *his cows* in (33c) cannot be accommodated in the context as there were only goats and lambs mentioned previously. We think that it is Grice’s Maxim of Quantity that blocks this accommodation. We assume that the judgment of these examples mirror the way informants include violation of the Maxims (or pragmatic inferences in general) in their judgment task. Informants who judge this set of three sentences as bad take the Maxims as part of coherence of the discourse. Informants who judge the example acceptable do not consider violations of the Maxims as relevant for the coherence of the discourse or sentences.

(33) Violation of implicature

- a. Mehmet geçen sene çiftliğ-in baş-ın-a geç-ti-Ø.
 Mehmet last year farm-GEN head-3.SG-DAT become-PST-3.SG
 ‘Mehmet became the director of the farm last year.’
- b. Çiftliğ-in-de keçi-ler ve kuzu-lar var.
 farm-3.SG-LOC goat-PL and lamb-PL exist
 ‘There are goats and lambs in his farm.’
- c. Sabahları inek-ler-in-i sağ-ıyor-Ø.
 in the mornings cow-PL-3.SG-ACC milk-PROG-3.SG
 ‘In the mornings, he milks his cows.’

We used these sets of items to find out how our informants react to violations of scalar implicatures. This was important in order to test our hypothesis 2, which postulates that case marking does not even signal an exhaustive implicature. Following hypothesis 2, informants should behave similarly independently of whether they like a violation of the scalar implicature in sentences like (33) or not.

Participants received a web-based questionnaire on Google Forms. 60 native speakers of Turkish, all of whom were university students, answered the questionnaire. They were given one of the two lists of discourses, consisting of 18 test items, the 6 items to test the ‘exhaustivity implicature hypothesis’, and 12 control items, in a pseudo-randomized order. We asked informants to rate the third sentence in terms of how well it fits the first two sentences on a scale from 1 (the last sentence is very badly linked) to 7 (the last sentence is very well linked). We eliminated 12 participants, since they did not react to the coherent and incoherent contexts among the control items correctly. We analyzed the judgments of the remaining 48 (24 for each list) participants.

3.2 Results and discussion

Figure 1 provides the mean values for the 12 control items and the 6 ‘implicature violation’ items, i.e. the coherent items, as in (31), the incoherent ones, as in (32), and the violated implicature items, as in (33). The mean values clearly show that participants do distinguish between coherent and incoherent discourses and that the judgments of discourses with a violated implicature are between the coherent and the incoherent discourses. We think that these results show that participants were attentive to the task and that they were able to judge semantic-pragmatic relations between sentences. Below we discuss the reaction to the 6 ‘implicature violation’ items in more detail.

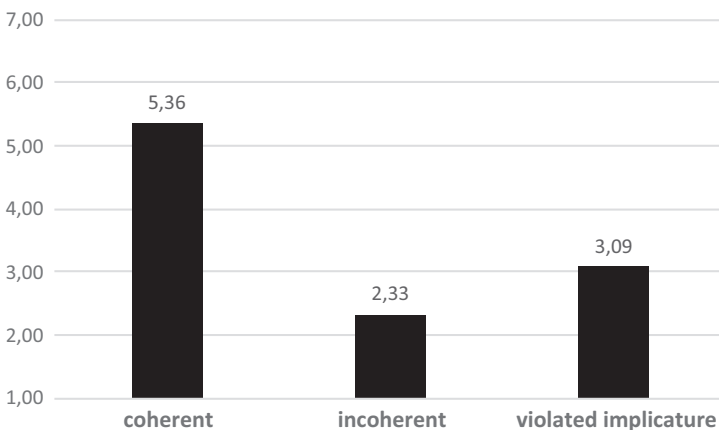


Figure 1: Mean scores for the coherent, the incoherent, and violated implicature items on a scale from 1 (badly linked) to 7 (very well linked).

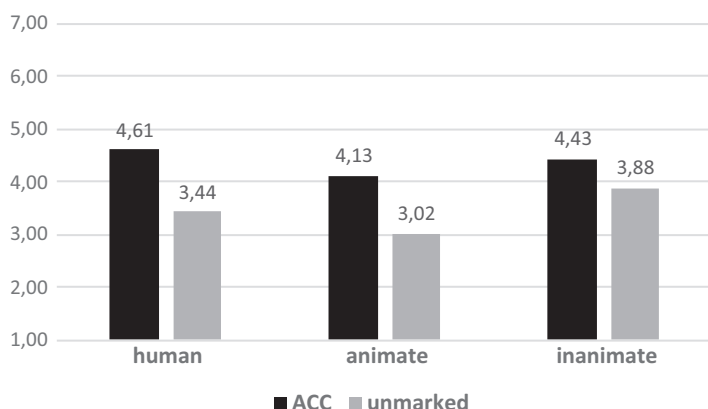


Figure 2: Mean scores for accusative case marking and animacy of the explicit partitives on a scale from 1 (badly linked) to 7 (very well linked).

Figure 2 summarizes the mean scores of the judgments for the 18 test items concerning partitive constructions with or without case marking. First, we observe that sentences with accusative-marked explicit partitives in direct object position, such as (28c-i; 29c-i, 30c-i), are nearly as acceptable (mean 4,39) as the coherent control items (5,36), as illustrated in Figure 1. Second, we see that sentences with unmarked explicit partitives in direct object position, such as (28c-ii; 29c-ii, 30c-ii), are less acceptable (3,45) than the sentences with accusative-marked explicit partitives (4,39). In both conditions the acceptability is much higher than for the incoherent examples (2,33). Third, there is no clear difference between the different animacy values. But for humans and non-human animates, the accusative case-marked explicit partitive is rated better than the unmarked one, while this contrast is almost neutralized with inanimates. This effect replicates the results of Krause & von Heusinger (2019) reported in Section 2.2 above, showing that human and animate direct objects have a higher preference for accusative marking. Statistical analysis¹⁶ supports the results represented in Figure 2, showing that there is an overall significant effect of case marking, but only a minor effect of animacy.

¹⁶ Statistical analyses were conducted in R version 1.0.136 using the lme4 package (Bates et al. 2015) to perform linear mixed-effect models (LMEM) with the score as outcome variable. As fixed effects, we entered case marking and animacy into the model. As random effects, we had intercepts for subjects and items, as well as by-subject and by-item random slopes for the effect of case marking. The ACC condition and the human condition were mapped onto the intercept. To identify the best model fit, we performed likelihood ratio tests. The model with two main effects, namely animacy and case marking, was chosen on the basis of a likelihood ratio test ($\chi^2(1) = 0.28, p < .01$). The results show a significant main effect for *case marking* $b = -0.94, SE = 0.20$,

Summarizing, participants have rated the discourses with an exhaustivity violation much better than the incoherent discourses and more similar to the coherent discourses. The somewhat degraded rating of the explicit partitives might come from their infrequent form of two full noun phrases in the partitive construction. These results confirm our Hypothesis 1 that accusative case-marked partitives do not have a semantic exhaustivity effect. Furthermore, we see that accusative case-marked partitives are significantly rated more highly than morphologically unmarked partitives. This would not be expected if accusative case marking expressed definiteness and thereby contributed to an exhaustive reading. Therefore, we take this significant result as additional evidence for our Hypothesis 1 that accusative case marking does not express exhaustivity or definiteness.

We still have to discuss the possibility that the exhaustivity effect arises by a pragmatic inference, which means that it would not be covered by a judgement task of participants that do not regard pragmatically infelicitous contexts as unacceptable. In order to test this possibility, we included in our questionnaire 6 items that had a violation of an implicature, as in (33)

We found that we had a high interindividual variation in the judgments for these items. Therefore we divided the 48 participants into two groups of 24 participants each, such that Group 1 is below the median of the judgments for these sentences (<2.7) and Group 2 is above the median (>2.7). We assume that Group 1 represents participants that take pragmatic violations as unacceptable, while

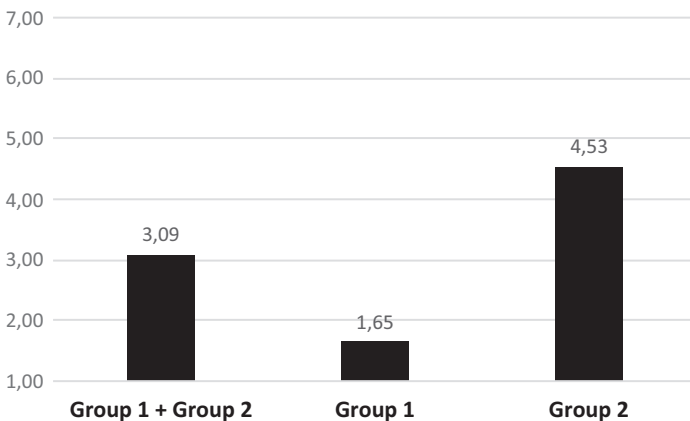


Figure 3: Mean scores for the items with the violation of the implicature on a scale from 1 (badly linked) to 7 (very well linked) for both groups and each group separately.

$t = -4.69$ and *animacy* $b = 0.58$, $SE = 0.25$, $t = -2.37$, only for the comparison between animate and inanimate conditions. As can be seen from Figure 2, there is no significant interaction of case marking and animacy.

Group 2 represents participants that are more tolerant towards pragmatic violations. This corresponds to the more general observation that informants vary whether or not pragmatic violations influence acceptability. In other words, some informants show more “pragmatic tolerance” than others (Katsos & Bishop 2011).

Figure 3 shows the mean values for all 48 participants and then for each group of 24 participants separately. We do see a stark contrast between these two groups with respect to the violation of pragmatic inferences. We can now verify our Hypothesis 2 according to which accusative case marking does not trigger an ‘exhaustivity implicature’. If exhaustivity were an implicature, we would predict that the group that does not like the violation of implicature in the 6 relevant test items would also judge a potential violation of the alleged ‘exhaustivity implicature’ triggered by accusative case marking in our partitive constructions as unacceptable, while the other group would not. Thus we would expect a clear contrast between these two groups.

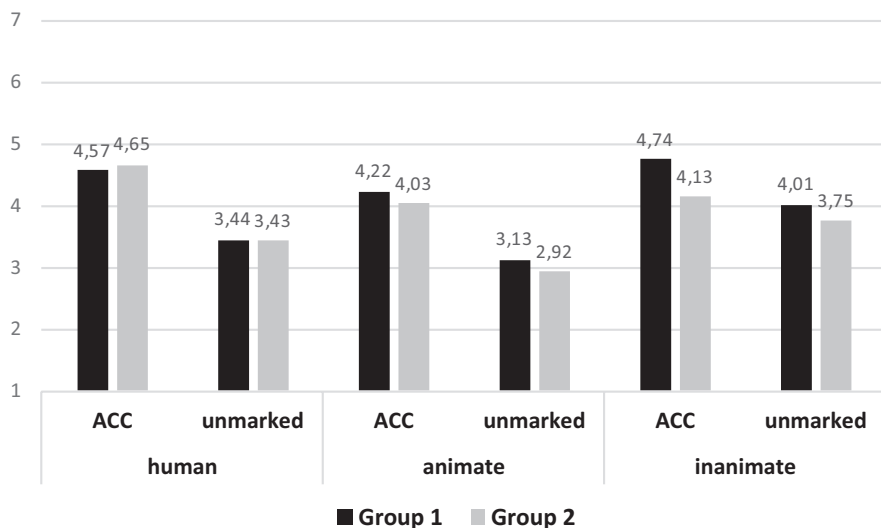


Figure 4: Mean scores for accusative case marking and animacy of the explicit partitives for Group 1 and Group 2 on a scale from 1 (badly linked) to 7 (very well linked).

Figure 4 shows the mean scores of the six conditions for the two groups – always pairwise. We see a marginal tendency in the two right columns representing the mean acceptability for inanimate partitives. However, overall there is no difference in the judgments of the participants in the two groups. We interpret these findings as absence of evidence for an ‘exhaustivity implicature’ in our test items, thus confirming our Hypothesis 2.

4 General discussion and conclusion

This paper contributes original empirical data to the discussion of the semantic-pragmatic functions of case marking in Turkish noun phrases, by studying explicit partitive constructions in direct object position. Turkish does not have a definite article, but a direct object that does not have any indefinite marker can be interpreted as definite if it has overt accusative case, and it is interpreted as non-referential if it does not show case marking. A direct object with an indefinite marker, such as the indefinite article *bir* or the quantifier *bazı* ‘some’, is interpreted as specific if it has accusative case and as non-specific without case, see Section 2.2 above. In a series of papers (Kornfilt & von Heusinger 2009, von Heusinger & Kornfilt 2017, von Heusinger, Kornfilt & Kizilkaya 2019), we investigated the function of accusative case marking in different types of partitives. We were able to show that accusative case marking for proper partitives *kadın-lar-dan iki-sin-i* (woman-PL-ABL two-3.AGR-ACC ‘two of the women’) is obligatorily triggered by the “dummy” (i.e. default) agreement marker *(s)I(n)* and does not encode definiteness or specificity. Explicit partitives based on hyponymic relations between the subset noun (hyponym) and the superset noun (hyperonym), such as *hayvan-lar-dan beş fil* (animal-PL-ABL five elephant ‘five elephants from / of the animals’), show optional accusative case marking. We argued that accusative case marking in these cases encodes specificity (Kornfilt & von Heusinger 2009, von Heusinger & Kornfilt 2017).

In von Heusinger, Kornfilt & Kizilkaya (2019), we presented original data from a grammaticality judgment study that tested explicit partitives in different types of contexts that trigger specificity. We concluded from those results that accusative case marking does encode specificity. However, the data would also be consistent with an alternative claim that accusative case in explicit partitives encodes definiteness. This was also suggested to us by two anonymous reviewers of von Heusinger & Kornfilt (2017). Those reviewers suggested an exhaustive reading of case-marked nominals, i.e. a definite reading for accusative case-marked explicit partitives.

Therefore, we undertook the present study and tested whether the accusative marking of explicit partitives in direct object position is obligatorily interpreted as exhaustive. We designed a questionnaire with examples consisting of three sentences such that the third sentence would violate an exhaustive interpretation. We found that Turkish native speakers do not find these sentences and the resulting discourse unacceptable. This clearly shows that these sentences with accusative-marked explicit partitives allow for a non-exhaustive reading alongside an also acceptable exhaustive reading. From this we conclude that accusative case marking of explicit partitives does not encode definiteness. These

findings support our Hypothesis in the earlier experiment that accusative case marking of explicit partitives in direct object position encodes specificity, as it does for non-partitive noun phrase with the indefinite article (*bir kadın-ı* ‘a specific woman’).

These original results also support the more general assumption of von Stechow & Kornfilt (2005) that accusative case marking encodes specificity, rather than definiteness, and therefore contribute to the analysis of Turkish noun phrases in particular and, more generally, to the interaction of structural case marker, agreement marker (in its default value and pronominal clitic-like usage) and classifier in noun phrases in Turkic languages.

References

- Aissen, Judith. 2003. Differential Object Marking: Iconicity vs. economy. *Natural Language and Linguistic Theory* 21(3). 435–483. <https://link.springer.com/article/10.1023/A:1024109008573>.
- Aydemir, Yasemin. 2004. Are Turkish preverbal bare nouns syntactic arguments? *Linguistic Inquiry* 35(3). 465–474.
- Baker, Mark & Nadezhda Vinokurova. 2021. Rethinking structural case: Partitive case in Sakha. In András Bányi, Theresa Biberauer, Jamie Douglas & Sten Vikner (eds.), *Syntactic architecture and its consequences III: Inside syntax*, 51–67. Berlin: Language Science Press. DOI: 10.5281/zenodo.4680264.
- Barker, Chris. 1998. Partitives, double genitives and anti-uniqueness. *Natural Language and Linguistic Theory* 16(4). 679–717. <http://www.jstor.org/stable/4047919>.
- Bates, Douglas, Martin Mächler, Ben Bolker & Steven Walker. 2015. Fitting linear mixed-effects models using lme4. *Journal of Statistical Software* 67(1). 1–48. <https://arxiv.org/abs/1406.5823>.
- Cardinaletti, Anna & Giuliana Giusti. 2006. The syntax of quantified phrases and quantitative clitics. In Martin Everaert & Henk van Riemsdijk (eds.), *The Blackwell companion to syntax*, vol. V, 23–93. Oxford: Blackwell.
- Chierchia, Gennaro. 1997. Partitives, reference to kinds and semantic variation. In Aaron Lawson (ed.), *Proceedings from Semantics and Linguistic Theory VII*, 73–98. Ithaca: Cornell University. <http://journals.linguisticsociety.org/proceedings/index.php/SALT/article/viewFile/2792/2532>.
- Dede, Müşerref. 1986. Definiteness and referentiality in Turkish verbal sentences. In Dan I. Slobin & Karl Zimmer (eds.), *Studies in Turkish linguistics*, 147–163. Amsterdam: Benjamins. <https://doi.org/10.1075/tsl.8.09ded>.
- Enç, Mürvet. 1991. The semantics of specificity. *Linguistic Inquiry* 22. 1–25. <http://www.jstor.org/stable/4178706>.
- Erguvanlı, Eser Emine & Karl Zimmer. 1994. Case marking in Turkish indefinite object constructions. In *Proceedings of the Twentieth Annual Meeting of the Berkeley Linguistics*

- Society*, 547–552. Berkeley, CA: Berkeley Linguistics Society. <http://www.journals.linguisticsociety.org/proceedings/index.php/BLS/article/viewFile/1442/1226>.
- Erguvanli, Eser Emine. 1984. *The function of word order in Turkish grammar*. Berkeley: University of California Press.
- Falco, Michelangelo & Roberto Zamparelli. 2019. Partitives and partitivity. *Glossa: A Journal of General Linguistics* 4(1): 111. 1–49. <https://doi.org/10.5334/gjgl.642>.
- Farkas, Donka. 1994. Specificity and scope. In Lea Nash & Georges Tsoulas (eds.), *Actes du Premier Colloque Langues & Grammaire*, vol. 1, 119–137. Paris: Université Paris-8. <http://citeseerx.ist.psu.edu/viewdoc/summary?doi=10.1.1.22.9999>.
- Fodor, Janet & Ivan Sag. 1982. Referential and quantificational indefinites. *Linguistics & Philosophy* 5. 355–398. <https://link.springer.com/content/pdf/10.1007/BF00351459.pdf>.
- Giusti, Giuliana. 2021, this volume. Partitivity in Italian: A protocol approach to a multifaceted phenomenon. In Petra Sleeman & Giuliana Giusti (eds.), *Partitive determiners, partitive pronouns and partitive case*. (Linguistische Arbeiten 580). Berlin: de Gruyter.
- Giusti, Giuliana & Petra Sleeman. 2021, this volume. Partitive elements in the languages of Europe. An advancement in the understanding of a multifaceted phenomenon. In Petra Sleeman & Giuliana Giusti (eds.), *Partitive determiners, partitive pronouns and partitive case*. (Linguistische Arbeiten 580). Berlin: de Gruyter.
- Göksel, Aslı & Celia Kerlake. 2005. *Turkish: A comprehensive grammar*. London: Routledge.
- Heim, Irene. 1991. Artikel und Definitheit. In Arnim von Stechow & Dieter Wunderlich (eds.), *Semantik: Ein internationales Handbuch der zeitgenössischen Forschung*, 487–535. Berlin: de Gruyter. <https://doi.org/10.1515/9783110203363.487>.
- von Heusinger, Klaus. 2002. Specificity and definiteness in sentence and discourse structure. *Journal of Semantics* 19(3). 245–274. <https://doi.org/10.1093/jos/19.3.245>.
- von Heusinger, Klaus. 2019. Indefinites and specificity. In Barbara Abbott & Jeanette Gundel (eds.), *Oxford handbook of reference*, 146–167. Oxford: Oxford University Press. <https://doi.org/10.1093/oxfordhb/9780199687305.013.9>.
- von Heusinger, Klaus & Elif Bamyacı. 2017a. Specificity effects of Turkish Differential Object Marking. In Leyla Zidani-Eroğlu, Matthew Ciscel & Elena Koulidobrova (eds.), *Proceedings of the 12th Workshop on Altaic Formal Linguistics (WAF 12)*, 309–319. Cambridge, MA: MIT Press. <http://mitwpl.mit.edu/catalog/mwpl83/>.
- von Heusinger, Klaus & Elif Bamyacı. 2017b. Specificity effects of Turkish Differential Object Marking in monolingual and bilingual speakers. Paper presented at the *Workshop on (In) definiteness and (Non)specificity: Meaning and usage*, Berlin, June, 2017.
- von Heusinger, Klaus & Jaklin Kornfilt. 2005. The case of the direct object in Turkish: Semantics, syntax and morphology. *Turkic Languages* 9. 3–44. http://www.digizeitschriften.de/dms/img/?PID=PPN666048797_0009%7CLOG_0014.
- von Heusinger, Klaus & Jaklin Kornfilt. 2017. Partitivity and case marking in Turkish and related languages. *Glossa: a journal of general linguistics* 2(1). 1–40. <http://doi.org/10.5334/gjgl.112>.
- von Heusinger, Klaus, Jaklin Kornfilt & Semra Kizilkaya. 2019. Differential Object Marking, partitivity and specificity in Turkish. In Tanya Bondarenko, Justin Colley, Colin Davis & Mitya Privoznov (eds.), *Proceedings of the 14th Workshop on Altaic Formal Linguistics (WAF 14)*, 145–156. Cambridge, MA: MIT Press.
- Hoeksema, Jacob. 1996. Introduction. In Jacob Hoeksema (ed.), *Partitives: Studies on the syntax and semantics of partitive and related constructions*, 1–24. Berlin: de Gruyter. <https://doi.org/10.1515/9783110908985.1>.

- de Hoop, Helen. 2003. Partitivity. In Lisa Cheng & Rint Sybesma (eds.), *The second Glot International state-of-the-article book. The latest in linguistics*, 179–212. Berlin: de Gruyter. <https://doi.org/10.1515/9783110890952.179>.
- Ihsane, Tabea (ed.). 2020. *Disentangling bare nouns and nominals introduced by a partitive article* (Syntax and Semantics 43). Leiden: Brill. <https://library.oapen.org/handle/20.500.12657/48299>.
- Ihsane, Tabea & Elisabeth Stark. 2020. Introduction: Shades of partitivity: Formal and areal properties. *Linguistics* 58(3). 605–619. <https://doi.org/10.1515/ling-2020-0078>.
- Ionin, Tania, Ora Matushansky & E.G. Ruys. 2006. Parts of speech: Toward a unified semantics for partitives. In Christopher Davis, Amy Rose Deal & Youri Zabbal (eds.), *Proceedings of NELS*, vol. 36, 357–370. Amherst, MA: University of Massachusetts, GLSA.
- Jackendoff, Ray. 1977. *X'-Syntax: A study of phrase structure*. Cambridge, MA: MIT Press.
- Johanson, Lars. 1977. Bestimmtheit und Mitteilungsperspektive im türkischen Satz. *Zeitschrift der Morgenländischen Gesellschaft* 3(2). 1186–1203.
- Kamp, Hans & Agnes Bende-Farkas. 2019. Epistemic specificity from a communication-theoretic perspective. *Journal of Semantics* 36(1). 1–51. <https://doi.org/10.1093/jos/ffy005>.
- Katsos, Napoleon & Dorothy V.M. Bishop. 2011. Pragmatic tolerance: Implications for the acquisition of informativeness and implicature. *Cognition* 120. 67–81.
- Koptjevskaja-Tamm, Maria. 2006. Partitives. In Keith Brown (ed.), *Encyclopedia of languages and linguistics. 2nd ed.*, 216–221. Amsterdam: Elsevier.
- Kornfilt, Jaklin. 1991. Some current issues in Turkish syntax. In Hendrik Boeschoten & Ludo Verhoeven (eds.), *Turkish linguistics today*, 60–92. Leiden: Brill.
- Kornfilt, Jaklin. 1996a. Naked partitive phrases in Turkish. In Jacob Hoeksema (ed.), *Partitives: Studies on the syntax and semantics of partitive and related constructions*, 107–142. Berlin: de Gruyter.
- Kornfilt, Jaklin. 1996b. Turkish and configurationality. In Bengisu Rona (ed.), *Current issues in Turkish linguistics*, vol. 1, 111–125. Ankara: Hitit Yayınevi.
- Kornfilt, Jaklin. 1997. *Turkish*. London: Routledge. <https://www.routledge.com/Turkish/Kornfilt/p/book/9780415587167>.
- Kornfilt, Jaklin. 2003a. Subject case in Turkish nominalized clauses. In Uwe Junghanns & Luka Szucsich (eds.), *Syntactic structures and morphological information*, 129–215. Berlin: de Gruyter.
- Kornfilt, Jaklin. 2003b. Scrambling, subscrambling, and case in Turkish. In Simin Karimi (ed.), *Word order and scrambling*, 125–155. Malden: Blackwell.
- Kornfilt, Jaklin. 2008. DOM and two types of DSM in Turkish. In Helen de Hoop & Peter de Swart (eds.), *Differential Subject Marking*, 79–111. Dordrecht: Springer.
- Kornfilt, Jaklin. 2009. Subject – Agreement correlations and their syntactic effects in some Turkic relative clauses. *Turkic Languages* 13(1). 70–96.
- Kornfilt, Jaklin. 2020. DOM and DSM in Turkish: Not only dependent case, but also dependent Agree. In András Bárány & Laura Kalin (eds.), *Case, agreement, and their interactions. New perspectives on Differential Argument Marking*, 127–174. Berlin: de Gruyter. <https://doi.org/10.1515/9783110666137-004>.
- Kornfilt, Jaklin & Klaus von Heusinger. 2009. Specificity and partitivity in some Altaic languages. In Ryosuke Shibagaki & Reiko Vermeulen (eds.), *Proceedings of the 5th Workshop on Formal Altaic Linguistics (WAFL 5)*, 19–40. Cambridge, MA: MIT Press.
- Krause, Elif & Klaus von Heusinger. 2019. Gradient effects of animacy on Differential Object Marking in Turkish. *Open Linguistics* 5(1). 171–190. <https://doi.org/10.1515/opli-2019-0011>.

- Luraghi, Silvia & Seppo Kittilä. 2014. Typology and diachrony of partitive case markers. In Silvia Luraghi & Tuomas Huomo (eds.), *Partitive cases and related categories*, 17–62. Berlin: de Gruyter. <https://doi.org/10.1515/9783110346060.17>.
- Massam, Diane. 2001. Pseudo noun incorporation in Niuean. *Natural Language and Linguistic Theory* 19(1). 153–197. <http://www.jstor.org/stable/4047915>.
- Nakipoğlu, Mine. 2009. The semantics of the Turkish accusative marked definites and the relation between prosodic structure and information structure. *Lingua* 119. 1253–1280. <https://doi.org/10.1016/j.lingua.2009.02.006>.
- Özge, Umut. 2011. Turkish indefinites and accusative marking. In Andrew Simpson (ed.), *Proceedings of the 7th Workshop on Altaic Formal Linguistics (WAFL 7)*, 253–267. Cambridge, MA: MIT Press.
- Öztürk, Balkız. 2005. *Case, referentiality and phrase structure*. Amsterdam: John Benjamins.
- Sağ, Yağmur. 2019. *The semantics of number marking: Reference to kinds, counting, and optional classifiers*. New Brunswick, NJ: Rutgers University dissertation. <https://doi.org/doi:10.7282/t3-7dny-mz84>.
- Sauerland, Uli & Kazuko Yatsushiro. 2017. Two nouns in partitives: Evidence from Japanese. *Glossa: A Journal of General Linguistics* 2(1). 1–29. <https://doi.org/10.5334/gjgl.171>.
- Seidel, Elyesa. 2019. Bare direct objects in Turkish: Pseudo-incorporated or weak arguments. In Tanya Bondarenko, Justin Colley, Colin Davis & Mitya Privoznov (eds.), *Proceedings of the 14th Workshop on Altaic Formal Linguistics (WAFL 14)*, 277–288. Cambridge, MA: MIT Press.
- Seržant, Ilja A. 2020. Typology of partitives. *Linguistics*. 1–67. <https://doi.org/10.1515/ling-2020-0251>.
- Seržant, Ilja A. 2021, this volume. Diachronic typology of partitives. In Petra Sleeman & Giuliana Giusti (eds.), *Partitive determiners, partitive pronouns and partitive case* (Linguistische Arbeiten 580). Berlin: de Gruyter.
- Sezer, Engin. 1972. Some observations on the role of genitive phrases in Turkish nominalizations. Unpublished ms., Harvard University.
- Stachowski, Marek & Astrid Menz. 1998. Yakut. In Lars Johanson & Eva Agnes Csató (eds.), *The Turkic Languages*, 417–433. London: Routledge. <https://doi.org/10.4324/9780203066102>.
- Zamparelli, Roberto. 1998. A theory of kinds, partitives, and *of/z* possessives. In Artemis Alexiadou & Chris Wilder (eds.), *Possessors, predicates and movement in the determiner phrase*, 259–301. Amsterdam: John Benjamins.