From possessor agreement to object marking:
the functional evolution of the Udmurt *-jez* suffix[1]

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1. Introduction

A characteristic feature of Uralic languages is the use of possessive agreement in non-possessive – mainly determiner-like – functions (Collinder 1960; Schlachter 1960; Hajdú 1966; Sinor 1978; Rédei 1988; Csúcs 1980; Leinonen 1998; Winkler 2001, 2011; Fraurud 2001; Nikolaeva 2003; Gerland 2014; Janda 2015, etc.). The 3SG possessive agreement suffix appears to have obtained the widest range of roles in Udmurt, where it is also said to function as a nominalizer, to mark contrast, to function as a kind of definite determiner, and to mark accusative case. This paper claims that these seemingly different roles are manifestations of three major functions (cross-referencing a possessor; encoding partitivity; marking specific objects), which, in turn, represent subsequent stages of a grammaticalization path. Evidence for the hypothesized changes will be provided by parallel developments in the sister languages, primarily Hungarian, the sister language with the longest documented history.

   The paper is structured as follows: Section 2.1. introduces the various functions of the Udmurt *-jez* suffix, and Section 2.2. summarizes the previous accounts of similar Uralic data. Section 3 contains our own proposal. Section 3.1. reconstructs a grammaticalization path from possessor agreement to partitivity marking, first documenting the process from the history of Hungarian, and then arguing that the Udmurt *-jez* has followed a parallel path. Section 3.2. reconstructs the grammaticalization process from partitivity marking to differential accusative marking, relying on the analyses of differential object marking and its developments in various Uralic languages. Section 4 is a conclusion, summarizing the typical and atypical properties of the grammaticalization observed.

2. The functions of 3SG possessor agreement in Udmurt[2]
2.1. The facts

(i) In Udmurt, similarly to other Uralic languages, the possessum bears an agreement suffix which encodes the number and person of the possessor (1a,b) (Winkler 2001; Edygarova 2010). Agreement is formal, not notional, hence a numerically modified possessor bearing no plural suffix elicits singular agreement (1c).

(1) a. Maša-len   agaj-**ez**[3]   b.   nyl-jos-len agaj-**zy**
        Masha-GEN brother-3SG   girl-PL-GEN brother-3PL
        'Masha's brother'   'the girls' brother'

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[2] Udmurt belongs to the Permic branch of the Uralic language family. It is spoken in the Volga-Kama Region, mostly in the Udmurt Republic, of the Russian Federation. The 2010 census counted 552 299 native speakers. The Udmurt population became bilingual in the 20th century (Salánki 2007); at present, Russian-dominant bilingualism is prevailing. Although Udmurt is declared to be the second official language of the Udmurt Republic by the 1994 Constitution, its use is limited in both the official and the public spheres; it is mostly used in home life (Speshilova 2008).

[3] Examples with no source are sentences elicited during Orsolya Tánczos's fieldwork in Udmurtia, or provided by our informant Julja Speshilova.

c. kyk nyl-len   agaj-**ez**
two girl-GEN   brother-3SG
ʽthe two girl's brother'

Because of pro-drop, a pronominal possessor does not have to be spelled out unless it is emphatic; its person and number can be reconstructed from the agreement suffix of the possessum. For example:

(2) (myn-am)   pi-**je**   (miľ-am)   pi-**my**
    I- GEN   son-1SG   we- GEN   son-1PL
    ʽmy son'   our son'

    (tyn-ad)   pi-**jed**   (tiľ-ad)   pi-**dy**
    youSG-GEN   son-2SG   youPL-GEN   son-2PL
    ʽyour son'   ʽyour son'

    (so-len)   pi-**jez**   (so-os-len)   pi-**zy**
    s/he-GEN   son-3SG   s/he-PL-GEN   son-3PL
    ʽhis/her son'   ʽtheir son'

   The 3SG possessive suffix – similarly to the other members of the paradigm – has various allomorphs. The basic variants are *-ez/-jez*, with *-ez* used after consonants (e.g., *Saša-len agaj-ez* ʽSasha's brother'), and *-jez* used after vowels (*Saša-len puny-jez* ʽSasha's dog'). The suffix *-yz* , believed to be an archaic variant, appears on certain members of the basic vocabulary, e.g., those denoting family relations and body-parts (*Saša-len ki-yz* ʽSasha's hand'), after the plural marker (*Saša-len agaj-os-yz* ʽSasha's brothers'), and after the instrumental, elative, translative and egressive case endings (e.g., *Saša-len agaj-en-yz* ʽwith Sasha's brother').[4]
   The relative position of possessive agreement in the morpheme complex of the possessum depends on which case morpheme it cooccurs with (Winkler 2001). The accusative, genitive, dative, ablative, caritive, and approximative adverbial case endings follow the agreement suffix; the instrumental, inessive, illative, elative, and egressive case endings precede it. The relative order of terminative case and possessive agreement is free. Some case–agreement (or agreement–case) combinations result in further allomorphs of *-ez/jez*. Observe, for example, the morpheme complex consisting of an illative case morpheme and 3SG agreement:

(3) Mon (solen)   gurt-**a-z**   lykto.
    I   (s/he.GEN)   village-ILL-3SG arrive.FUT.1SG
    'I will arrive to his/her village.'

With accusative case, too, only the consonant of the affix is spelt out, which is the same *-z-* in singular and plural 3rd person. Homophony does not arise because the regular *-ez/jez* accusative case ending is realized in different forms in singular and plural. (The possessor of the direct object is assigned ablative case, instead of genitive.)

(4) a. Mon Sašaleś   **agaj-z-e**   utćaj.
        I   Sasha.ABL   brother-3SG-ACC   search.PST.1SG

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[4] The allomorph *-yz* also has another, genetically unrelated variant, the suffix *-ty*, which is believed to have entered Standard Udmurt from a dialect (see Csúcs 2003).

'I was searching for Sasha's brother.'

   b. Mon soosleś **agaj-z-es** utćaj.
      I   their   brother-3PL-ACC search.PST.1SG
      'I was searching for their brother.'

(ii) The suffix *-jez* is also claimed to express contrast, „a kind of contrastive emphasis whose background need not be expressed explicitly in the context" (Winkler 2001: 32; Nikolaeva 2003: 12).The contrastive *-jez* appears on attributive adjectives, as shown in (5a,b) (cited as (26a,b) by Nikolaeva (2003)):

(5) a. **śöd-ez** kyšet
       black-JEZ scarf
       'the black scarf'   (Serebrennikov 1963: 133)

   b. Buskeľjos-len **badʒ'ym-ez** pi-zy   armiyś   bertiz   ińi.
      neighbors-GEN big-JEZ   son-3PL army.from returned.3SG already
      'The elder son of the neighbors has already returned from army service'
                                                          (Kel'makov 2001: 179)

As explained by Nikolaeva (2003: 12), "(5a) indicates that the scarf is black as opposed to other colors, while in (5b) the elder son is implicitly opposed to the younger son(s). There is no such implication in the absence of the possessive affix".
   Whereas attributive adjectives without *-jez* optionally agree in number, and do not agree in case with the nominal they modify (6a), *-jez*-marked adjectives agree both in case and in number. What is more, when modifying a plural noun, they can bear both the *-es-* plural of adjectives, and the *-jos-* plural of nominals (6b). The contrastive *-jez* yields the same allomorphs in the context of different case endings as the possessive *-jez* does.

(6) a. badʒ'ym(-eś) gurt-jos-yn   b. badʒ'ym-eś-jos-**az**   gurt-jos-yn
       large(PL)   village-PL-INE   large-PL-PL-JEZ.INE village-PL-INE
       'in large villages'   'in the large villages'

(iii) *-jez* can also appear on pronouns and numerals, and on pronominal and numeral determiners.

(7) ta 'this'   – ta-**iz** 'this very'
    so 'that'   – so-**iz** 'that very'
    tače 'like this'– tače-**jez** 'like this very'
    syče 'like that'– syče-**jez** 'like that very'
    kud   – kud-**iz** 'which'
    vań   – vańm-**iz** 'all'
    tros   – tros-**ez** 'many'
    kyk   – kyk-**ez** 'two'
    olokud   – olokud-**iz** 'any'
    nokud   – nokud-**iz** 'no'
    koťkud   – koťkud-**iz** 'every'

Winkler (2001: 34) translates the special meaning component of the *jez*-marked demonstrative pronouns by the particle 'very' – but apart from this, the literature on Udmurt gives no hint

concerning the meaning difference of the *jez*-less and *jez*-marked variants. Our informants found the *jez*-marked variants felicitous in partitive contexts. For example, whereas the universal quantifier of generic statements is *kot'kud* (8a), the universal quantifier denoting the members of a contextually given set is *kot'kudiz* (8b).

(8) a. **Kot'kud** aďami kuloz.
      all   person die.FUT.3SG
      'All men are mortal.'

   b. Tunne viť stuďent ekzamen śotiz.   **Kot'kud-iz** öz   śot.
      today five student exam   give.PST.3SG all-JEZ   NEG.PST.3SG give.CNV.SG[5]
      'Today five student had an exam. Each of them failed.'

(iv) *-jez* is also claimed to have a so-called nominalizing role (Winkler 2001: 43); more precisely, it can mark the presence of a phonologically empty nominal projection. The ellipted nominal can be the possessum following a genitive-marked possessor (Winkler 2001: 29, 44), in which case the *-jez* suffix is cliticized to the possessor, represented by a lexical noun phrase in (9a,b), and a pronoun in (10).

(9) a. Ivan-len gurt-ez   →   **Ivan-len-ez**
      Ivan-GEN-village-3SG   Ivan-GEN-3SG
      'Ivan's village'   'that of Ivan'   (Winkler 2001: 44)

   b. pios-len   gurt-zy   →   **pi-os-len-ez**
      boys-GEN village-3PL   boy-PL-GEN-3SG
      'the boys' village'   'that of the boys'

(10) Ta-iz   solen   mašina-jez, noš ta-iz   mynam – ojdo mynom   **mynam-en-yz.**
     this-JEZ s/he.GEN car-3SG   but this-JEZ I.GEN   PRT   go.FUT.1PL I.GEN -INS-JEZ
     'This is his car, and that is my one – let's go with my one!'

The *-jez* suffix following a possessor with no overt possessum cannot be a regular possessive agreement suffix attached to a phonologically empty possessor because it is invariant for person and number. In (9b), it fails to agree in number, and in (10), it fails to agree in person, with the possessor. The suffix *-jez* can also nominalize modifiers and determiners other than possessors. In (11a), it is attached to attributive adjectives, and in (11b), to demonstrative determiners. As illustrated by (11b), it interacts with case endings morphophonologically in the same way as the 3SG possessive *-jez* does.

(11) a. Ulizy-vylizy   kyk bratjos, pokći-**jez**   kuańer, byдʒ'ym-**ez** uzyr.
      lived-were.3SG two brothers young-JEZ   poor   old-JEZ   rich
      'There lived two brothers, the young one was poor, the old one was rich.'
                                                  (Nikolaeva 2003: (23a))
   b. Ta-**ze**   jake so-**ze**   mynym   byrjono.
      this-JEZ.ACC or   that-JEZ.ACC I.DAT   choose.PTCP
      'Shall I choose this one, or that one?'

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[5] *Öz* is a negative auxiliary. CNV stands for 'connegative', the verb form used with a negative auxiliary.

(v) *-jez* can also mark object nouns, in which case it is traditionally classified as an accusative case suffix (cf. Winkler 2001; Rédei 2000; Csúcs 2003).

(12) Mon ta **kńiga-jez** /ta **kńiga-os-yz** lydʒ'-i.
     I this book-ACC/this book-PL-ACC read-PRET.1SG
     'I read this book/these books.'

The *-jez* suffix also appears on the causee argument of causative constructions (for details, see Tánczos 2016):

(13) Maša **nyl-ez**[6] kńiga-*jez* lydʒ'y-t-iz.
     Masha girl-ACC book-ACC read-CAUS-PST.3SG
     'Masha made the/a girl read the book.'

However, not all objects are marked by *-jez*. It is debated whether *-jez* marks definite objects, or specific ones (including specific indefinites), and whether the *jez*-marking of definite/specific objects is optional (Fraurud 2001; Nikolaeva 2003), or it is a requirement with certain exceptions (Csúcs 2003). In any case, a *jez*-less object is understood to be indefinite:

(14) Mon **kńiga** lydʒ'-i.
     I book read-PRET.1SG
     'I read a book.'

Objects bearing a possessive suffix are always *-jez*-marked, as shown by (4a,b) and (15a,b):

(15) a. Mon **kńiga-d-e** lydʒ'-i.[7] b. Mon **kńiga-d-es** lydʒ'-i.
     I book-2SG-ACC read-PRET.1SG   I book-2PL-ACC read-PRET.1SG
     'I read your_SG book.'   'I read your_PL book.'

The accusative *-jez* has the same morphophonologically determined allomorphs as the possessive *-jez*. E.g., the allomorph appearing on plural objects is *-yz*:

(16) Mon ta **kńiga-os-yz** lydʒ'-i.
     I this book-PL-ACC read-PRET.1SG
     'I read these books.'

Crucially, however, words taking the archaic *-yz* 3SG possessive ending, like *ki-yz* 'his/her hand', are marked by *-jez* as objects. Compare:

(17) a. Śekyt **ki-jez** operirovat' karyny.
       hard hand-ACC to.operate make.PTCP
       'It is hard to operate the hand.'

     b. Solen **ki-yz** ćeber.

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[6] The *-jez* suffix on the causee argument in causative constructions is mostly analyzed as an accusative case (see Kozmács 1994). Tánczos (2016), following Fraurud (2001), analyzed it as an associability marker.

[7] Csúcs (2003) claims that the *-e* accusative allomorph appearing on nouns bearing a singular possessive agreement suffix (and on pronouns) is not a cognate of *-ez/jez*; it is a preserved stem vowel.

s/he-GEN hand-3SG nice
'His/her hand is nice.'

vi. As shown by Winkler (2001), Nikolaeva (2003), Csúcs (2003), and others, an apparently non-possessive *-jez* can also appear on subjects:

(18) a. Guždor   vylyn **turyn-ez** ćeber.
       meadow on   grass-JEZ beautiful
       'On the meadow, the grass is beautiful.'   (Winkler 2001: 32)

    b. **Kalyk-ez**   tros.
       people-JEZ   many
       'The people are many.' (Winkler 2001: 32)

    c. **Gureź-ez**   žužyt.
       mountain-JEZ high
       'The mountain (here) is high. '

It is an open question in what contexts a *jez*-marked subject can appear. According to Nikolaeva (2003), examples like (18a-c) are licensed when the subject is available for direct sensory perception, i.e., when it is directly identifiable. Example (19), from the first available Udmurt text from the end of the 19th century, is an apparent counter-example because only the subject of the second clause is contextually identifiable; the subject of the first clause is generic. The *-jez* suffix of these example, however, is the contrastive *-jez* illustrated in (5), which also has the nominalizing role illustrated in (11):

(19) **Inmar-kad'-jos-iž** ɵz   bȋgatä -no   **täj-kad'ez**   bȋgatoz   -a?
     God-like-PL-JEZ   NEG.PRS.3 manage.CNV.PL-too louse-like-JEZ manage.FUT.3SG Q
     'God-like creatures did not manage [to kill me], will someone like a louse manage?'
                                        (Munkácsi 1887: Text III/3)[8]

As shown by the two clauses of (19), the *-jez* marker of subjects has the same singular and plural allomorphs as the *-jez* marker of objects.

2.2. Analyses

Possessive agreement suffixes play similar roles in other Uralic languages, as well. The descriptive grammars of these languages take notice of the definiteness-marking role of possessive agreement, however, accounts going beyond observations are scarce.

   Fraurud (2001) raised – and discarded – the hypothesis that the various functions of the possessive suffix observed in the Uralic languages are stages of a grammaticalization path leading from possessive agreement to a definite article. A grammaticalization process would have the following manifestations: a. change in form from free morphemes to clitics and affixes, b. increased discourse frequency, c. employment of possessive suffixes in certain definite uses, d. obligatoriness in some of these uses, e. emergence of new forms of possessive marking gradually replacing the old ones, f. loss of essential semantic/pragmatic features. Since the phenomena observed in Udmurt and other Uralic languages satisfy only some of

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[8] Occasionally, we cite examples from texts recorded in 1885 by Bernát Munkácsi. Although certain aspects of Udmurt syntax, especially word order, have changed considerably under the influence of Russian in the past 130 years, we see no noticeable differences between 19th century and contemporary texts as regards the distribution and the functions of *-jez*.

these criteria (b, c, and f), they display a grammaticalization process underway at best. However, since there are no historical data testifying the progressing of the change, and since the same stable situation is attested in several Uralic languages, Fraurud considered it more appropriate to describe Uralic possessive agreement in its own terms – as a category with special characteristics distinguishing it from definite articles as well as from possessive marking in languages like English.

Nikolaeva (2003) advanced further arguments against the tentatively raised possibility that Uralic possessive agreement has assumed the function of a definite determiner. First, possessive affixes in the non-possessive function are compatible with NPs that are unambiguously indefinite. Her Northern Ostyak example can be replaced by an Udmurt sentence:

(20) Mon   odig **puny-jez**   utćaśko.
      I   one dog.ACC   search.PST.1SG
      'I am searching for a (specific) dog.' (Tánczos 2016: 48)

Second, in at least some of the languages in question the possessive affixes can attach to non-nouns, among them postpositions, participles, and adjectives. (Our informant's interpretations of such examples, however, suggest the presence of an ellipted nominal. Observe, for example, (21), where *-jez* attaches to a participle:

(21) Parś vandem   siľmy   kyk   ľuketly   ľukemyn: aśmely   śijon no
      pork slaughtered meat.1PL two part.DAT   divide.PASS ourselves.DAT   food and
      vuzan ponna. **Vuza-no-jez**   ćeberges.
      sell   for   sell-PTCP-3SG   nice.COMP
      'Our slaughtered porkmeat has been divided into two parts: one is for food for ourselves and one is for selling. The one to be sold is nicer.')

Furthermore, one can find possessive affixes on nouns already marked for definiteness, for example, on nouns with a demonstrative determiner, as illustrated above in (12). In Udmurt, -*jez* can also follow a possessive agreement suffix (see (15)).

According to Nikolaeva (2003), non-possessively used 3SG possessive agreement has three main functions in Uralic: it expresses (i) identifiability, (ii) associability, or (iii) emphasis and contrast. Identifiability can be based on deixis and situational context, as illustrated by (18a-c). For example, expressions designating periods of time such as morning, summer and year bearing the 3SG possessive suffix are interpreted in absence of modifiers as 'this/that morning', 'this/that summer', and 'this/that year' – as shown by our Udmurt example in (22b):

(22) a. **čukna-jez**   tunne keźyt val.
         morning-JEZ today cold   was
         'The morning today was cold.'

      b. **ǯyt-ez**   šuldyr   ortćiz.
         evening-JEZ cheerfully   pass.PST.3SG
         'The evening cheerfully passed.'

Possessive agreement can encode an associative relationship with an individual present in the discourse or in the context. In Udmurt, we attest the marking of associative relations with the speaker and the addressee by 1SG and 2SG possessive suffixes, e.g.:

(23) Otyn   koške   ńi   avtobus-ed.
     there   go.PRES.3SG   already   autobus-2SG
     'Your bus is already going there.'

The emphatic–contrastive function attributed to the 3SG possessive suffix by Nikolaeva (2003) is illustrated by examples (5a,b) and (11a,b) above. Contrastive/emphatic possessive affixes are compatible with indefinite noun phrases, as well.

Nikolaeva (2003) also discusses the possible relation between the possessive role and the identifying and associative functions of possessive suffixes. She argues that possessive constructions encode a much wider range of relations in Uralic than in the Indo-European languages; they can express any kind of association between two entities. The possessor must be established prior to the utterance – hence it serves as a reference point for creating mental contact with the possessum. The possessum is identified through its relation to the possessor, i.e., by encoding the reference-point relationship, the possessive affix simultaneously also encodes the identifiability of the possessed noun. The contrastive function of the 3rd person possessive affix is logically independent of its identifiability function; it pertains to the relative saliency of the respective concept for the speaker. Nikolaeva claims that it is only attested in the languages of the Volga basin, Udmurt, Komi and Cheremis, hence it must be an innovation that developed under the influence of the neighboring Turkic languages.

Gerland (2014), too, argues against the hypothesis raised by Fraurud (2001) that the definiteness-marking function of Uralic possessive agreement is the outcome of a grammaticalization pathway; she claims that it has always been an inherent property of these languages. In these languages, possessive agreement has a relational function; it can establish a link between two entities, or between an entity and the discourse situation (in the case of pragmatically unique referents), or an entity and world knowledge (in the case of semantically unique referents). The entity marked by possessive agreement is perceived as definite owing to the definiteness of the possessive pro. The possessive versus definite interpretation of the nominal bearing possessive agreement depends on the context and the noun type. For example, inherently unique concepts invoke the definite reading, whereas relational nouns evoke the possessive interpretation.

In sum: previous analyses have not found sufficient evidence of a grammaticalization pathway linking all the different roles of possessive agreement in Uralic. They trace back the diverse functions of the possessive agreement morphemes to the fact that the possessive relation is much looser in Uralic than in the Indo-European languages. In Uralic, the possessor is not necessarily an entity; it can also be represented by the discourse situation. The definite interpretation of a noun phrase bearing a possessive agreement suffix is due to the fact that it is anchored to a definite possessor (the empty or implicit pronominal cross-referenced by the possessive agreement suffix).

3. A new look at the functions of 3SG possessor agreement in Udmurt

In our view, the different occurrences of the Udmurt *-jez* suffix are manifestations of three main functions: (i) cross-referencing a possessor, (ii) partitivity marking, and (iii) specific object marking. The *-jez* suffix of indefinite, interrogative and universal pronouns and determiners, and the *-jez* of contrastive adjectives encodes the feature [partitive]. The nominalizing role of the suffix is a concomitant of its partitivity-marking function. The *-jez* suffix of the subject also marks the partitivity of its referent. Udmurt is a differential object marking language, it marks specific objects with the suffix *-jez*. We will argue that encoding the phi-features of a possessor, encoding partitivity, and encoding specificity are subsequent stages of a grammaticalization path. The history of Udmurt is not documented long enough to

provide evidence for this process, however, we have evidence of parallel developments from Hungarian, a sister language with an 800-year-old documented history.

3.1. From possessive agreement to partitivity marking

Modern Hungarian has an *-ik* partitivity suffix appearing on indefinite, interrogative, free choice and universal pronouns. These pronouns also have *-ik*-less versions. The *-ik* suffix assigns a [partitive] feature to them; noun phrases determined by an *-ik*-pronoun are understood to denote a subset of a contextually or situationally given set. Compare:

(24) *egy szó* ʿone word'   – *egyik szó* ʿone of the words'
     valamely, némely szó ʿsome word' – *valamelyik, némelyik szó* ʿsome of the words'
     mely szó ʿwhat word'   – *melyik szó* ʿwhich of the words'
     bármely, akármely szó ʿany word' – *bármelyik, akármelyik szó* ʿany one of the words'
     minden szó ʿall words'   – *mindenik szó* ʿeach word'
     etc.

Whereas the *ik*-less pronouns and the noun phrases determined/modified by them are indefinite, the *-ik*-versions are definite, as is shown by the fact that as objects, they elicit the definite conjugation, involving object–verb agreement. Compare:

(25) a. **Minden** szó-t   hallo-tok?   b. **Minden-ik** szót   hall-**já**-tok?
        every   word-ACC   hear-2PL   every-IK   word-ACC   hear-OBJ-2PL
        ʿDo you hear all words?'   ʿDo you hear each word'?

The *-ik* suffix can also appear on comparative and superlative adjectives. An *-ik*-marked adjective can modify an ellipted nominal (marked by Ø):

(26) Melyik autót   vegyem,   meg, a **szebb-ik**-Ø-**et**   vagy a **jobb-ik**-Ø-**at**?
     which   car.ACC   buy.SUBJ.1SG PRT the nicer-IK-Ø-ACC   or   the better-IK-Ø-ACC
     ʿWhich car shall I buy, the nicer one or the better one?

Modern Hungarian grammars categorize *-ik* as a partitivity suffix (ʿkijelölő jel'). In Old Hungarian documents, however, it is still clearly one of the allomorphs of the 3PL possessive agreement morpheme.
  In Hungarian, the possessive relation is marked on the possessum. In the case of a lexical possessor, the possessum bears an invariant possession suffix (see (27)); in the case of a pronominal possessor, however, an agreement suffix also cross-references the possessor's person and number.[9] If the possessum is in the plural, its plural suffix separates the possession suffix and the agreement suffix (28); elsewhere the two morphemes are often represented by a single portmanteau morpheme (29). Hungarian being a pro-drop language, a pronominal possessor is only spelt out if it is contrasted.

(27) a fiú kalap-ja   a fiú-k   kalap-ja
     the boy hat-POSS   the boy-PL hat-POSS
     ʿthe boy's hat'   ʿthe boys' hat'

(28) (az én) kalap-ja-i-m   (a mi) kalap-ja-i-nk
     the I   hat-POSS-PL-1SG   the we hat-POSS-PL-1PL

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[9] For furthe details, see Szabolcsi (1992), É. Kiss (2002), etc.

'my hats'   'our hats'

(a te) kalap-ja-i-d   (a ti)   kalap-ja-i-tok
the you hat-POSS-PL-2SG   the you hat-POSS-PL-2PL
'your hats'   'your hats'

(az ő)   kalap-ja-i-Ø   (az ő)   kalap-ja-i-k
the s/he hat-POSS-PL-3SG   the they hat-POSS-PL-3PL
'his/her hats'   'their hats'

(29) kalap-om   kalap-unk
     hat-POSS.1SG   hat-POSS.1PL
     'my hat'   'our hat'

     kalap-od   kalap-otok
     hat-POSS.2SG   hat-POSS.2PL
     'your hat'   your hat'

     kalap-ja   kalap-juk
     hat-POSS.3SG   hat-POSS.3PL
     'his/her hat'   'their hat'

At the beginning of the Old Hungarian period, the 3PL possessive suffix had three allomorphs: *-ik*, *-ok*, and *-ek* (Benkő 1992: 325; É. Kiss 2017a). In early Old Hungarian, a split took place in their distribution: *-ok* and *-ek* combined with nominal stems (*-ok* with back-vowel stems, and *-ek* with front vowel stem), whereas *-ik* appeared on the pronominal, numeral or adjectival determiner/modifier of ellipted nominals.

   The indefinite, interrogative, free choice and universal pronouns listed under (24) all existed in Old Hungarian. Whereas their *-ik*-less versions mostly occurred as determiner/modifiers, the *-ik*-versions occurred as heads of possessive constructions – more precisely, as determiners/modifiers of an ellipted possessum. Their 3PL possessive suffix cross-references a 3PL pro possessor, which invariably has a lexical antecedent in the preceding context. Compare the following Old Hungarian sentence pairs: the *-ik*-less pronouns in the (a) sentences are modifiers of lexical heads, whereas the *-ik*-versions in the (b) sentences behave like nominalized heads of possessive constructions – more precisely, as modifiers of ellipted heads, taking on the suffix of the possessum. Their pro possessor is always coindexed with a preceding noun phrase (marked by underlining):

(30) a. **nemel** terekek fa   teteyerewl   azt   orozwa   nyzek
        some Turks   tree top.POSS.from that.ACC stealthily watched
        '**Some** Turks were watching it stealthily from tree tops'   (Szabatkai (1515) 14)

     b. A_ʒoc ke·   … èlmenenèc / **nemèl'l'-ic**   ọ faluiaba   dè
        those in.turn   left   some-POSS.3PL he village.POSS.3SG.to   but
        nemel'l'-ic   ọ   kerèskedeterè
        some-POSS.3PL he search.POSS.3SG.to
        'Those in turn left, **some of them** for his village, but **some of them** for his search'
                                                        (München Codex (1416) 27 verso)

(31) a. menden valaki   kerest   kerènd   harminc napiglan **valamel** istèntọl

every   somebody request.ACC asks   thirty   day.for some   god.from
'whoever asks a request of **any** god for thirty days'

<div align="right">(Vienna Codex (1416) 145)</div>

b. <u>Ez ẏfẏak   ḳọzọl</u>   kegeglen haa **ualamell-ik-nek**   tọrtenik ual'a
   this young.men among.from in.turn   if   some-POSS.3PL-DAT happens be.PST
   megh   korulnia
   PRT   get.sick.INF.3SG
   'From among these young men, in turn, if **any of them** would happen to get sick'

<div align="right">(Kazinczy Codex (1525–41) 44 verso)</div>

(32) a. Ime azert   **mel'** keġetlen ellensege embereknek ez   velag
      look PRT   what merciless enemy   people.DAT   this   world
      'Look, **what** merciless an enemy to the people this world is!'

<div align="right">(Bod Codex (early 16th c.) 4 recto)</div>

    b. m̄ghaga <u>monna-ic-nac</u>   aʒert **mel'l'-ic**   ʒèrèti ọtet inkab
      told   both-POSS.3PL-DAT that   which-POSS.3PL loves him   more
      'He asked both of them **which of them** loved him more'

<div align="right">(München Codex (1416) 62 verso)</div>

(33) a. Zabadych   engemeth **mynden** gonoztwl
      save   me   every   evil.from
      'Save me from **every** evil'   (München Relic (early 16th c.))

    b. <u>ọ alm-a-i-Ø-t</u>   ọ hailakaban   megiruā rủuid bèzedbè
      he dream-POSS-PL-3SG-ACC he house.POSS.3SG.INE writing short speech.to
      foglala   **menden-ik-èt**   egèmbè zoreituā
      included   every-POSS.3PL-ACC one.to   comprising
      'having written down his dreams in his house, he included **every one of them** in a
      short speech comprising them into one   (Vienna Codex (1416) 148)

In the Middle Hungarian period the *-ik* 3PL possessive suffix of pronominals came to be reanalyzed – in fact, grammaticalized – as a derivational suffix expressing partitivity (É. Kiss 2017a). (In the case of *-ik*-marked adjectives and numerals, this process took place somewhat earlier, still in the Old Hungarian period, before the 16th century.) As a consequence of the reanalysis, *-ik*-marked pronouns started appearing in determiner/modifier positions in 17th-18th century texts (34a), and they could also take on an additional, productive possessive agreement suffix (34b):

(34) a. **minden-ik Farizeus** tsak a' maga szemtelen dolgait
      every-PART Pharisee only the own   impertinent matter.POSS.PL.3SG.ACC
      láthattya   vala
      see.POSS.3SG be.PST
      'each Pharisee could see only his own impertinent matters'   (Vajda 1773: 116)

    b. **minden-ik-ünk**   azon   igyekezik, miként az érdemekben el
      every-PART-POSS.1PL that.for strives   how   the merits.in   PRT
      nyerhesse   az elsöséget
      gain.POT.SUBJ.3SG the lead.ACC

ʿeach of us strives how to gain the lead in merits'　　　　　　　(Báróczi 1775: 6)

What made the reanalysis of a 3PL possessive suffix into a partitivity marker possible was the fact that the pro possessor cross-referenced by the suffix was phonologically empty, hence it could be understood as an implicit possessor absent in syntax, reconstructable only from the context or the situation. The possessive relations corresponding to ʿsome of them', ʿwhich of them', ʿeach of them', ʿthe nicer one of them', ʿthe better one of them' all represent subset–set relations. The replacement of the 3PL pronominal possessor with a general partitivity suffix preserves the information that the given set forms part of a superset, but the superset is not identified by the suffix (it can be inferred from the context).

　This change only affected the *-ik* allomorph of Old Hungarian possessive agreement; *-ok* and *-ek* have preserved their possessive agreement category. The functional split of the allomorphs was motivated morphophonologically. In Hungarian practically all inflectional suffixes participate in vowel harmony (they have front-vowel and back-vowel variants), which is not necessarily true of derivational suffixes. As opposed to the harmonizing *-ok/ek* allomorphs, the *-ik* suffix could combine with front- and back-vowel stems alike (cf. *szebb-ik* ʿmore beautiful one' vs. *jobb-ik* ʿbetter one'); hence it was an appropriate candidate for the derivational suffix status. The claim that *-ik* has become a derivational suffix is also supported by the fact that its distribution is not only categorially but also lexically constrained.

　The reanalysis of *-ik* from a 3PL possessive agreement morpheme into a derivational suffix involved semantic bleaching (the loss of referential index and the loss of phi-features), and morphophonological simplification (the elimination of harmonizing allomorphs), which are regarded as symptoms of grammaticalization.

　É. Kiss (2017a) assumes the following grammaticalization process:

(35) *The grammaticalization path of* -ik
(i)　Before early Old Hungarian: *-ok/ek/ik* are allomorphs of 3PL possessive agreement

(ii)　Early Old Hungarian:
　　Fission of *-ok/ek/ik*:
　　　　　　pro$_i$ overt noun+*ok/ek$_i$*　　　　　(pro$_i$ *ház-ok$_i$* ʿhouse of them')
　　　　　　pro$_i$ pronoun/num./adj.+ellipted N+*ik$_i$* (pro$_i$ *minden-Ø-ik$_i$* ʿevery one of them')

(iii) Reanalysis of *-ik* as a derivational suffix marking partitivity, loss of the pro possessor
　　Consequences: determinative/attributive use:　　　*mindenik lány* ʿeach girl'
　　　　　　　　taking possessive agreement anew:　pro$_i$ *mindenik-ük$_i$* ʿeach of them'

　The Hungarian possessive suffix *-ja/je*, marking the presence of a lexical possessor, or (fused with a Ø agreement suffix) the presence of a 3SG pro possessor, is undergoing a similar grammaticalization process. It can be attached to an adjective, in which case it nominalizes the adjective and assigns the feature [partitive] to it:

(36) a.　Almát　　　termesztenek. **A　nagy-já-t**　　eladják, **az apra-já-ból**
　　　　apple.ACC　grow.3PL　　the big-PART-ACC　sell.3PL　the small-PART-from
　　　　almalét　　csinálnak.
　　　　juice.ACC　make.3PL
　　　　ʿThey grow apples. The big ones they sell, from the small ones they make apple juice.'

　　b.　A diákok　　most　érettségiznek.　**Az okos-abb-ja**　egyetemre　　megy,
　　　　the students　now　graduate　　　the smart-er-PART　university.to　go

a gyengé-bb-je szakmát tanul.
the weak-er-PART vocation.ACC learn
ˈThe students are now graduating from high school. The brighter ones go to university, the weaker ones learn a vocation.ʼ

The *ja*-marked adjectives in (36a) could actually be analyzed as proper possessive constructions containing an ellipted nominal head and a pro possessor coreferent with *alma* ʼappleʼ in the preceding sentence. In (36b), however, the implicit possessor is clearly plural, hence if the suffix on the adjectives were a possessive agreement morpheme coindexed with a plural pro, it would be the plural *-juk/jük*. The derivational suffix status of this type of *-ja/je* is also indicated by the fact that it is not fully productive, it does not sound acceptable with every adjective in the positive degree. E.g.

(37) Sokan eljöttek az előadásra. ??A **fiatal-já-na**k tetszett, *az **idős-é-nek** nem.
many came the show.to the young-PART-DAT pleased the old-PART-DAT not
ˈMany people came to the show. The young ones liked it, the old ones didn'tʼ.

   In the case of the partitive *-ja/je*, too, the starting point of the grammaticalization process must have been the possessive construction with a pro possessor having its phi-features cross-referenced by the possessive suffix. This pro could be reinterpreted as an implicit possessor with no syntactic representation, which resulted in the reanalysis of the agreement suffix as a partitivity marker encoding no specific phi-features. The nominalizing effect of the partitive *-ja/je* has been inherited from the original possessive suffix. The possessive *-ja/je* can only combine with a nominal head, hence an adjective merging with *-ja/je* is assumed to modify an ellipted noun. Despite its category change and function change, the partitive *-ja/je* has preserved this property.

(38) *The grammaticalization path of* -ja/je
3SG possessive agreement: pro$_i$ ADJ+ellipted N+*ja/je*$_i$ e.g. *a* pro$_i$ *nagy-Ø-ja*$_i$
                                                     the big-N-POSS.3SG
                                                     ˈits major partʼ

        partitive suffix: ADJ+ellipted N+*-ja/je*   e.g. *a nagy-Ø-ja*
                                                     the big-N-PART
                                                     ˈthe major partʼ

Unlike the *-ik* suffix, *-ja/je* has not lost its original 3SG possessive agreement function; it has extended it by a new role. The fact that the two functions have not been dissimilated phonologically indicates that the grammaticalization of *-ja/je* into a partitivity marker is less advanced than that of *-ik*. This conclusion is also supported by the fact that an adjective supplied with the partitive *-ja/je* must still be analyzed as a nominal projection, whereas an *-ik*-marked adjective or pronoun can also function as the attribute or determiner of a lexical noun.
   The facts of Udmurt summarized in Section 1 under (i)–(iv) are parallel to those observed in Hungarian. Like in Hungarian, the pronominal possessor in Udmurt possessive constructions is subject to pro-drop, because the suffix *-jez* cross-references its phi-features on the possessum. This is what opens the way to reanalysis: the phonologically empty pro can be identified with an implicit possessor absent in syntax, and *-jez* can be reinterpreted as a general partitivity marker.

Originally the *-jez* suffix appeared attached to an adjective or a determiner when the nominal head of the possessive construction was ellipted, as in example (11), rewritten here as (39):

(39) Ulizy-vylizy   kyk bratjos,   pokći-Ø-**jez**   kuańer, bydʒ'ym-Ø-**ez**   uzyr.
   lived-were.3SG two brothers young-JEZ   poor   old-JEZ   rich
   'There lived two brothers, the young one was poor, the old one was rich.'

<div align="right">(Nikolaeva 2003: (23a))</div>

In such cases, the nominal is ellipted because it is given information; the adjective represents the noun-phrase internal focus. This is the source of the contrastivity of *-jez*. The referent of the ellipted noun phrase modified by the *jez*-marked adjective is assumed to be the member of a set of similar referents which only differ in the property denoted by the adjective. Hence the property denoted by the adjective contrasts the referent with the other referents of this set.

In (39), the possessor of the *jez*-marked adjectives cannot be a pro because a plural pro possessor coreferent with *kyk bratjos* 'two brothers' would elicit the 3PL agreement suffix *-zi*. The referent to which the *-jez*-marked element bears a part-whole relation is implicit, and *-jez* is not a 3SG possessive suffix any more but a partitivity marker. Whether the *jez*-marked element is the possessum of a syntactically given possessor or represents a part of an implicit referent reconstructable from the context or the situation, it denotes an entity, i.e., it is interpreted as a noun phrase with an ellipted head – hence the nominalizing effect of the contrastive *-jez*.

In the case of indefinite, interrogative, and universal pronouns, partitivity means that the set denoted by the pronoun is a subset of a contextually given set. Udmurt indefinite, interrogative and universal pronouns all have *jez*-marked partitive variants. The meaning difference between the *jez*-marked and *jez*-less variants, shown by the pair list in (7), corresponds to the meaning difference of the Hungarian *-ik*-marked and *-ik*-less pronouns. The minimal pair in (8) above illustrated that generic statements can only be formulated by the *jez*-less pronoun *kot'kud* 'all, every'; *kot'kud-iz* is used to refer to the members of a familiar, deictically or contextually given set. Here is another pair of examples, involving *tros* and *tros-ez* ʿmany'. *Tros* in (40a) is a counting quantifier, whereas *tros-ez* in (40b) has a partitive reading:[10]

(40) a. **tros**   kyj-jos: śöd   ďźyr-o-jez no,   shuzh ďźyr-oj-ez   no…
      many snake-PL black head-ADJ-JEZ too yellow head-ADJ-JEZ too
      'There are many snakes: black headed ones, yellow headed ones…'

<div align="right">(Badretdinov 2007: 9)</div>

   b. Kazań-yn han-jos kivalty-ku, arća udmurt-jos pölyś   **tros-ez**
      kazan-INE khan-PL reign-PTCP Arsk Udmurt-PL among many-JEZ
      bigerm-i-zy.
      become.tatar-PST-3PL
      'Among the Arsk Udmurts, many became Tatars during the reign of khans.'

<div align="right">(Udmurt dunne, 2009.08.04)[11]</div>

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[10] In Hungarian, the partitive *sok* 'many' and the counting *sok* are distinguished by their structural positions (see Szabolcsi (1997)).

[11] Source: Udmurt National Corpora (http://web-corpora.net/UdmurtCorpus/search/?interface_language=en)

Similarly to Hungarian *-ik* pronouns and *ik*-marked adjectives, Udmurt adjectives and determiners bearing *-jez* can modify overt, lexical nominals. Interestingly, whereas determiners and attributive adjectives in Udmurt show no obligatory number agreement and no case agreement with the nominal head, *jez*-marked determiners and adjectives determining/modifying an overt nominal bear the same number and case morphemes as the nominal. E.g.:

(41) a. ta-os-a-**z**   gurt-jos-y   b. badʒ'ym-jos-a-**z** gurt-jos-y
         that-PL-ILL-JEZ house-PL-ILL   big-PL-ILL-JEZ   house-PL-ILL
         'to those houses'   'to big houses'   (Riessler 2016: 130)

According to Riessler (2016), the agreement in number and case between the partitive-marked determiner/modifier and the head noun is evidence of a former appositive relation between them (a view in accordance with Emonds's (2012) derived nominal analysis of agreeing adjectives). The structure in which the *jez*-marked determiner or adjective modifies an overt noun was originally an appositive construction combining a *jez*-marked elliptic nominal and a lexical noun phrase. (41a), for example, must have meant something like 'to those ones, to houses'. In present-day Udmurt, there is no syntactic or prosodic evidence of apposition, i.e., the appositive structure must have been reanalyzed as a single noun phrase displaying determiner/adjective agreement.[12]

In Hungarian, the evolution of *-ik* from a possessive agreement suffix into a partitivity marker has been identified as a grammaticalization path, because it involves semantic bleaching (the loss of referential index and the loss of phi-features), and morphological simplification (the elimination of certain allomorphs). These properties also characterize the evolution of *-jez,* which, therefore, is also regarded by us as a grammaticalization process

In sum: the Udmurt contrastive *-jez* suffix has covered a grammaticalization path leading from possessive agreement marking to partitivity marking, similar to those of the Hungarian *-ik* and *-ja/je* suffixes. The path that *-jez* has covered is inbetween those covered by *-ik* and *-ja/je*: *-jez* can be attached to a pronoun or adjective modifying a lexical head like *-ik*, but it is not phonetically dissimilated from the possessive *-jez* like *-ja/je*.

(42) *The grammaticalization path of -jez from possessive agreement to partitive marking*
(i) 3SG possessive agreement with overt or covert N:
                    pro$_i$ DET/ADJ N+*jez*$_i$:   pro$_i$ *pokchi pi-jez*$_i$ 'the young son of him',
                    pro$_i$ DET/ADJ [$_N$ Ø]+*jez*$_i$: pro$_i$ *pokchi Ø-jez*$_i$ 'the young one of him'

(ii) partitive suffix: DET/ADJ [$_N$ Ø]+*jez*:   *pokchi Ø-jez* 'the young one [of those]'
         in appositive structure   *pokchi Ø-jez, ad'ami*
                                                          'the young one [of those], a man'
         in appositive structure: *pokchi-jez ad'ami*   'the young man [of those]'

3.2. From partitivity marking to object and subject marking

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[12] In Hungarian, we have evidence of a development similar to that illustrated in (41c). In Middle Hungarian, the demonstrative determiner formed an appositive construction with the noun phrase it modified; occasionally they were separated by intervening material (i), however, in Modern Hungarian they form a single nominal projection with the demonstrative acting as an agreeing DP-specifier (ii) – see Egedi (2015).

(i) Middle Hungarian   (ii) Modern Hungarian
     ar-rul   is az bibliá-nak **rész-é-rűl**   a Bibliá-nak **ar-ról**   a **részé-ről** is
     that-DEL too the Bible-DAT part-POSS-DEL   the Bible-DAT that-DEL the part-DEL too
     'about that part of the Bible, too'   'about that part of the Bible, too'(Pázmány (1613) 473)

Uralic languages are known to display differential object marking. The function of Uralic differential object marking has been discussed most thoroughly in connection with Khanty (Ostyak) by Nikolaeva (2001) (see also Dalrymple and Nikolaeva (2011), Bárány (2015a; 2015b), as well as Skribnik (2001), Virtanen (2015) and Sipőcz (2015) about Manysi, É. Kiss (2013a; 2017b) about Hungarian, Nikolaeva (2014) about Tundra Nenets, and Klumpp (2008) about Komi). As shown by Nikolaeva (2001), Khanty is a strict SOV language, where the subject also functions as the primary topic of the sentence. (If the underlying subject is the intended focus, the clause must be passivized.) The object can be focus in an [S (Adv) [vp O V]] structure, or secondary topic in an [S O (Adv) [vp V]] structure. Object-marking, which is manifested in Khanty by an object agreement morpheme on the verb, encodes the topicality (the structural topic position and the contextual givenness) of the object. In some Uralic languages, e.g., Northern Mansi, the topicality of the object is also marked on the object itself by a morpheme analyzed as an accusative case suffix. In example (43), the object of the main clause is new information, hence unmarked, whereas the object of the non-finite clause is contextually given, hence it bears accusative case:

(43) jänii **lyüüly** wöär-s-øm,　　wisy **kom-mø** jåt tåt-øs-løm.
　　 big mistake make-PST-1SG young man-ACC with bring-PST-OBJ.1SG
　　 'I made a big mistake when I took the boy with me.'　　　　　(Virtanen 2015: 36)

　　As argued by É. Kiss (2013a; 2017b), differential object marking encoding the secondary topic status of the object is subject to an inverse topicality constraint in many languages. The constraint does not allow a secondary topic to be more prominent than the primary topic of the same sentence in the person hierarchy 1SG > 1PL > 2SG > 2PL > 3SG > 3PL. This hierarchy has been claimed to represent a topicality/topicworthiness hierarchy (Moravcsik 1974; Givón 1975; Kiparsky 2008, etc.). What the inverse topicality constraint ensures is that the structural hierarchy of the topicalized constituents should not contradict their ranking in the topicality hierarchy. An object which is of a higher person than the topicalized subject of the same clause cannot be topicalized, it can only be construed as a focus. Various Uralic languages, among them Hungarian, have preserved this constraint, or the relics of this constraint. In Hungarian, for example, 1st and 2nd person objects cannot elicit object–verb agreement (44). As is also clear from (44a), the 1st ad 2nd person singular object pronouns cannot receive the accusative -t suffix – unlike the 3rd person object prounouns in (44b) (É. Kiss 2017b).

(44) a. Péter lát-Ø　　engem/téged.
　　　　Péter see-3SG me /you
　　　　'Peter sees me/you.'

cf. b. Péter **lát-ja-Ø**　**ő-t**　/**ő-k-et**.
　　　　Péter see-OBJ-3SG he-ACC /he-PL-ACC
　　　　'Peter sees him/them.'

　　Differential object–verb agreement, differential accusative marking, and the inverse topicality constraint represent different aspects of the same grammatical system, which serves to encode the topic versus focus role of the object, and, more generally, the information structure of the clause. Although none of the present-day Uralic languages has preserved all three of these ingredients, each ingredient has survived in more than one language, which suggests that they represent shared heritage of the Uralic family (É. Kiss 2017b). Differential object–verb agreement has survived, for example, in Khanty, Manysi, and the Samoyedic languages, differential accusative marking has survived in Eastern Manysi and Komi, whereas

the inverse topicality constraint has survived in Hungarian, Eastern Khanty, and the Samoyedic languages

In the system that can be reconstructed for Proto-Uralic (É. Kiss 2017b), and which has partially been preserved in present-day Uralic languages, the object is marked by a case suffix and/or by verbal agreement if it is topical. A topical object is specific, having a referent identical with, or representing a subset of, a previously introduced referent, and it occupies a VP-external topic position in sentence structure. The semantic-pragmatic content of topicality is familiarity, which corresponds in present-day Khanty to contextual activation (Nikolaeva 2001). A definite noun phrase introducing a new referent into the domain of discourse does not trigger agreement – as shown by the minimal pair in (45):

(45) a. What happened?
         ma   tam kalaŋ   we:l-s-əm.   (Khanty)
         I   this reindeer kill-PST-1SG
         'I killed this reindeer.'
cf.
     b. What did you do to this reindeer?
         ma   tam kalaŋ   **we:l-s-e:m.**
         I   this reindeer kill-PST-OBJ.1SG
         'I killed this reindeer.'   (Nikolaeva 2001: (14))

Agreeing objects in Nenets must also be specific, i.e., contextually given:[13]

(46) **Wera-m**,   xīb'a   lad∘ə-da?   (Tundra Nenets)
     Wera-ACC   who   hit-OBJ.3SG
     'Who hit Wera?'   (Nikolaeva 2014: 208)

In Hungarian, object–verb agreement has been generalized from topical objects to all definite objects, irrespective of their structural position. However, in Old and Middle Hungarian texts we can still find sporadic examples of topical specific indefinite objects triggering verbal agreement (see É. Kiss 2015: 58), for example:

(47) **Kit**   Amasias kiral auag pap   gakorta **getre-tt-e-Ø**   čapasockal
     whom Amasias king or   priest often   tortur-PAST-OBJ.3SG blows.with
     'whom king or priest Amasias often tortured with blows'

In Modern Hungarian (and in the majority of Old and Middle Hungarian cases, as well), verbal agreement is elicited by definite objects also when they are focussed:

(48) János **kinek   a könyvé-t veszített-e-Ø** el?   (Hungarian)
     John   who-DAT the book-ACC lost- OBJ-3SG PRT?
     'Whose book did John lose?'

The differential accusative marking preserved in Eastern Manysi and Komi has attrited in some of the Uralic languages, and has extended in others. In Khanty, for example, only objects represented by personal pronouns are case-marked. In early Old Hungarian, accusative marking has been extended from topical objects to all objects (É. Kiss 2013b) – except for 1st

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[13] As the subject question in (46) illustrates, objects in Nenets – unlike Khanty objects – can also function as primary topics.

and 2nd person singular objects as a relic of the inverse topicality constraint.[14] Thus the hypothesized system of differential object–verb agreement and differential accusative marking inherited from Proto-Uralic have evolved in Hungarian as follows:

(49) *The evolution of differential object marking in Hungarian*
topical-object – verb agreement → definit-object – verb agreement
accusative marking of topical objects → accusative marking of all objects

   We argue that Udmurt shares the property of differential object marking characterizing most Uralic languages; it displays differential accusative marking, and its accusative suffix is *-jez*. Udmurt *-jez*-marked objects include not only contextually activated objects, but also uniquely identifiable objects whether or not they are contextually given or new, among them proper names, personal and demonstrative pronouns, and lexical objects bearing a possessive agreement suffix. For example:

(50) a. Mon *ton/**ton-e**   magazinyś adʒ'i.
         I   you/you-ACC shop.ABL   see.PST.3SG
         'I saw you in the shop.'

     b. Mon   *Saša/**Saša-jez**   magazinyś adʒ'i.
         I   Sasha/Sasha.ACC shop.ABL   see.PST.3SG
         'I saw Sasha in the shop.'

     c. Mon *so kńiga/**so-ze**   **kńiga-jez** utćaj   otyn.
         I   that book/that-ACC book-ACC search.PST.1SG there
         'I searched for that book.'

Generic objects, e.g. that in (51a), are also marked by *-jez*, as opposed to existential objects, e.g. that in (51b).

(51) a. Ug   jaratky   ďeťekťivnoj **roman-jos-yz**.
         NEG.PRS.1SG like.CNV.SG   detective   novel-PL-ACC
         'I don't like detective novels.'

     b. D'eťekťivnoj roman-jos śeďti   biblioťekayś.
         detective   novel-PL find.PST.1SG library.ABL
         'I found detective novels in the library.'

We also find specific indefinite objects marked by *-jez* (Tánczos 2016: 44-48), e.g.:

(52)   Mon odig **puny-jez** utćaśko.
         I   one dog-ACC   search.PST.1SG
         'I am searching for a (specific) dog.'

The causee argument of causative constructions also tends to be *-jez*-marked (as was illustrated in (13), obviously because it is specific/familiar in practically all conceivable situations.

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[14] The generalized accusative suffix of Hungarian, *-t*, is other than the *-m* object marker reconstructed for Proto-Uralic. According to Beke (1931), it derives from the 2SG possessive morpheme.

These examples indicate that the 'specificity' feature eliciting object marking is interpreted more broadly in Udmurt than, e.g., in Khanty; an object is *jez*-marked not only when its referent is contextually activated but also when it is present in the discourse situation or in the universe of the discourse participants. The topic position of the object, however, is not a condition of *jez*-marking any longer. That is, accusative marking in Udmurt has undergone a further change (similar to, though not quite identical with, that attested in Hungarian): in addition to extending the notion of specificity to unique objects and generics, Udmurt has also extended accusative marking from topical specific objects to all specific objects.

What makes *-jez* suitable for the role of specific object marking is that the semantic-pragmatic content of specificity, identified as familiarity, subsumes partitivity. According to Enç (1991: 7), specific noun phrases triggering differential accusative marking in Turkish are interpreted semantically as partitive – given that a noun phrase is specific if its referent is in a subset–superset relation with a referent that is already present in the domain of discourse.[15] (In the case of definite noun phrases, this condition is trivially satisfied, as a set is a subset of itself.) Familiarity is a wider notion than partitivity in as much as a noun phrase counts as familiar also when its referent bears a subset relation to a referent not present in the domain of discourse but present in the universe of the discourse participants.

As was illustrated in (18)-(19), *-jez*-marking can also target subjects. The *-jez*-marked subjects cited in the literature and those occurring in our corpus all involve topical subjects. The *-jez*-marking of topical subjects is not general though. It is attested when the subject is in a part–whole relation to a previously mentioned referent, i.e., when it is partitive, as illustrated by the following 19th century example:

(53) soki̯ ad'amilän ńań tuž udaltoz vi̊läm - užatäk veś
    then man.GEN grain very grow.FUT.3SG be.PRET.3SG workless whole
    kuro-ez-no, **šep-ez**-no čisto ńań luoz vi̊läm.
    stem-JEZ-too ear-JEZ-too all grain become.FUT.3SG be.PRET.3SG
    'At that time, people's grain would yield very much, without work the stem and the ear would become full of grains.'   (Munkácsi 1887: Text III/4)

-jez is also common on the subjects of locative sentences, whose referent is in a part-whole relation with the location – as was illustrated in (18a), and is illustrated in (54). (54a) would be appropriate in a situation where the question under discussion is which of the attributes of a city the given city has.

(54) a. Kar-yn **zoopark-ez** vań.
       city-INE zoo-3SG is
       'In the city, a zoo exists.'   (Edygarova 2015:15)

    b. Sad-yn **pispu-os-yz** śaśkajaśko.
       garden-INE tree-PL-JEZ blossom.PRS.3PL
       'In the garden, the trees are blossoming.

In (18b,c), rewritten here as (55a,b), the referents of the subjects represent part of the physical environment of the discourse (according to Nikolaeva (2003), they are available for direct sensory perception).

(55) a. **Kalyk-ez** tros.

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[15] The term 'specific' also has other meanings, see Farkas (2002).

people-JEZ　many
　　　'The people are many.'　(Winkler 2001: 32)

　　b.　**Gureź-ez**　　žužyt.
　　　mountain-JEZ high
　　　'The mountain (here) is high.'

　　We assume that the partitive *-jez* – while preserving its partitivity-marking role – has passed the following grammaticalization path:

(56) *The grammaticalization path of -jez from partitivity marking to specific object marking*
poss. agr.⟶partitivity marker　⟶　marker of topical objects⟶ marker of specific objects

　　　　　　　　　　　　　⟶　optional marker of partitive topical subjects

4. Conclusion

This paper has argued that the seemingly different roles that the suffix *-jez* plays in Udmurt grammar are cognate, and represent subsequent stages of a developmental path. The primary function of *-jez* is to cross-reference a 3SG possessor on the possessum. The evolution of additional functions must have been set off by the fact that the possessor can be a phonologically empty pro, which could easily be reinterpreted as an implicit possessor not represented syntactically, causing the *-jez* suffix to be reanalyzed as a partitivity marker. The partitive suffix has developed into two slightly divergent directions. Attached to the determiner or modifier of an (often ellipted) nominal, it has assumed a contrastive interpretation. On objects and subjects, it marked partitivity and topicality. Topical object marking has evolved into specific object marking – with no respect to the topic or focus status of the object.

　　We have argued that the developmental path of *-jez*, leading from possessive agreement through partitivity marking to specific object marking, represents a grammaticalization process. This possibility was already raised by Fraurud (2001), but it was discarded by her for two reasons. First, the process does not display every characteristic feature of grammaticalization. The starting point of a typical grammaticalization path is a lexical item, which develops into a grammatical function word, undergoing semantic bleaching, morphological reduction, and phonological erosion on the way, and becoming obligatory in specific contexts. Indeed, the starting point of the change we have surveyed is not a lexical word but an agreement suffix, however, it is a suffix cross-referencing a lexical noun phrase, encoding its phi-features. That is, although it is not a lexical item with a rich descriptive content, it is a morpheme having person and number features, capable of co-referring, assumed to be cognate with the 3SG personal pronoun (Kozmács 2006). In the course of its developmental path, *-jez* has undergone semantic simplification, losing its phi-features, as well as morphological reduction, losing some of its allomorphs, although its phonological forms have remained unchanged in its new functions. It has become obligatory in some of its new roles; e.g., specific existential and universal pronouns, denoting subsets of a contextually given set, are obligatorily *jez*-marked.

　　The other reason why Fraurud (2001) believed the grammaticalization hypothesis to be unverifiable was that the history of Udmurt is not known long enough for any changes to be documented. The sister languages she examined provide no clues for the reconstruction of a developmental path, either. Fraurud, however, did not study Hungarian. We have shown that Hungarian, a sister language with an 800-year long documented history, does provide

evidence of changes similar to the two phases of the hypothesized evolution of the Udmurt 3SG possessive agreement suffix. In the historical documents of Hungarian, we can keep track of how a 3rd person possessive agreement developed into a partitivity marker, and how object marking (via object–verb agreement), first targeting topical, syntactically specific, semantically partitive objects, came to be extended to all definite objects with no regard to their structural position and information status.

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List of abbreviations
ABL
ACC
CAUS
CNV
DAT
FUT
GEN
ILL
INE
INF
INS
OBJ
PASS
PAST
PL
POSS
POT
PRES
PRET
PRT
PTCP
SG
SUB
SUBJ