

Plural formation in Istro-Romanian numeral quantifier phrases: inflexional calquing from Croatian?

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Abstract

We explore the effects of prolonged contact with Croatian on the inflexional morphology of number-marking in the Istro-Romanian noun. One result of a reorganization of the nominal system is that certain bisyllabic plural desinences, originally associated with *feminine* gender, are reassigned to the masculine, and come to exist alongside other modes of masculine plural marking. The resultant variation in masculine plural inflexion becomes subject to new patterns of distribution which are clearly sensitive to Croatian models, including the exaptation of masculine plural morphology to provide distinctive specialized morphological marking of plurals in

certain numeral quantifier expressions for ‘smaller’ numbers, in ways clearly reminiscent of Croatian. What is involved is a complex array of ‘pattern’ borrowing, although there is also some evidence for ‘matter’ borrowing of a dialectal Croatian plural ending which Istro-Romanian sometimes uses in numeral quantifier phrases with higher numerals. Overall, we seem to be in the presence of an emergent ‘numerative’. While the creation of numeratives is well known from the *internal* history of various languages, our data may show that they may also emerge through language contact.

Keywords: numeratives, *genus alternans*, Istro-Romanian, Croatian, contact.

1. Introduction

1.1 Aims and data

This article explores some complex effects on Istro-Romanian noun morphology of centuries of contact¹ with Croatian. The descriptive literature on this contact seems to reflect the widespread perception that one language’s morphology is unlikely to be influenced by another language’s morphology, especially if the languages in contact are not genetically close (see Petrovici & Neiescu 1964: 192, but also, e.g., Flora 1962; Kovačec 1963, 1966, 1968). Our conclusion is that, in fact, contact with Croatian generated extensive and complex morphological changes in Istro-Romanian morphological marking of number, involving a kind of calquing such that indigenous morphological material was redeployed according to patterns of distribution originating in Croatian, so that there begins to emerge what appears to be a special ‘numerative’ form. We base this conclusion on a detailed examination of our corpus of late-nineteenth texts and of mid-twentieth century texts and sound recordings. This corpus was compiled by us from collections of dialect texts,² from the two Istro-Romanian linguistic atlases (Filipi 2002; Flora 2003), from Neiescu (2011-)'s (still unfinished) Istro-Romanian dictionary, and not least from the fieldnotes and sound recordings held in Oxford’s Hurren archive³ and containing fieldwork carried out in the 1960s, together with our fieldwork carried out in 2020.⁴

We shall seek to establish how the dominant language, Croatian, has influenced the morphology of Istro-Romanian plural marking, specifically in numerical quantifier phrases. And we shall seek to show that this influence has occurred both in respect of ‘matter’ (MAT) borrowing—where ‘morphological material and its phonological shape from one language is replicated in another language’ and in respect of ‘pattern’ (PAT) borrowing—where ‘only the patterns of the other language are replicated, i.e. the organization, distribution and mapping of grammatical or semantic meaning, while

¹ See Pușcariu (1926: 23, 31); Kovačec (1971: 28); Dragomir (1924a,b).

² We have drawn on the following collections of texts: Glavina/Diculescu (1905); Popovici (1909); Pușcariu (1905, 1929); Morariu (1928, 1929, 1932, 1933); Cantemir (1959), but also Sârbu (1992); Sârbu & Frățilă (1998); Kovačec (1998).

³ This archive contains over 30 hours of sound recordings made by Tony Hurren from 1966 to 1967. Hitherto unpublished, it may now be consulted on *The Oxford University Research Archive* <https://ora.ox.ac.uk/objects/uuid:9c7e2da8-ae4a-434c-8dbe-589afbaa2cb6>.

⁴ The fieldwork (under Covid conditions, which prevented us from travelling ourselves to Croatia) was carried out on our behalf in November 2020, by our Croatian colleague Dr Ana Werkmann Horvat to whom we are extremely grateful.

the form itself is not borrowed' (Sakel 2007: 15; also Sakel & Matras 2004, Matras & Sakel 2007). As Sakel points out 'In many cases of MAT-borrowing, also the function of the borrowed element is taken over, that is MAT and PAT are combined'. We shall see how MAT and PAT borrowing may be intricately intertwined. We need first to present more detail about the history of Istro-Romanian and its relation with Croatian.

1.2 About Istro-Romanian and its relation with Croatian

Istro-Romanian⁵ is classified in the *UNESCO Atlas of the World's Languages in Danger* as 'severely endangered'.⁶ It is one of the four major varieties of 'Daco-Romance', the name given to that branch of the Romance languages principally represented by Romanian, and including Aromanian and Megleno-Romanian. Istro-Romanian is spoken in the Istrian peninsula, Croatia, by people who are probably descendants of the Balkan Vlachs (for the whole question, see, among others, Kovačec 1971: 30-32). There are about 120 fluent, mainly elderly, speakers left in Istria,⁷ and the language is also spoken in a number of small diasporic communities outside Croatia.⁸ There are two varieties, one spoken north of Mt Učka in the village of Žejane, the other in some villages and hamlets south of Mt Učka, particularly Šušnjevića, Nova Vas, and Brdo. In Istria, all speakers of Istro-Romanian are bilingual with Croatian, and speak both standard Croatian and the local (Čakavian) dialect.⁹ In Žejane, speakers use a version of the Čakavian dialect which is highly affected by the standard, most probably because of close links with the nearby urban centre Rijeka (Kovačec 1971: 20). Speakers of the southern variety also speak a Venetian Italo-Romance dialect. Until the mid 1960s pre-school-age children were monolingual in Istro-Romanian (Kovačec 1971: 13),¹⁰ but the situation has changed dramatically both in the north and the south because of the advanced decline in the population, internal migration towards the city, and the phenomenon of mixed families using both languages. Thus in Žejane, in 2009, there were only six (fluent) speakers aged between 25 and 50 and none under 25 (Vrzić & Singler 2016: 52).

The respective domains of use of Istro-Romanian and dialectal and/or literary Croatian have also shifted fundamentally since the 1960s. Istro-Romanian has progressively shrunk while Croatian has expanded and become dominant: speakers aged up to 50 are Croatian-dominant, while older speakers are reckoned (Vrzić & Singler 2016: 52) to be balanced bilinguals. In the south, speakers aged over 50 communicate in Croatian with their children, a phenomenon not unknown in Žejane,

⁵ We use the scientific name 'Istro-Romanian': the names used by the speakers are *žejānski* (the northern variety) and *vlāški* (the southern variety).

⁶ Our recent fieldwork suggests that Istro-Romanian is actually 'critically endangered': there are very few active, fluent, speakers, and they are overwhelmingly elderly, while transfer of the language to younger generations is precarious because Croatian is preferred even in situations where Istro-Romanian used to be employed.

⁷ According to the estimate of Vrzić & Singler (2016: 52). This is backed up by data obtained, especially from Mr Pepo Glavina, during our first round of fieldwork in 2019.

⁸ We have made contact with members of these communities in Australia and USA, but we have not yet managed to establish their numbers nor, especially, to test their first language attrition.

⁹ There may also have been a connexion between the migrations that carried central Čakavian and those that carried Istro-Romanian to the area (Kalsbeek 1998: 18-19). See also Ribarić (1940: 7) and Małecki (1930: 80).

¹⁰ But see also Petrovici & Neiescu (1964: 188).

although there speakers still tend to communicate with their children in Istro-Romanian (Vrzić & Singler 2016: 65).

The Istro-Romanian case shows that the relation between a dominant language/variety and a recipient language is not always of the 'one-to-one' type.¹¹ The central (Lukežić (1990)Čakavian dialects have become dominant (at least in speakers under 50), but in turn both Istro-Romanian and Čakavian are under pressure from standard Croatian.¹² As Kalsbeek (1998: 21) puts it: 'It goes without saying that in recent decades standard Croatian has had a considerable impact on the linguistic usage of speakers [...], through the influence of school and the media [...]. This influence is especially strong on the lexical level, where it is apparent even when people are speaking to fellow dialect-speakers in domestic settings. Virtually all speakers who have had their education after 1945 have a good command of the standard language and are used to switching among pure dialect, mixed dialect/standard, and standard Croatian, depending on the situation and the topic of conversation'.

2. Aspects of nominal morphology and number-marking in Istro-Romanian, Daco-Romance, and Croatian

2.1 Daco-Romance number marking, gender, and the genus alternans

Both northern and southern Istro-Romanian varieties mark number (singular vs plural) inflexionally on nouns, a property they share not only with other Daco-Romance varieties but also with Croatian.¹³ The relation of number to gender in Istro-Romanian is, however, historically complicated, and this in a way not paralleled in Croatian. Istro-Romanian, like all other Daco-Romance varieties, inherited a large and productive class of nouns sometimes labelled the *genus alternans* ('alternating gender'). For an account of the origins and history of the *genus alternans* see Maiden (2016): its principal characteristic is that its members show exclusively masculine agreement in their singulars, but exclusively feminine agreement in their plurals; a further, purely semantic, property is that its members have exclusively 'abiotic'¹⁴ reference. Examples 1-3 illustrate the *genus alternans* in modern Romanian, showing on the one hand masculine and feminine (1 and 2) and, on the other, gender-alternating nouns (3):

- | | | |
|--------|--------------------------|---------------------------|
| (1) a. | <i>par înalt</i> | <i>pari înalți</i> |
| | pole high _{MSG} | poles high _{MPL} |
| | high pole | high poles |
| b. | <i>băiat înalt</i> | <i>băieți înalți</i> |
| | boy tall _{MSG} | boys tall _{MPL} |
| | tall boy | tall boys |

¹¹ Cf. Sakel (2007: 21): 'A language can be dominant in one contact situation, while dominated in another.'

¹² See also Thomason (2014: 205) on standard-dialect pressures via schools.

¹³ See, for example, Brozović & Ivić (1988), Vuković & Langston (2020). In Čakavian dialects prosodic distinctions are also involved in number-marking. For further details see Langston (2006: 131).

¹⁴ Not simply 'inanimate', as sometimes claimed, because names of plants also never belong to the *genus alternans*. See, e.g., Maiden et al. (2021: 55, 66).

- (2) a. *masă înaltă* *mese înalte*
 table high_{FSG} tables high_{FPL}
 high table high tables
- b. *fată înaltă* *fete înalte*
 girl tall_{FSG} girls tall_{FPL}
 tall girl tall girls
- (3) a. *scaun înalt* *scaune înalte*
 chair high_{MSG} chairs high_{FPL}
 high chair high chairs
- b. *raft înalt* *rafturi înalte*
 shelf high_{MSG} shelves high_{FPL}
 high shelf high shelves

Genus alternans nouns in Romanian generally display one of two inflexional plural endings, *-e* (also found in many purely feminine nouns: cf. 2a,b and 3a), and (cf. 3b) *-uri*. This ending *-uri* was originally *-ure*, the form which it retains in Istro-Romanian. The plural desinence *-uri* / *-ure* is unique to *genus alternans* nouns, which means that nouns bearing it are uniquely identifiable as belonging to the *genus alternans*. In the Romanian grammatical tradition, the *genus alternans* is normally called the ‘neuter’ gender but, for reasons developed in Maiden (2016), this label is misleading, and it is very doubtful whether Daco-Romance has a third, ‘neuter’, gender, distinct from masculine and feminine, as the label implies. What matters for our analysis of Istro-Romanian in the context of contact with Croatian, however, is that, even if we call the IR *genus alternans* a ‘neuter’, this ‘neuter’ would not map on to its Croatian namesake.¹⁵ Semantically, Croatian neuters are not ‘abiotic’ (they can denote plants, for example) nor even exclusively inanimate (for example, the word for ‘child’ is neuter); morphosyntactically, Croatian neuters not only have a set of distinctive desinences on nouns, both in the singular and in the plural, but also (unlike Daco-Romance) have a morphologically distinct set of endings on agreeing elements, such as adjectives, as well. The three genders of Croatian are illustrated in examples (4) (masculine), (5) (feminine), and (6) (neuter).

- (4) *Jedan je dječak visok. Mnogi su dječaci visoki.*
 one_{MSG} is boy tall_{MSG} many_{MPL} are boys tall_{MPL}
 One boy is tall. Many boys are tall.

¹⁵ Istro-Romanian has in fact borrowed some neuter morphology from Croatian, using the distinctive Croatian neuter singular inflexional marker *-o* in nouns, adjectives, possessives, and determiners. To date there is no complete study of Croatian neuter morphology in Istro-Romanian, apart from the observations in Kovačec (1963; 1966; 1968; 1971), Petrovici (1967). Recently, Loporcaro, Gardani, & Giudici (2021) have addressed the complexity of gender overdifferentiation in Istro-Romanian, drawing attention to the development/enrichment of the paradigm of agreement targets. For the adverbial use of Istro-Romanian adjectives in *-o*, see e.g., Sala (2013: 222f.).

- (5) *Jedna je djevojka visoka. Mnoge su djevojke visoke.*
 one_{FSG} is girl tall_{FSG} many_{FPL} are girls tall_{FPL}
 One girl is tall. Many girls are tall.
- (6) a. *Jedno je stablo visoko. Mnoga su stabla visoka.*
 one_{NSG} is tree tall_{NSG} many_{NPL} are trees tall_{NPL}
 One tree is tall. Many trees are tall.
- b. *Jedno je dijete visoko. Mnoga su djeca visoka.*
 one_{NSG} is child tall_{NSG} many_{NPL} are children tall_{NPL}
 One child is tall. Many children are tall.

What marks out Istro-Romanian from other Daco-Romance varieties, however, is that the *genus alternans* is severely in retreat. The general view (e.g., Popovici 1914: 64-71; Pușcariu 1926: 140-146; Kovačec 1971: 83-85) is that the southern variety of Istro-Romanian still retains some *genus alternans* nouns while in the northern variety the alternating agreement pattern has been completely lost. Here, original *genus alternans* nouns, which have been masculine in the singular *ab origine*, have correspondingly also become masculine in their plurals. Crucially, however, loss of the feminine plural agreement from *genus alternans* nouns in the north does not necessarily entail loss of the distinctive inflexional plural markers of the old *genus alternans*: in many nouns the desinences -ure (and -e) survive as plural markers, although the relevant plurals show only masculine agreement. The result is that there emerge masculine plural nouns that still bear the old *genus alternans* plural endings -ure or -e.

2.2 Croatian case and the quantificational genitive

While Istro-Romanian and Croatian each mark both number and gender (albeit in somewhat different ways), a respect in which these languages are different is the morphological marking of case. Where Croatian has a rich system of morphological case-marking (with distinctive marking for nominative, accusative, genitive, dative, and instrumental cases) Istro-Romanian case-marking is, at best, vestigial and limited. In both varieties, morphological case distinctions are absent at least in nouns (and adjectives), although for Žejane it is claimed¹⁶ that genitive-dative case continues to be inflexionally distinguished in feminine singular nouns (a pattern also found in standard Romanian). In Žejane (in common with most other Daco-Romance varieties), case distinctions are however marked on the definite article, in both genders and both numbers (see Kovačec 1971: 106).

It will be particularly relevant to our discussion of number-marking in Istro-Romanian to describe briefly one respect in which case-marking and number interact in Croatian. This is the so-called ‘quantificational genitive’,¹⁷ a phenomenon which

¹⁶ Popovici (1914: 64, 68) indicates the complete absence of the genitive-dative case-form; yet cf. Pușcariu (1926: 148); Kovačec (1971: 99). For further discussion of the history of inflexional case-marking in Daco-Romance and particularly Romanian feminines, see Maiden (2015); Maiden et al. (2021: 75-83).

¹⁷ See other observations in Šarić (2014). For a different view, see Lučić (2015: 23), who shows that ‘[i]n combination with the cardinal numerals “two”, “three”, or “four”, masculine nouns ending in a consonant (e.g., *prozor* ‘window’) and neuter nouns (e.g., *selo* “village”, *srce* “heart”) take a form which is identical to the genitive singular (*dva prozora, tri sela, četiri*

Croatian shares with other Slavonic languages. Basically, if the numeral is a low one, in the range ‘two, three, four’, in standard Croatian the nominal is in the genitive singular (7), but if the number is ‘five’ or greater (8) the nominal is in the genitive plural:¹⁸

(7)	<i>dva</i>	<i>tri</i>	<i>četiri</i>	<i>krova</i>
	two	three	four	roof.M.SG.GEN
	<i>dve</i>	<i>tri</i>	<i>četiri</i>	<i>devoјčice</i>
				girl.F.SG.GEN
	<i>dva</i>	<i>tri</i>	<i>četiri</i>	<i>deteta</i>
				child.N.SG.GEN
(8)	<i>pet</i>	<i>krovova</i>		
	five	roof.M.PL.GEN		
	<i>pet</i>	<i>devoјčica</i>		
		girl.F.PL.GEN		
	<i>pet</i>	<i>jezera</i>		
		lake.N.PL.GEN		

In the Čakavian dialects the situation is even more complicated. Once one gets above ‘two’, masculine and neuter nouns select the genitive singular form. With ‘three’ and ‘four’ the nominative plural form is selected, while from ‘five’ upwards the genitive plural is selected (9, 10, 11).¹⁹

(9)	<i>dva</i>	<i>krovà</i>		
	two	roof.M.SG.GEN		
(10)	<i>trî</i>	<i>četiri</i>	<i>krovî</i>	
	two	four	roof.M.PLNOM	
(11)	<i>p'êt</i>	<i>krovi</i>		
	five	roof.M.PL.GEN		

In Daco-Romance generally, in contrast, there is no such morphological distinction, one and the same, plural, form being used for all numerals from ‘two’ upwards. The position is not so straightforward, however, precisely in the one Daco-Romance variety that has been in contact with Croatian—Istro-Romanian.

3. Plural formation and numerical quantifiers in Istro-Romanian

3.1 Does Istro-Romanian have special plural forms in numerical quantifier phrases?

In monographic studies of Istro-Romanian (Popovici 1914; Puşcariu 1926), numerical quantifier phrases, and the behaviour of masculine and *genus alternans* nouns in such phrases, are usually ignored, the implication being that the situation must be as in Romanian. However, there is one—largely unnoticed—allusion to the issue by

srca), while feminine nouns (e.g., *kuća* “house”, *kost* “bone”) take a form which is identical to the nominative plural (*tri kuće*, *dvije kosti*).

¹⁸ Examples in Croatian are adapted from Šarić (2014).

¹⁹ See Kalsbeek (1998: 276-280; 474).

Kovačec (1971: 87), who states that in his questionnaire-based survey very many speakers of the southern variety, of all ages, produced *masculine* plural forms for otherwise *genus alternans* nouns, especially after the numerals ‘two’, ‘three’, ‘four’, ‘five’, but in several cases after numerals from ‘two’ to ‘ten’: e.g., *trej vârĥ* ‘three peaks’ instead of *trej vârĥure*. The material in our own corpus of texts also suggested the existence of morphological differentiation of plural forms when used with such numerals. Our fieldwork tested²⁰ the use and extent of the Istro-Romanian (originally *genus alternans*) plural ending *-ure* in the nominal system, by means of a questionnaire comprising 61 questions eliciting information on ten nouns.²¹ These all have almost the same syllable structure (nine of them are monosyllables),²² but have different origins (most of them are of Slavonic origin, either loans from old Slavonic (*biĥ* ‘whip’), or loans from Croatian (*káun* ‘beak’, *grob* ‘grave’, *pvs* ‘belt’, *kris* ‘bonfire’, *krov* ‘roof’, *kuk* ‘hip’), while *pvr* ‘pair’ may have a multiple origin and the history of *pvt* ‘bed’ is unclear. Two words involved were of Romance origin (*kop* ‘tor/kup’ ‘oven’ and *fok* ‘fire’). These are all count nouns which are part of basic, familiar, vocabulary. The first part of our questionnaire asked, in Croatian: ‘How do you say “one, two, three, four, five, ten, eleven, etc., [followed by the relevant noun]”?’. The noun whose plural morphology was being investigated was specified only for the numeral ‘one’; thereafter the only prompt was the numeral, leaving the speakers to specify the relevant form of the noun.²³ Before we present the results and their interpretation, a brief word is in order about the IR numeral system. In our questionnaire we obtained the numerals *doj* ‘2’, *trej* ‘3’, *pvrtru* ‘4’, *ifinj* ‘5’, *deset* or *zefje / zetse* ‘10’, and *jede najst* ‘11’. Of these numerals, the words used for ‘2’, ‘3’, ‘4’, and ‘5’ are of Romance origin, while for ‘10’ we have either Croatian *deset* or Romance *zefje / zetse*, and for ‘11’ only the Croatian loan *jede najst*. In fact, from ‘5’ upwards there has been extensive borrowing of numerals from Croatian, the Romance and the Croatian forms sometimes coexisting under complex conditions which we explore in detail elsewhere (Uță Bărbulescu and Maiden in progress). Whether the Croatian etymology of some of the Istro-Romanian numerals has any bearing on the phenomena that we observe is at this point an open question.

²⁰ We used eight participants, four from the north, four from the south, five male, three female, aged between 51 and 70 with one person over 71. They had different levels of schooling and were all bilingual, two also indicating that they knew Italian. Of the eight, three had never left the locality where they were born while the remaining five had lived over six months elsewhere, mostly within Istria. Five used Istro-Romanian every day, one used IR once a week, and one rarely spoke the language (the other gave a generic evaluation). We give data from our own fieldwork in IPA. When our sources use other types of phonetic representation we have tried to preserve those transcriptions.

²¹ We were careful to distinguish three of these words (*pvr* ‘pair’, *pvs* ‘belt’, and *kuk* ‘hip’) from homophones meaning, respectively, ‘pole’, ‘step’, ‘cuckoo’. As will be apparent, we also received responses on an eleventh noun, *fok* ‘fire’, which some informants offered instead of *kris* (‘bonfire, Saint John's fire’).

²² For monosyllables, we observe a preference for plurals in *-ure*, but this does not rule out the possibility of other plural endings or neutralization of the number opposition.

²³ The structures investigated and the range of subjects interviewed were more restricted than we would have desired, due to the need to conduct the research by proxy under the conditions of the pandemic of 2020. In future research we intend to explore these structures in semi-spontaneous speech and also in the form of acceptability tests.

3.2 The situation in Žejane (northern Istro-Romanian).

There is no mention, in the literature on this dialect, of any special morphological behaviour of nouns modified by numerical quantifiers, with one exception. From the results of his fieldwork (1961-1963) in Žejane, Kovačec observes the extension of the ending *-ure* into the plurals of (masculine) nouns which had previously shown *neutralization* of the number opposition: thus the original *lup*_{SG} ‘wolf’ ~ *lup*ⁱ_{PL} first became invariant *lup*_{SG} ~ *lup*_{PL}—as a consequence of loss of palatalization of labial consonants under Croatian phonological influence—and then became *lup*_{SG} ~ ‘*lupure*_{PL}. These findings are confirmed by Hurren’s 1966-1967 survey, and further supported by our own. But we found that *-ure* has been extended not only into number-invariant nouns, but also into nouns which continue to mark the number opposition via consonantal alternations in the root (e.g., *jed*_{SG} ‘kid’ ~ *jez*_{PL} but also ‘*jezure*_{PL}). In addition, it must be noted again that in Žejane the alternating gender has been entirely lost, all original *genus alternans* nouns having been reanalysed as masculine in the plural as well as in the singular.²⁴

Only one participant in our survey used the same form for the plural when there was also a numeral quantifier as that used without such a quantifier; moreover, the ending selected for 57 tokens of the nouns with the quantifier in our questionnaire was *-ure* (Table 1):

Table 1. Unitary behaviour of nouns in responses from ST

	doi ‘2’	trei ‘3’	‘pōtru ‘4’	‘fintf ‘5’	‘deset ‘10’	jede ‘najst ‘11’
kλun ‘beak’	-ure	-ure	-ure	-ure	-ure	-ure
kup ‘tor ‘oven’	-e	-e	-e	-e	-e	-e
grob ‘grave’	-ure	-ure	-ure	-ure	-ure	-ure
pōr ‘pair’	-ure	-ure	-ure	-ure	-ure	-ure
bič ‘whip’	-ure	-ure	-ure	-ure	-ure	-ure
kris ‘bonfire’	-ure	-ure	-ure	-ure	-ure	-ure
fok ‘fire’	-ure	-ure	-ure	-ure	-ure	-ure
krov/ krou ‘roof’	-ure	-ure	-ure	-ure	-ure	-ure
kuk ‘hip’	-ure	-ure	-ure	-ure	-ure	-ure
pōt ‘bed’	-ure	-ure	-ure	-ure	-ure	-ure

For the word *kuk* ‘hip’, all informants from Žejane (ST, RD, MD, ŽD) gave only *-ure* regardless of the presence of a numeral quantifier. Similarly, for *kup ‘tor* ‘oven’, three participants (ST, MD, and ŽD) gave only the form in plural *-e*, likewise for *krov/krou*,

²⁴ See, e.g., Kovačec (1971: 87-89.) For a broader discussion, see Uță Bărbulescu & Maiden (2022: 187-208).

for which ST, MD, and ŽD gave the same forms in *-ure* with or without a numeral quantifier, while for *bif* ‘whip’ and *kăun* ‘beak’, ST, RD, and ŽD offered only the form in *-ure*. Yet for *fok* ‘fire’ and *kris/kres* ‘bonfire’ only ST and ŽD gave just *-ure*, while ST and MD also gave *-ure* for the nouns *păt* ‘bed’ and *grob* ‘grave’. In all other cases the *-ure* form alternates with, or is even replaced by, other plural forms. The sole context in which speaker ST admitted a plural form other than *-ure* was with the indefinite *‘fuda* ‘many’ (borrowed from Croatian). But these forms are quite marginal with respect to *-ure*, which is preferred with the indefinite *‘fuda* (Table 2):

Table 2. Behaviour of nouns in numeral quantifier phrases vs phrases with indefinite *‘fuda* in responses from ST

	doi ‘2’	‘fuda ‘many’
krōmp ‘pickaxe’	‘krōmpure	‘krōmpi/ ‘krōmpure
gnoi ‘manure’	‘gnojure	gnoi
grozd ‘grape’	‘grozdure	‘grozdi

Informant ST uses Istro-Romanian every day and has never been away from his home community for more than six months: in his case we find extension, not to say generalization, of *-ure* as plural marker to numerals from ‘two’ upwards. ŽD also uses the language daily and has never been away from the home community for longer than six months: for him, six out of ten nouns show this behaviour (*kăun* ‘beak’, *kup’tor* ‘oven’, *bif* ‘whip’, *fok* ‘fire’, and *kris/kres* ‘bonfire’, *krov/krou* ‘roof’, *kuk* ‘hip’). RD and MD, who have been away for over six months, keep the same form regardless of the numerical quantifier, for three out of ten nouns (RD) and five out of ten (MD): RD uses Istro-Romanian daily and MD perhaps once a week.

The behaviour of nouns modified by low numerals (‘two, three, four’) is relatively stable: if *-ure* is selected with ‘two’, then it is also selected with ‘three’ and ‘four’ and frequently so for ‘five’, but the threshold for selection or acceptance of any form of plural is, usually, ‘ten’ (Table 3):

Table 3. Plurals in low numerical quantifier phrases vs high numerical quantifier phrases

	doi ‘2’	trei ‘3’	‘pōtru ‘4’	‘fintf ‘5’	‘deset ‘10’	jede ‘naist ‘11’
kup’tor ‘oven’	kup’torure			kup’torure	kup’tore	kup’tore
grob ‘grave’	‘grobure	‘grobure	‘grobure	‘grobure	‘grobri [sic]	‘grobri
	‘grobure	‘grobure	‘grobure	‘grobure	‘grobi/ ‘grobure	‘grobure
pōr ‘pair’	‘pōrure	‘pōrure	‘pōrure	‘pōrure	‘pōrure/ ‘pōri	‘pōri
kris/kres ‘bonfire’	‘kresure			‘kresure	‘kresurle/ ‘kresure ‘kresi	
krov/ krou ‘roof’	‘krowure	‘krowure	‘krowure	‘krowure	‘krovi	‘krowure
păt ‘bed’	‘păture	‘păture	‘păture	‘păture	‘pătis	‘păture
krōmp ‘pickaxe’	‘krōmpure			‘krōmpi	‘krōmpi/ ‘krōmpure	
pōs ‘belt’	‘pōsure			‘pōsi	‘pōsi/ ‘pasure	

The forms that occur with ‘ten’ are either the primary ones, such as *kup'tore* ‘ovens’, or are modelled on nouns which mark the number opposition by consonantal or vocalic alternation. But for the other nouns in Table 3, the plural in [-i] cannot be explained as an adaptation to the inherited system. In word-final position, IR shows devocalization of the ending -i in words inherited from Latin, the fully vocalic -i occurring only after *muta cum liquida*. The plural type *'grobi* ‘graves’, *'pøri* ‘pairs’, *'krovi* ‘roofs’ is due to the influence of the Čakavian dialect, which has this ending in the nominative-accusative and in the genitive plural.²⁵ In just one case, the threshold remains ‘ten’, but the form presented is the one that shows neutralization of plural marking (Table 4):

Table 4. ‘Ten’ as threshold for neutralization of number oppositions

	doi '2'	trei '3'	ŋinŋ '4'	'deset '10'	jede'naist '11'
kλun 'beak'	'kλunure	'kλunure	'kλunure	kλun	'kλunure

If a noun shows neutralization of the singular-plural opposition when used with the number ‘two’, the same form is used for ‘three’ and ‘four’, often also for ‘five’ (with some exceptions), but it takes the ending *-ure* when the numeral is ‘ten’ (Table 5):

Table 5. The ‘ten’ threshold marked by *-ure*

	doi '2'	trei '3'	'pøtru '4'	ŋinŋ '5'	'deset '10'	jede'naist '11'
biŋ 'whip'	biŋ	biŋ	biŋ	biŋ	'biŋfurle	'biŋfurle
krømp 'pickaxe'	krømp			krømp	'krømpure	
pøri 'pair'	pøri/'pøriure	pøri	pøri	pøri	'pøriure	'pøriure
kris/kres 'bonfire'	kres			'kresure	'kresure	

For just one informant, RD, forms in *-i* appear randomly, showing no sensitivity to the ‘ten’ or ‘five’ threshold (Table 6):

Table 6. Arbitrary selection of the endings *-i* and *-ure* in responses from RD

	doi '2'	trei '3'	'pøtru '4'	ŋinŋ '5'	'deset '10'	jede'naist '11'
pøri 'pair'	'pøriure	'pøri	'pøriure	'pøri	'pøriure	'pøriure

This informant shows other alternations but without any particular pattern (Table 7):

²⁵ For the whole issue see Kalsbeek (1998: 63-125), Langston (2006: 136-139), and Steinhauer (1973: 68-69, 198-199, 332-333). Čakavian does have as a nominative plural ending a short [-i] not found in the genitive plural, but this distinction does not appear to affect the Istro-Romanian system.

Table 7. Arbitrary selection of pluralizing strategies in responses from RD

	doi '2'	trei '3'	'pɔtru '4'	ʃinʃ '5'	'deset '10'	jede 'naɪst '11'
fok 'fire'	'fokure	'fokurle/ 'fokure/ foʃ	foʃ	foʃ	'fokurle/ foʃ	foʃ
pɔt 'bed'	pɔts	pɔts	pɔts	pɔts	pɔts	'pɔture

The data from Žejane suggest that the morphology of nouns modified by numerical quantifiers is changing under the pressure of the Croatian model, contrary to the image generally presented by the descriptive literature, of an extremely stable system. In Žejane, the changes seem less detectable for the low numbers, 'two, three, four' (although there are some examples for these numbers), perhaps reflecting the situation in Čakavian: there, in simple quantifier phrases, after the number 'two', masculines and neuters appear in the genitive singular, while complex quantifier phrases take the nominative plural, most commonly with the ending *-i*, and after 'three' and 'four' they appear only with the nominative plural ending. Most changes are sensitive to the threshold 'ten'. It is difficult to say to what extent these changes could also be supported by the fact that the inherited form of the numeral, *'zeʃe* or *'zetse*, has been completely replaced by Croatian *deset* (although there seems to be less variation for *jede 'naɪst* 'eleven').

In sum, in the early 1960s, older speakers in Žejane showed generalized neutralization of number distinctions in masculine nouns. Historically, some Daco-Romance masculine plurals were differentiated from their corresponding singulars through palatalization of certain root-final consonants. Reflecting a phonological neutralization also found in Croatian (both dialectal and standard), the distinction between non-palatalized singulars and palatalized plurals tended to be lost, leading to number syncretism in masculines. Yet this syncretism has since radically retreated: in our data, only one speaker, MD, displayed it. On the rare occasions when such syncretistic plurals occur, they are used especially after low numbers (most stably after 'two') and are replaced by forms in *-ure* in combination with 'five' or 'ten'. The linguistic atlases of Filipi (maps 1347 J, 699 J, 943 J, 252 J, 1459 J, 398 J, 998 J) and Flora (map 41 J), which reflect surveys made after the 1960s, show almost exclusively *-ure* for the nouns we examined in our own survey (with the single exception of *pvs* 'belt', in Filipi, which also has plural *'pvsure*). Our recordings confirm this tendency, first observed by Kovačec and supported by the atlases. In standard Croatian, most of the nouns corresponding to those surveyed in our questionnaire have plurals in *-ovi* or *-evi* (e.g., *'kʌunure* ~ *'kljũnovi* 'beaks', *'krovure* ~ *'kròvovi* 'roofs', *'bifure* ~ *'bičevi* 'whips').

3.3 The situation in Šušnjevića (southern Istro-Romanian).

The behaviour of nouns in numeral quantifier phrases in Šušnjevića is more complicated than the monographic studies indicate. The nouns tested in the southern varieties are all masculine (Table 8) or *genus alternans* (Table 9). Even when they are masculine they may take the ending *-ure*. Both masculine and *genus alternans* nouns that take *-ure* with 'two' generally also show *-ure* for other numerals:

Table 8. Unitary behaviour of some masculines taking *-ure*

	doj '2'	trej '3'	'pɔtru '4'	ʃinj '5'	'zɛʃe/ 'zetse '10'	jede'naɪst '11'
grob 'grave'	'grobure	-ure	-ure	-ure	-ure	-ure
biʃ 'whip'	'biʃure	-ure	-ure	-ure	-ure	-ure
kuk 'hip'	'kukure	-ure	-ure	-ure	-ure	-ure

Table 9. Unitary behaviour of some *genus alternans* nouns taking *-ure*

	do '2'	trej '3'	'pɔtru '4'	ʃinj '5'	'zɛʃe/ 'zetse '10'	jede'naɪst '11'
biʃ 'whip'	'biʃure	-ure	-ure	-ure	-ure	-ure
kuk 'hip'	'kukure	-ure	-ure	-ure	-ure	-ure
pɔt 'bed'	'pɔture	-ure	-ure	-ure	-ure	-ure
kris 'bonfire'	'krisure	-ure		-ure		
fok 'fire'	'fokure	-ure		-ure		
krov/ kroy 'roof'	'krowure	-ure	-ure	-ure	-ure	-ure

More rarely, if the form selected after 'two' ends in *-[i]*, then we have *-[i]* with other numerals (Table 10):

Table 10. Unitary behaviour of some masculine nouns taking *-i*

	doj '2'	trej '3'	'pɔtru '4'	ʃinj '5'	'zɛʃe/ 'zetse '10'	jede'naɪst '11'
kup'tor 'oven'	kup'tori			kup'tori	kup'tori	
pɔs 'belt'	'pɔsi			'pɔsi	'pɔsi	

The same behaviour may occur when number is expressed by consonantal alternation (Table 11):

Table 11. Unitary behaviour of some masculine nouns marking plural by consonantal alternation

	doj '2'	trej '3'	'pɔtru '4'	ʃinj '5'	'zɛʃe/ 'zetse '10'	jede'naɪst '11'
pɔt 'bed'	pɔts	pɔts	pɔts	pɔts	pɔts	

However, the behaviours illustrated by Tables 10 and 11 are quite marginal.

If masculines are invariant for number with ‘two’ (Table 12), or show consonantal alternation for number, then *-ure* is selected from ‘five’ upwards (Table 13), or from ‘ten’ upwards (Table 14), or from ‘three’ upwards (Table 15), or even from ‘four’ upwards (Table 16):

Table 12. Marking of the ‘five’ threshold by *-ure* in masculines that present neutralization of the plural opposition in phrases with ‘2’, ‘3’, ‘4’

	doi ‘2’	trei ‘3’	‘patru ‘4’	‘cinci ‘5’	‘zece/ ‘zetse ‘10’	jede ‘naist ‘11’
grob ‘grave’	grob	grob	grob	grob	‘grobure	‘grobure
păr ‘pair’	păr	păr	păr	păr	‘părure	‘părure
păs ‘belt’	păs	păs	păs	păs	‘păsure	‘păsure
biț ‘whip’	biț	biț	biț	biț	‘bițure	‘bițure
krov/ kroș ‘roof’	krov	krov	krov	krov	‘krovure	‘krovure
kris ‘bonfire’	kris	kris	kris	kris	‘krisure	‘krisure
krōmp ‘pickaxe’	krōmp	krōmp	krōmp	krōmp	‘krōmpure	‘krōmpure

Table 13. Marking of the ‘five’ threshold by *-ure* in masculines that present consonantal alternations in phrases with ‘2’, ‘3’, ‘4’

	doi ‘2’	trei ‘3’	‘patru ‘4’	‘cinci ‘5’	‘zece/ ‘zetse ‘10’	jede ‘naist ‘11’
kλun ‘beak’	kλun ^j	kλun ^j	kλun ^j	kλun ^j	‘kλunure	‘kλunure

Table 14. Marking of the ‘ten’ threshold by *-ure* in masculines

	doi ‘2’	trei ‘3’	‘patru ‘4’	‘cinci ‘5’	‘zece/ ‘zetse ‘10’	jede ‘naist ‘11’
păr ‘pair’	păr	păr	păr	păr	păr/ ‘părure	‘pări
biț ‘whip’	biț	biț	biț	biț	‘bițure	‘bițure
krov ‘roof’	krov	krov	krov	krov	‘krovure	‘krovure
kuk ‘hip’	kuk	kuk	kuk	kuk	‘kukure	?

Contrary to the impression given in the literature (Popovici 1914: 64-71; Pușcariu 1926: 144; Kovačec 1971: 87), the southern variety spoken in Šušnjeвица no longer associates *-ure* just with the *genus alternans* but also uses it in the masculine. If this ending is selected with the number ‘two’ in masculine and *genus alternans* nouns, then speakers also use *-ure* with higher numerals. If some other form is used, that form is sometimes preferred by some speakers especially with ‘three’ and ‘four’. This happens where, in the Čakavian dialect, a separate form is used in numbers after ‘two’ or with the number ‘eleven’ if in Istro-Romanian that numeral is borrowed from Croatian. If masculines preceded by ‘two’ show neutralization of the number opposition or express the distinction between singular and plural via a consonantal alternation, speakers employ forms in *-ure* especially when preceded by ‘five’, more rarely when they are preceded by ‘ten’ or even ‘three’ (very exceptionally, by ‘four’). In any case, it is clear that speakers are seeking to replicate—by exploiting morphological means available in Istro-Romanian—an opposition which exists in literary or in dialectal Croatian.

3.4 A comparative view over the two varieties.

The ‘thresholds’ for using a different plural form of the noun with numerical quantifiers vary as follows across the two varieties (Table 20):

Table 20. The ‘thresholds’ in the two IR varieties

Žejane				
numerical threshold for differentiation	‘ten’	‘five’	‘four’	‘three’
number of nouns	8	2	1	3
number of informants	3	2	1	2

Šušnjeвица				
numerical threshold for differentiation	‘ten’	‘five’	‘four’	‘three’
number of nouns	4	7	2	3
number of informants	1	3	2	2

In the northern variety, speakers have a numerical threshold of ‘ten’ (or are more sensitive to this numeral), after which there is a threshold of ‘three’ or ‘five’, for which the two informants use different strategies but, as Table 20 shows, only for a limited number of nouns. However in the southern variety, speakers have a threshold of ‘five’ (or pay more attention to the form of the noun after ‘five’), followed by a threshold of ‘three’. Only one speaker has a threshold of ‘ten’. There is a close match between Žejane and Šušnjeвица regarding the set of nouns that selects a different plural form, except that in Žejane the relevant threshold is mostly ‘ten’, while in Šušnjeвица is mostly ‘five’.

4. Conclusions

4.1 Plural-marking and contact in Istro-Romanian

The differential behaviour of Istro-Romanian masculine and *genus alternans* morphology in combination with numeral quantifiers is due to contact with Croatian, both dialectal and standard. It is also closely linked to a reorganization of the Istro-

Romanian nominal system which has itself been, in turn, influenced by the contact situation.

From our corpus and from comparison with other Daco-Romance varieties it emerges that initially, in both northern and southern Istro-Romanian, number was expressed morphologically and there was a large class of *genus alternans* nouns alongside purely masculine and purely feminine nouns; case-marking was largely absent from Istro-Romanian noun morphology, however. As a consequence of language contact, Istro-Romanian masculine and *genus alternans* nouns were the most affected by reorganization of the system. An old inflexional pattern in the masculine involved number-marking via alternation between non-palatalized consonants in the singular and palatalized consonants in the plural (e.g., *lup*_{SG} ‘wolf’ ~ *lup^j*_{PL}, *korb*_{SG} ‘basket’ ~ *korb^j*_{PL}). This opposition had been lost, a development attributable to the influence of Croatian, where palatalization of labials has been lost. This phonological change had morphological repercussions in neutralization of number oppositions in masculine nouns: e.g., *lup*_{SG=PL}, *korb*_{SG=PL}. This pattern of number-invariance served as the model for loans from dialectal (and standard) Croatian, such as *grob*_{SG=PL} or *krov*_{SG=PL}. Moreover, in the northern variety *genus alternans* nouns have become masculine in the plural, just as they already are in their singular. This particular development could have purely internal causes, but Croatian influence cannot be ruled out, given that Croatian lacks anything resembling a *genus alternans* (so that Croatian nouns that are a masculine in the singular are also masculine in the plural).²⁶ Istro-Romanian *genus alternans* nouns which have thus been transferred to the masculine gender have nonetheless retained the old *genus alternans* plural ending *-ure*, so that this ending, originally associated with feminine agreement, has ended up as a plural desinence associated with *masculine* agreement. Croatian influence, and particularly that of standard Croatian, then favoured the extension of this ending into other masculines, so that the pattern $-\emptyset_{MSG} \sim -ure_{MPL}$ emerged as a rival to the pattern where masculines were morphologically invariant for number. This redistribution appears to calque a pattern characteristic of standard Croatian,²⁷ such that most masculine nouns that are monosyllabic (and some that are disyllabic) in the singular have the disyllabic plural ending *-ovi* or *-evi* (instead of monosyllabic *-i*). The type $-\emptyset \sim -ure$ initially entered monosyllabic masculine nouns, but then began to affect polysyllabic nouns (such as *kup* ‘*tor*_{MSG}’ ‘oven’ ~ *kup* ‘*tore*_{MPL}’) which historically had shown other inflexional patterns, this new pattern in *-ure* thereby coming to ‘compete’ with the plural ending *-e*.

In the south, the *genus alternans* has not been lost, even though the tendency for originally *genus alternans* nouns to become masculines is observable there as well; further research needs to be done to establish whether extension of *-ure* to masculines in the south has begun to follow the same path, or whether it follows the Croatian model of ‘long’ masculine plurals, described above.

In sum, Croatian influence has been more subtle than, say, mere borrowing of an ending. A phonological simplification reflecting Croatian influence had morphological repercussions in Istro-Romanian such that there emerged a class of masculine nouns invariant for number. Croatian influence was probably also at work

²⁶ In situations of linguistic contact, gender may also be affected: see, e.g., Matras (2007: 43).

²⁷ For Čakavian dialects, Langston (2006: 137) shows that masculine nouns normally lack this ending. Yet Kovačec (1966: 64) shows that, in Čakavian dialects influenced by the literary standard, plurals in *-ovi* are present.

in the loss of alternating gender, so that morphologically *genus alternans* nouns came to be reanalysed as masculine in terms of their agreement pattern. This led to the emergence of a set of *masculine* plural desinences *-e* and *-ure*, whose lexical distribution came to be determined by the Croatian distributional model of polysyllabic vs monosyllabic masculine plural desinences (for the whole question, see Uță Bărbulescu & Maiden 2022: 187-208).

A further complication emerges in the context of numeral quantifier phrases. The older type, with neutralization of the number opposition, does still survive both in the north and in the south, but it has acquired a distribution whose model is based in Croatian. Number-neutralized forms appear especially with the lower numerals ‘two’, ‘three’, and ‘four’ (see Table 5 and Table 12, Table 13) exactly where in standard Croatian we find a form which is normally identified in Croatian grammars as a genitive singular (and was in origin a dual). In addition, in the Čakavian dialects, a distinction is sometimes made between the form of the noun used with the numeral ‘two’ (actually the reflex of a historical dual, nonetheless identified as a genitive singular in Croatian grammars and dialect studies)²⁸ and the form used with the numerals ‘three’ and ‘four’ (effectively a kind of ‘paucal’, but identified as a nominative plural in Croatian grammars and dialect studies) (Kalsbeek 1998: 277; Steinhauer 1973). Speakers of both northern and southern Istro-Romanian tend to use a distinctive form of the plural in combination with ‘five’ (see Tables 5, 12, 13), thereby following the model of Croatian which, from ‘five’ upwards, selects a distinct, genitive plural, form. But the Croatian-based pattern has sometimes been reinterpreted, in that speakers of the northern Istro-Romanian variety (less so those of the southern varieties) morphologically differentiate the plural from ‘ten’ rather than from ‘five’ (see Tables 3, 4, 14). The Croatian model would have led us to predict that the differentiation would occur from ‘five’, and that the same form would therefore also be used through ‘ten’. In our view, the observed behaviour does reflect the Croatian model, because speakers know that from ‘five’ upwards Croatian uses a differentiated form, but they are more sensitive to the ‘ten’ as the trigger for the differentiated form, possibly because, in a base-ten system, ‘ten’ marks a distinct transition-point in the system of numerals (note also that, in the south, from ‘ten’ upwards Croatian rather than Romance numerals are used).

Finally, in numeral quantifier phrases some MAT-borrowing from Croatian has also occurred. Our questionnaire shows very rare masculine plural forms, after ‘two’, ‘three’, and ‘four’ (see Tables 6 and 10), with the ending *-[i]*. This *-[i]* is inexplicable by internal evolution in Istro-Romanian, but is characteristic of Čakavian dialects (see Kalsbeek 1998; Steinhauer 1973; Langston 2006) and has been borrowed straight into Istro-Romanian (although the Croatian forms are used especially with larger numbers, particularly ‘ten’ and ‘eleven’). It should be stressed that we have here is the independent borrowing of a *desinence*, not of whole Croatian words that happen

²⁸ See Kalsbeek (1998: 276-277). Steinhauer (1973:53;182;441) sometimes call it a dual, sometimes a paucal, and sometimes says that the two forms are different. When describing the Čakavian dialect of Senj, Steinhauer (1973:68-69) specifies that ‘the paucal forms of the A- and B-inflection are identical with the gen.sg., those of the C- and D-inflection with the nom.pl.’.

to contain that desinence, because the desinence can be used productively with indigenous words²⁹ (e.g., *'foki* ‘fires’ or *kup'tori* ‘ovens’).³⁰

4.2 Wider implications

The existence of special ‘numerative’ morphology in numerical quantifier phrases has been observed in many language families, such as Celtic (Irish, Scottish Gaelic, and Middle Welsh),³¹ Indo-Iranian,³² and Slavonic.³³ In what follows we use the term ‘numerative’ in the sense proposed by Roncero (2019): ‘ADNUMERATIVE (a.k.a. NUMERATIVE): An inflectional form that nouns (or constituents of an NP) take when they appear in conjunction with a numeral (or less frequently a quantifier). This value can have a morphophonologically dedicated form for some nouns (or parts of the NP).’ Numeratives are an elusive category, because some languages use a special form just with low numbers³⁴ (or especially with low numbers), others use one with all plural numerals, some have special forms only for a subset of nouns,³⁵ while in some a wider yet still limited range of nouns is involved. In the languages just mentioned the numerative category appeared either as a result of erosion of the dual (in Indo-Iranian and Slavonic), or from a reorganization of the nominal system, arising as in Middle Welsh from ‘the phonological attrition of plural suffixes and analogical extension of new plural suffixes to all relevant syntactic environments except after numerals’ and either way, we are dealing with an internal development in which the category of numerative emerges from the ‘disintegration of a major category, such as plural or dual’ (Nurmio & Willis 2016: 297). In contrast, what happens in both varieties of Istro-Romanian arises exclusively from language contact. The *forms* used in Istro-Romanian numerical quantifier phrases may be the result either of an internal reorganization of the nominal system or (marginally) of borrowing, but their *distribution* follows the Croatian model and is the result of a reanalysis by Istro-Romanians of a Croatian pattern. Such a distribution is unlikely to have emerged outside a contact situation: for example, in at various points in the history of Romanian there also appeared doublet plural forms, but these never assumed a special distribution

²⁹ Cf. Gardani (2020: 102). Neither are we dealing with phenomena of ‘compartmentalization’ and ‘Parallel System Borrowing’ (see Kossmann 2010: 459-487; Gardani 2020: 101-103).

³⁰ The Croatian desinence cumulatively marks case and number, but since Istro-Romanian no longer marks case inflexionally, in Istro-Romanian this desinence encodes only number. Thus a cumulative desinence of Croatian has been borrowed with the more concrete and, implicitly, more transparent, value. Cf. Gardani, Arkadiev, & Amiridze (2015: 6).

³¹ See Nurmio & Willis (2016), who also discuss forms from Irish which Acquaviva (2006: 1868–1869, 2008: 188) called ‘transnumeral’.

³² See Sims-Williams (1979: 337-346; 2019: 955-970).

³³ See Akiner (1983), Pugh & Press (1999), Corbett (2001; 2008) for eastern Slavonic; Scatton (2002) for south-eastern Slavonic; Corbett (1983; 1996) and Alexander (2006) for south-western Slavonic. There is a vast and varied literature on this subject; for other Slavonic languages and Croatian see, e.g., Babby (1985; 1987); Corbett (1993); Franks (1994; 1995); Giusti & Leko (1995); Rappaport (2002); Leko (2009); Lučić (2015); Titov (2016); Driemel & Stojković (2019).

³⁴ Cf. the situation in the Slavonic family where Croatian, Serbian, Russian, Belarusian, and Ukrainian use the numerative only with low numbers, while Bulgarian and Macedonian also use it with higher numbers.

³⁵ Cf. Middle Welsh (Nurmio & Willis 2016), or modern standard Russian (Corbett 2001; 2008).

depending on the numerals with which they combined. There is also no sign, from the data we have obtained so far, that there is any consistent generalization of special forms only after low numbers or only after high numbers. There is very great variation in the use of forms after numerals both between the two varieties of Istro-Romanian and between individual speakers, which means that the innovation is far from being concluded. But given the age of Istro-Romanian speakers and the tenuous transmission of the language to younger generations, that ‘conclusion’ may never in fact be reached.

That the process is not over can also be seen in the fact that the plurals of masculine nouns (the most affected class, followed by *genus alternans*)³⁶ still show variation, despite a preference for long plurals in *-ure*. That a plural in which the morphological expression of number is neutralized can also appear outside the numeral context is a clear sign that the process is still underway—so that it is somewhere midway between being a proper plural and a numerative. Only if the number-invariant plural were to come to be selected exclusively after low numbers, for example, would we be able to say that a true numerative category had begun to take root.

Our survey has shown that nouns low on the animacy hierarchy³⁷ are subject to the relevant formal modification depending on the number with which they are combined, but it is too early to make generalizations, and we still need to test nouns higher on the hierarchy (it appears, provisionally, that pronouns are not affected). Nonetheless, some of the forms selected seem close to two of the distinctive characteristics of numeratives in that they appear *exclusively* in combination with numerals, and otherwise lack both syntactic and semantic autonomy. These are the forms in *-[i]*, a desinence taken from Croatian, which appears sporadically after higher numbers where dialectal and standard Croatian use instead the genitive plural (for the situation with larger numbers, see Roncero 2019). This *-[i]* is a form which turns out to be homophonous with the suffixed masculine plural definite article of Istro-Romanian, and is one which most speakers rejected in any other context.³⁸ This reaction implies that we are dealing with a special form used only with numerals. But we still do not have a generalized and consistent use of that form.

Since the morphological expression of case is at best marginal in Istro-Romanian, our data tend to confirm the hypothesis of Nurmio & Willis (2016: 32) that the ‘numerative is related to the category of number’ (cf. also Sims-Williams 1979, Bailyn & Nevins 2008, Igartua & Madariaga 2018 who tend to analyse the numerative as a number value), against Corbett’s view (Corbett 2008: 19; see also Franks 1994;

³⁶ Our next step should be to investigate to what extent feminines might also be affected (we have some—as yet fragmentary evidence—that they might be). Croatian masculines and their modifiers, and demonstratives, have a special form which is a remnant of a minor number, the dual, when combined with small numbers (see Corbett 1983: 13-14, 89-92; 1996: 114-116). Yet Alexander (2006: 59) seems to indicate the use of a special form for feminines.

³⁷ Minor numbers are not sensitive to the animacy hierarchy (Corbett 1996: 118). Nonetheless, the system of numeratives in Middle Welsh ‘shows a partial animacy effect; that is, a large proportion of nouns that express numerative are animate, especially kinship terms. However, it is also found with various nouns denoting standard units of time’ (Nurmio & Willis 2016: 303).

³⁸ Commenting on the differences between Istro-Romanian and Romanian, Pușcariu (1926: 242) found it puzzling that Istro-Romanians sometimes appeared to use a form with the masculine plural in numeral quantifier groups, such as *sto fîurini* ‘100 florins’, *devet miseți* ‘9 months’. In fact we are dealing with forms which have nothing to do with the Romanian (masculine plural) determiner *-[i]*. Rather they reflect the influence of the Čakavian Croatian dialect.

Rappaport 2002) that the Russian numerative is a case value, albeit one ‘on the extreme edge’ of what could be counted as such.

What we have found is that we are dealing with a category *in statu nascendi*, of which it is hard to predict whether it will become established in the language. We have also seen that the numerative can emerge not only through the internal erosion of a major category but also in a contact situation, if the source language also has such a category.

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