

# THE SLAVONIC AND EAST EUROPEAN REVIEW

Volume 72, Number 2—April 1994

---

## Systems of Grammatical Number in Slavonic

GREVILLE G. CORBETT

### *Abstract*

THE expression of grammatical number varies from relative simplicity in some languages to great complexity in others. Even in languages where the main patterns are straightforward, we often find isolated examples of more interesting types. Accordingly we shall first set up a general model of the morphological means by which numbers can be signalled. This will then allow us to characterize the range of variation found within Slavonic and to uncover the regularities within the diversity. In particular, we consider the possible relations between the inflectional root, the different stems and the sets of inflections. While in Slavonic number is signalled primarily by means of inflectional morphology, we find interesting examples of stem alternation, with instances of derived plural stems and of derived singular stems, and occasional examples of suppletion.

### *Introduction*

This paper first sketches a general typology of number systems, and situates Slavonic within it (section 1). Then we shall concentrate on the morphological means of expressing number and examine the possibilities which Slavonic exploits here (section 2). In both these sections a major aim is to provide a review of the range of work on number which has already been carried out by Slavists.<sup>1</sup> Finally we will consider

Greville G. Corbett is Professor of Linguistics and of Russian Language in the Department of Linguistic and International Studies at the University of Surrey.

<sup>1</sup> The research for this paper was supported in part by the Economic and Social Research Council (grant R000233633); this support is gratefully acknowledged. The paper was read at the XIth International Congress of Slavists, Bratislava, 1993. I am grateful to those present for some helpful comments and to Mr Tony Hall for bringing several references to my attention.

briefly recent work which allows a formal account of the inflectional morphology involved (section 3).

## I. A TYPOLOGY OF NUMBER SYSTEMS

### 1.1 *Nominal and verbal number*

Broadly speaking, number is of two types: nominal number quantifies individuals, while verbal number quantifies events. The Slavonic languages have nominal number (verbal number is widespread in the languages of the world, particularly perhaps in those of North America). We should then ask where the two types of number are typically marked (see Figure 1).

	nominal number	verbal number
(a) on noun phrase	Lezgian	not found
(b) on both	Slavonic	not found
(c) on verb	Amele	Hausa

Figure 1: Place where number is primarily expressed

We might expect to find nominal number expressed just on the noun phrase (as in the North-East Caucasian language Lezgian), and verbal number just on the verb (as in the Chadic language Hausa). While these possibilities do occur, nominal number may be expressed also on the verb, together with marking on the noun phrase or as the primary place of expression (see Corbett 1992b for more detail). In Slavonic we find nominal number marked both on the noun phrase and on the verb. Thus the Slavonic verb indicates the number of individuals and not the number of events; it shows nominal number by agreement with the subject.<sup>2</sup>

### 1.2 *Number distinctions*

Most Slavonic languages have just the opposition singular : plural. The dual is lost in most of the Slavonic languages (leaving complex traces behind, in morphology and syntax, as shown, for instance in Naylor 1972). There is a substantial literature on the interesting problem of dual and its loss: Belić (1932), Isačenko (1941/1976), Dostál (1954),

<sup>2</sup> A good deal has been written on agreement in Slavonic; for a bibliography see Corbett (1992a).

Iordanskij (1960), Salter (1971), Moszyński (1985), Remneva and Kijanová (1991), Kijanová (1992). However, Slovene and Sorbian preserve the dual: Tesnière (1925a, 1925b), Jakopin (1966), Ermakova (1966), Lenček (1982), Derganc (1988), Nartnik (1988), Vlahović (1991).<sup>3</sup>

From a typological perspective, number can also be divided into optional and obligatory. Many languages have optional number — the speaker uses a particular number only if number is salient: in such languages 'cat' could be used to refer to one or more cats. In Slavonic, the plural number is obligatory — to refer to more than one cat the plural will be used.<sup>4</sup> However, the Slovene dual is optional: the speaker is not forced to use the dual to refer to two items (Priestly 1993: 440–41). A somewhat similar situation exists in Sorbian; in some Sorbian dialects the plural replaces the dual to a greater or lesser extent (Stone 1993: 614).

### 1.3 *The range of nouns involved in number distinctions*

When languages have nominal number, as we find in Slavonic, typically not all the nouns are involved. In some languages number is restricted to a small subset of the nouns and pronouns, in others it is of greater importance. Smith-Stark suggested that plurality 'splits' a language if 'it is a significant opposition for certain categories but irrelevant for others' (1974: 657). The type of evidence he produced concerned marking of the noun phrase for number (usually by marking on the noun itself) and agreement in number (mainly verbal agreement but with some instances of agreement within the noun phrase). He claims, for instance, that if in Georgian the subject is plural and denotes an animate the verb will be plural, if it denotes an inanimate then the verb will be singular. Various languages make the split at different points, according to a hierarchy which can be presented as follows:

speaker > addressee > kin > rational > human > animate > inanimate

(1st person    (2nd person  
pronouns)    pronouns)

Figure 2: The Animacy Hierarchy

In Slavonic the split occurs within the inanimates: as a broad generalization we may suggest that most nouns denoting concrete

<sup>3</sup> For data on the frequency of the dual in Slovene see Neweklowsky (1988). And for its use in particular cases in Upper Sorbian see Jenč (1966).

<sup>4</sup> The situation is of course more complex than this bald statement implies; see Revzin (1969), Vinogradov (1972: 124–38), Padučeva (1967, 1974: 210–16), who stresses the importance of syntax for a full analysis of the category of number, Soboleva (1979), and for instances of the use of number in spoken Russian, including instances of transposition, see Krasil'nikova (1990: 63–89).

objects distinguish singular and plural while most denoting abstracts do not. Of course, it is the borderline which deserves attention. There has been some interesting work on nouns denoting fruit and vegetables in Slavonic, many of which do not distinguish number (Mel'čuk 1979, 1985: 257–64; Ivić 1982; Polivanova 1983; Wierzbicka 1988: 503–06). The nouns which fall below the boundary for distinguishing number are normally *singularia tantum*; there is, however, a substantial minority of *pluralia tantum*.<sup>5</sup>

#### 1.4 Means of expressing number

In Slavonic, then, the majority of nouns express number. Let us look at the possible strategies for doing this. In the languages of the world there are four main means of expressing number. Some languages (such as the Austronesian language Yapese, Dryer 1989) use separate lexical items (number words). Slavonic does not belong to this type, unless we include quantifiers and numerals, but then most or even all languages would belong to this type. The second type uses syntactic means to mark number. As we have already seen, Slavonic belongs here in part, since agreement is used for marking number. The third type uses morphological means: this is the main strategy in Slavonic, and we shall concentrate on this. However, we should also note a fourth method: lexical marking (suppletion). Slavonic does have suppletive number forms, but they are suppletive stems (which we shall consider within morphology). In any case they do not represent a major means of marking number in Slavonic.

## 2. THE MORPHOLOGY OF NUMBER SYSTEMS

We start from the notion of 'inflectional root' (Matthews 1974: 73–75). The inflectional root of a lexical item is the basic form, the one which cannot be further reduced as far as inflectional categories are concerned. It is indifferent to inflectional category, in the sense that all the inflectional forms normally available to lexical items of the particular word-class can be formed from it. The inflectional root *pisatel'* in Russian is the base for the forms *pisatelja*, *pisateli* and so on, though it is not, of course, basic derivationally.

Number can be marked formally in Slavonic by stem formation and inflection, and these provide the basis for our typology. The abstract scheme in Figure 3 shows the elements potentially involved:

<sup>5</sup> See Flaume (1974: 194–227), Degtjarev (1982a), Holman (1983), Jarvis (1986), Klimov (1987).

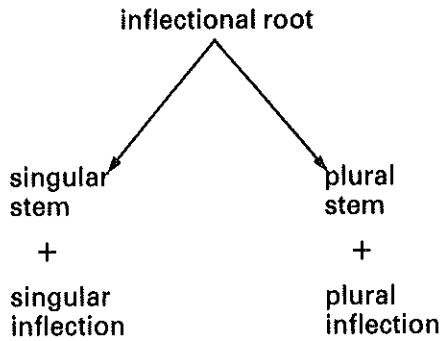


Figure 3: Elements involved in number marking

The first possibility (Type 1) is that neither stem nor inflections mark number; in that case we are dealing with an indeclinable noun, such as Russian *kenguru* 'kangaroo'.<sup>6</sup> The readiness with which such nouns are accepted varies considerably: in the south-west of the Slavonic area, in Serbo-Croat, almost every noun, including recent borrowings, is declined. The number of indeclinables accepted increases as we move north-eastwards, with Russian being the most permissive in this regard (Unbegaun 1947: 141-44). If we look back to Figure 3, for indeclinable nouns none of the elements marks any distinction.

The second possibility is that the stems are identical but the inflections are different:

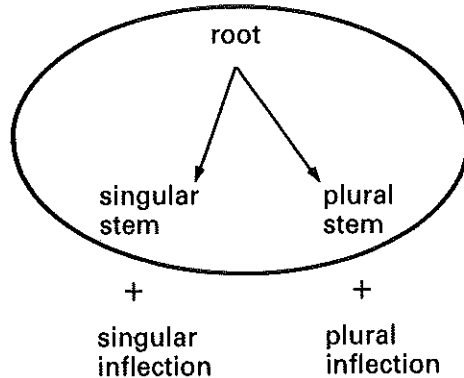


Figure 4: Type 2: Identity of stems in number marking

In Type 2 all the work is done by the inflections. It is extremely common in Slavonic; for instance in Russian there are thousands of

<sup>6</sup> See Smirnova (1981).

nouns like *komnata* 'room', plural *komnaty* in which number is marked exclusively by the inflection.<sup>7</sup>

The third possibility is for number to be marked both by the stem and by inflections. Within this type there are three further possibilities, according to whether either or none of the stems is identical to the inflectional root. We consider them in turn:

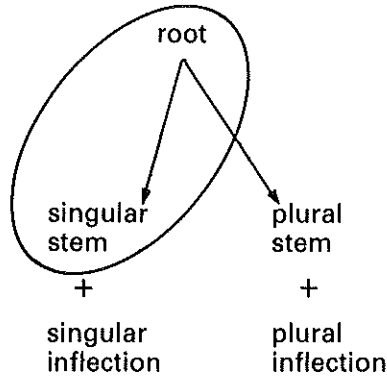


Figure 5: Type 3A: Special plural stem

This pattern can be illustrated from Russian. The noun *krylo* 'wing' has the inflectional root *kryl-*, to which the singular endings are added directly (*kryl-o*, *kryl-a*, *kryl-u* and so on). The plural stem is *kryl'j-*, as in the nominative plural *kryl'ja*. Why should we say that there is a distinct plural stem here, rather than that the nominative plural ending is palatalization plus *-ja*? The point is that *-a* is a regular nominative plural ending, found on thousands of nouns which do not have a separate plural stem. The remaining plural endings are also found on other nouns; we would be missing an obvious generalization if we claimed there were special endings right through the plural. This pattern is particularly common in the South Slavonic languages: in Serbo-Croat, for instance, we find many nouns of the type *grad* 'town', plural *gradovi*.<sup>8</sup>

The converse pattern is shown in Figure 6:

<sup>7</sup> There are interesting cases of competition between plural inflections; see, for example, the discussion of the plural inflections in Polish in Wierzbicka (1988: 455–61).

<sup>8</sup> It is worth adding that in languages with a dual, where there are alternative stems, we normally find one for singular, and the second for dual and plural, as in Slovene: *grád* 'castle', dual *gradóva*, plural *gradóvi*.

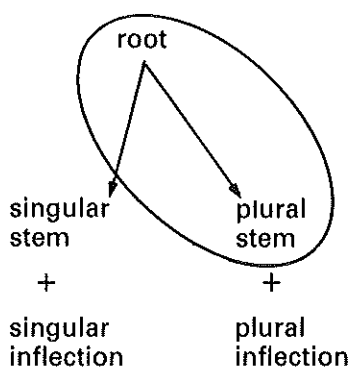


Figure 6: Type 3B: Special singular stem

Again this is a pattern found in Russian. The noun *bolgariin* 'a Bulgarian' has the inflectional root *bolgar-*, and the plural stem is identical, as in forms like the nominative plural *bolgar-y*. The singular stem differs, and is *bolgariin-*. Several nouns denoting nationalities and other social groupings behave in this way.<sup>9</sup>

Before moving on we should contrast types 3A and 3B. It is generally (but not universally) held that the singular is unmarked with relation to the plural. The existence of special plural stems (type 3A) would therefore be expected, but not that of special singular stems (type 3B). Here Tiersma's notion of 'local unmarkedness' is helpful:

When the referent of a noun naturally occurs in pairs or groups, and/or when it is generally referred to collectively, such a noun is locally unmarked in the plural. (1982: 835)

Many of the Slavonic nouns involved do appear to meet Tiersma's definition.<sup>10</sup>

Tiersma uses Russian data to support his case, in discussing how his notion accounts for the way in which stems are levelled. Greenberg had earlier pointed out (1969: 192–93) that of the group of nouns like *slovo* 'word' (plural formerly *slovesa*), the majority have levelled according to the nominative/accusative singular, so that in modern Russian we have *slovo/slova*. However, earlier *kolo/kolesa* 'wheel' is now *koleso/kolesa*. The claim is that for this word the plural is locally unmarked. (The suggestion that this word is more frequent in the plural than in the singular goes back to Kuznecov 1953: 83.)

Still considering the possibilities for marking number by means of stems and inflections, we find that the most complex situation is for all elements to be different:

<sup>9</sup> For further examples, particularly from Bulgarian and Macedonian, see Stankiewicz (1962: 10–12). He also notes instances where accentual alternation marks the singular-plural opposition.

<sup>10</sup> For interesting discussion of markedness with reference to Russian see Revzin (1969).

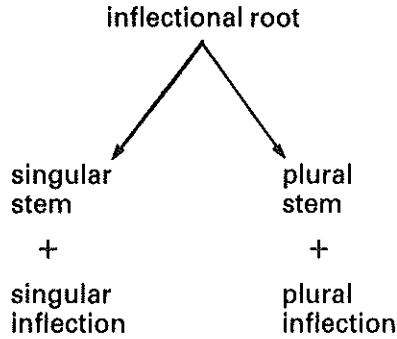


Figure 7: Type 3C: Distinct stems and inflectional root

This possibility can be illustrated by the irregular Russian noun, *xozjain* 'landlord'. The inflectional root is *xozja-*,<sup>11</sup> the singular stem is *xozja-in-* and the plural stem is *xozja-ev-*. Both stems allow the addition of endings.

The extreme type of difference is found in cases of suppletion, where there are different stems which are not related by any regular or irregular type of stem formation; their relation is purely semantic. An example is Russian *čelovek* 'person', plural *ljud-i* 'people'. Note that we are indeed dealing with stems here: *čelovek* 'person' takes normal singular inflections, and *ljud-i* 'people' takes plural inflections. A way of thinking of such cases is to say that the lexeme involved has alternative inflectional roots (Matthews 1974: 74).

The fourth logical possibility (within morphological marking of number) is that number should be marked just by means of the stem:

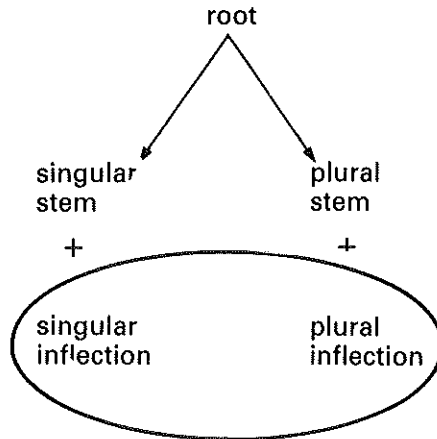


Figure 8: Type 4: Number marking by stem only

<sup>11</sup> We are using transliterated forms here; a phonemic transcription would require a final -j on the stem.

We find this system in languages of the Caucasus like Akhvakh, where case endings mark only case, and number is marked by stem augments. At first sight it appears that it is not found in Slavonic. But consider for a moment the so-called collectives, as for instance in Serbo-Croat (see Table 1).

Table 1: Examples of collectives in Serbo-Croat

SINGULAR	COLLECTIVE	GLOSS
dete	deca	child/children
štene	štenad	puppy/puppies
kamen	kamenje	stone/stones

The point is that the collective form takes singular inflections: though not identical to those of the ordinary singular of the noun, they are nevertheless singular endings, and so it is reasonable to claim that number is marked by the stem. (Agreement is complex: see Stevanović 1936, Babić 1984–85, Degtjarev 1982c, Corbett 1983: 76–88; Đorđević 1989: 33–34.) The history of collectives in Slavonic has been deservedly well studied: see, for instance, Unbegaun (1935: 262–318), Greenberg (1972: 21–25), who draws on the work of Unbegaun, Azarx (1977), Eselevič (1979), Fiedler (1981), Degtjarev (1982b, 1982d: 40–148, 1987), Malevinskij (1982), Makeeva (1986).<sup>12</sup> A common pattern is for them to be integrated into the dominant singular–plural opposition, with regular plural endings, but they have also given rise to the patterns illustrated in Figures 5 and 6 above.

### 3. NETWORK MORPHOLOGY

In most of the Slavonic languages, nouns cannot express number in isolation — its expression is combined with that of case.<sup>13</sup> And there is often no unique inflection for a particular case-number combination; the inflection depends on the declensional class of the noun. This is, of course, the typical situation in fusional languages.

The notion of declensional class is problematic. First, because there is a strong tradition that a certain number of declensional classes

<sup>12</sup> For a helpful typological perspective on collectives see Gil (1993). See also Reformatkij (1960: 393–97) and Rudenko (1987), who consider collectives in Modern Russian, for Serbo-Croat see Peco (1956) and Pavlović (1965), and for comparative accounts see Stankiewicz (1983) and Heyl (1990).

<sup>13</sup> But note the interesting Polish nouns like *muzeum* 'museum', borrowed from Latin (Rothstein 1993: 699). These have the invariant ending *-um* in the singular (hence this expresses number but not case), but decline in the plural: *muzea, muzeów, muzeom, muzeami, muzeach*.

should be recognized in particular languages — these are taken over from one reference grammar to another with little or no justification. Second, there is no clear *syntactic* argument to demonstrate the validity of a particular analysis (unlike the situation with regard to case, number, gender and animacy). And third, there are various numbers of nouns which are exceptional to various degrees.<sup>14</sup>

There are, however, reasonable arguments which can be brought to bear (see Corbett 1982 for detailed discussion):

1. the number of nouns involved
2. productivity
3. similarity of form (dissimilar forms should not be grouped together)
4. predictions which follow from a particular solution.

To make the discussion more specific, consider the data in Table 2.

Table 2: Major noun declensional classes of Russian

	zakon 'law'	komnata 'room'	kost' 'bone'	v'ino 'wine'
SINGULAR				
nominative	zakon	komnata	kost'	v'ino
accusative	zakon	komnatu	kost'	v'ino
genitive	zakona	komnati	kost'i	v'ina
dative	zakonu	komnate	kost'i	v'inu
instrumental	zakonom	komnatoj	kost'ju	v'inom
locative	zakone	komnate	kost'i	v'ine
PLURAL				
nominative	zakoni	komnati	kost'i	v'ina
accusative	zakoni	komnati	kost'i	v'ina
genitive	zakonov	komnat	kost'ej	v'in
dative	zakonam	komnatam	kost'am	v'inam
instrumental	zakonam'i	komnatam'i	kost'am'i	v'inam'i
locative	zakonax	komnatax	kost'ax	v'inax
	I	II	III	IV

Note: forms are given in phonemic transcription. Palatalization (or 'softening') is indicated by '.

We do not find six singular and six plural endings: there are numerous instances of syncretism. And equally, there is not a single form for, say,

<sup>14</sup> In Serbo-Croat, several nouns change their declensional pattern (and consequently their gender) in the plural; see Ivić (1989: 32).

the dative singular — it varies according to the type of noun in question. Hence the traditional notion of declensional classes.

When we review the arguments for setting up such classes, we can justify the analysis as follows:

1. the number of nouns involved: in each of the four classes proposed there are several thousands of nouns;
2. productivity: each class is productive;
3. similarity of form: we have not combined dissimilar forms into a single class;
4. predictions which follow from a particular solution: gender is a predictable category in Russian (and more generally in Slavonic) given this analysis of the declensional classes.

However, this traditional-style analysis is unduly rigid. Consider, for example, the dative plural of *zakon*. Why is it *zakonam*? The traditional answer would have to be that, since it is a member of the first declensional class, and the dative plural inflection for that class is *-am*, then the dative plural of *zakon* must be *zakonam*. But in fact all inflected nouns of Russian have the dative plural in *-am*.<sup>15</sup> We need to be able to state certain facts about nouns in general (and, at a higher level, about nominals including adjectives and pronouns); some facts are true at the level of declensional class, while individual exceptions hold at the level of the individual lexical entry (see Figure 9).

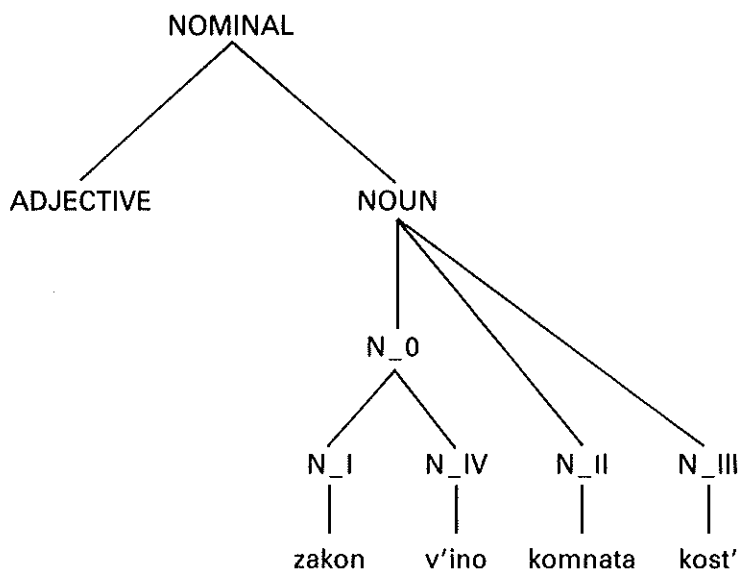


Figure 9: An inheritance structure for Russian nominals

<sup>15</sup> The merging of the oblique forms in Russian is discussed in Andersen (1969) and Šul'ga (1983); for a recent discussion of the plural forms of Czech see Cummins (1991).

This is possible in 'Network Morphology' (see Corbett and Fraser 1993), which is implemented in the lexical knowledge representation language DATR (for which see Evans and Gazdar 1989a; 1989b; Gazdar 1990; forthcoming). Facts which are true of nouns are lodged at the noun node, and this information is inherited by all nouns. More specific information is lodged at lower nodes such as N\_II. Note particularly that this account allows us to see the old regularities, captured by the three-class approach (the shared forms of nouns like *zakon* and *okno*), and the new regularities too. Looking down from the top, Russian has three declensional classes (N\_O, N\_II and N\_III); looking up from the bottom it has four: (N\_I, N\_II, N\_III and N\_IV). While this brief account cannot hope to do justice to this line of research, it is worth stressing one advantage of working in a formal framework, implemented in DATR, namely that for DATR there are compilers (computer interpreters) available, and so we are able to check the output, which demonstrates that the predictions made by our account are indeed correct.

#### 4. CONCLUSION

By taking a typological perspective, we see that certain aspects of the number systems of the Slavonic languages turn out to be of particular interest. This perspective in turn highlights the value of focusing research specifically on these topics. Research in progress aims to give a formally explicit account of the interesting phenomena we have singled out.

#### References

- Andersen, Henning. 1969. 'The Peripheral Plural Desinences in East Slavic', *International Journal of Slavic Linguistics and Poetics*, 12, 19-32.
- Azarx, Ju. S. 1977. 'K istorii sobiratel'nyx tipa brat'ja, zver'ev v russkom jazyke', *Obščeslavjanskij lingvističeskij atlas: materialy i issledovanija 1975*, 189-210. Moscow: Nauka.
- Babić, Stjepan. 1984-85. 'Sročnost s riječima u kojima se razlikuje oblik i broj', *Jezik*, 32, no. 4, 113-18.
- Belić, Aleksandar. 1932. *O dvojini u slovenskim jezicima*. Beograd: Srpska kraljevska akademija.
- Corbett, Greville G. 1982. 'Gender in Russian: An Account of Gender Specification and its Relationship to Declension', *Russian Linguistics*, 6, 197-232.
- . 1983. *Hierarchies, Targets and Controllers: Agreement Patterns in Slavic*. London: Croom Helm.
- . 1992a. Review article on L. L. Iomdin, *Avtomatičeskaja obrabotka teksta na estestvennom jazyke: model' soglasovanija*, Moskva 1990, str. 168, Nauka,

- together with a bibliography of works on agreement. *Russian Linguistics*, 16, 107–19.
- . 1992b. 'A Typology of Number Systems', European Science Foundation Programme in Language Typology: Theme 7, Noun Phrase Structure: Working Paper no. 15.
- Corbett, Greville G. and Fraser, Norman M. (1993). 'Network Morphology: A DATR Account of Russian Nominal Inflection', *Journal of Linguistics*, 29, 113–42.
- Cummins, George. 1991. 'Plural, Gender, and Pluralia in Czech', *Slavic and East European Journal*, 35, 254–71.
- Degtjarev, Vladimir I. 1982a. 'Proisxoždenie imen pluralia tantum v slavjanskix jazykax (K opredeleniju semantičeskix mexanizmov leksikalizacii form mn. č.)', *Voprosy jazykoznanija*, no. 1, 65–77.
- . 1982b. 'Sobiratel'nost' i kategorija čisla v istorii slavjanskix jazykov', *Voprosy jazykoznanija*, no. 4, 92–101.
- . 1982c. 'Oformlenie svjazi skazuemogo s podležaščim — imenom sobiratel'nym v drevnix slavjanskix jazykax', *Voprosy jazykoznanija*, no. 5, 78–89.
- . 1982d. *Kategorija čisla v slavjanskix jazykax (istoriko-semantičeskoe issledovanie)*. Rostov-na-Donu: Izdatel'stvo Rostovskogo universiteta.
- . 1987. 'Pljuralizacija imen sobiratel'nyx v istorii slavjanskix jazykov', *Voprosy jazykoznanija*, no. 5, 59–73.
- Derganc, Aleksandra. 1988. 'On the History of the Dual in Slovene and Russian', *Wiener Slawistischer Almanach*, 22, 237–47.
- Dorđević, Radmila. 1989. *Engleski i srpskohrvatski jezik: Kontrastivna gramatika imeničke grupe*. Beograd: Naučna knjiga.
- Dostál, Antonín. 1954. *Vývoj duálu v slovanských jazycích, zvláště v polštině*. Prague: ČSAV.
- Dryer, Matthew. 1989. 'Plural Words', *Linguistics*, 27, 865–95.
- Ermakova, M. I. 1966. 'Dvojstvennoe čislo v serbolužickix jazykax na materiale pamjatnikov XVI–XVIII vekov' in H. Faßke & R. Löttsch (eds), *Beiträge zur sorbischen Sprachwissenschaft*, 242–51. Bautzen: VEB Domowina-Verlag.
- Eselevič, I. È. 1979. *Iz istorii kategorii sobiratel'nosti v ruskom jazyke: Očerki*. Kazan': Izdatel'stvo Kazanskogo universiteta.
- Evans, Roger and Gazdar, Gerald. 1989a. 'Inference in DATR', *Proceedings of the 4th Conference of the European Chapter of the Association for Computational Linguistics*, 66–71. Manchester, England.
- . 1989b. 'The semantics of DATR' in A. G. Cohn (ed.), *Proceedings of the Seventh Conference of the Society for the Study of Artificial Intelligence and Simulation of Behaviour*, 79–87. London: Pitman/Morgan Kaufmann.
- Fiedler, Wilfried. 1981. 'Collective Plural Forms in Albanian and Balkan Slavic', *Folia Slavica*, 4, 263–72.
- Flaume, T. 1974. 'Singular and Plural Forms in Russian: Semantic and Stylistic Variants', PhD dissertation, University of Pennsylvania. Distributed by University Microfilms, Ann Arbor, 74–22, 840.
- Gazdar, Gerald. 1990. 'An Introduction to DATR' in Roger Evans and Gerald Gazdar (eds), *The DATR Papers*, Cognitive Science Research Paper CSRP

- 139, 1–14. School of Cognitive and Computing Sciences, University of Sussex.
- forthcoming. 'Ceteribus paribus', to appear in J. A. W. Kamp and C. Rohrer (eds), *Aspects of Computational Linguistics*. Berlin: Springer.
- Gil, David. 1993. 'Maltese "Collective Nouns": A Typological Perspective', unpublished paper.
- Greenberg, Joseph H. 1969. 'Some Methods of Dynamic Comparison in Linguistics' in Jaan Puhvel (ed.), *Substance and structure of language*, 147–203. Berkeley and Los Angeles: University of California Press.
- . 1972. 'Numeral Classifiers and Substantival Number: Problems in the Genesis of a Linguistic Type', *Working Papers on Language Universals* (Stanford University), 9, 1–39. [Reprinted 1977 in Adam Makkai, Valerie B. Makkai and Luigi Heilmann (eds), *Linguistics at the Crossroads*, 276–300. Padova: Liviana Editrice.]
- Heyl, Sonja. 1990. 'Typologische Aspekte des Feldes der Numeralität', *Zeitschrift für Slavistik*, 35, no. 4, 558–61.
- Holman, M. 1983. 'Interferencija i kategorija čisla imen suščestvitel'nyx v anglijskom i ruskom jazykak', *Bolgarskaja rusistika*, 12, no. 3, 69–72.
- Iordanskij, A. M. 1960. *Istorija dvojstvennogo čisla v ruskom jazyke*. Vladimir.
- Isačenko, Aleksandr V. 1941. 'Dvojstvennoe čislo vъ "Slově o pьlku Igorevě"' in *Zametki k Slovu o polku Igoreve*, 34–48. Beograd. [Reprinted in Alexander V. Isačenko 1976. *Opera Selecta: Russische Gegenwartssprache, russische Sprachgeschichte, Probleme der slavischen Sprachwissenschaft* (Forum Slavicum 45), 34–48. Munich: Fink Verlag.]
- Ivić, Milka. 1982. 'Slavic Fruit and Vegetable Names and Countability', *International Journal of Slavic Linguistics and Poetics*, 25–26 (= Kenneth E. Naylor, Howard I. Aronson, Bill J. Darden and Alexander M. Schenker (eds), *Slavic Linguistics and Poetics: Studies for Edward Stankiewicz on his 60th Birthday, 17 November 1980*, Columbus, Ohio: Slavica), 209–11.
- . 1989. 'Neka zapažnja o broju i rodu u srpskohrvatskom jeziku', *Južnoslovenski filolog*, 45, 27–44.
- Jakopin, Franc. 1966. 'Slovenska dvojina in jezikovne plasti', *Jezik in slovstvo* (Ljubljana), 4, 98–104.
- Jarvis, Donald K. 1986. 'Some Problems with Noun Number Choice', *Slavic and East European Journal*, 30, 262–70.
- Jenč, R. 1966. 'Wo woznamjenju porowosće w hornjoserbščinje' in H. Faßke & R. Löttsch (eds), *Beiträge zur sorbischen Sprachwissenschaft*, 214–41. Bautzen: VEB Domowina-Verlag.
- Kijanowa, O. N. 1992. 'K probleme odnositel'nosti jazykovyx norm russkix letopisej', *Vestnik Moskovskogo universiteta: Filologija*, 47, 9, no. 3, 54–57.
- Klimonov, V. D. 1987. 'Estestvennost' i markirovannost' v grammatičeskix formax čisla u imen suščestvitel'nyx v sovremennom ruskom jazyke', *Zeitschrift für Slavistik*, 32, 187–204.
- Krasil'nikova, E. V. 1990. *Imja suščestvitel'noe v ruskoj razgovornoj reči: Funkcional'nyj aspekt*. Moscow: Nauka.
- Kuznecov, P. S. 1953. *Istoričeskaja grammatika russkogo jazyka: morfologija*. Moscow: Izdatel'stvo Moskovskogo universiteta.

- Lenček, Rado L. 1982. 'On Poetic Functions of the Grammatical Category of Dual', *South Slavic and Balkan Linguistics*, 193-214. Amsterdam: Rodopi.
- Makeeva, I. I. 1986. 'K voprosu o sobiratel'nyx imen suščestvitel'nyx (Na primere nazvanij dragocennyx kamnej)', *Voprosy jazykoznanija*, no. 1, 91-98.
- Malevinskij, S. O. 1982. 'O klassifikacii sobiratel'nyx suščestvitel'nyx v drevnerusskom jazyke', *Izvestija Sibirskogo otdelenija AN SSSR: Serija obščestvennyx nauk*, 11, 3, 135-40.
- Matthews, P. H. 1974. *Morphology: an Introduction to the Theory of Word-Structure*. London: Cambridge University Press.
- Mel'čuk, Igor A. 1979. 'Countability vs. Non-countability' in Paul R. Clyne, William F. Hanks and Carol L. Hofbauer (eds), *Papers from the Fifteenth Regional Meeting Chicago Linguistic Society, April 19-20, 1970*, 220-27. Chicago: Chicago Linguistic Society.
- . 1985. *Poverxnostnyj sintaksis russkix čislovyx vyražeenij* (Wiener Slawistischer Almanach: Sonderband 16). Vienna: Institut für Slawistik der Universität Wien.
- Moszyński, Leszek. 1985. 'Czy w języku staro-cerkiewno-słowiańskim była kategoria duale tantum', *Slavica Hierosolymitana: Slavic Studies of the Hebrew University*, 7, 107-18.
- Nartnik, Vlado. 1988. 'K obravnavi dvojine v povojnih slovenskih slovnica' in Boris Paternu & Franc Jakopin (eds), *Sodobni slovenski jezik, književnost in kultura: mednarodni simpozij v Ljubljani od 1. do 3. julija 1986* (=Obdobja 8), 375-82. Ljubljana: Univerza Edvarda Kardelja v Ljubljani, Filozofska fakulteta.
- Naylor, K. E. 1972. 'On Some Developments of the Dual in Slavic', *International Journal Slavic Linguistics and Poetics*, 15, 1-8.
- Neweklowsky, Gerhard. 1988. 'Zur Häufigkeit morphologischer Kategorien in slowenischen Prosatexten' in Boris Paternu & Franc Jakopin (eds), *Sodobni slovenski jezik, književnost in kultura: mednarodni simpozij v Ljubljani od 1. do 3. julija 1986* (=Obdobja 8), 337-49. Ljubljana: Univerza Edvarda Kardelja v Ljubljani, Filozofska fakulteta.
- Padučeva, E. V. 1967. 'Dva podxoda k semantičeskemu analizu kategorii čisla' in *To Honor Roman Jakobson: Essays on the Occasion of his Seventieth Birthday*, 11. October 1966, II, 1474-88. The Hague: Mouton.
- . 1974. *O semantike sintaksisa: materialy k transformacionnoj grammatike russkogo jazyka*. Moscow: Nauka.
- Pavlović, M. 1965. 'Strukturalno-funkcionalne pojave kod zbirnih imenica u srpskohrvatskom jeziku', *Studia z filologii polskiej i słowiańskiej*, 5, 165-73.
- Peco, A. 1956. 'Oblici kolektivnih imenica na -ad', *Naš jezik* (Belgrade), nova serija 7, sv. 7-10, 234-46.
- Polivanova, A. K. 1983. 'Vybor čislovyx form suščestvitel'nogo v russkom jazyke' in V. P. Grigor'ev (ed.), *Problemy strukturnoj lingvistiki*, 130-45. Moscow: Nauka.
- Priestly, T. M. S. 1993. 'Slovene' in Bernard Comrie and Greville G. Corbett (eds), *The Slavonic Languages*, 388-451. London: Routledge.
- Reformatskij, A. A. 1960. 'Čislo i grammatika' in *Voprosy grammatiki: Sbornik statej k 75-letiju A. I. Meščaninova*, 384-400. Moscow/Leningrad: Izdatel'stvo Akademii Nauk, AN SSSR.

- Remneva, M. L. and Kijanova, O. N. 1991. 'Iz istorii ispol'zovanija form dvojtvennogo čisla v knižno-slavjanskoj i delovoj pis'mennosti XII–XVII vv.', *Vestnik Moskovskogo universiteta: Filologija*, 46, 9, no. 1, 23–33.
- Revzin, I. I. 1969. 'Tak nazывaemoe "nemarkirovannoe množestvennoe čislo" v sovremennom russkom jazyke', *Voprosy jazykoznanija*, no. 3, 102–09.
- Rothstein, Robert A. 1993. 'Polish' in Bernard Comrie and Greville G. Corbett (eds), *The Slavonic Languages*, 686–758. London: Routledge.
- Rudenko, D. I. 1987. 'O smislovoj specifikke sobiratel'nyx suščestvitel'nyx', *Russkij jazyk v škole*, no. 1, 60–64.
- Salter, Francis R. 1971. 'Numerical Duality and Grammatical Number in Old Russian', PhD Dissertation, University of Wisconsin. Distributed by University Microfilms, Ann Arbor, ref. 71–25, 503.
- Smirnova, G. A. 1981. 'Kategorija čisla nesklonjaemyx suščestvitel'nyx' in V. P. Grigor'ev (ed.), *Problemy strukturnoj lingvistiki 1979*, 132–47. Moscow: Nauka.
- Smith-Stark, T. Cedric. 1974. 'The Plurality Split' in Michael W. La Galy, Robert A. Fox and Anthony Bruck (eds), *Papers from the Tenth Regional Meeting, Chicago Linguistic Society, April 19–21, 1974*, 657–71. Chicago: Chicago Linguistic Society.
- Soboleva, P. A. 1979. 'Leksikalizacija množestvennogo čisla i slovoobrazovanie' in V. P. Grigor'ev (ed.), *Lingvistika i poëtika*, 47–85. Moscow: Nauka.
- Stankiewicz, Edward. 1962. 'The Singular–Plural Opposition in the Slavic Languages', *International Journal of Slavic Linguistics and Poetics*, 5, 1–15. [Reprinted in Edward Stankiewicz, *The Slavic Languages: Unity in Diversity*, Berlin: Mouton de Gruyter, 1986, pp. 113–26.]
- . 1983. 'The Collective and Counted Plurals of the Slavic Nouns' in Michael S. Flier (ed.), *American Contributions to the Ninth International Congress of Slavists, Kiev, September 1983: I: Linguistics*, 277–92. Columbus, Ohio: Slavica. [Reprinted in Edward Stankiewicz *The Slavic Languages: Unity in Diversity*, Berlin: Mouton de Gruyter, 1986, pp. 153–70.]
- Stevanović, M. 1936. 'Predikat zbirnih imenica', *Naš jezik* (Belgrade), 4, 202–06.
- Stone, Gerald. 1993. 'Sorbian' in Bernard Comrie and Greville G. Corbett (eds), *The Slavonic Languages*, 593–685. London: Routledge.
- Šul'ga, M. V. 1983. 'Unifikacija russkogo substantivnogo sklonenija s točki zrenija struktury rodovyx i čislovyx protivopostavlenij', *Voprosy jazykoznanija*, no. 2, 118–22.
- Tesnière, Lucien. 1925a. *Les formes du duel en slovène*, Paris: Champion.
- . 1925b. *Atlas linguistique pour servir à l'étude du duel en slovène*. Paris: Champion.
- Tiersma, Peter M. 1982. 'Local and General Markedness', *Language*, 58, 832–49.
- Unbegaun, Boris. 1935. *La Langue russe au XVIe siècle (1500–1550), I: La flexion des noms*. Paris: Champion.
- . 1947. 'Les substantifs indéclinables en russe', *Revue des études slaves*, 23, 130–45.

- Vinogradov, V. V. 1972. *Ruskij jazyk (grammatičeskoe učenie o slove)*, izdanie vtoroc. Moscow: Vysšaja škola. [First edition 1947.]
- Vlahović, Maja. 1991. 'Modeli transpozicije dvojine (na primeru prevođenja sa slovenačkog na srpskohrvatski)', *Naučni Sastanak Slavista u Vukove Dane: Referati i saopštenja*, 20/2, 311–15. Beograd: Međunarodni slavistički centar.
- Wierzbicka, Anna. 1988. *The Semantics of Grammar* (Studies in Language Companion Series 18). Amsterdam: John Benjamins.