

AN INTERPRETATION OF THE EVOLUTION OF THE DUAL IN SOUTH SLAVIC

1. **Introduction.** Historical linguists reconstruct for the Common Slavic nominal system a dual paradigm in addition to a plural,¹ noting that desinences of the dual were required in the declension of stems denoting paired objects (e.g. *nog-* 'leg', *ruk-* 'arm'),² and the declension of all stems in contexts where the arithmetic notion of *two* was implicit, or expressed via the numeral *dva/dvě* 'two' which itself exhibited dual declension. None of the contemporary languages has reflexes of all of the inherited strings associated with dual paradigms. All, however, have some, although only two – Sorbian in West Slavic and Slovenian in South – are thought to have retained the dual. The purpose of this paper is to trace the evolution of the dual in South Slavic as it is represented in the contemporary literary standards of Slovenian,³ Serbocroatian, Macedonian, and Bulgarian in an attempt to show that the fate of the dual has, in certain ways, been more uniform than heretofore thought, and that it is an oversimplification to claim, following the handbooks, that the dual has been lost.

2. **General Remarks.** The loss of dual paradigms is not unique to Slavic. It is well attested among the languages of the world, and has been the rule in descendants of Indoeuropean. Among contemporary Indoeuropean languages, the dual remains only in Slavic, although it may occur as an archaism in Lithuanian (see Senn 1966: 91). Among the ancient languages, it is attested in Old Irish (see Thurneysen 1946: 154-155), Sanskrit (see Whitney 1889: 88-89), Greek (see Smyth 1956: 45), and the Baltic languages (see Endzelins 1971: 132 et passim), but is already obsolescent. It is also attested in Gothic and Old Norse, where it is restricted to the pronoun (see Prokosch 1938: 229-230). The handbooks are content to state simply that the dual has been lost, ignoring the fact that, properly speaking, loss is not an innovation, but the result or effect of one. None of the handbooks makes any attempt to define the innovation(s) responsible for loss. This can be done only with reference to the meaning and form of the dual, and to their relationship and function within the declensional system. We therefore begin with the observation that, semantically, the dual is associated with two fundamental meanings: *pairedness* and *twoness*. We are accustomed to thinking of both in terms of the category of number.⁴ However, if number is defined arithmetically, only the notion of *twoness* applies because the notion of *pairedness* does not, technically,

quantify participants of the narrated event. Rather, it *qualifies* them by denoting one of their characteristics, which is that they occur naturally, normally, or contextually in *two's*, or that the referent of one noun occurs in combination with that of another (e.g. Sanskrit *śive te dyāvāprthivī ubhe stām* 'May heaven and earth both be propitious to thee!', which is cited in Whitney 1889 [88-89]; modifiers of the compound *dyāvāprthivī* 'heaven and earth' are dual, as is the verb). In contrast, the meaning of *twoness* is unambiguously arithmetic, and therefore compatible with the category of number. It follows that the notion of duality⁵ may be grammaticalized via gender represented by [paired] or number represented by [two].⁶ In fact, although contemporary Slavic languages which retain the dual attest it only in the arithmetic interpretation, the earliest attestation of Slavic, i.e. Old Church Slavonic, shows unmistakable evidence of the nonarithmetic. The nominal systems of this language generally did not reflect the category of number morphologically or morphophonemically in the nominal stem; there were, however, two instances in which it did, both in derived stems:

1. nominal stems with the suffix *-tel'/-tel-*, in the declension of which stem final nonpalatal was restricted to the plural (e.g. n.pl. *kazatele*, etc.; cf. n.sg. *kazatelъ* 'instructor', etc.), and

2. nominal stems with the suffix *-in-/θ-*, in the declension of which *-θ-* was restricted to the plural (e.g. n.pl. *graždane*, etc.; n.sg. *graždaninъ* 'townsman', etc.).

In each instance, dual forms were made on the stem variant which occurred in the singular;⁷ thus, on the stem with palatal *l* in the declension of nominal stems with *-tel'/-tel-*, and on the overt variant in the declension of those with *-in-/θ-* (e.g. n.a.du. *kazatel'a*, etc., n.a.du. *graždanina*, etc.). At this early stage in the disintegration of the Slavic linguistic unity, then, we must assume that the dual was interpreted nonarithmetically, as gender, or that the forms we have cited reflect a time when it was. The evidence is particularly strong in the case of nominal stems with *-in-* because this suffix denoted "one", and would therefore have been incompatible with strings expressing duality in an arithmetic sense. There was no contradiction if the dual was interpreted as an instantiation of gender, imparting the meaning 'paired'. Since this is not an arithmetic meaning per se, it is compatible with a stem marked for singularity (i.e. exhibiting the suffix *-in-*), imparting the meaning that the singular referent of the stem is paired. The implication is, of course, that there are two. But this is not part of the meaning proper imparted by the desinences expressing duality.

Collectives provide a useful comparison. Common Slavic attested a suffix *-j-* imparting the notion of collectivity, which cannot be considered an instantiation of number since it entailed a stem declined in the singular (e.g. *brat-ij-* 'brother').⁸ The derivational suffix, in other words, did not quantify the referent

of the stem, but qualified it by imparting the meaning 'occurring in groups'. Nominal stems from the roots *ok-/oč* - 'eye' and *ux-/uš* - 'ear' are also of interest.⁹ Morphologically, these stems had two forms, one comprised exclusively of the root, and the other, of the root extended by a suffix *-es*. The root constituent in the unextended stem opposed a velar to a palatal in final position. There was no root final opposition in the extended stem, which consistently attested the palatal; thus, *ok-/oč-/oč-es* and *ux-/uš-/uš-es*. The distribution of stem variants was the same in each instance: the extended stem occurred throughout the plural and in the oblique forms of the singular; the unextended stem with final palatal occurred throughout the dual; it occurred in the nominative singular with final velar. Thus, although these stems did not, like those we have already mentioned, oppose a plural stem variant to a nonplural, with dual forms attesting the latter, they did oppose a stem variant (i.e. the unextended one) restricted to nonplural forms, although not occurring in all of them, to another (i.e. the extended one) not restricted in this regard. Dual forms attested the restricted variant. The occurrence in them of a variant incompatible with the plural is further evidence for a nonarithmetic interpretation, and especially noteworthy because these stems were the only ones combining a naturally paired referent with a declension exhibiting a stem variant restricted to nonplural forms. Other stems with a naturally paired referent (e.g. *rp̣k*- 'arm', *nog*- 'leg') had declensions with uniform stem structure, and, therefore, no stem-level opposition of number.

The assumption that the dual has evolved from pairedness to twoness in Slavic and other Indoeuropean languages is supported by the failure of these languages to retain the former. The transition to twoness can be understood as evolution towards an unmarked interpretation, and therefore can be likened to the evolution of collectives, which in some of the contemporary Slavic languages attest plural inflections and/or require the plural forms of modifiers. Since collectivity implied plurality, but not vice versa, collectives took on plural form, resulting in a simplification of the grammar. Similarly, in the case of meanings associated with the dual, pairedness implied twoness, but not vice versa. Thus, an arithmetic interpretation was simpler than a nonarithmetic one. It was not, however, without consequence since, with its implementation, the strings in question united form which was canonically and positionally grammatical with meaning which, unlike all other meaning represented desinentially, was represented lexically as well, in the numeral *dъva/dъvѣ*. Subsequent developments, which we are about to consider, suggest that the immediate result of this marked combination was decomposition of meaning and form. The arithmetic meaning of 'twoness' was assigned exclusively to the cardinal number "2"; the grammatical form previously connected to this meaning, in the absence of special (i.e. dual) arithmetic meaning to be represented, was united allo-

morphically with strings of the plural (i.e. the existing grammatical form expressing arithmetic meaning, which we represent as [+plural]) if there were such strings, or, for nouns expressing inherently paired objects (e.g. *oko* 'eye', *noga* 'leg'), were interpreted as markers of the plural (e.g. Bulgarian *noze* from *noga*, which, historically, is a reflex of the dual, but, synchronically, is an irregular plural). This was one of two developments which gave rise to the contemporary systems. The other was reinterpretation of the nonoblique (i.e. the form functioning as nominative and accusative) form of the numeral *dъva/dъvѣ* as a noun. Historically, this numeral, a cardinal number, behaved adjectivally; it agreed in gender, number, and case with the noun it modified. Although gender and case varied, its number was always dual. The status of the nonoblique form, however, was ambiguous because, syntactically, it could occur in isolation in what may be termed an enumerative or counting function. This made it susceptible to reinterpretation as a noun. With reinterpretation, however, the possibility of adnominal modification (i.e. the occurrence of an accompanying noun in the genitive with delimiting function) arose. This was significant for *dъva/dъvѣ* because, with decomposition of meaning and form in the evolution of the dual, strings associated with the dual were vulnerable to identification with other, meaningful desinential strings in the declension. Other things being equal, they were identified with plural strings. Reinterpretation of *dъva/dъvѣ* as a noun, however, made possible identification with strings of the genitive as well.

3. South Slavic. We have identified two developments relevant in the evolution of strings associated with duality. The first, decomposition of form and meaning, was universal in South Slavic, and was of consequence because, in yielding an allomorphic relationship between them and strings occurring in the plural, it created a situation in which their fate was no longer solely a function of the notion of duality; i.e. the retention or elimination of duality in the grammatical system was no longer directly connected with the retention or elimination of the strings which had represented it. Form and meaning could evolve independently. The second development, reinterpretation of the non-oblique form of *dъva/dъvѣ* as a noun, occurred only in Serbocroatian, Macedonian, and Bulgarian, where it was of consequence for the interpretation of "2" and its declension. The result in each language was identification of -a in the nonoblique form of the masculine dual with the genitive singular. Since masculine -a was the only dual string identical to a string occurring in a genitive of the same declension type,¹⁰ we may generalize that any nonoblique dual string which *could* be identified with a form of the genitive was, with the result that *dъva/dъvѣ* followed by a masculine noun in the nominative dual was reinterpreted as *dъva/dъvѣ* followed by a genitive singular. Feminine and neuter nouns were unaffected because the -ѣ in their nominative dual was not

identical to a form of the genitive; *džva/džvč* followed by a feminine or neuter noun, therefore, continued to be interpreted as *džva/džvč* followed by the nominative plural.

We turn now to more detailed consideration of the consequences of decomposition and reinterpretation for strings associated with the dual and the paradigmatic structures in which they were relevant.¹¹ There were two such structures, which we refer to as nominal (i.e. the inflection of nouns and adjectives) and *numerical* (i.e. the inflection of the cardinal number "2"). We conclude by returning to the retention of duality as a notion.

3.1 Nominal Inflection. If duality was retained grammatically, it could continue to be expressed morphologically via the strings which had expressed it previously, with the difference that these strings were now markers of the plural and so could express duality only by virtue of their distribution, allomorphically in effect.¹² Slovenian has taken this route, requiring *džva/džvč* with the first occurrence of a dual allomorph of the plural.¹³ The evidence for allomorphy and the underlying status of strings occurring in the plural is indisputable: *-ov-*, a nonterminal suffix marking the plural and historically restricted to the plural of certain masculine nouns, is now attested in the dual of those nouns as well (e.g. n.du. *glasova*, etc. and n.pl. *glasovi*, etc. from *glas* 'voice'; cf. Old Slovenian n.du. *glasā*, etc., and the remaining South Slavic languages, in which *-ov-* occurs only in the plural). Despite what seems to be a relatively clear situation, however, there are several phenomena which require explanation. The plural string has replaced the dual in the genitive and locative of nominal declension, and the nominative of pronominal. The motivation for this innovation has yet to be determined.¹⁴ It is probably to be found in the category of gender. In the plural of the Slovenian noun, gender is distinguished in *all* cases (cf. the case systems in the literary standards of North Slavic, which lack gender in some forms of the plural; e.g. *-ami* in the instrumental plural of Polish and East Slavic) although the distinction varies, usually opposing masculine and neuter to feminine (e.g. masculine/neuter *-om* versus feminine *-am* in the dative plural; cf. feminine and neuter *-ø* versus masculine *-ov* in the genitive plural).¹⁵ If dual strings were part of the plural system, and distinction of gender was required in this system, we must assume that the absence of gender attested in the genitive and locative of the dual, which both exhibited *-u*, was marked in systemic terms. The remaining cases were not a problem in this regard since masculine was opposed to feminine and neuter in the nonoblique subsystem (i.e. masculine *-a* was opposed to feminine and neuter *-ě/i* in the nominative and accusative), and feminine to masculine and neuter in the remaining cases of the oblique (i.e. feminine *-ama* was opposed to masculine and neuter *-oma/-ema* in the dative and instrumental). Plural

strings were extended in the genitive and locative, regularizing the system of strings with regard to the gender requirement.

The development of the Slovenian pronominal system can also be understood in this light. Synchronically, reflexes of the dual are preserved as allomorphs of the plural except in the nominative, where new forms are attested. Thus, we find g.l.du. *naju/vaju* and d.i.du. *nama/vama*, which are reflexes of Common Slavic duals, in the oblique forms of the first and second persons of the contemporary language, but *midva/midve/vidva/vidve*, which are reflexes of Common Slavic plurals followed by *dъva/dъvѣ*, in the nominative. Historically, this system combined reflexes of the Common Slavic pronominal system with those of its demonstrative. Among forms of the plural, gender was relevant only in the nominative forms of the demonstrative component (e.g. *oni/one/ona* in the nominative). Within the pronominal system as a whole, therefore, the nominative was not uniform in the expression of this category since there was no implementation of it in the pronominal component proper, which attested *mi* in the first person of the plural, and *vi* in the second. Final *i* in them was identified with final *i* marking gender in masculine *oni*, and uniformity was imposed via the evolution of feminine complements yielding, respectively, *mi/me* and *vi/ve*. Subsequently, this distinction was extended to the nominative dual, yielding *midva/medve* and *vidva/vedve*, and making the pattern of gender distinction in the dual identical to that in the plural with regard to case.¹⁶ Thus, generally, the allomorphic relationship between dual and plural was maintained in Slovenian declension only to the extent that requirements imposed by the plural were met in the dual paradigm. To the extent they were not, the latter was remade. It is interesting to note in this regard that reformation in the nominative dual yielded constructions composed of strings in desinential position which, canonically, were lexical. These may be a result of the anaphoric requirement, with the added requirement that the numerical component had to follow the lexical in the pronoun. Apparently, this led to their reinterpretation as word level units with the numeral in desinential position. This is further evidence for the ambiguity inherent in the expression of the notion of duality. Although it was probably more compatible with expression in a lexical morpheme, it was also expressible in desinential position.

In the remaining languages, we can say only that, if duality has remained part of the grammatical system, it is nevertheless not expressed inflectionally, presumably because the plural allomorphs which were reflexes of the dual strings were needed for other systemic functions. In this regard, East Balkan Slavic has lost case. Nevertheless, there were consequences in nonnumerical declension because *a* in masculine nouns following *dъva/dъvѣ* had apparently been identified with the genitive singular, but could no longer be assigned case value (i.e., be identified with the genitive singular). It therefore was assigned a

new value which the handbooks identify as the *counted form* or *counted plural* (*brojna forma* in Bulgarian; *izbrojana množina* in Macedonian).¹⁷ There has been no discussion, however, of the category which is represented. The assumption implicit in the name *counted form* or *counted plural* is obviously that the category in question is *number*. But the evidence does not support this interpretation. And the evidence, again, is morphological in nature. In nouns which oppose a singular to a plural via the alternation of a vowel with its absence (e.g. *starec/starci* 'old man' in Bulgarian and Macedonian), the counted form, historically, exhibited the form of the stem which occurred in the plural (i.e., the form without a vowel; thus *starca* from *starec/starci*). There has been a well defined tendency in both Bulgarian and Macedonian for the counted form to be remade on the nonplural stem; thus, *stareca* instead of *starca* for the counted form of *starec* in both Bulgarian and Macedonian), apparently because the desinential component of such forms was distinct from that of the plural, and so identified as *nonplural*. We must conclude from this that countedness in East Balkan Slavic is not defined arithmetically, but in terms of the category of gender. Thus, a masculine noun exhibits a plural marked for arithmetic interpretation and a nonplural not so marked. The nonplural, in turn, exhibits a counted form marked for gender and a noncounted form not so marked. The counted form, in other words, does not quantify participants of the narrated event, but qualifies them by imparting via the inflectional machinery of the language that they are modified by a cardinal number. The meaning of the inflection is, therefore, case-like in imparting what is essentially syntactic information. This explains the ability of the counted form to be replaced by a plural (see Stojanov 1964: 280). Since Bulgarian and Macedonian are otherwise languages without morphemes which function syntactically, the occurrence of a desinence imparting syntactic information was marked, and therefore vulnerable to replacement by a morpheme more compatible with the grammatical structure of the language.¹⁸

In Serbocroatian, the allomorphic relationship in the nominal and pronominal systems led to generalization of the plural string in the nominative, accusative, and genitive, but the dual in other cases. To understand this, we must consider the fate of dual strings in the languages of North Slavic, which neither preserved them as allomorphs of the plural nor eliminated case as a category. These languages generalized plural strings, from which we conclude that, normally, strings of the plural were basic, or underlying, in the allomorphic relationship which evolved between them and strings of the dual. Serbocroatian, therefore, attests the expected evolution in the nominative, accusative, and genitive. The unexpected evolution in other cases of the plural must be taken as evidence that the grammatical structure of the case system had been redefined in a manner which made it more compatible with the distribution of strings in the

dual, i.e. redefined in terms of a four-way opposition, in which the inherited distinction of dative/locative/instrumental was not preserved. The distribution of dual *-ma* reflected this structure, with the result that it was assigned underlying status in the relevant forms, and subsequently generalized, replacing strings of the plural.¹⁹

3.2 Numerical Inflection. The interpretation of *dъva/dъvѣ* as a noun had more farreaching consequences in Serbocroatian than it did elsewhere. The facts suggest that, within the category of noun, special status was given to cardinal numbers. The evidence for this is the development of the declension of "2", which, historically, was pronominal, with gender distinguished only in the nominative and accusative, opposing masculine *dъva* to feminine/neuter *dъvѣ*. All genders attested g.l. *dъvoju* and d.i. *dъvѣma*. The modern language opposes a masculine/neuter declension, including n.a. *dva*, g.l. *dvaју*, and d.i. *dvama*, to a feminine one, including n.a. *dve*, g.l. *dveју*, and d.i. *dvema*. Structurally, this is a unique declension type, comprised morphologically of numeral + desinence, which has been extended to "3" and "4"; thus, n.a. *tri*, g.l. *triju*, d.i. *trima* in the declension of the former; n.a. *četiri*, g.l. *četir(i)ju*, d. i. *četir(i)ma* in that of the latter.²⁰ It is not difficult to motivate the remade forms. Historically, final *a/ѣ* in the nonoblique dual was part of the case system. With decomposition, and in the absence of plural forms of *dъva/dъvѣ*, *a/ѣ* was apparently reinterpreted as a marker of gender, with the result that the nonoblique form was morphologically *stem + gender + case*, in which the final component was nonovert.²¹ The remaining forms exhibited only the stem and case components, and so were marked since they did not distinguish gender. They were replaced by gender forms, resulting in the contemporary "twofold" paradigm. This, however, did not complete the evolution. It created a paradigmatic structure in which the nonoblique forms were related directly to the oblique by the addition of a suffix. This was interpreted as a numerical declension, and extended to "3" and "4". Higher numbers did not decline, and so were unaffected.

Although East Balkan dialects lost case, there is nevertheless one development in the evolution of *dъva/dъvѣ* which requires comment: retention of what appears to be the dative form of this numeral, and extension of its terminal segments, i.e. *ma*. The analysis of *-a* as a morpheme expressing countedness undoubtedly explains the retention in East Balkan of what appears to be the inherited dative/instrumental of *dъva/dъvѣ* in *dvama*, and the appearance of new numerals composed, apparently, of the cardinal and *ma* in Bulgarian (thus, *trima*, etc.). First, it should be noted that, although *ma* is undoubtedly from the dative/instrumental of *dъva/dъvѣ*, *dvama* is a new form which arose via suffixation of *ma* to the cardinal number *dva* (cf. *dъvѣma*, the inherited dative/instrumental of *dъva/dъvѣ*). As case was lost in East

Balkan, and *-a* took on the status of a morpheme expressing countedness, the final *-a* of *ma* in the dative/instrumental of *dъva/dъvѣ* was evidently analyzed as an instance of this morpheme, with *ma* as its realization after a vowel, or, perhaps, as a morpheme in its own right. As a result, the string *ma* became available for the creation of a new set of quantifiers, and was used for this purpose.²²

We come last to Slovenian, in which the inherited adjectival status of "2/3/4" has been preserved and extended. The oblique forms of "5" and above now exhibit adjectival declension, and the declension of "2/3/4" has been remade to conform fully to the adjectival pattern. Thus, the contemporary declension of "2" exhibits n.a. *dva/dve*, g.l. *dveh*, and d.i. *dvema*, with only n.a. *dva/dve* and dative/instrumental *dvema* direct descendants of their Common Slavic etymons. Genitive/locative *dveh* is new, replacing *dъvoju*, the inherited form.²³ The evolution is evident: first, strings in the dual of the adjective, like those in the dual of the noun, were reinterpreted as allomorphs of the plural, following which plural allomorphs of the genitive/locative were extended to the dual so that the pattern of adjectival declension was structurally identical to that of nominal (i.e., there was no allomorphic distinction between dual and plural in the genitive/locative). Second, desinential *-h* in the genitive/locative of adjectival declension was extended to *dъva/dъvѣ*, which was distinct from the adjective only in that form. As a result, the adjectival status of *dъva/dъvѣ* was reflected in its form. The cardinal numbers "3" and "4" were unaffected by the innovation because they inherited, and thus already attested, desinential *-h* in the genitive/locative.

4. Final Remarks. The handbooks claim evolutionary divergence in South Slavic with respect to the dual. Slovenian, they say, retained it; the other languages eliminated it. But this view, based on the fate of desinential strings associated with dual meaning, is misleading. If retention of the dual is taken literally, i.e. as the maintenance of strings not merely associated with, but *expressing* duality, we must conclude that, with respect to dialects which served as the sources of the literary standards at least, the dual was lost throughout South Slavic because none of the contemporary literary languages attests such strings. We have therefore hypothesized a uniform South Slavic evolution, which includes *pairedness* as the original interpretation of the dual, replacement of this interpretation by an arithmetic one, and, finally, dissociation of the arithmetic meaning from grammatical form with concomitant assignment of the form to morphemes expressing plurality. The loss of strings associated with dual meaning in Serbocroatian, Macedonian, and Bulgarian, which serves as a basis for the assertion of the handbooks that the dual has been lost in these languages but not in Slovenian, is therefore properly understood as part of the evolution of the plural in conjunction with that of the category of case.

Slovenian maintained the status quo, presumably in the absence of systemic motivation to do otherwise. Thus, synchronically, Slovenian is unique in imparting the notion of duality, via strings which express the meaning [+plural]. It can nevertheless be argued that all of the South Slavic languages give special status to duality since each has maintained at least some of the unique attributes of the cardinal number "2". This cannot be considered a coincidence in view of the fact that there has been interaction between "3" and "4". Historically, there were differences in the nominative, but both now attest *i* although "2" has retained *a/æ*. This unique attribute has been maintained throughout South Slavic, even when there has been analogical leveling in oblique (i.e. adjectival) forms. The implication is clear: Despite the instability of duality expressed desinentially (i.e. via the morphology of case), it is important enough in some sense, undoubtedly to be defined culturally and psychologically, to maintain its presence. Thus, systemically, Serbocroatian, Macedonian, and Bulgarian, have preserved a unique dual which is, in every sense comparable to that of Slovenian since the latter is arithmetic, with its distinctive semantic content housed in *dva/dvæ*. It may therefore be reasonable to assume that, historically, the uniqueness of Slovenian was not so much the preservation of dual strings as allomorphs of the plural, subject only to the requirements of gender we noted, but the absence of change elsewhere in the system (i.e. reinterpretation of the nonoblique form of "2" as a noun; loss of case; syncretism in plural cases), creating conditions in which the interpretation of dual strings changed as a concomitant (i.e. were identified with a desinence of the genitive and/or were assigned basic status and subsequently generalized).

Notes

- ¹ For general discussion of the nominal dual and its evolution in Slavic, see Bräuer 1969: 130-143, Meillet 1965: 459-460, and Vaillant 1958. Meillet 1964: 188 and Lehmann 1974: 201-202 should be consulted for Indoeuropean. For discussion of the category of number, see Jespersen 1965.
- ² Unless otherwise specified, linguistic units are cited as they are reconstructed for late Common Slavic. Forms specific to a language are cited in its orthography, or in transliteration if the language uses Cyrillic. Slovenian desinences attesting alternation of *o* with *e* in initial position are cited with *o* (see Lencek 1982b: 178). Accentual notations are omitted in Serbocroatian and Slovenian forms. Note the following abbreviations: sg. = singular, du. = dual, pl. = plural, h. = hard, s. = soft, m. = masculine, f. = feminine, n. = neuter, n. = nominative, g. = genitive, d. = dative, a. = accusative, i. = instrumental, and l. = locative.
- ³ For comment on the dual in Contemporary Standard Slovenian, see Lencek 1982b: 185-186, Lencek 1982a, and Svane 1958: *passim*. For discussion of

the evolution of the dual in South Slavic, see Bräuer 1969: 130-143 and, in addition, Mirčev 1958: 177-178 for Bulgarian, Koneski 1967: 111-112 for Macedonian, Meillet 1914: 330-402 for Serbocroatian, and Tesnière 1925 for Slovenian.

- ⁴ We assume the inventory and definition of grammatical categories in Jakobson 1984.
- ⁵ Note the distinction between *duality*, which refers to a *notion* (i.e. something independent of language), and *dual*, which refers to linguistic form and/or meaning reflecting this notion.
- ⁶ Gender may well be the more likely alternative if the origin of the dual was the occurrence of certain objects, primarily parts of the human body, in two's.
- ⁷ For the facts in Old Church Slavonic, see Lunt 1974: 64 and Diels 1963: 164-167.
- ⁸ For general discussion of collectives in Slavic, see Bräuer 1969: 113-126.
- ⁹ For the facts in Old Church Slavonic, see Lunt 1974: 64 and Diels 1963: 169-172.
- ¹⁰ Following Lunt 1974, we assume two basic declension types, *twofold* and *simple*, for Old Church Slavonic and, by implication, for Common Slavic as well as Old Slovenian, Serbocroatian, Bulgarian, and Macedonian. The twofold type exhibits two sets of desinences, one of which occurs with stems terminating in a palatal consonant, the other with stems terminating in a nonpalatal. The simple type exhibits only a single set of desinences. Each type attests masculine and feminine nouns. The twofold type attests neuter nouns as well. For reference, we give the genitive singular and all cases of the dual for each type in the following table:

twofold:

	n.a.du.	g.l.du.	d.i.du.	g.sg.
m.h.	-a	-u	-oma	-a
m.s.	-a	-u	-ema	-a
f.h.	-ě	-u	-ama	-y
f.s.	-i	-u	-ama	-ę
n.h.	-ě	-u	-oma	-a
n.s.	-i	-u	-ema	-a

simple:

	-i	-i	-ьma	-i
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- ¹¹ For reference, we give nominal and pronominal reflexes of the dual in the contemporary South Slavic languages:

nominal

Slovenian

n.a. *-a* and d.i. *-oma* in nonfeminine declension

n.a. *-i* and d.i. *-ama* in feminine declension

Serbocroatian

n.a. *-a* in constructions with "2", "3", and "4"

d.i. *-ma* in plural declension

East Balkan

n.a. *-a* in the counted plural

d.i. *-ma* in collective numerals

pronominal

Slovenian

g.l. *naju/vaju*

d.i. *nama/vama*

Serbocroatian

d.i. *nama/vama*

East Balkan

none

- ¹² It should be reiterated that grammatical retention of duality was not a function of its retention desinentially. Duality was retainable in the grammatical hierarchy as long as it was systemically motivated. Such motivation was available on a permanent basis in words with naturally paired referents, which, we have noted, may be seen as the origin of the incorporation of duality into linguistic systems.
For discussion of the allomorphic representation of grammatical meaning, see Elson 1980.

- ¹³ See Lencek 1984b: 185, where it is also noted that nominal stems denoting inherently paired objects take plural declension and occur with plural forms of the verb. Strings associated with the dual were unopposed in such forms, and so functionless as allomorphs. They were therefore replaced by the basic allomorphs of the plural, i.e., the strings which, historically, were restricted to the plural.

Slovenian generally does not heighten oppositions of number morphophonemically in the nominal stem. It should be noted, however, that the stem variant of *ok/-oč/-oč-es* - 'eye' and *ux/-uš/-uš-es* - 'ear' restricted to the dual (i.e. *oč-* and *uš-* respectively) has been eliminated, even when strings associated with the dual are retained in their declension. The nominal stem *človek-/ljud-* 'person' should also be mentioned. This stem appears to oppose a

plural stem variant (i.e. *ljud-*) to a nonplural (i.e. *človek-*), with dual forms made on the nonplural. But Svane 1958: 35 notes that in the genitive/locative of the dual, where a plural form is expected, *ljud-* is attested, showing that *ljud-* is compatible with dual environments, and, by implication, that the dual has been reinterpreted arithmetically.

- ¹⁴ See Tesnière 1925: 191-193 for discussion and references. Tesnière himself considers three possibilities, but his proposals do not include the one made here. He also discusses chronological differences with respect to gender and case in the replacement of dual strings by plural.
- ¹⁵ Following is the complete inventory of dual and plural desinences for reflexes of the twofold declension in Contemporary Standard Slovenian:

dual

	m.	f.	n.
n.a.	-a	-i	-i
d.i.	-oma	-ama	-oma

plural

n.	-i	-e	-a
g.	-ov	-ø	-ø
d.	-om	-am	-om
a.	-e	-e	-a
i.	-i	-ami	-i
l.	-ih	-ah	-ih

Note: Plural forms are used in the genitive and locative dual.

- ¹⁶ The new forms replaced *vě*, later remade as *ma*, in the first person dual, and *va* in the second. These were invulnerable to the extension of gender undoubtedly because they, unlike *mi* and *vi* of the plural, did not terminate in *i*, an existing marker of gender present in *oni*. Lencek (1982b: 222) notes that feminine *medve* and *vedve* are artificial in the standard literary language. Tesnière 1925: 263-264 et passim states that forms of "2" were suffixed to forms of the dual as well (e.g. *madva* in the first person, *onadva* in the third person), from which it is evident that *midva*, etc. did not replace forms of the dual directly, but following an intermediate period in which these forms themselves attested the new pattern. Tesnière agrees that the source of gender in *mi* and *vi* was *oni/one* in the third person, but offers no explanation for extension of the distinction to the dual.
- ¹⁷ For brief discussion of the counted plural, see Mirčev 1958: 177-178 and Stojanov 1964: 203-205 for Bulgarian, as well as Koneski 1967: 245 and Lunt 1952: 32 for Macedonian.

- ¹⁸ Beaulieu 1950: 59 notes that certain neuter nouns form a counted plural with *-ta*; thus, *moreta* from *more* 'ocean'; cf. *morja*, the normal plural. This is not confirmed by other references (see, for example, Stojanov 1964: 206, in which *moreta* and *morja* are given as alternatives, with the latter stylistically marked). To the extent Beaulieu is, or was, correct, however, we have support for the nonarithmetic nature of the counted plural in Bulgarian. Since the counted plural has not otherwise been extended, the occurrence of new instances for such a small set of nouns seems peculiar until it is observed that, provided *e* of the singular is assigned to the stem, these are the only nouns which can be seen to oppose a plural stem to a nonplural (thus, *mor*'-/*more*- for the noun in question, with *mor*' in the plural and *more*- in the nonplural). The new "plural", combines a stem unmarked for plurality with a desinence marked for it. The counted form, therefore, expresses gender via a marked combination of morphemes.
- ¹⁹ For discussion of the evolution of the case system in Serbocroatian, see Meillet 1914.
- ²⁰ The inherited declensions of "3" and "4" were respectively: n.a. *trъje/tri*, g. *trъjъ*, d. *trъmъ*, i. *trъmi* and l. *trъxъ*; n.a. *četyre/četyri*, g. *četyrъ*, d. *četyremъ*, i. *četyremi* and l. *četyrexъ*.
- ²¹ The same innovation is attested for *oba/obě* 'both'; thus, g.l. *obaju/obeju* and d.i. *obama/obema*.
- ²² For discussion of the relevant numerals, see Mirčev 1958: 177 and Stojanov 1964: 268-269 for Bulgarian, as well as Koneski 1967: 328 and Lunt 1952:48 for Macedonian. Note that contemporary Standard Macedonian does not attest *-ma* as such, but appears to preserve a reflex of it in the initial segment of *-mina* (e.g. *dvamina* 'two', etc.; cf. Bulgarian *dvama* 'two', etc.).
- ²³ See Tesnière 1925: 370 for discussion of g.l. *dveh* and criticism of alternative interpretations.

Bibliography

- Beaulieu, L. 1950. *Grammaire de la langue bulgare*. Paris: Institut d' études slaves.
- Belić, A. 1965 (second edition). *Istorija srpskohrvatskog jezika (knj. II; sv. 1: reči sa deklinacijom)*. Beograd: Naučna knjiga.
- Bräuer, H. 1969. *Slawische Sprachwissenschaft (III Formenlehre; 2. Teil)*. Berlin: Walter de Gruyter & Co.
- Diels, P. 1963. *Altkirchenslawische Grammatik*. Heidelberg: Carl Winter Universitätsverlag.
- Elson, M. 1980. "On the Nature of Morphophonemic Alternations" in *Lingua*, Vol. 51: 297-309.
- Endzelins, J. 1971. *Comparative Phonology and Morphology of the Baltic Languages*. The Hague: Mouton.
- Jakobson, R. O. 1984. "Shifters, Verbal Categories, and the Russian Verb", in *Russian and Slavic Grammar: Studies 1931-1981*, ed. L. Waugh and M. Halle. New York: Mouton.
- Jespersen, O. 1965. *The Philosophy of Grammar*. New York: W.W. Norton & Company, Inc.
- Koneski, B. 1965. *Istorija na makedonskiot jazik*. Skopje: Kočo Racin.
- Koneski, B. 1967. *Gramatika na makedonskiot literaturnen jazik*. Skopje: Kultura.
- Lehmann, W. 1974. *Proto-Indo-European Syntax*. Austin: University of Texas Press.
- Lencek, R. 1982a. "On Poetic Functions of the Grammatical Category of Dual", in *Studies in Slavic and General Linguistics*, Vol. 2.
- Lencek, R. 1982b. *The Structure and History of the Slovene Language*. Columbus: Slavica.
- Leskien, A. 1914. *Grammatik der serbokroatischen Sprache*. Heidelberg: Carl Winter Universitätsverlag.
- Lunt, H. 1974 (6th revised edition). *Old Church Slavonic Grammar*. The Hague: Mouton.
- Meillet, A. 1964. *Introduction à l'étude comparative des langues indo-européennes*. University: University of Alabama Press.
- Meillet, A. 1965. (second edition, revised and enlarged). *Le slave commun*. Paris: Librairie Honoré Champion.
- Mirčev, K. 1958. *Istoričeska gramatika na bŭlgarskija ezik*. Sofija: Nauka i izkustvo.

- Prokosch, E. 1938. *A Comparative Germanic Grammar* (William Dwight Whitney Linguistic Series). Linguistic Society of America.
- Senn, A. 1966. *Handbuch der litauischen Sprache (Band I: Grammatik)*. Heidelberg: Carl Winter Universitätsverlag.
- Smyth, H. 1956. *Greek Grammar*. Cambridge: Harvard University Press.
- Stojanov, St. 1964. *Gramatika na bŭlgarskija knižoven ezik (fonetika i morfologija)*. Sofija: Nauka i izkustvo.
- Svane, G. 1958. *Grammatik der slowenischen Schriftsprache*. Kopenhagen: Rosenkilde und Bagger.
- Tesnière, L. 1925. *Les formes du duel en slovène*. Paris: Librairie Ancienne Honoré Champion.
- Thurneysen, R. 1946 (revised and enlarged edition). *A Grammar of Old Irish*. Dublin: Institute for Advanced Studies.
- Vaillant, A. 1958. *Grammaire comparée des langues slaves (II: Morphologie, 1. Flexion nominale, 2. Flexion pronominale, I and II)*. Paris: Editions IAC.
- Whitney, D. 1889. *Sanskrit Grammar*. Cambridge: Harvard University Press.