How Many Declensions in Slavic Languages?

Robert Beard

The argument over how many productive declensions the various Slavic languages have has raged for ages now. The problem in determining the number of declensions stems from the fuzziness of our definition of the term 'declension' and the lack of definition of related terms, such as 'number', 'case', and 'gender'. In this paper I will assume the definitions of these terms recently established in Beard (1995a, 1995b) to show that Russian has four productive declensions. The number of declensions in other Slavic languages may be divined in the same manner.

In *Lexeme-Morpheme Base Morphology* (Beard 1995a) I attempt to establish for the first time a complete catalog of universal morphological categories and define all the terms of morphology in a manner consistent with the terms of contemporary generative grammar. My recent article in JSL, 'The Gender-Animacy Hypothesis' (Beard 1995b), focuses more particularly on the nominal categories of gender and declension class in an attempt to define them more closely, so that we may predict their behavior across Slavic languages. I think, now, on the basis of the advances made in these two works, that we are in a position to settle the issue of how many productive declensions each of the Slavic languages contain and how to treat the unproductive ones.

First, my assumptions. I assume with Halle (1990) that natural gender and grammatical gender are distinct universal grammatical categories. Natural gender is a lexical category and its functions, masculine and feminine, are inherent features of the so-called 'animate' nouns and only of 'animate' nouns.[1] The existence of natural gender as a lexical category is unequivocally established by lexical derivations which transmute unmarked masculine nouns, such as student, to feminine ones, like studenika. Grammatical gender or declension class, as Corbett (1991) points out, is identical with what is called 'noun class' in Bantu and other languages and it is also lexical. Therefore, all nouns in Slavic inherently possess noun class features associating it with a morphological declensional paradigm and those referring to objects with animal sexual organs also possess natural gender.

Grammatical gender is an inflectional category which I prefer to call 'agreement',[2] since it is an interpretive category in the sense that some mechanism of syntax must interpret declension class and natural gender in order to assign what are traditionally called 'agreement functions' to nonnominal agreeing categories, adjectives and verbs.[3] The traditional term for this mechanism is 'inflection'. Inflection must be syntactic because neither the categories of declension nor those of natural gender, which are realized on adjectives and verbs, are categories of adjectives and verbs (and for all the reasons laid out in Anderson 1982, 1992, and Aronoff 1994). If we wish our theories, therefore, to characterize the empirical facts of language, those theories must have a natural way in which to express this fundamental distinction of grammatical categories: those which are lexical and hence inherent, and those which are interpretive, intercategorial, and hence syntactic. All Slavic languages possess both types and

no language possesses any more than these two types of inflectional (functional) categories.

Corbett (1991) wishes agreement to be a morphological operation copying features from the 'controller gender' to 'target gender' without the intervention of an autonomous grammatical category of agreement. To accomplish this, each lexical (controller) gender must map directly onto a target gender.[4] Since Corbett assumes the traditional genders in Russian-feminine, masculine, and neuter, he must have a neuter noun class. This, in turn, compels him to over look the identity of the declension I and divide it into two declensions. He therefore ends up with the required 4 declensions, one masculine, one neuter, and two feminine, each containing identical singular and plural schemes.[5]

Such a move is unmotivated and inconsistent, however. If we assume that the feminine declensions are separated from the masculine and neuter declensions because they are different, it is imperative that we maintain a single declension I if the members of that declension behave identically. To do otherwise would represent a failure to interpret the data consistently. The members of declension I are nouns ending on /o/ or a consonant in their citation form. The citation form is a lexical matter. In every other case the desinence assignment is identical, even the accusative, where desinence assignment is accomplished by referral rule, to wit, 'if the noun has natural gender, copy the genitive ending; otherwise, copy the nominative.' The distinction of masculine (M-) agreement and neuter (N-) agreement with nouns of declension I is determined on purely phonological grounds. Thus the M-Agreement and N-Agreement nouns of declension I are identical in every case without exception once we accept the inevitable, that native nouns whose citation form end on /o/ and those ending on consonants belong to one and the same declension.

The more important assumption of this paper is that number is an inherent lexical category and that it is changed by lexical derivation and not by inflection. The arguments are laid out in Beard (1992, 1995a). Briefly, they are the following. (1) Number markers may be borrowed like derivational ones, e.g. English *datum*: *data*, *cherub*: *cherubim*, *alumnus*: *alumni*, while inflectional markers are not (no borrowed 3rd person endings on English verbs, nor case endings in Slavic). (2) number endings follow the pattern of derivational endings diachronically.

When the Bulgarian case endings were replaced by prepositions, number continued to be marked by suffixes, the only means of marking available to lexical derivation. (3) In relative clauses the number, and natural and grammatical gender of the relative pronoun, e.g. kotoryj, is inherited from the modified noun, whereas the case is assigned locally. For example, in the Russian phrase *ja videl devusku, s kotoroj ty veer a govorila*, *kotoroj* is feminine singular because *devusku* is feminine singular. It is in the instrumental case, however, because that is the case which the prepositions assigns in its sociative function.

Unlike inflectional forms, (4) plural forms without a corresponding underlying form are found in large numbers in all languages, e.g. *glasses*, *pliers*, *shorts*, *oats*, *measles*. It follows from these observations that number and gender belong to the same category type and since there is no question but that declension class (= grammatical, controller gender) and natural gender are lexical categories; number then must also be lexical rather than inflectional.

It is common to define a declension as all the forms available to a noun stem (Anderson 1992, Jensen 1990). This, however, fails to account for indeclinable nouns, like *kenguru*, *radio*, *simpanze*, which have no forms available to them, yet which pass on declensional (case) features to agreeing adjectives and verbs. It also fails to account for declinable nouns borrowed into the language. Certainly French *chauffeur* had no Slavic declension class before it was borrowed into Russian; so, where did the

declension of *sofër* come from?

Carstairs-McCarthy defines declension as an autonomous morphological SYSTEM of forms associated with a noun (Carstairs 1987: 48-49). This accounts for nouns borrowed and assigned a system of forms; however, it does not account for indeclinables. Indeclinable nouns have no system of forms, yet they pass on case to agreeing categories just as surely and predictably as do declinables. We are left with the definition of a declension as a morphological paradigmatic system selected by lexically determined declension class; the question then that remains is: what is a noun (declension) class?

In order to gain an understanding of what a noun class really is, and how it is related to case, I would like to propose that a declension designated by a noun class is a system mapping case functions to case expressions, or endings. Crucial to this definition is the assumption that number is an independent noun class, since the plural paradigm maps to a distinct set of declensional endings. Two independent arguments, aside from the arguments that plural formation is a lexical rather than an inflectional derivation mentioned above, support this point.

First, the singular and plural declensions may contain the identical set of cases. If a declension is a paradigm of case markers, it is certainly redundant to repeat the array of cases for each noun in the singular and plural. If the plural is of the same stuff as the singular declension, why do Slavic languages not simply insert a plural marker for all nouns, then use the same case endings as are found in the singular, as does, say, Turkish or Finnish?

The reason could be that the singular-plural cases constitute an integral mapping system as traditionally assumed; however, that is not the only interpretation. This account is more plausible because it portrays the behavior of the plural declension in the same terms as other declensions. Like the feminine counterpart of an agentive like ucitel', učitel'nica, which is reassigned a new noun class, the plural under this interpretation also represents a new word assigned to a different noun class.

Second, the plural declension in Russian is independent of any of the singular declensions. If the traditional combination of singular and plural forms in a single declension were the result of their belonging to an single integral system combining number, declension class, and case, how is it possible for the plural forms in Russian to comprise only number and case, ignoring, of all things, declension class itself? Yet that is surely the case. The plural declensions of all nouns in Russian may be defined without reference to the remaining three declension classes. Here is that definition for all productive forms:

Table 1: Russian Plural Declension

Cases	Forms	
Nominative	bórody	dvéri
Genitive	boród	dveréj
Dative	borodám	dverjám
Accusative	bórody	dvéri
Locative	borodáx	dverjáx
Instrumental	borodámi	dverjámi

Notice also that the conclusion that declensions are used to mark lexical derivations is not

unintuitive. It is not uncommon cross-linguistically for lexical derivations to be marked by the simple switch from one declension class to another. Declension II productively marks femininization in Russian and other Slavic languages. In a few instances Declension II alone signals the derivation, as (2) illustrates.

(2)　　a.　suprug (Mas)　　　　　　　supruga (Fem　　　　　　　'spouse'

　　　　b.　rab (Mas)　　　　　　　　raba (Fem)　　　　　　　　'slave'

Elsewhere, both Declension II plus a redundant independent suffix marks feminization, as in (3).

(3)　　a .　učitel'　　　　　　učitel'-nic-a　　　　　　'teacher'

　　　　b.　lifter　　　　　　lifter-š-a　　　　　　　'elevator operator'

　　　　c.　pakovšč-ik　　　　pakovšč-ic-a　　　　　'packer'

But the derivational suffix is an accidental accouterment. In Bantu languages the shift of noun class (the Bantu equivalent of declension class) marks virtually all derivations. For example, diminutives are derived by simply shifting a noun to Class 3, as (4) illustrates.

(4)　a.　m-lima 'mountain' (Class 2)　　　　　ki-lima 'hill' (Class 3)

　　　b.　Ø-kundi 'group' (Class 4　　　　　　ki-kundi 'small group' (Class 3)

　　　c.　m-lango 'door' (Class 2)　　　　　　ki-lango 'small door (Class 3)

In Italian it is also common to simply shift a noun from one noun class to another without adding any derivational marker in order to mark gender. The result is that is a difficulty in discerning whether the feminine form is masculinized or the masculine form femininized:

(5)　　a.　nonn-o 'grandfather'　　　　　　　nonn-a 'grandmother'

　　　　b.　bimb-o 'baby (Mas)'　　　　　　　bimb-a 'baby (Fem)'

　　　　c.　domestic-o 'servant'　　　　　　　domestic-a 'maid'

Finally, if the plural represents an independent noun class in Russian, there should be lexically plural nouns as well as derived plural nouns in the language. This is, of course, true of all IE languages and a variety of non-Slavic languages. These languages are rife with pluralis tantrum nouns of all sorts, as (6) illustrates.

(6)　　a.　vorota　　　　　　'gate'

　　　　b.　cernila　　　　　　'ink'

　　　　c.　drova　　　　　　'firewood'

　　　　d.　jasli　　　　　　　'nursery school'

　　　　e.　casy　　　　　　　'watch, clock'

　　　　f.　sutki　　　　　　　'(24-hour) day'

These forms have no logical reason to exist; they refer to singular objects or objects without

7

number. The plural marking in these instances is purely fortuitous, which is to say, lexical, and without derivational origin.
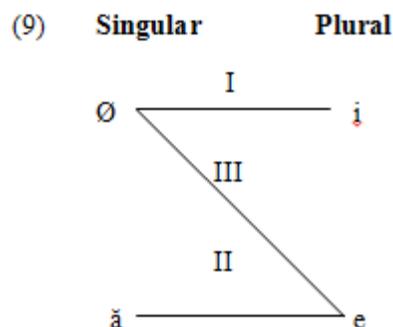
All the evidence, therefore, points to the plural as a distinct, fourth declension in Russian rather than an inflectional category which fuses with declension class, natural gender, and case in a unitary morphological declensional paradigm.[8] If we follow the evidence consistently, therefore, we come to the conclusion that noun classes behave the same way in languages around the world. They are lexical, not inflectional, categories and as such are available to morphologically mark lexical derivations of various sorts. Number is a lexical category just like gender and the expressive categories of diminution, honorific, and pejoration. The is no differences between Slavic, Romance, and Bantu noun class system, only in the morphological means of expressing noun classes and case. The Slavic languages mark case and noun class fusionally while Swahili and Italian use separate morphemes.

(7) a. barbătul e bun-Ø
         man-the is good-Mas
         'the man is good'

     b. scaunul e bun-Ø
         table-the is good-MasSg
         'the table is good'

     c. fata e bun-ă
         girl-the is good-Fem
         'the girl is good'

(8) a. barbătuţii sînt bun-i
         Men-the are good-MasPl
         'the men are good'

     b. scaunele sînt bun-e
         tables-the are good-FemPl
         'the tables are good'

     c. fetele sînt bun-e
         'girls.the are good-FemPl'
         'the girls are good'

A variety of benefits arise from the conclusion that plural is a lexical derivation marked by its own declension in Slavic languages. Several mysteries surround the plural across languages. One puzzle is related to a semi-Slavic language, Rumanian. As is well known Rumanian ostensibly distinguishes two noun classes, traditionally called 'masculine' and 'feminine'. In the singular, these nouns trigger phonologically definable 'masculine' and 'feminine' agreement markers on adjectives. However, one subclass of 'masculine' nouns normally entails 'feminine' plural endings (see Corbett 1991: 150-152 for the literature and further details).

(7) illustrates how the Rumanian words for 'man' and 'table' both behave like 'masculine' nouns in the singular; in the plural, however, they are distinct in a particular way: the second 'masculine' noun takes the 'feminine' plural ending. Corbett (1991: 150-160) points out that this number asymmetry is not uncommon among the world's languages and reminds us of Greenberg's Universal 37: 'A language never has more gender categories in nonsingular numbers than in the singular' (Greenberg 1963: 112). What this means is that when asymmetry such as that of (7) and (8) occurs, there are always fewer plural or dual categories than singular ones. The interesting question, as usual, is, why?

Corbett (1991: 152) diagrams the situation represented by the data in (7) and (8) as in (9):

(9)   **Singular   Plural**

(9) illustrates how the three 'controller genders', i. e. noun classes, of Rumanian maps onto the two parts of the masculine and feminine 'target genders', i. e. the two parts of the declensional paradigm. Corbett does not provide the specifics of how a noun class manages to map onto two different declensional paradigms, yet this is an interesting question. How is it possible for a noun class to map onto a declensional paradigm which is one part declensions Fem and one part declension Mas?

Let us ask this question in the framework just discussed which assumes that plural is a lexical derivation marked by a distinct noun class. If the plural noun class maps to a distinct morphological declension, that declension a morphological marker in a class with other grammatical morphemes, we would not expect the grammatical relation between the two implicit in the traditional assumption that a declension comprises a set of singular and plural markers. Thus the asymmetry between the singular and plural paradigms would be a natural implication of such a morphological theory. Under this model there would be four noun classes, say, I, II, III, and IV, where declensions III and IV would be plural. Members of noun class II would be regularly shifted to noun class IV to mark pluralization. But members of noun class I are sometimes shifted to class III, sometimes to class IV. We would expect such shifts to be marked by all the properties of lexical derivation.

The problem for this model would be to explain the parallels between singular and plural noun classes that we find in languages like French, Polish, and Serbo-Croatian, which seem to have masculine and feminine, if not neuter, plurals as well as singulars. The correspondence between singular and plural declensions represents no problem to a derivational approach to plural so long as the correspondence is based on lexical categories. Serbo-Croatian, for example, seems to distinguish Declension I and Declension II nouns in both the singular and plural of what are traditionally called declensions I-II (see Table 1).

Table 2: Serbo-Croatian Declensions I and II

		Declension I		*Declension II*
		"man"		"woman"
Singular	*Nominative*	muž		žen-a
	Genitive	muž-a		žen-e
	Dative	muž-u		žen-i
	Accusative	muž-a		žen-u
	Instrumental	muž-om		žen-om
Plural	*Nominative*	muž-ev-i		žen-e
	Genitive	muž-ev-i		žen-a

Dative-Instr	muž-ev-ima	žen-ama
Accusative	muž-ev-e	žen-e

But then if noun class is a lexical category, it is available in a derived stem to determine declension selection in the plural just as it is available to determine declension selection in the singular.[9]

Under the new hypothesis, we would expect direct parallels between the number of singular and the number of plural declensions in obverse proportion to the number of noun classes available to determine declensions. The smaller the number, the more likely a one-one pairing of M(asculine)-singular with M(asculine)-plural declensions, and F(eminine)-singular with F(eminine)-plural declensions. This is essentially the pattern we find in the languages discussed by Corbett (1991). The parallel between MasSg and MasPl, on the one hand, and FemSg and FemPl, on the other, is virtually absolute in French with its two noun class functions while in German, with 3 functions, has only one plural declension.

Polish and Czech do have considerable parallelism between the singular and plural declensions, but Belorussian, Russian and Ukrainian exhibit none. Serbo-Croatian has a distinction in the nominative (and accusative), but no distinction in the oblique cases. This would allow us to posit a single plural declension for that language, explaining the variation in the Nominative case on the basis of the lexical features for noun class and gender. Certainly, the lack of a clear cut-off point at some specific number of cases where plural noun classes converge requires that further investigations be carried out on this question. However, the assumption that plural declensions are distinct noun classes used to mark a lexical derivation raises far more interesting questions than the assumption that they are part and parcel of singular declensions.

In conclusion, then, it would seem that applying the arguments for number as a lexical category and pluralization a lexical derivation to inflectional morphology leads to some interesting conclusions. First, it allows us to see nominal inflectional paradigms in a radically new way, which resolves two longstanding problems, one pertaining solely to Slavic linguistics, the other a universal question. The problem in Slavic languages was our inability to define declension or noun classes in such a way as to account for all the phenomena of inflectional morphology: noun class, natural gender, agreement, case, and number. That has now been done in Beard (1995a, 1995b) with the support of this paper. The universal problem is an explanation of why there is seldom a one-one mapping between the singular and plural sides of the traditional declensional paradigm, why there are always fewer plural sides than singular, and why the one-one matching between the two sides tends to break down in languages with larger numbers of declension or noun classes. The answer offered by this paper is simple: number is a derivational, not inflectional category and the plural declension is a lexical class in a set with the singular noun classes.

NOTES

[1]For this reason I conclude in Beard (1995b) that 'animacy' is not a grammatical category in Slavic languages. The phenomena of animacy is simply phenomena of natural gender. This explains why no Slavic language has any affix marking animacy alone.

[2]The distinction is the same as Corbett's 'control gender' and 'target gender' (Corbett 1991: 150-153). In order to remind his readers that 'target gender' is, in fact, agreement, Corbett substitutes 'target agreement' periodically. It seems to me that the more mnemonic device would be simply to call agreement 'agreement' and natural gender 'gender', and noun declension classes 'noun class', 'declension class', or 'noun declension class'.

[3]I am not impressed at the potential of Checking Theory to account for agreement since it merely confuses lexical and inflectional derivation, situating the latter both in the lexicon and in syntax. However, even were Checking Theory to eventually prove itself, it is, after all is said and done, a theory of syntax.

[4]Corbett also does not buy into the Separation Hypothesis (Beard 1981, 1988), which allows operations on grammatical categories to be independent of the phonological means of expressing them. This hypothesis obviates the problems created by one number of categories mapping onto a different number of affixes.

[5]Russian is required to have four declensions by Carstairs-McCarthy's 'Paradigm Economy Principle', which, roughly speaking restricts the number of declensions to the number of declensional desinences in the case with the largest number of such desinences across all declensions (Carstairs 1987). Russian has several with four distinct desinences, if null is taken for what it is, Genitive (*-a*, *-i*, *-ov*, *-ej*), Instrumental *-om*, *-oj*, *-ju*, *-ami*), but none with more than four.

[6]Notice that this is not the same as claiming that plural forms are lexicalized in large numbers; lexicalized inflectional forms like dam and em also occur. However, there are no inflected forms that I know of without an underlying stem. There are hundreds of such plural forms.

[7]Beard (1995: 161) argues that mass (singularis tantum) nouns like *breakability* possess no number features. If the semantic interpretation of number has to do with reference to countable objects, it makes no sense to speak of number in connection with nouns of this type.

[8]I assume that the plural declension is a fourth rather than a fifth declension as a result of rejecting Corbett's claim that the masculine (e.g. *stol*) and neuter nouns (e.g. *okno*) of Declension I comprise two distinct declensions (Corbett 1991: 34-43). Corbett assumes two distinct declensions since he does not propose mapping algorithms from noun classes to agreement classes as do I (Beard 1995). The problem with Corbett's assumption is that it posits two declensions (and thus two noun classes) which are identical except that the nominative form of one class ends on a vowel while those of the other do not. In all other ways, including the mapping of the nominative endings onto the accusative, the two paradigms are identical.

[9]Table 2 also suggests that Serbo-Croatian might be no different from Russian in having a single plural noun class distinct from the singular ones. Notice that the plural declension consistently bears one case fewer than the singular declensions. (This holds for the 'neuter' nouns, too.) Moreover, the only difference between the 'masculine', 'neuter', and 'feminine' plurals are the nominative and dative cases and the latter differs only in the thematic vowel. Given the assumption that the singular noun class feature is not erased when a noun is shifted to the plural, it could still determine such minor differences in the plural declension without leading us to the conclusion that there are separate plural declensions for each singular one.

References

Anderson, Stephen R. 1982. 'Where's morphology?' Linguistic Inquiry 13.571-612.

Anderson, Stephen R. 1992. *A-Morphous Morphology*. Cambridge: Cambridge University Press.

Aronoff, Mark 1994. *Morphology By Itself*. Cambridge, MA: MIT Press.

Beard, Robert 1981. *The Inda-European Lexicon: A Full Synchronic Theory*. Amsterdam: North-Holland Publishers.

Beard, Robert 1988. 'On the Separation of Derivation from Morphology: Toward a Lexeme/Morpheme-Based Morphology.' *Quaderni di semantica* 9.3-59.

Beard, Robert 1992. "Plural as a lexical derivation (word formation)." *Glossa* 16: 133-148.

Beard, Robert 1995a. *Lexeme-Morpheme Base Morphology: A general theory of inflection and word formation*. Albany, NY: SUNY University Press.

Beard, Robert 1995b. 'The Gender-Animacy Hypothesis'. *Journal of Slavic Linguistics* 3.59-96.

Carstairs, Andrew 1987. *Allomorphy in Inflexion*. London: Croom Helm.

Corbett, Greville 1991. *Gender*. Cambridge: Cambridge University Press.

Greenberg, Joseph 1966. 'Some universals of grammar with particular reference to the order of meaningful elements.' In J. Greenberg, ed., *Universals of Language*, Cambridge, MA: MIT Press, 73-113.

Halle, Morris 1990.11 An approach to morphology." *Proceedings of the North East Linguistics Society* 20: 150-184.

Jensen, John 1990. *Morphology, word structure in generative grammar*. Amsterdam: John Benjamins.