

GENDER AND DECLENSIONAL CLASS IN BULGARIAN¹

1. Introduction

Although a rare topic in recent linguistic literature, or perhaps exactly for that reason, Modern Bulgarian morphology, and especially declension, presents many challenges. The Bulgarian noun system depends largely on phonology, and "this feature is unique among the languages of the world" (Foley 1986: 85). However, in contrast to the complex 'unfamiliar' (Aronoff 1994: 89) inflectional morphology of those African languages² which may illustrate phonologically determined systems, Bulgarian as an Indo-European language reveals another 'familiar' type of morphological organization.

This contribution will concentrate on gender, inflection and phonological form in Bulgarian. It can be seen as a sequel to some other articles on inflection: Dressler & Thornton (1996); Dressler, Dziubalska-Kolaczyk & Fabiszak (1997); Pöchtrager et al. (1998). We will situate our analyses within the framework of Natural Morphology and its three subtheories: 1) the subtheory of universal preferences / markedness, 2) the subtheory of typological adequacy, 3) the subtheory of language-specific system adequacy (Dressler 1989, 1997b, 1999; Dressler et al. 1987; Kilani-Schoch 1988; Dressler & Karpf 1995).

The approach, we apply, is input-oriented, i.e. we take the most unmarked form (the basic form of a paradigm), in our case – the singular indefinite form, as basis for the analyses.

All traditional studies on Bulgarian morphology are descriptive. Excluding Kucarov (1999) and to some extent Maslov (1956, 1982) and Pašov (1989), the other sources (Stojanov 1983, 1993, De Bray 1980, Scatton 1993, Feuillet 1996), we will use, can be characterized as mainly descriptive as well.

¹ Abbreviations: augm. = augmentative, BAN = Bulgarian Academy of Sciences, colloq. = colloquial, def. = definite form, dim. = diminutive, f. = feminine, LW = loanword, m. = masculine, n. = neuter, OB = Old Bulgarian, pl. = plural, RBE = Rečnik na bǎlgarskija ezik (Dictionary of Bulgarian Language), sg. = singular, V. = Vocative, WF = word formation.

² Qafar, Hausa, Kru languages, Yimas, Arapesh (see Fortune 1942, Foley 1986, Corbett 1991, Aronoff 1992, 1994, Fraser & Corbett 1997).

We will start with some general information about Bulgarian and its declensional system illustrated by adjective agreement (section 2). Section 3 is devoted to major definitions and concepts. Section 4 reveals some peculiarities of Bulgarian noun categories and serves as an introduction to section 5, where a detailed account of the noun classes is given. Thus, section 5 is central and a basis for the investigation. It examines primarily number; this is the category which we, in contrast to all traditional studies, will relate, first, to phonological shape of the singular form and only afterwards to gender. In the final section 6, we will attempt to connect the results of our investigation and to draw conclusions.

2. Bulgarian

Bulgarian is a South Slavic language. All its noun categories are synthetic forms; of those only Gender (*masculine, feminine, neuter*), Number (*singular vs. plural*, and *count plural* for masculine non-humans in consonants) and Definiteness (expressed by a postposed definite article) are productive. Vocative is an unproductive form, classified by Bulgarian linguists under 'Remainders of case forms'. Gender and Number are the basis for agreement, both cumulatively signaled on the noun, as in the following examples³:

- (1) m. *učitel* – *učitel-i* (pl.) 'teacher'; *učitel-ja(t)*(def. f.) – *učitel-i-te* (pl.)
 f. *žena* – *žen-i* (pl.) 'woman'; *žena-ta*(def. f.) – *žen-i-te* (pl.)
 n. *selo* – *sel-a* (pl.) 'village'; *selo-to*(def. f.) – *sel-a-ta* (pl.)

Adjective agreement⁴

The three genders of Bulgarian can be demonstrated by the agreement patterns of adjectives. Adjectives occur in attributive and predicative positions but always trigger the same inflectional suffixes, as illustrated in the next examples:

³ All examples are transliterated from the standard orthography.

⁴ Agreement in gender and number also occurs in ordinal numerals, pronouns and participles.

- (2a) *nov učebnik* 'new(m.) textbook(m)' – *učebnikăt e nov* 'the textbook(m.) is new(m.)'
nova kniga 'new(f.) book(f.)' – *knigata e nova* 'the book(f.) is new(f.)'
novo pismo 'new(n.) letter(n.)' – *pismoto e novo* 'the letter(n.) is new(n.)'

definite forms:

- (2b) m. *nov-i⁵-ja(t)* *učebnik* – *nov-i-te učebnici* (pl.)
 f. *nov-a-ta kniga* – *nov-i-te knigi* (pl.)
 n. *nov-o-to pismo* – *nov-i-te pisma* (pl.)

Masculine singular forms can also terminate in *-i*, for example, *bălgarski* 'Bulgarian', the other forms are, as expected, parallel to the forms given above: *bălgarska* (f.), *bălgarsko(n.)*, *bălgarski(pl.)*. After soft consonants, feminine singular adjectives take *-ja*. Adjectives which have alternative neuter forms, complete the set of gender suffixes: e.g. *găši* (m.), *găša* (f.), *găšo / găše* (n.), *găši* (pl.) 'goose'; *visš* (m.), *visša* (f.), *visšo / visše* (n.), *visši* (pl.) 'high'.

Kucarov (1999: 370)⁶ also argues that for adjectives, Bulgarian develops a formal system which is a basis of the gender oppositions, i.e. "nouns without a special gender suffix tend to be masculine (*elen* 'deer' formally resembles *zelen* 'green (m.)' and goes into masculine nouns), nouns terminating in *-a* go into feminines (*stena* 'wall' formally matches *zelena* 'green (f.)' and is feminine, but in French *le mur* (m.)); nouns terminating in *-o* or *-e* are neuter, e.g. *selo* 'village' formally matches *zeleno* green (n.) and goes into neuter nouns; in contrast, the French noun *le village* is masculine but the Russian *derevnja* and Czech *vesnice* are feminine."

The same rules assign gender to foreign words (Kucarov 1999:370): "At the end of the 19th or the beginning of the 20th century we borrowed from French the noun *radio* (Fr. *la radio* (f.)), the word formally coincided with *zeleno* 'green (n.)' and was assigned neuter gender instead of feminine; the word *kompjutăr* 'computer' had no special gender suffix and joined the masculines, etc."

⁵ *-i* originates from the full (definite) forms of the OB adjectives (Stojanov 1993:262).

⁶ All Bulgarian linguists' quotations are translated from Bulgarian by the first author.

As seen, each gender shows inflectional suffixes of its own, listed in table 1.

Adjective agreement

Table 1

Adjectives	Sg.	Pl.	Sg.	Pl.
			articles	
masculine	-ø, -i	-i	-(i)ja(t)	-te
feminine	-a / -ja		-ta	
neuter	-o / -e		-to	

Bulgarian, like Macedonian and colloquial Czech, shows no gender distinctions in the plural (cf. Corbett 1991: 132, Aronoff 1994: 74 for Russian; Stankiewicz 1986: 114-125 for Slavic languages, and Corbett 1991: 189-203 about the asymmetry between the singular and plural paradigms).

3. Terminology

We will assume the following concepts and definitions:

(cf. Dressler & Thornton 1996; Dressler, Dziubalska-Kolaczyk & Fabiszak 1997; Pöchtrager et al. 1998).

- 1) An **inflectional paradigm** comprises all inflectional forms of one word.
- 2) **Classes** are sets of paradigms, with a 'vertical' hierarchical organization: macroclass and its successive subset classes: class, subclass, subclass, etc., microclass.
- 3) An **inflectional microclass** is the set of paradigms which share exactly the same morphological generalizations (but may differ via application of phonological processes in the sense of Natural Phonology).
- 4) An **isolated paradigm** is a paradigm which differs morphologically or morphophonologically from all other paradigms; it does not form a microclass of its own but is considered a satellite to the most similar microclass.
- 5) An **inflectional macroclass** is the highest, most general type of class, which comprises (hierarchically) several classes or (sub)subclasses or microclasses. Prototypically its nucleus is a productive microclass.

6) A **family of paradigms** is a looser group of paradigms than any type of class. It captures valid morphological generalizations which the language learner is able to make not over the structure of paradigms as wholes but only over parts of paradigms.

7) **Transitional paradigms** are satellites to more than one microclass. The extreme case is represented by transitional paradigms which share properties of two different macroclasses. We use this auxiliary term just where it is unclear whether there is a (directional) class shift in course or whether two productive patterns compete for the same words.

8) **Productivity** is the capability of using morphological rules (e.g. characterizing inflectional paradigms) with new words. These may be (in order of importance) i. loanwords, ii. indigenous neologisms, iii. old words which undergo class change (prototypically from an unproductive to a productive inflectional class), iv. WF productivity – productivity of derivational suffixes (or suffixations) which belong to a given inflectional class (cf. Dressler 1997a, Dressler & Ladányi 1998, Wurzel 1984). Thus a rule may be fully productive, only very productive or semi-productive, or rather unproductive (slightly unproductive) or totally unproductive (Dressler 1985: 92).

9) Defective paradigms of LWs do not reveal morphological-rule productivity; at least they cannot illustrate 'full productivity' of an inflectional rule. A clearly unproductive microclass (e.g. feminines in consonants – microclass 10, I) might include defective paradigms of LWs. According to Maslov (1982: § 146), a **defective paradigm** is a paradigm with lack of any main form (singular, plural or definite), for example pluralia and singularia tantum words or paradigms of proper nouns (cf. Pašov 1989: 60 who also calls such nouns 'defective'). Semantic reasons may determine defective paradigms. For a theoretical conception of uninflectibility (be it total or partial), see Doleschal (2000).

10) An inflectional **minimicroclass** is an inflectional microclass with a very limited number of members (just two or three paradigms), cf. 4 above.

4. Noun categories

This part of our investigation aims not only at a detailed account of Bulgarian noun inflection, but also at arguing for the approach we will apply. Since this contribution tries to relate Bulgarian declension primarily to formal criteria, we will start with gender,

because for assigning gender all scholars adopt as a criterion the phonological form of the noun. Definiteness and Number are usually described as depending on both gender and phonological form. Only Pašov (1989) has noticed that, in respect to nouns, Bulgarian definite articles do not show gender and can be predicted formally. Accepting his conclusion, we will reapply formal rules also to plural forms.

4.1. Gender

As mentioned in section 2, Bulgarian has three genders: masculine, feminine and neuter; masculine gender is the unmarked member of the category. (Compare with the large gender systems of the aforementioned African languages (Carstairs- McCarthy 1994: 783); for example, Arapesh has thirteen genders, Yimas – eleven).

Corbett (1991) proposes two types of gender assignment systems: semantic and formal, the latter comprising phonological and morphological systems. Without knowing Corbett's study, the Bulgarian linguists Pašov (1989: 55-59), Stojanov (1993: 202-207) and Kucarov (1999: 369-374) use the same strategy. First, they apply the semantic factors; after finding out that semantic meaning cannot account for assignment, they look for other classifying criteria.

Let us also start with the semantic assignment possibility.

Here we will cite Pašov (1989: 55-56), who allots the nouns to four semantic groups: 1) animals, 2) plants, 3) concrete objects and 4) abstract notions. Of course, we find nouns from all three genders in each group. For example:

Animals: m.: *kon* 'horse', *slavej* 'nightingale'

(3a) f.: *kobila* 'mare', *majmuna* 'monkey',

n.: *kuče* 'dog', *tele* 'calf'

Plants: m.: *bor* 'pine tree', *kaktus* 'cactus'

(3b) f.: *roza* 'rose', *pšenica* 'wheat'

n.: *zele* 'cabbage', *lale* 'tulip'

Concrete objects: m.: *moliv* 'pencil', *stol* 'chair'

f.: *masa* 'table', *kniga* 'book'

(3c)

n.: *greblo* 'oar, rake', *kanape* 'sofa'

Abstract notions: m.: *napredāk* 'progress', *boj* 'fight'

(3d)

f.: *kražba* 'theft, larceny', *karanica* 'quarrel'

n.: *kolebanie* 'hesitation', *peene* 'singing', etc.

Even the most obvious semantic assignment rule – gender : sex correlation for animates, does not function for Bulgarian. Some salient examples are given below:

1) All diminutives and augmentatives with suffixes terminating in *-e* are neuter:

(4) *māž* (m.) 'man' – *māžle* (dim., n.), *māžište* (augm., n.);

lāv (m.) 'lion' – *lāvče* (dim., n.), or *lāvište* (n.) as a possible augmentative;

žena (f.) 'woman' – *ženče* (dim., n.), but *ženička* (dim., f., terminates in *-a*), *ženište* (augm., n.).

2) Hybrid nouns (cf. Corbett 1991: 183), which have either natural male or female sex, are always neuter, e.g. *momče* 'girl', *momče* 'boy' (both fossil original diminutives).

3) *libe* 'sweetheart' can denote both males and females, but is a neuter noun.

4) Common gender nouns such as: *rodnina* 'relative', *pijanica* 'drunkard', *xajmana* 'scapegrace', etc. can refer to both males and females, but always with feminine morphology, e.g.:

(5) *rodnina* (sg.) / *rodninata* (def. f.) – *rodnini* (pl.) / *rodninite* (def. f.),
cf. *žena* / *ženata* 'woman' – *ženi* / *ženite*.

5) Even Bulgarian dictionaries disagree in determining gender of loanwords denoting male humans; Romanski (1955-59), RBE, Andrejčin et al. (1999) assign to *krupie*, *ataše*, *pikolo*

different genders⁷: either m. or n., or m. & n. simultaneously. It should be noticed that the problem does not arise with nouns of native origin, for example, to *bate* 'elder brother', or to nouns in the other typical neuter marker *-o*, such as *čičo* 'uncle', *vujčo* 'uncle', *djado* 'grandfather', no dictionary will assign neuter gender.

Establishing the fact that semantic criteria fail to account for gender in Bulgarian, the linguists apply the second possibility – the formal assignment. Thus, Stojanov (1993: §195) concludes that "there are no correspondences between grammatical gender of the nouns and the natural gender of the objects denoted by them", and only "for nouns denoting humans or animals, one can point out a partial dependence between grammatical gender and sex". But "there exists a clear and consequent dependence between grammatical form and grammatical gender of Bulgarian nouns". It can be expressed as follows: "a) nouns terminating in consonants are mostly masculine; b) those in *-a*, *-ja* – mostly feminine; and c) those in *-e*, *-o*, *-i*, *-u*, *-ju* – mostly neuter" (§196 a, b, v).

We will develop these observations by using the theoretical notions of default and productivity (for English cf. Pinker & Prince 1994, for German cf. Clahsen et al. 1996, for Russian cf. Corbett & Fraser 1993, Fraser & Corbett 1995, for Arapesh cf. Fraser & Corbett 1997, etc.). In some cases we will adopt two criteria: phonological form (see A. below) as a main criterion and semantics (B. below) as a secondary one, since all gender systems have a semantic core. In a few cases, in order to predict gender, we will turn to derivational morphology (see C. below).

Default as an "approach to information organization allows generalizations to be expressed once at a high level, and then automatically to apply everything which inherits from there. In this way regularities, subregularities and exceptions can be encoded with considerable ease and parsimony" (Fraser & Corbett 1995: 124).

⁷ It is clear that the above-cited dictionaries confuse gender assignment with agreement pattern. Those nouns have natural masculine gender, but often realize neuter agreement because of the final *-e* and *-o* which usually signal neuter.

Gender assignment rules

A). Phonological assignment:

- 1) nouns ending in consonants are masculine by default
- 2) nouns ending in *-a* / *-ja* are feminine by default
- 3) nouns ending in *-e*, *-o*, *-i*, *-u*, *-ju* are neuter by default

An interesting case which exemplifies the phonological character of the Bulgarian gender system is the behavior of OB pluralia tantum terminating in *-a*, such as *usta* 'mouth', *vrata* 'door', *kola* 'car', *vojska* 'army' (cf. Maslov 1956: 63); they have become normal feminine singular nouns in Modern Bulgarian:

- (6) *usta* (sg.) / *ustata* (def. f.) – *usti* (pl.) / *ustite* (def. f.), *vrata* – *vrati*, *kola* – *koli*,
vojska – *vojski*.

B). Semantic assignment:

- 1) sex-differentiable nouns denoting males (male humans) are masculine
- 2) sex-differentiable nouns denoting females (female humans) are feminine

Some month names (*januari*, *februari*, *juni*, *juli*, *septemvri*, *oktomvri*, *noemvri*, *dekemvri* – earlier they terminated in *-j* (Maslov 1982: 136)), and the names of some cities (e.g. *Delxi*, *Xelzinki*) terminating in *-i*, are masculine (Note that both *mesec* 'month' and *grad* 'city' are masculine in Bulgarian). The fact is important for agreement but not for declension; for semantic reasons both groups of nouns take no plural suffixes and no definite articles. Let us also remember that there are adjectives with masculine gender suffix *-i* (as mentioned in Adjective agreement, section 2).

In the cases of conflicts of the phonological and semantic rules, semantic factors usually take precedence (cf. Corbett 1991: 69), e.g. *bašta* 'father' ends in *-a*, but according to its semantics is masculine, therefore, it is masculine, likewise *tatko* 'father (hypocoristic)', although terminating in *-o*, is masculine, according to its natural gender. The same logic can be applied to pairs such as *bojadžija* (m.) – *bojadžijka* (f.) 'dyer'. In contrast, as established earlier, all diminutives and augmentatives formed with suffixes

terminating in *-e*, and a few other words (Maslov 1956: 64; Pašov 1989: 56) override the semantic assignment criteria (in fact, their behavior favors the formal assignment rules).

Only feminines in consonants are problematic for our assignment system. Diachronically, they underwent a remarkable transition from the unmarked masculine gender to the more marked feminine one, e.g., *var* 'lime', *večer* 'evening'. (The greeting *Dobăr* (m.) *večer!* 'Good evening!' and the idiom *Bădni* (m.) *večer* 'Christmas eve' have retained the OB masculine gender (Maslov 1982: 135). Stojanov (1993: 203) suggests that *večer* changed its gender in analogy to *večerja* 'supper' and *nošt* 'night', both feminine.) Since some of the nouns, such as *žar* 'live coals', *kal* 'mud', *pot* 'sweat', *prax* 'dust' often fluctuate in agreement, we cannot say that even now they are completely feminine, cf. *studena pot* 'cold (f.) sweat' and *studen pot* 'cold (m.) sweat' (Pašov 1989: 57).

For Pašov (1989: 57), these nouns are "grammatical exceptions", because they do not denote females, i.e. are semantically unpredictable, but end in consonants which is the most important characteristic for masculines. According to Pašov, this group includes about 150 simplex nouns and about 2500 nouns derived with the suffixes *-ost*, *-est* (morphological criterion, cf. Corbett 1991: 34). Hence, in order to predict their gender, we can use a formal morphological factor:

C). Morphological assignment:

- 1) Nouns derived with suffixes *-ost* and *-est* are always feminine.

Thus, only 150 words⁸, some of them with double gender, have no overt gender marker and no natural gender. These nouns originate from the OB *i*-stems (cf. Mirčev 1963: 154, 2000: 60-61). The OB *i*-stems consisted of feminine and a few masculine nouns. Feminine and masculine declensions coincided in all forms but Instrumental singular and Nominative plural. Here we find simplex nouns such as *kost* 'bone', *vrāv* 'string', *reč* 'speech', *tvar* 'being, creature', *sol* 'salt'; those with the OB suffix *-ost*, e.g. *radost* 'joy', *skorost* 'speed', *mădrost* 'wisdom'; abstract nouns with the OB suffix *-t*, such as *vlast* 'power, authority', *vest* 'a piece of information', *mošt* 'might', *măst* 'revenge', *blagodat* 'blessing', *čest* 'honor', *zavist* 'envy', *smărt* 'death', *pamet* 'memory', *strast* 'passion'.

⁸ A full list in Feuillet (1996: 130).

slast 'lust', *čast* 'part', *napast* 'scourge'; words with the OB suffixes *-n*', *-sn*', *-zn*', e.g. *bojazăn* 'fear', *pesen* 'song', *kazăn* 'punishment', *bran* 'war, battle', *dan* 'tribute', *bolest* (OB *boljazn*) 'disease'; and nouns derived with the OB suffixes *-l*', *-sl*', *-jal*', such as *misăl* 'thought', *gibel* 'destruction, doom', *obitel* 'closter', *pečal* 'grief', etc.

Note, however, that a prefixed noun derived from a noun above (if the prefixation is possible) is always masculine, e.g. *kakva misăl* 'what (f.) thought', but *kakăv s-misăl* 'what (m.) sense'; *dobra cel* 'good (f.) aim', but *dobăr pri-cel* 'good (m.) target' (Pašov 1989: 57).

Pašov also remarks that feminines in consonants are an unproductive group. Only three LWs (cf. Maslov 1956: 62 and Pašov 1989: 57), all defective paradigms (without plural forms) have joined this peculiar feminine microclass: *zaxar* 'sugar' (from Indian via Greek 'sákcharon'), *gaz* 'kerosene' (cf. *gaz* (m.) with meanings: 1) 'gas' and 2) 'gauze'), and *mebel* 'furniture (collective)'. Like *gaz*, *mebel* can be masculine and feminine: as a collective noun it is feminine, e.g. *meka mebel* 'upholstered (f.) furniture'; and it is masculine as a single piece of furniture, e.g. *xubav mebel* 'nice (m.) piece of furniture'.

Undoubtedly, Bulgarian represents a remarkably overt gender system (in the sense of Corbett 1991: 62): the right edge of the noun, i.e. the final phoneme (+/- consonantal) almost always indicates gender unless semantic rules assign gender. In case of conflict among the assignment criteria, the gender-marked suffixes have absolute precedence. Next, for adult male and female humans, and for those animals where sex is distinguished by different words (they are usually phonologically determined), the semantic criterion is decisive. Other semantic criteria are few, are of a lexical nature, but also have precedence. The rest (the huge majority) is determined by the phonological default criteria.

4.2. Definiteness

Nouns carry a postposed (i.e. suffixed)⁹ definite article. Stojanov (1993: 227-232), Kucarov (1999: 472), De Bray (1980: 101-102) determine the articles on the basis of: first, gender and second, phonological form as given below. (Scatton 1993: 202 and Feuillet 1996: 152 take the phonological form of the noun as the first criterion).

⁹ The traditional term 'postposed' is misleading since it seems to indicate a clitic (similar to proclitic articles in most Germanic and Romance languages).

Singular:

m. 1) in a consonant → -*ăt* (-*a*) / -*jat* (-*ja*)

Only the subject and the predicative get the full forms -*ăt* / -*jat*. (For Scatton 1993: 202 and De Bray 1980: 101, masculine singular forms distinguish syntactic case: Nominative vs. Objective.)

2) in a vowel

a) in -*a* or -*ja* → -*ta* (see f.)

b) in -*o*, -*e*, -*u* → -*to* (see n.)

In order to explain the fact that masculines in vowels take f. and n. articles, De Bray (1980: 102) uses the term 'apparent gender'.

f. → -*ta* (in a vowel) / -*tă* (in a consonant)

n. → -*to*

Plural: 1) pl. indefinite form in -*a*, -*ja* → -*ta*

2) pl. indefinite form in -*i*, -*e* → -*te*

Only Pašov (1989: 65) notices that "in fact, the choice of article does not depend so much on gender than on the inflectional suffix of the noun", and that "the Bulgarian definite article does not show the gender of the noun, as it is in some European languages, for example, French, German, etc."

Sg. in consonants: -*ăt* (-*a*) / -*jat* (-*ja*) (feminines in consonants -*tă*)

Sg. / Pl. in -*a* / -*ja*: -*ta* (Here, the choice of article does not even depend on number).

Sg. in -*o* / -*e* / -*i* / -*u* / -*ju*: -*to*

Pl. indefinite in -*i*, -*e*: -*te*

Again, only feminine singular nouns in consonants are problematic, however, let us remember that they can be defined morphologically (as established in section 4.1). Thus, we can conclude that the formal assignment of the articles according to phonological and morphological criteria works successfully for Bulgarian.

Usually the definite forms show the stress pattern of the basic form, exceptions are some masculine monosyllables such as: *vek* - *vek`ăt* 'century', *zăb* - *zăb`ăt* 'tooth', *krak* - *krak`ăt* 'leg', *sin* - *sin`ăt* 'son', etc.; and all feminines in consonants which always take the stressed article -*tă*.

4.3. Number

Bulgarian has two numbers: singular and plural. Singular is the unmarked member of the category. Plural is always overtly signaled.

OB distinguished singular, dual and plural. Modern Bulgarian has retained some former duals but as normal plural forms. These are nouns denoting pairs of human or animal body parts (Pašov 1989: 60), e.g.: *oči* 'eyes', *uši* 'ears', *răce* 'hands', *kraka* 'legs', *roga* 'horns'.

For some other nouns the language has kept both the old dual and plural forms, now doublets. Both: *Pticata razperi krile / krila*. 'The bird spread wings.' are correct; but only *dvete krila na prozoreca* 'both the wings of the window' (See Pašov 1989: 61). Obviously, the forms in -*e* have preserved to some degree their dual meaning (cf. Stojanov 1993: 218).

We found an interesting explanation of the plural variant and doublet forms in Stankiewicz (1986: 115-117). He argues that the loss of gender in the plural has resulted in Bulgarian (and in the other Slavic languages) in functional transformations of the old forms into contextual, stylistic or lexical variants. "The existence of numerous lexical doublets in the plural, which are matched in the singular by homonymous forms, gives the plural the appearance of an inflectional-derivational category; e.g. *djadovci* 'grandfathers, old men' / *dedi* 'ancestors'...".

For more examples and comments see section 5. Note that lexical differentiation in the plural concerns only individual items.

Stankiewicz (1986: 117) recognizes in the Slavic languages "neutral", unmarked plural forms, and semantically marked plural distinctions of three types: (1) counted, (2) collective, and (3) emotive. "All three types co-occur in Bulgarian and Macedonian, i.e. in the languages which have completely lost gender distinction in the plural."

In contrast to him and like Bulgarian linguistic literature, we will discuss only count forms and mention collectives where necessary. In Modern Bulgarian, emotive plurals appear as too stylistically marked (first, as archaic and second, as pejorative forms), therefore with a very restricted use (if with any at all). For that reason we will neglect them.

Count form¹⁰

This is another category connected with the old duals, but still productive. Only masculines terminating in consonants (again a formal criterion, default for masculines) and denoting non-humans, take this peculiar number form after cardinal numerals¹¹ and the quantifiers *kolko* 'how many', *njakolko* 'some', *tolkova* 'so many'. Count form suffixes are *-a* / *-ja*:

- (7) *grad* 'city' – *tri grad-a* 'three cities', pl. *grad-ove*;

kon 'horse' – *šest kon-ja* 'six horses', pl. *kon-e*.

LWs: *kompjutăr* – *pet kompjutăr-a* 'five computers', pl. *kompjutr-i*;

tim – *deset tim-a* 'ten teams', pl. *tim-ove*.

With common nouns denoting male humans the usual plural forms are preferred, at least in explicit norms, e.g.:

- (8) 35 *vojnici* '35 soldiers', not *vojnika*; 50 *učiteli* '50 teachers', not *učitelja*;
dvama studenti(pl.) 'two students', not *studenta*.

Dvama is a special form for male humans, only the cardinal numerals from 2 to 6 possess such a form.

Nouns which undergo vowel alternations in the plural, show no such changes when forming the count forms, e.g. *kosām* 'single hair' – *dva kosāma* (count f.) – *kosmi* (pl.).

¹⁰ De Bray (1980) calls the category 'Secondary plural'.

¹¹ After *duzina* 'dozen', *stotici* 'hundreds', *xiljadi* 'thousands' and *milion* 'million' (all nouns) the explicit norm requires the usual plural forms.

Thus, the rule ordering is for count plurals: first, phonological epenthesis, second, suffixation. Exceptions are *lităr* 'liter', *metăr* 'meter' and the words derived from them:

- (9) *metăr* – *dva metra* (count f.) – *metri* (pl.).

Since count forms are always preceded by numerals, they take no articles.

A full account of the plural inflection is given in section 5.

4.4. Remainders of case forms

In contrast to the other Slavic languages which retain a rich set of cases, Bulgarian and Macedonian show near complete loss of case.

The category of case is unproductive in Modern Bulgarian. Only masculines in consonants and feminines in *-a* / *-ja* (both cases of default, see section 4.1) use Vocative forms. Vocative suffixes are: *-e*, *-o* (m. and f.), and *-ju* (m., root-final soft consonants), as illustrated in the following examples:

- (10) m. *Petăr* – V. *Petr-e*, *narod* 'people' – V. *narod-e*, *bălgarin* 'Bulgarian man' – V. *bălgarin-o*, *učitel* 'teacher' – V. *učitel-ju*.
 f. *Ivanka* – V. *Ivank-e*, *gospožica* 'miss' – V. *gospožic-e*, *žena* 'woman' – V. *žen-o*, *duša* 'soul' – V. *duš-o*, but *Marija* – *Marijo*(old, impolite) / *Marija*.

Some Western linguists consider the distinction of full and short article forms with masculines as a case opposition between Nominative and Objective (Scatton 1993: 202); Nominative vs. Oblique (De Bray 1980: 101), see section 4.2.

5. Noun classes¹²

Up to this point we have assumed that almost all Bulgarian nouns can be distinguished among the three genders by phonological assignment; a few nouns are assigned by complementary semantic, morphological and phonological rules; and in the few cases

¹² We would like to thank Prof. Heinz Miklas (Institut für Slawistik) for his valuable comments.

where these clash, it is the semantic rules which usually take precedence; formal rules determine article use as well. In the beginning we declared that our investigation of declensional classes will be based primarily on phonological criteria and only secondarily on gender. Of course, phonological form can be seen as a link between gender and inflectional class; however, as has been established for articles, the phonological rules which determine declension differ from the rules responsible for gender assignment. For gender assignment, only one form is of importance, but for declensional class assignment we should connect three forms (singular indefinite as input, plural indefinite and singular definite as output). Thus in contrast to the three-member gender category, we recognize two macroclasses (= 27 microclasses) according to the feature +/- consonantal realized in the singular form (see table 2). Both macroclasses show different types of inflection: usually word-based in Macroclass 1, and root-, stem- and word-based in Macroclass 2. Inflectional meanings can be expressed by suffixes only or by suffixes and modifications (such as morphological palatalizations, epentheses, metatheses, elisions and root-vowel changes), and in one microclass (11, I) by subtraction.

LWs¹³ are often adapted phonologically or morphologically, they are assigned to one of the macroclasses on the basis of their final segments (Scatton 1993: 242). Gender is, in general, morphologically irrelevant for LWs. Clippings and acronyms also belong to both macroclasses.

The traditional Bulgarian grammar (Stojanov 1983, 1993) lists the plural suffixes for each gender and, if necessary, makes comments about the phonological shape of the singular forms. The other aforementioned linguists organize the data in the same way. Monosyllables vs. polysyllables is also a traditional criterion for masculines.

The full list of suffixes we propose, is organized first, according to the above-given criteria and second, according to the principle of distinguishing between general and exceptional (cf. the Elsewhere Condition Principle in Kiparsky 1973 and the Blocking principle in Aronoff 1976). At the beginning of a macroclass we put the unproductive microclasses, i.e. paradigms of limited number (which can be listed). After their 'elimination', the remaining nouns, usually default instances, will be produced by productive rules. The elimination of the unproductive classes is important for the correct

¹³ Our LW examples and analyses are based on Mladenov (1941), Romanski (1955-59), Milev et al. (1978), Rusinov & Georgiev (1996: 69-103), RBE (I-IX), Popov et al. (1998), and Andrejčin et al. (1999).

function of the formal rules we apply. Note that the singular (basic) forms of a macroclass usually exhibit the same phonological final segment, and thus phonological factors cannot determine the exceptions (unproductive microclasses). If we begin with the productive microclasses, the plural of, for example, *măž* should be **măžove* or **măzi* and this of *răka* **răki* (see table 2). In contrast to gender assignment, Fraser and Corbett (1995: Note 18) postulate for declensional class assignment: "It is a plausible hypothesis that in declensional class assignment generally, formal factors will take precedence over semantic." It is difficult to find semantic rules in declensional class assignment, although if existing, these could be helpful. We will also notice regularities of that kind, for example body parts or pejoratives can often form microclasses.

I. Macroclass: terminating in consonants, definite article (default) *-ăt (-a) / -jat (-ja)*, overridden only by feminine *-tă*.

High diagrammaticity and morphological transparency (cf. Dressler 1987, 1999).

Default: suffixation without additional modification, i.e. base (sg. indefinite form) + (1) plural suffix or (2) definite article.

A.) Class: unproductive plural suffixes

Subclass: stressed suffixes¹⁴

1. Minimicroclass: m., plural suffix *-ă*:

- (11) *krak* – *kraka* 'leg', *rog* – *roga* 'horns' (when concerning animals) / *rogove* 'horns, bugles'.
- (12) *nomer* – *nomeră* 'number, size, trick' is an old loanword from West European languages via Russian (Maslov 1956: 70).

¹⁴ The plural suffix *-ovcê*, e.g. *gradec* – *gradovcê* 'small town', *listec* – *listovcê* 'small leaf', etc. (Maslov 1982: 144 (pl. suffix *-ove* + dim. suffix *-ec*); Stojanov 1993: 212), occurs only in diminutives for inanimates. Here it is seen as archaic and not taken in consideration.

The suffix *-a* is unstressed in the count forms *dva kràka* 'two legs', *tri ròga* 'three horns', *pet nòmera* 'five numbers'.

Isolated paradigm: plural suffix *-ja*¹⁵ (unstressed):

- (13) *brat* – *bratja* 'brother'.

The form *bratja* originates from the OB feminine collective noun *brat'ja* (Stojanov 1993: 104).

2. Microclass: m., plural suffix *-è* (only 5 nouns, cf. Stojanov 1993: 211):

- (14) *kral* – *krale* 'king', *knjaz* – *knjaze* 'prince', *máž* – *máže* 'man',
car – *care* 'king, tsar', *kon* – *kone* 'horse'.

Subclass: unstressed suffixes

3. Microclass: m., plural suffix *-išta* (only 5 nouns):

- (15) *kraj* – *kraišta* 'end', *săn* – *săništa* 'dream', *păt* 'road' – *pătišta* 'roads' / *păti* 'time',
kăr – *kărišta* 'field', *grob* 'grave' – *grobišta* 'cemetery' / *grobove* 'graves'.

Class shift to the productive microclass 8, e.g.

- (16) *kup* – *kupišta* / *kupove* 'heap, pile', *plet* – *pletišta* / *pletove* 'hedge' (the forms with the suffix *-išta* are stylistically marked, see Stojanov 1993: 210).

Isolated paradigm:

- (17) *săd* / *sădilište* – *sădilišta* 'law-court' (cf. *săd* – *sădove* 'vessel, utensil' in microclass 8).

¹⁵ We consider the plural suffix *-ja* with a collective meaning (Stojanov 1993: 213) as in *daskal* – *daskalja* 'teacher', *oficer* – *oficerja* 'military officer', *graždanin* – *graždanja* 'citizen' for archaic. Such forms are neglected here. See Stankiewicz (1986: 113–125, 153–167).

4. Microclass: m., pejoratives for male humans formed with the suffix *-an*, plural suffix *-ovci*:

- (18) *zabravan* – *zabravanovci* 'chuckle-head', *gotovan* – *gotovanovci* 'idler', etc.
(Cf. when *-an* is a part of the root: *pelikan* – *pelikani* 'pelican').

The only exception of the morphological rule 'suffix *-an* + *-ovci*' is *politikan* – *politikani* 'dabbler in politics, intriguer', thus belonging to the productive microclass 14.

B.) Default class

Subclass: monosyllables by default (about 250 words of native origin and about 250 LWs, see Stojanov 1993: 211).

5. Microclass: m., nouns of native origin terminating in *-j*, pl. suffix *-eve*:

- (19a) *broj* – *broeve* 'issue, number, copy', *boj* – *boeve* 'fight', *stroj* – *stroeve* 'system, order, regime', but *zmej* – *zmejove* / (rare) *zmeeve* 'dragon'.

LWs in *-j* take always the suffix *-ove* (microclass 8), cf. Feuillet (1996: 132):

- (19b) *bej* – *bejove* 'bey', *jaj* – *jajove* 'G-spring', *kej* – *kejove*, *paj* – *pajove*, *čaj* – *čajove*.

The interesting behavior of the LWs undoubtedly signals that the plural suffix *-eve* is unproductive in Modern Bulgarian.

6. Minimicroclass: m., plural suffix *-ove*, the groups *-ăr-*, *-ăl-* between consonants, metathesis in the plural and in the singular indefinite form (cf. Stojanov 1993: 101; Trubetzkoy 1954: 101 who considered the process as morphonological in Old Church Slav; see also Dressler 1985):

- (20) *vrăx* – *vărxove* / *vărxăt* 'peak', *grăb* – *gărbove* / *gărbăt* 'back'.

The same change in *grăk* – *gărci* – isolated paradigm in microclass 12 (38), and in feminines in consonants – microclass 9: *grăd* – *gărdi*, *vrăv* – *vărvi*.

7. Microclass: m., plural suffix *-ovè*, *ja : e* alternation in the plural and in the singular indefinite form (a few words only), e.g.:

- (21) *brjag* – *bregovè* – *breg`ăt* ‘shore’, *grjax* – *grexovè* ‘sin’, *snjag* – *snegovè* ‘snow’, *svjat* – *svetovè* ‘world’.

Cf. *xljab* – *xljàbove* – *xljàbăt* ‘bread’ in microclass 8.

No linguist but Feuillet (1996) mentions the alternation as important for plural forms. *Cja* occurs if the alternating syllable is stressed and not followed by: 1) a palatal or alveo-palatal consonant; 2) a consonant cluster containing such a consonant; or 3) a syllable containing a front vowel; otherwise *Ce*. Note that this rule has many exceptions.

Family of paradigms:

- (22) *zvjat* – *zverovè* – *zvjàrăt* ‘beast’;
vjàtăr – *vetrovè* – *vjàtărăt* ‘wind’;
djal – *djàlove* – *del`ăt* ‘share’.

8. Microclass (productive): m., plural suffix *-ove*:

- (23) *sin* – *sinove* ‘son’, *stol* – *stolove* ‘chair’, *bor* – *borove* ‘pine-tree’,
săd – *sădove* ‘vessel, utensil’, etc.

In OB, only a few *-stem* masculines had plural forms with the suffix *-ove*, but later the suffix *-ove* became productive for masculine monosyllables and largely replaced the plural suffix *-i* (Mirčev 1963: 146, Stojanov 1993: 209), see the instances of class shift in microclasses 12 (35) and 14 (42).

LWs (about 250 nouns, see Stojanov 1993: 211):

- (24) *akt* – *aktove*, *bal* – *balove*, *tim* – *timove*, *mač* – *mačove*, *disk* – *diskove*, *bej* – *bejove* ‘bey’, *jaj* – *jajove* ‘G-spring’, *kej* – *kejove*, *paj* – *pajove*, *čaj* – *čajove*.

Acronyms:

- (25) *VUZ* – *VUZ-ove* ‘university’ (Stojanov 1993: 157),
TEC – *TEC-ove* ‘thermo-electric power-plant’ (Krumova & Čoroleeva 1983).

Isolated paradigms:

- (26) *zet* – *zet`ove* ‘son-in-law’, *ogăn* – *ogn`ove* ‘fire’
(cf. Russian *zjat*, *ogon* Maslov 1982: 141);
centăr – *centrove* ‘center’.

Stress patterns: Monosyllabic stems show three different stress patterns in the plural: *bòr* – *bòrove* ‘pine-tree’, *stòl* – *stolòve* ‘chair’, *gràd* – *gradovè* ‘city’. LWs always preserve the stress on the same syllable as in the singular form.

Subclass: plural suffix *-i*

Subsubclass: feminines with definite article *-tâ* (see section 4.1)

9. Microclass: f., with metathesis in the plural (cf. minimicroclass 6 (20)), e.g.:

- (27) *krăv* – *kărvi* ‘blood’, *skrăb* – *skărbi* ‘grief’, *vřăv* – *vărvi* ‘string’.
grăd, *gărdà* – *gărdi* ‘breast, bosom’ is an exception with a stress change.

10. Microclass: f., e.g.:

- (28) *prolet* – *proleti* ‘spring’, *nošt* – *nošti* ‘night’, *kost* – *kosti* ‘bone’, etc.

Some feminines show a phonological change, i.e. vowel : zero alternation, in the plural:

- (29) *pesen* – *pesni* ‘song’, *misăl* – *misli* ‘thought’, *kazăn* – *kazni* ‘punishment’,
săblazăn – *săblazni* ‘temptation’, etc., cf. (45).

LWs (all defective paradigms):

- (30) *zaxar* ‘sugar’, *gaz*¹⁶ ‘kerosene’ (both singularia tatum, i.e. partially non-inflected, take only a definite article, e.g. *zaxartâ*, *gaztâ*), *mebel* ‘furniture’.

Subsubclass: masculine, polysyllables¹⁷ by default

11. Microclass: m., suffix *-in* (unstressed) is lost in the plural, i.e. subtraction:

- (31) *graždanin* – *graždani* ‘citizen’, *bălgarin* – *bălgari* ‘Bulgarian man’, etc.
(vs. *domakin* – *domakini* ‘householder, host’, *ispolin* – *ispolini* ‘colossus’, both with a stressed *-in*, thus belonging to the productive microclass 14).

Isolated paradigm: in spite of the stressed suffix *-in*, subtraction; plural suffix *-ă*:

- (32) *gospodîn* – *gospodă* ‘Mister’ (cf. *Gospod* ‘God’ – *Gospodi* (V.)).

Isolated paradigm:

- (33) *turčin* – *turci* ‘Turk’.

12. Microclass: m., palatal alternations, exceptions especially in loanwords, i.e. unproductive microclass: *g, k, x : z, c, s*:

- (34) *săprug* – *săpruzi* ‘husband’, *vnuk* – *vnuci* ‘grandson’, *učenik* – *učenici* ‘pupil’,
găsok – *găsoci* ‘gander’, *mečok* – *mečoci* ‘he-bear’, *siromax* – *siromasi* ‘poor man’.

But cf., e.g.: *uspex* – *uspexi* ‘success’, *trak* (rare) – *traki* ‘Thracian man’, both belong to microclass 14.

Class shift to microclass 8:

- (35) *zvuk* – *zvuci* (poetic) / *zvukove* ‘sounds’, *vrag* – *vrazi* (old, poetic),
vragove ‘enemy’, etc.

LWs:

- (36) *matematik* – *matematici* ‘mathematician’, *biolog* – *biolozi* ‘biologist’ (WF
productivity of *-ik* and *-log*), *bjurek* – *bjureci* ‘cheese pasty’, etc.

¹⁶ According to RBE, *gaz* with this meaning, can also be masculine (rare).

¹⁷ About 30 masculine monosyllables of native origin have plural forms with the suffix *-i* (Stojanov 1993: 211).

However:

- (37) *ajsberg* – *ajsbergi*, *miting* – *mitingi*, *suing* – *suingi*, *bolševik* – *bolševiki*, etc., which belong to microclass 14 (cf. Stojanov 1993: 107).

Isolated paradigm: metathesis and palatalization,

- (38) *grāk* – *gārci* ‘Greek man’.

13. Microclass: alternation *e : ø* (*-e-* is usually part of a suffix), if a stressed *-è-*, then a stress shift:

- (39) *borèc* – *borci* ‘fighter, wrestler’, *kradèc* – *kradci* ‘burglar’, *ovèn* – *ovni* ‘ram’,
den – *dni* ‘day’, *šānec* – *šānci* / *šāncove* ‘ditch, trench’.

However, no elision (thus microclass 14) in the cases of *-C-* + suffixes *-rec* or *-lec*, e.g.:

- (40a) *mādrèc* – *mādreçi* ‘wise man’, *podlèc* – *podleçi* ‘scoundrel’;

or when *e* : (epenthetic) *ă* change as in :

- (40b) *beglèc* – *begālci* / *begleçi* ‘escapee’, *mārtvèc* – *mārtāvci* ‘dead person’.

14. Microclass (productive): m., e.g.:

- (41) *učitel* – *učiteli* ‘teacher’, *ovčar* – *ovčari* ‘shepherd’;
monosyllabic nouns: *zāb* – *zābi* ‘tooth’; monosyllables for national affiliation: *čex* – *čexi* ‘Czech’, *šved* – *švedi* ‘Swede’, etc.

Class shift to microclass 8:

- (42) *dvor* – *dvori* (archaic) / *dvorove* ‘yard’, *dar* – *dari* (old) / *darove* ‘gift’,
prāt – *prāti* / *prātove* ‘stick’, etc.

Phonological alternations:

1.) Alternation *j : i* (synchronic phonological rule, see Maslov 1982: 142):

- (43) *zlodej* – *zlodei* 'villain', *poroj* – *poroi* 'flood rain', *slavej* – *slavei* 'nightingale', etc.

2.) Alternation *e : j* (postvocalic -e- from the suffix -ec):

- (44) *boec* – *bojci* 'soldier', *evropeec* – *evropejci* 'European',
avstrieec – *avstijci* 'Austrian man', etc.,

zaek – *zajci* 'rabbit' – with palatalization, thus to microclass 12.

3.) Alternation *ǎ : ø*, a phonological rule inserts in the singular an epenthetic *ǎ* between two consonants (one being sonorant):

- (45) *kòsǎm* – *kòsmi* 'single hair', *vòpǎl* – *vòpli* 'sob', *vihǎr* – *vihri* / (rare) *vihrove* 'storm wind', etc.

Exceptions when a stressed *ǎ* or when *k : c* alternation (Maslov 1982: 142), e.g.:

- (46) *sat'ǎr* (Turkish *satir*) – *sat'ǎri* 'chopper', *kat'ǎr* (Turkish *katir*) – *kat'ǎri* 'mule' (*ǎ* is not epenthetic here).

-ǎ- in the suffixes -ǎk, -lǎk is not epenthetic, but underlying (Stojanov 1993: 214):

- (47) *vosǎk* – *vosǎci* 'wax', *pisǎk* – *pisǎci* 'shout', *svatlǎk* – *svatlǎci* 'match-making' (cf. *momǎk* and *potomǎk* – both isolated paradigms below (51)).

Note that no alternation occurs with definite articles, e.g.:

- (48) *kosǎm* – *kosǎma* / *kosǎmǎt*, *vopǎl* – *vopǎla* / *vopǎlǎt*, *vosǎk* – *vosǎka* / *vosǎkǎt*, *tigǎr* – *tigǎra* / *tigǎrǎt*, i.e. the rule of phonological epenthesis is ordered before suffixation of the article; exceptions only in derivation with the suffix -izǎm, e.g. *socializǎm* – *socializma* / *socializmǎt*, *neologizǎm* – *neologizma* / *neologizmǎt*.

LWs:

- (49) monosyllables (7 nouns only): *jon* – *joni*, *tanc* – *tanci*, *fakt* – *fakti*, *film* – *filmi*, *nerv* – *nervi*, *štrix* – *štrixi*, *ximn* – *ximni*; and with class shift: *bas* – *basi* / *bàsove*, *alt* – *alti* / *àltove* (from Italian *basso*, *alto*, pl. *bassi*, *alti*).

Polysyllables: *biznesmen* – *biznesmeni*, *printer* – *printeri*, *ketčup* – *ketčupi*, *kolhoz* – *kolhozi* (the Russian clipping for *kollektivnoe hozjajstvo* 'collective farm'), *skener* – *skeneri*, *luping* – *lupingi*, *suing* – *suingi*, *smoking* – *smokingi*, *šampoan* – *šampoani* 'shampoo', etc.

LWs with phonological alternations: *muzej* – *muzei* 'museum', *teatǎr* – *teatri* 'theater', *neologizǎm* – *neologizmi*, *kompjutǎr* – *kompjutri*, *tigǎr* – *tigri*, etc.

Clippings (Stojanov 1993: 157), e.g.:

- (50) *izpǎlkom* – *izpǎlkomi* from *izpǎlnitelen komitet* 'executive committee'.

Isolated paradigms: (cf. Maslov 1982: 145 and Feuillet 1996: 137)

- (51) *kamǎk* – *kamǎni* 'stone';
bodil – *bodli* 'prickle' / *bodili* 'thistle', here regularized with a different meaning;
mednik – *menci* / *mednici* (rare) 'copper', the latter form can be assigned to microclass 12 with palatalization;
čovek 'man, human beeing' – *xora* 'people' / *čoveci* 'men' (rare) / *ljude* (archaic) (the only suppletive paradigm).
Elision and *k : c* alternation in the suffix -ǎk (cf. (47)): *potòmǎk* – *potòmci* 'heir', *mòmǎk* – *momci* 'young man, lad', the latter with a stress shift as well.

We cannot agree with Maslov (1980: 145) who classifies *brat* – *bratja* here (see minimicroclass 1 (13)).

Stress patterns: For polysyllabic stems the stress is usually fixed on the stem; exceptions: *mòmǎk* – *momci* 'young man' (cf. *potòmǎk* – *potòmci* 'heir'); some nouns with the suffix -èc: *mǎdrec* – *mǎdreci* 'wise man', *podlec* – *podleci* 'scoundrel'; and some nouns with *è : ø* alternation in the plural, e.g. *bežanèc* – *bežanci* 'refugee', *lǎžèc* – *lǎžci* 'liar', etc.). But

the monosyllables of native origin often change the stress pattern, e.g.: *lăč* – *lăči* 'ray', *žrec* – *žreci* 'priest', *zăb* – *zăbi* 'tooth'.

II. Macroclass: terminating in vowels.

Macroclass II is less transparent morphologically than Macroclass I.

Default: truncation without additional modification for 1.) plural forms, and suffixation for 2.) definite articles.

A). Class: singular forms in *-a*, *-ja*; definite article *-ta*

Stress patterns: The class shows no stress change in the plural, exceptions are: *gospoža* – *gospozi* 'Mrs', *duša* 'soul' – *duši* 'souls' vs. *duši* 'persons'.

1. Minimicroclass: f., body parts, plural suffix *-e* with morphological palatalization *g, k : z, c*:

(52) *răka* – *răce* 'hand', *noga* – *noze* 'leg'.

Isolated paradigms:

(53) *ovca* – *ovce* / *ovci* 'sheep', *svinja* – *svine* / *svini* 'pig, swine' (the forms with *-i* are dialectal, see Popov et al. 1998: 726).

Subclass: plural suffix *-i*

2. Minimicroclass: m., Christian clergymen of high rank; *k : c* palatalization in the plural:

(54) *vladika* – *vladici* 'bishop', *patrika* – *patrici* (archaic) 'patriarch' (see Feuillet 1996: 138, Gerov 1895-1904).

3. Microclass: f., alternation *ja : e* in the plural form, e.g.:

(55) *sjanka* – *senki* 'shadow', *razdjala* – *razdeli* 'separation', *prištjavka* – *prištevk* 'caprice' (cf. microclass 7, I, and microclass 12 below).

4. Microclass (productive): f. & m., e.g.:

(56) *žena* – *ženi* 'woman', *lelja* – *leli*¹⁸ 'aunt', *učitelka* – *učitelki* 'teacher (f.)', *čexkinja* – *čexkini* 'Czech woman', *bălgarka* – *bălgarki* 'Bulgarian woman', *umnica* – *umnici* 'clever woman', *găska* – *găski* 'goose', *mečka* – *mečki* 'bear'.

Male humans in *-(j)a*: *bašta* – *bašti* 'father', *sădija* – *sădii* 'judge', *betondžija* – *betondžii* 'concrete-worker', *voevoda* – *voevodi* 'voivode, leader' etc.

Common gender nouns denoting both male and female humans: *pijanica* – *pijanici* 'drunkard', *rodnina* – *rodnini* 'relative', etc.

In contrast to the masculines in consonants (microclass 12, I, (34) & (36)) and to minimicroclass 2, this microclass shows no palatalization in the plural (Stojanov 1983: 109), e.g.:

(57) *kniga* – *knigi* 'book', *săpruga* – *săprugi* 'wife', *sluga* – *slugi* 'male servant'.

LWs, f.:

(58) *depeša* – *depeši* (archaic), *telegrama* – *telegrami*, *gejša* – *gejši*, *mafija* – *mafii*, (*koka*) *kola* – *koli*, *džungla* – *džungli*, *puma* – *pumi*, *zebra* – *zebri*, *linija* – *linii* 'line', *aleja* – *alei* 'avenue, lane', *galerija* – *galerii* 'gallery', *kompanija* – *kompanii* 'company'; (and all *-tion* & *-sion* words) *civilizacija* – *civilizacii*, *demokracija* – *demokracii*, *emocija* – *emocii*, *depresija* – *depresii*, *koncesija* – *koncesii*, *privatizacija* – *privatizacii*, etc.

(59) m.: *aga* – *agi* 'aga, master' (Turkish *aga*), *komšija* – *komšii* 'neighbor' (Turkish *komşu*), *delija* – *delii* 'madcap' (Turkish *deli*), *dermendžija* – *dermendžii* 'miller (old)', *darakčija* – *darakčii* 'carder', *čenčadžija* – *čenčadžii* 'money-changer (colloq.)' (WF productivity of *-džija* and *-čija*, also borrowed from Turkish, see Stojanov 1993: 176), *maxaradža* – *maxaradži*, *xodža* – *xodži* 'imam' (Turkish *hoca*), *papa* – *papi* 'pope' etc. (see Milev et al. 1978).

¹⁸ Stojanov (1993: 216) gives both *leli* and *lelini* as plural forms of *lelja*; for us, *leli* is the plural, and *lelini* has only the meaning '(at) my aunt's'.

B). Class: another vowel; definite article -to (many variant plural forms, remainders of OB declension classes).

5. Microclass: m., singular forms in -o, -e, male humans, only nouns of native origin, plural suffix -vci (-e)vci after -e and -(o)vci after -o):

- (60) kinship terms: *bae* – *baevci*, *bate* – *batevci* 'elder brother' (both with class shift in colloquial speech: *baeta*, *bateta*, cf. the productive microclass 11), *čičo* – *čičovci* 'uncle', *tatko* – *tatkovci* 'father (hypocoristic)', *djado* 'grandfather' – *djadovci* 'grandfathers' / *dedi* 'ancestors'; nouns derived with the suffixes -(an)ko, -(an)čo, -ulko and -l'o (Stojanov 1993: 211): *zabravanko* – *zabravankovci* 'chuckle-head (dim.)', *glupčo* – *glupčovci* 'little fool', *prismexulko* – *prismexulkovci* 'mockers', *dripl'o* – *dripl'ovci* 'ragamuffin', etc.

Subclass: words with semantically undifferentiated gender (n.) + some borrowings for humans

Subsubclass: pl. suffix -i

6. Minimicroclass: n., singular forms in -o, body parts, palatalization *k, x* : *č, š*:

- (61) *oko* – *oči* 'eye', *uxo* – *uši* 'ear'.

7. Microclass: n., substantivized adjectives terminating in -n-o, -l-o, -m-o:

- (62) *prilagatelno* – *prilagatelni* 'adjective', *sāštestvitelno* – *sāštestvitelni* 'noun', *vodoraslo* – *vodorasli* 'seaweed', *životno* – *životni* 'animal', *skazuemo* – *skazuemi* 'predicate', *nasekomo* – *nasekomi* 'insect', *delimo* – *delimi* 'dividend', *množimo* – *množimi* 'multiplicand', etc.

Cf. Russian *životnoe* – *životnye* (Maslov 1982: 149).

Isolated paradigm:

- (63) *vlečugo* – *vlečugi* 'reptile' (cf. *vlečuga* – *vlečugi* (common gender, pejorative) in microclass 4).

Subsubclass: plural in -a

8. Minimicroclass: n., singular forms in -o, plural suffix -es-a:

- (64) *čudo* – *čudesa* 'wonder', *dārvo* 'tree' – *dārvesa* (old, poetic) / *dārveta* 'trees' / *dārva* 'wood, firewood' with class shift to the productive microclass 11; *slovo* – *slovesa* (old) / *slova* 'word, speech' with class shift to the productive microclass 13.

Microclass in dissolution, i.e. the old forms X-*esa* have been largely replaced (class shift) by the productive -*ta* and -*a*.

Isolated paradigms:

- (65) *tjalo* – *telesa* (old) / *tela* 'body' with class shift to microclass 12; *nebe* – *nebesa* (poetic) / *nebeta* 'sky' with class shift to microclass 11.

9. Microclass: n., words terminating (formally) in -m-e, plural suffix -(e)-na, only the following nouns:

- (66) *vreme* – *vremena* 'time, weather', *seme* – *semena* 'seed', *ime* – *imena* 'name', *pleme* – *plemena* 'tribe', *zname* – *znamena* 'flag', *streme* – *stremena* 'stirrup', *breme* – *bremena* / *bremeta* 'burden' with class shift to the productive microclass 11 (cf. *vime* – *vimeta* 'udder', *teme* – *temeta* 'pate', both in microclass 11 (Feuillet 1996: 143)).

Isolated paradigm: singular form in -o, variant plural:

- (67) *ramo* – *ramena* / *ramene* 'shoulder' (cf. *koljano* in microclass 12 (75) and *krilo* in microclass 13 (77)).

The forms show different usage, that with *-e* has only a dual meaning concerning the human body.

10. Microclass: n., verbal nouns with the suffix *-ne*, plural suffix *-ija*:

- (68) *sčupvane* – *sčupvanija* 'breaking', *iskane* – *iskanija* 'wanting', etc. (cf. *jadene* – *jadeneda* 'meal, eating', *prane* – *praneta* 'washing' in microclass 11).

Some verbal nouns with abstract meaning have no plural at all.

11. Microclass¹⁹ (productive): n., m. & f. in *-e*, *-i*, *-u*, *-ju*, plural suffix *-(e)-ta*²⁰:

- (69) *momče* – *momčeta* 'boy', *momiče* – *momičeta* 'girl', *libe* – *libeta* 'sweetheart'; some diminutives: *petle* – *petleta* 'cock (dim.)', *konče* – *končeta* 'horse (dim.)', *bratle* – *bratleta* 'old chap, brother (dim.)'; some verbal nouns with the suffix *-ne*, e.g. *jadene* – *jadeneda* 'eating, meal, food', *prane* – *praneta* 'washing', *klane* – *klaneta* 'slaughtering' (cf. microclass 10); some variant plurals: only *more* – *morja* (old) / *moreta* 'sea', *pole* – *polja* / *poleta* 'field', *loze* – *lozja* / *lozeta* 'vineyard' (*morja*, *polja*, *lozja* have a collective meaning, cf. footnote 15).

LWs (**neuter**, all non-humans):

- (70) *giše* – *gišeta* 'booking-office, counter', *dosie* – *dosieta* 'record, file', *šimpanze* – *šimpanzeta*, *taksi* – *taksita*, *žuri* – *žurita*, *poni* – *ponita*, *randevu* – *randevuta*, *bižu* – *bižuta*, *menju* – *menjuta*, *intervju* – *intervjuta*, *kenguru* – *kenguruta*, *marabu* – *marabuta* etc. (see Popov et al. 1998: 734).

Some male humans (**masculine** is morphologically irrelevant, even the dictionaries disagree about the gender of these nouns):

¹⁹ According to Aronoff's framework for Arapesh (cf. Aronoff 1992, 1994), microclass 11 should be the [exceptional case] default class and neuter the [exceptional case] default gender. See also Fraser and Corbett (1997).

²⁰ In OB, the plural suffix *-eta* is used only for young of animals, e.g. *agné* – *agnéta* 'lambs', *telé* – *teléta* 'calves'; however, in Modern Bulgarian, the suffix has become productive.

- (71) *ataše* – *atašeta* 'attaché' (m. & n. in Andrejčin et al. 1999, for Romanski 1955-59 only m.), *dendi* – *dendita* (RBE: m. & n. and rare m. = pl.; Andrejčin et al. (1999): m. & n.), *krupie* – *krupieta* (n. – Romanski 1955-59; RBE; Andrejčin et al. 1999), *kamikadze* – *kamikadzeta* (found only in Andrejčin et al. 1999 as m.), *zaptie* – *zaptieta* 'zaptieh, Turkish policeman' (n. in all dictionaries), *guru* – *guruta* (found in no dictionary), *mosju* – *mosjuta* (RBE: colloq.-ironical m. & n.).

Since a vowel is an unusual final segment for masculines, these nouns take instead of masculine inflectional suffixes neuter ones which fit better their phonological shape.

In this microclass we also find nouns denoting female humans, i.e. **feminines**:

- (72) *lejdi* 'lady' – (colloq.) *lejdieta* / *lejdito*; *frau* – def. f. *frauto* (colloq.).

It seems that definite forms of feminine nouns in peculiar final vowels are more acceptable than plural ones.

Acronyms (cf. Krumova & Čoroleeva 1983):

- (73) *MPS* (*me-pe-se*) – *MPS-eta* 'motor vehicle', *SDS* (*se-de-se*) – *SDS-eta* 'The Union of the Democratic Forces', *DSO* (*de-se-o*) – colloq. *DSO-ta* (pl.) 'State economic group', *DZI* (*de-ze-i*) 'State insurance institute' – *DZI-ta*, *ESPU* (*espu*) – *ESPU-ta* (colloq.) 'high school'. All of them can be used with articles (sg. *-to* / pl. *-ta*) in colloquial speech.

Stress patterns: Usually the suffix *-(e)ta* causes no stress change (Maslov 1982:149).

Subsubsubclass: plural suffix *-a* / *-ja*

12. Microclass: n., singular forms in *-o*, alternation *ja* : *e* in the plural:

- (74) *ljàto* – *letà* 'summer', *mjàsto* – *mestà* 'place', *željàzo* – *železà* '(piece of) iron', cf. microclass 3, and microclass 7, I.

Variant plural:

- (75) *koljàno* – *kolenà* / *kolene* 'knee' (cf. *ramo* in microclass 9 (67) and *krilo* in microclass 13 (77)).

13. Microclass (productive): n. & m., singular forms in *-o*, *-ce*, *-ište* & *-ie*:

- (76) *selo* – *sela* 'village', *šilo* – *šila* 'awl', *butalo* – *butala* 'piston, charge', *svetilo* – *svetila* 'luminary', *učilište* – *učilišta* 'school'; diminutives and augmentatives: *krilce* – *krilca* 'wing (dim.)', *selce* – *selca* 'hamlet', *momčence* – *momčenca* 'boy (dim.)', *ženište* – *ženišta* 'woman (augm.)', *māžište* – *māžišta* 'man (augm.)'; words with singular forms in *-ie* (*-ia* is phonologically impossible in final position → *-ija*²¹): *izvestie* – *izvestija* 'news, message, information', *pokritie* – *pokritija* 'discharge, cover', *sābranie* – *sābranija* 'meeting, assembly', etc.

Variant plural:

- (77) *krilo* – *krila* / *krile* 'wing' (cf. *ramo* in microclass 9 (67) and *koljano* in microclass 12 (75)).

LWs (only nouns terminating in *-o*):

n.:

- (78) *bjuro* – *bjura*, *kino* – *kina* 'cinema', *sako* – *saka*, *palto* – *palta*, *kazino* – *kazina*, *radio* – *radia*, *kimono* – *kimona*, etc.

m.:

- (79) *žigolo* – *žigila*, *pikolo* – *pikola* (see RBE), *impresario* – *impresaria* (Popov et al. 1998).

Transitional paradigms: (doublet plural forms)

- (80) *kolelo* – *kolela* / *koleleta* 'wheel, bicycle', *kālbo* – *kālba* / *kālbeta* 'sphere, globe, ball', *tārkallo* – *tārkala* / *tārkaleta* 'wheel, circle, slice' (The forms with the suffix *-a* are more frequent).

Isolated paradigms:

- (81) *dete* – *deca* 'child',
cvete – *cvetja* 'flower'.

Stress patterns: If the singular indefinite form of a neuter noun is disyllabic with a stress on the first syllable and if the plural suffix the noun takes is *-a(-eCa)*, *-ja* or *-e*, the noun changes its stress in the plural, as in the following examples: *vino* – *vinà* 'wine', *vrème* – *vremenà* 'time, weather', *čudo* – *čudesà* 'wonder', *cvète* – *cvet'ja* 'flower', *kino* – *kinà*, etc. There exists a final stressed syllable tendency if a singular form is suffixed with: *-lo*, *-alo* *-ilo*: *vetrilo* – *vetrilà* 'fan', *xvārcilo* – *xvārcilà* 'kite', *ogledàlo* – *ogledalà* 'mirror', etc. (see Stojanov 1993: 219).

Bulgarian declension

Table 2

Macroclass 1		singular definite form	
singular indefinite form	plural		
1.m.-C <i>krak</i> 'leg'	+ <i>-ā</i>	<i>krakā</i>	<i>krakāt</i>
2.m.-C <i>māž</i> 'man'	+ <i>-ē</i>	<i>māžē</i>	<i>māžāt</i>
3.m.-C <i>sān</i> 'dream'	+ <i>-išta</i>	<i>sāništa</i>	<i>sānjat</i>
4.m.-an <i>zabravan</i> 'chuckle-head'	+ <i>-ovci</i>	<i>zabravanovci</i>	<i>zabravanāt</i>
5.m.-j <i>boj</i> 'fight'	+ <i>-eve</i>	<i>boeve</i>	<i>bojat</i>
6.m.-C <i>vrāx</i> 'peak'	+ <i>-ove</i> (metathesis)	<i>vārxove</i>	(metathesis) <i>vārxāt</i>
7.m.-C <i>grjāx</i> 'sin'		(<i>ja : e</i>) <i>grēxovē</i>	(<i>ja : e</i>) <i>grēxāt</i>
8.m.-C (p) <i>grad</i> 'city'		<i>gradove</i>	<i>gradāt</i>
9.f.-C <i>vrāv</i> 'string'		(metathesis) <i>vārvī</i>	<i>vrāvītā</i>
10.f.-C <i>kost</i> 'bone'	+ <i>-i</i> (subtraction)	<i>kosti</i>	+ <i>-tā</i> <i>kosttā</i>
11.m.-in <i>bālgarin</i> 'Bulgarian'		(palatalization) <i>bālgari</i>	<i>bālgarināt</i>
12.m.-g,k,x <i>učēnik</i> 'pupil'		(palatalization) <i>učēnici</i>	+ <i>-āt(-a)/-jat(-ja)</i> <i>učēnikāt</i>
13.m.-eC <i>kradec</i> 'burglar'		(elision) <i>kradci</i>	<i>kradecāt</i>
14.m.-C (p) <i>učitel</i> 'teacher'		<i>učiteli</i>	<i>učiteljat</i>

Macroclass 2		singular definite form	
1.f.-ā <i>rākā</i> 'hand'	+ <i>-ē</i> (palatalization)	<i>rācē</i>	<i>rākata</i>
2.m.-a <i>vladika</i> 'bishop'	+ <i>-i</i> (palatalization)	<i>vladici</i>	<i>vladikata</i>
3.f.-a <i>sjanka</i> 'shadow'		(<i>ja : e</i>) <i>senki</i>	<i>sjankata</i>
4.f.m.-a / -ja (p) <i>žēna</i> 'woman'		<i>žēni</i>	<i>ženata</i>
5.m.-o, -e <i>djado</i> 'grandfather'		<i>djadovci</i>	<i>djadoto</i>
<i>bate</i> 'elder brother'	+ <i>-vci</i>	<i>batevci</i>	<i>bateto</i>
6.n.-o <i>oko</i> 'eye'		(palatalization) <i>oči</i>	<i>okoto</i>
7.n.-n-o, -l-o, -m-o <i>životno</i> 'animal'		<i>životni</i>	<i>životnoto</i>
8.n.-o <i>čudo</i> 'wonder'	+ <i>-esa</i>	<i>čudesā</i>	<i>čudoto</i>
9.n.-m-e <i>vreme</i> 'time'	+ <i>-na</i>	<i>vremēna</i>	<i>vremeto</i>
10.n.-ne <i>ščupvane</i> 'breaking'	+ <i>-ija</i>	<i>ščupvanija</i>	<i>ščupvaneto</i>
11.n.m.f.-e, -i -u, -ju (p) <i>momče</i> 'boy'		<i>momčeta</i>	+ <i>-to</i> <i>momčeto</i>
<i>taksi</i>		<i>taksita</i>	<i>taksito</i>
<i>randevu</i>	+ <i>-ta</i>	<i>randevuta</i>	<i>randevuto</i>
12.n.-o <i>menju</i>		<i>menjuta</i>	<i>menjuto</i>
13.n.m.-o, -ce, -ište, -ie <i>ljato</i> 'summer'		(<i>ja : e</i>) <i>leta</i>	<i>ljatoto</i>
(p) <i>selo</i> 'village'	+ <i>-a</i>	<i>sela</i>	<i>seloto</i>
<i>učilište</i> 'school'		<i>učilišta</i>	<i>učilišteto</i>

(p) = productive microclass

²¹ *impresaria* in (79) is an exception, cf. RBE where the plural of *impresario* is *impresarii*.

In contrast to Russian (Švedova 1980: §1221 'Zero declension'), Bulgarian grammar has not documented any indeclinable nouns²². Unfortunately, dictionaries point out some words as unchangeable (see, for example, RBE). It is unclear why only nouns denoting humans, i.e. with natural gender, are problematic. It seems that for Bulgarian, the opposition human : non-human is more important than the opposition animate : inanimate.

We will illustrate the problem and the possible solutions with three feminine nouns which have peculiar final segments: *leidi*, *madam*, *mis*:

1.) *leidi* – natural gender feminine, but instead of plural suffix *-i* / article *-ta*, the only possibility for feminines, it takes, at least in colloquial speech, the plural suffix *-ta* / article *-to*, like all other nouns in *-i*, which are usually neuter. Thus, we have: *lejdi* / *lejdito* – pl. *lejdita* / *lejditata*. The same happens with masculine singular forms terminating in vowels, as is usual for neuter inflection (if we accept such gender specialization of the inflectional suffixes). (According to RBE, *leidi* can be used only as an apposition, no plural form is given; there is a second possibility: (literary) sg. *lèdi* = pl. *lèdi*, this we consider as an archaism of old literary texts).

2.) *madam* – due to natural gender, it should have gone into the unproductive microclass feminines in consonants, but this is not the case. Since the plural of all feminines is always *-i*, only the definite article shows inflectional integration: *madàmata*, **madamtà*. Thus *madami* is the plural of *madama*, formed, perhaps, following the pattern *zabravan* (m.) 'chuckle-head' – *zabravana* (f.), *săprug* (m.) 'husband' – *săpruga* (f.) 'wife', where *-a* is inflectional, since it changes only the gender of the nouns without adding any other semantic information. This is a fine example of the adaptation of an unfitting property of the original foreign form to the most productive pattern of Bulgarian feminines.

3.) Like *madam*, *mis* is feminine but ends in a consonant. Here, the solution of the colloquial speech is very interesting: the word undergoes an even stranger transmorphemization (cf. Filipović 1986), first, it gets a derivational suffix (the productive feminine *-ka*) and then it is already a normal feminine noun in *-a*: *miska* / *miskata* – pl. *miski* / *miskite*. Other inflectional forms are unacceptable, but *misi* / *misito* (colloq.) is a hypocoristic.

²² Except proper nouns, pluralia and singularia tantum.

Russian uses the same strategy with indeclinable nouns. For example, *pal'to* 'coat' is indeclinable, but if we form a diminutive, it can be declined: *pal'teco* / *pal'teca* or *pal'tiško* / *pal'tiška* (Zaliznjak 1977, Ožegov & Švedova 1995).

6. Conclusion

In Bulgarian, unlike Arapesh (cf. Fraser and Corbett 1997: 32), phonological form both determines, by default, gender and declensional class (cf. 3 genders and 27 declensional classes in Bulgarian vs. 13 genders and 22 inflectional classes in Arapesh; and only one-to-one mappings from inflectional class to gender in Arapesh (Aronoff 1994: 104)). Thus, in principle, gender and declensional class are only indirectly related.

Gender is important for agreement, i.e. syntactically, in contrast to its irrelevance for the choice of the suffixed definite article.

There exist gender-specialized suffixes, but most of them (with the exception of f. *-est*, *-ost*, and m. *-džija*, *-čija*) follow the phonological character of the system. These suffixes are real morphemes (*-ka*, *-ok*, *-(k)inja*, etc.) but they express only a sex-differentiation meaning. Thus sex-differentiation determines the choice among these system-adequate suffixes, i.e. whose gender and whose inflectional class assignment agrees with the phonology of their right edge.

The distribution of productive microclasses is not chaotic. In the first macroclass, there are just two productive microclasses, which are phonologically complementary (monosyllables vs. polysyllables).

In the second macroclass, there is one microclass (4) which is productive for nouns with singular forms in *-(j)a*. Microclass 13 is productive for nouns terminating in *-o*, and microclass 11 for those in *-e*. The productive microclass 11 represents an exceptional default for not fully system-adequate foreign words and abbreviations.

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Zusammenfassung

Dieser Beitrag untersucht die bulgarische Deklination im theoretischen Rahmen der Natürlichen Morphologie. Das bulgarische Nominalsystem zeigt sich als stark phonologisch orientiert, d.h. Genus, bestimmter Artikel und Plural können auf Grund des rechten Randes des Wortes vorausgesagt werden. So teilen wir nach dem konsonantischen vs. vokalischen rechten Rand die Nomina in zwei Makroklassen (mit insgesamt 27 Mikroklassen) ein. Nur fünf von allen Mikroklassen sind produktiv. Fremdwörter werden entweder phonologisch oder morphologisch angepasst und danach wie die einheimischen Wörter flektiert. Fremdwörter mit nicht passendem rechten Rand erhalten einen Notfallplural (als "exceptional default"). Genus ist keine zentrale Kategorie für die Etablierung von Deklinationsklassen, sondern nur für die Kongruenz wichtig. Daher ist der Bezug von Genus auf Deklinationsklasse nur indirekt, insofern als beide Kategorien vorwiegend phonologisch determiniert sind.