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Review of: Anna Polivanova, *Old Church Slavic. Grammar and dictionaries*

Diego Luinetti[1]

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Anna Polivanova, 2023, *Old Church Slavic. Grammar and Dictionaries*, translated by Lev Blumenfeld, edited by Artemij Keidan, Firenze: Firenze University Press, XXX+799 p. ISBN 979-12-215-0104-9, DOI https://doi.org/10.36253/979-12-215-0104-9.

The new grammar of Old Church Slavic (OCS) by the late Anna Polivanova (1945-1925), with a distinct linguistic orientation, is a great innovation not only in the field of Slavic Studies, but also in the grammatical treatment of dead languages as well as in the theory of grammar and grammar writing in general. Originally published in Russian in 2013 (see Polivanova, 2013), this book has now become accessible to a wider audience. The content and the features of the monograph are clearly stated by the author in the foreword: it is presented as a purely synchronic grammar (see p. XVII), independent of – yet compatible with – diachronic considerations, and intended to enhance the consistency and completeness of the existing synchronic grammars of OCS (as represented by Diels, 1932; Vaillant, 1964, and especially Lunt, 1974). This approach led the author to a general overhaul of the terminology of the grammar. On the one hand, certain notions introduced in this grammar lack any corresponding terminology in the tradition of studies; on the other hand, many existing terms are often ambiguous or poorly defined, being bound to century-long terminological debates. For the sake of convenience, the translator provides a useful glossary of technical terms (p. XI ff.), paired with the Russian originals, which the reader can comfortably consult whenever needed.

Given a closed corpus of OCS texts, this grammar aims at providing the full segmental and paradigmatic information about any Slavic root contained in it, and at giving all the tools required to analyze any wordform occurring in it. The corpus, which is referred to as the "benchmark"[1] of the grammar, consists of the eight most ancient attestations of OCS: namely, *Kiev Missal*, *Codex Zographensis*, *Codex Marianus*, *Codex Assemanius*, *Psalterium Sinaiticum*, *Sava's book*, and *Codex Suprasliensis*. A peculiar issue of such a corpus is the great textual variability, deriving from the absence of a single linguistic norm, which can manifest itself either as variation between different idiolects or as instability within even one

[1] Double quotes indicate author's terminology. All the special symbols used here – including the angle brackets, the dot for the formative boundary, the double vertical strokes for the alternations, etc. – are the author's.

✉ D. Luinetti
d.luinetti@unimarconi.it

[1] Università degli Studi G. Marconi, Dipartimento di Scienze Umane, Rome, Italy

given idiolect. The causes of the variation are multifactorial, as can be seen by considering a few wordforms from the parallel texts cited by the author in the Introduction (see p. XXI ff.): *prišьdъšjumu* (Zogr.) differs from *prišedъšu* (Mar.), both occurring in the Slavic translation of (Mt. 8, 28-34), for orthographic (*šju* vs. *šu*), phonological (*ь* vs. *e*), and morphological (short vs. long form) reasons; lexical choice can also affect the variation: thus, *stranǫ* 'country' in Zogr. corresponds to *zemlǫ* 'region' in Sav.

In the grammar under review, a specific descriptive technique is discussed in detail: the author does not describe the language of any particular manuscript, but rather a certain fictitious language – referred to as the "canonical OCS language" – together with a system of "deviations": a set of rules whose application to the canonical form yields the form attested in a given manuscript. The book provides an apparatus for such a description – separately for graphics, phonology, morphonology, and paradigmatics. This technique, as the author observes, is not totally new, since in traditional OCS studies the function of the canonical form is partly performed by the reconstructed Common Slavic. In grammars devoted to the synchronic description of OCS (Vaillant, 1964; Lunt, 1974), however, this technique receives no special attention: Vaillant employs it rarely and with almost no commentary, while Lunt uses the notion of "normalization" with regard just to graphics and occasionally employs the term "Standard Old Church Slavonic", without providing any explanation.

The grammar consists of 26 chapters following the Introduction, subdivided into four parts. Part I, comprising the first 7 chapters, is dedicated to the "segmental grammar". Chapter 1 has the purpose of familiarizing the reader with the "segmental systems" and the technical terminology used to describe them. Segmental grammar aims to provide a segmental analysis of any wordform of the benchmark list of wordforms (see p. 10), which corresponds to the total amount of wordforms in the selected corpus, with the explicit exclusion of compounds, proper names, almost all unassimilated loanwords and extraparadigmatic forms (i.e. uninflected functional words). To this end, it provides the necessary set of rules for constructing three different segmental representations of a wordform: the morphophonological, the phonological, and the graphic representation (for a detailed description of the theory of segmental grammar cf. Polivanova, 2008, p. 210 ff.).

Chapter 2 is dedicated to graphics and phonology. A normalized OCS Cyrillic alphabet, consisting of 40 graphemes, is adopted: some of the graphemes found in the manuscripts are excluded, either because they are redundant or ambiguous (e.g. ‹і› and ‹ї›, corresponding to the normalized ‹и›), or because they are used mostly in Greek loanwords (e.g. ‹ѓ›, ‹ѱ›, ‹ѳ› and ‹ѡ›). It should be noted that the graphemes ‹ѧ›, ‹ѩ› and ‹ѹ› have the so-called "kamorated" counterparts, ‹ѧ̂›, ‹ѩ̂› and ‹ѹ̂›, as self-standing graphemes.[2] Also, the combination ‹жд› is treated as a grapheme *per se*, providing the voiced counterpart to ‹шт› (which is the normalization of ‹щ›), a grapheme on its own as well. An account of the allowed letter combinations is then provided. Dealing with a purely synchronic analysis of a dead language, the author refrains from attempting any reconstruction of the articulatory phonetics of OCS and takes the graphic representation as the base. The phonetic traits associated to the phonemes are thus simply functional to describe the morphophonological alternations: for instance, in presenting the phonological pairings of vowels, the opposition between etymologically short and etymologically long vowels, which would have no meaning in the synchrony of OCS, is reconfigured as an opposition between "inner" and "outer" vowels, in relation to the position of the vowels in the vocalic triangle; again, the phonemes *št*, *žd*, *c*, *dz*, and *č*, qualified as

[2]The term "kamorated", coming from Russian Slavistic tradition, has been left unaltered. For a mistake, kamoras are lacking in one of the two series of ‹ѧ, ѩ, ѹ› found on p. 12 (first line from above).

dentopalatal plosives, and historically arising from different palatalizations, are further classified into three groups each distinguished by number, without postulating any articulatory interpretation, which would in any case be unprovable due to the absence of articulatory data, and therefore futile. At the end of the Chapter, the rules for the transformation from graphics to phonology, which are two-way, are given.

Chapter 3 introduces the morphophonological representation of the word-forms: at the morphophonological level a word-form consists of a string of formatives. Each class of formatives is then characterized by its own "CVC-norm": CV for prefixes, CVC for roots, VC for suffixes and V or VCV for "terminals", i.e. inflectional endings (where C stands for a simple consonant or a cluster, and V for a single vowel). The boundaries between formatives are regulated by "Jakobson's law" (as the author calls it), which permits only C.V and V.C boundaries between formatives. Nevertheless, there are some formatives that violate their class CVC norm (e.g. the prefix *iz* or the root *zna*), as well as other formatives that are ambivalent, i.e. having alloforms that violate the CVC-norm (e.g. the prefix *sъ*||*sъn*, the root *klę*||*klьn*, and the terminal *oxъ*||*xъ*). This is why prohibited boundaries, of the kind V.V or C.C, may sometimes occur. If nonstandard edges of formatives do not compensate each other (e.g., the nonstandard prefix *iz* and the nonstandard root *i* form an allowed boundary in the infinitive *iz.i.t.i*), morphophonemic adjustments are needed: for instance, a V.V boundary may be adjusted by inserting an epenthetic *j* (see the boundary between root and terminal in Pres1Sg *zna.ǫ* which becomes *znajǫ* in phonology), and a C.C boundary may be resolved through cluster simplification rules (see the boundary between prefix and root in *bez.sъ.mrъ.t.ьn.ъ*, which gives *besъmrьtьnъ*).

Chapter 4 begins with an examination of phoneme syntagmatics, offering an in-depth description of vowel and consonant combinations, indicating, for each combination of two phonemes, whether it is permitted or prohibited. Note that the allowance or prohibition of segmental strings longer than two is computed recursively from the syntagmatics of bisegmental combinations (see §48).

One emblematic example is the so-called "law of the velars". The prohibition against combinations of velars (/k/, /g/, /x/) with front vowels (/i/, /e/, /ě/, /ь/, /ę/), both in the morphophonological or the phonological representation, is formulated as a synchronic law, whereas previously it has been always presented in the form of several separate statements, treated in different sections of the grammar. Lunt (1974), Vaillant (1964), and Diels (1932) described it as an alternation accompanying certain morphological and paradigmatic structures. In other authors, it is treated as several distinct alternations, justified on a diachronic basis. Note that the law of the velars does not affect recent unassimilated loanwords, which are indeed excluded from the benchmark dictionary (except for a few words that have been purposedly preserved as an illustration, e.g. *kitъ* 'whale').

Next, the mapping from the morphophonological to the phonological representation is addressed. In particular, the author describes the set of rules that eliminates phoneme combinations allowed at the morphophonological level but not at the phonological level (which are referred to as "mph → ph/norm rules"). For example, the combination of /l'/, /n'/, /r'/, /č/, /ž/, /š/, /št/, and /žd/ with the vowel /ě/ is allowed on the morphophonological level but prohibited at the phonological level, and repaired by a mph → ph/norm rule that substitutes /ě/ with /a/, which, on its turn, is syntagmatically compatible with the aforementioned consonants (e.g., the morphophonological Imf1Sg wordform *mož.ěaxъ* becomes *možaaxъ* in the phonological representation).

In Chap. 5, the author examines the variability of formatives, or "polyformy", i.e., how the members of a "family" of alloforms are related to each other. This polyformy is remarkably reduced to four standard types. The first two, namely the "twofold rule" and "CVC-ambivalence", are classified as "morphophonological variation". The remaining types of

Table 1 Initial vowels of hard and soft subtypes of twofold formatives

hard	ъ	o	ě	y	y
soft	ь	e	i	i	ę

polyformy are referred to as "instabilities", with a distinction between a consonantal and a vocalic type. Morphophonological variation implies that the choice between alloforms is governed by context-bound rules. Segmental instability, by contrast, involves alloforms that are generated by segmental transformations of various kinds, accompanying paradigmatic synthesis and word formation, rather than being selected.

The "twofold rule" applies to "bivariate" formatives (suffixes and endings), i.e. those having two alloforms, both starting by vowels opposed as "hard" vs. "soft"; this opposition comprises the pairings listed in Table 1 (see §85).

The selection between the two types is determined by the final consonant of the immediately preceding formative. For instance, "morphophonologically soft" consonants select the soft alloform, the remaining consonants select the hard alloform (cf. the hard endings in NomSg *grad.ъ*, LocPl *grad.ěxъ* and the corresponding soft endings in NomSg *dъžd.ь*, LocPl *dъžd.ixь*).[3]

The twofold rule offers multiple advantages: it not only reduces the soft and hard subtypes of declensions, traditionally treated as separate, to contextual variants of a single declension, but also does the same for some verbal endings, and, for the first time, treats even pairs of derivative suffixes as alloforms based on the hard/soft distinction. The latter are exemplified, among others, by the suffix *ot*‖*et* found in nouns (e.g., *topl.ot.a*, where the hard subtype is selected by the morphophonologically hard consonant *l* vs. *ništ.et.a*, where the soft subtype is selected by the morphophonologically soft consonant *št*), or by the *št*-participle suffix *y*‖*ę* (e.g., *nes.y* vs. *plač.ę*, where the alloform *y* is selected by the morphophonologically hard consonant *s* while the alloform *ę* by the morphophonologically soft consonant *č*). Furthermore, the notion of the "new twofold rule" is introduced in order to explain certain aberrant endings in nominal declension.

CVC-ambivalence consists of pairs of formatives distinguished by their CVC-scheme, i.e., whether they begin/end with a vowel or a consonant. The alloforms are arranged so as to comply with the aforementioned Jakobson's law: a V-final formative selects a following C-initial formative, and vice versa; similarly, a V-initial formative selects a preceding C-final formative, and vice versa (this "CVC agreement rule" applies to both derivative and inflectional formatives). One example is the root *klę*‖*klьn*: the C-ending alloform *klьn* is accompanied by the V-initial ending in Pres2Sg *klьn.eši*, while the non-standard V-ending alloform *klę* is accompanied by the following C-initial suffix in Inf *klę.t.i*.

The alloformy due to segmental instabilities include all forms of segmental alternation. Three segmental instabilities are treated in this grammar: "velar palatalization", "substitutive softening" and "fundamental vocalic alternation".[4] Note that segmental alternations have always been presented together with rules of distribution: each grade of an alternation must be triggered by a certain segmental context (this is true for many preceding grammars of OCS, as well as for some synchronic studies in modern languages, such as Zalizniak, 1967). However, this approach inevitably leads to some unfortunate results. Thus, in his attempt to describe the selection rules for the palatalization of the velars (*k*→*č* vs. *k*→*c*), Lunt (1974: 46 ff.) is forced to postulate such deep segments, or morphophonemes, as $\check{e}_1$ (from PIE

[3] Note that "hard" and "soft" are just two conventional terms with no relation to any phonetic reality.

[4] Table 82 on p. 55, which surveys the types of alloformy, would be expected to include substitutive softening as well.

**ē*, triggering *k*→*č*) vs. *ě*$_2$ (from PIE **ai* and **oi*, triggering *k*→*c*); likewise also *i*$_1$ and *i*$_2$. However, the sources treat them uniformly as, respectively, ‹ѣ› and ‹и›.

Note that the grammar under review assumes the non-existence of morphophonemes as an axiom: the inventory of the morphophonological representations must coincide with that of the phonological ones.[5] This made it impossible, for the author, to follow the traditional approach to alternations. Here, they are treated with a totally different approach, i.e. as an instruction to substitute a certain segment, in a certain position, with another segment, based on a table of alternant segments given in advance; this transformation occurs during the "paradigmatic synthesis" of a wordform and is triggered by special rules, which do not refer to any segmental context, but are linked to specific grammatical characteristics.

The author thus presents "velar palatalization" as an alternation with three grades, named after the first phoneme of each series (i.e. *k*, *č* and *c*), presented in a special table (p. 66, Table 105). The alternation applies exclusively to the last consonant (or a consonantal cluster) of a formative.[6] It is required during the process of nominal and verbal paradigmatic synthesis, limitedly to certain wordforms. For example, the Imf1Sg form requires the alternation of the final velar of the preceding formative to the grade *č*, while the Imp2Sg form requires the grade *c*. Thus, root *mog* + terminal *ěaxъ* gives the morphophonological form Imf1Sg *mož.ěaxъ* (phonologically *možaaxъ*), while the same root + terminal *ěte* gives Imp2Sg *modz.ěte*.

The final C of a formative may also be subject to the so-called "substitutive softening", an alternation with two grades: a "simple" consonant or consonant cluster and its "substitutively soft" counterpart (p. 68, Table 112). Like the palatalization of the velars, the substitutive softening also requires the presence of specific terminals, rather than a segmental context (e.g., the root ⟨428⟩ *kras*‖*kraš* presents the softened grade in the Pres1Sg *kraš.ǫ* and the simple grade in Pres2Sg *kras.iši*).

The only vocalic instability found in OCS is the "fundamental vowel alternation", which applies to a well-defined list of around 200 roots preserving the Indo-European apophony (e.g. the root ⟨658⟩ *par*‖*per*‖*pьr*). The alternation, presented on Table 119 (p. 72), is quite complex as it includes both pure vocalic alternating pairs as well as pairs with sonants. The specific roots, with different alternation grades, are surveyed in a dedicated section on pp. 378–400.

Given the various types of alloformy, formatives are organized into "families", where – unlike in the traditional "morpheme" vs. "allomorph" distinction – no alloform can be considered as the official representative of the family. Each family is simply referred to by a number, which determines its order in the Root Dictionary.[7] The structure of formative families varies depending on the number and type of alloformy affecting each root, as illustrated in the following examples (Table 2 and Table 3); these two tables are constructed as the pairwise product of the values of two alternations: velar palatalization and the fundamental vowel alternations:

[5] See Polivanova (2008: 230). The axiom of identity between phonological and morphophonological inventories represents one of the author's most significant assumptions.

[6] For this reason, the roots with initial C that may be seen as a product of a palatalization processes in diachrony are registered as separate roots, despite being historically related. Thus, *grad.ъ* and *žrъd.ь*, despite possibly tracing back to the same diachronic root **ǵ^{h}reh$_3$d-* (EDSIL, p. 185, cf. also IEW, p. 444), are built on two different synchronic roots, respectively ⟨192⟩ and ⟨293⟩.

[7] It should be noted that, consistently with the synchronic setting of this grammar, roots are understood as a purely synchronic concept (on the topic see Alfieri, 2016); lexemes are assigned to synchronic roots with no regard for their supposed IE etymology. E.g., the root ⟨105⟩ builds both *vlьkъ* (*vlьk.ъ*) 'wolf' and *vlěšti* (*vlěk.t.i*) 'to draw' which etymologically are believed to descend from two different diachronic roots, respectively PIE **welk^w-* (cf. EDSIL, p. 536 ff.) and PIE **h$_2$welk-* (see EDSIL, p. 414 ff.).

Table 2 Root ⟨766⟩

	o	e	ě	ь	i
k	*rok*	*rek*	*rěk*		
č	*roč*	*reč*	*rěč*		*rič*
c	*roc*			*rьc*	*ric*

Table 3 Root ⟨535⟩

	o	a
g	*mog*	*mag*
ž	*mož*	
dz	*modz*	

Chapters 6 and 7, which conclude Part I, focus on the segmental peculiarities of the sources: in particular, they address the so called "aberrant" forms, i.e. wordforms found in the sources that deviate from the canon. Forms may be graphically aberrant (resulting from the specific graphic system of each source, e.g., мѧсѡ (in Ass., written in Glagolitic script) for canonical мѧсѡ, or мъи for canonical мъı (in some Cyrillic manuscripts); or they may represent "aberrant spellouts" (differing from the corresponding canonical ones in their phonological representation, e.g., *mnogo* for *mъnogo*, where the segmental aberration ъ→Ø occurs); or they may represent erroneous spellouts, which result from generic scribal errors (e.g., DatSg *brěgru* for *brěgu* in Sav.). These chapters offer a comprehensive overview of the graphic system of each source and of its characteristic segmental aberrations. Furthermore, for each manuscript, two or three excerpts with comments on their aberrations are provided.

Part II comprises 15 chapters devoted to "paradigmatics" i.e., the section of the grammar describing the inflection of "paradigmatic words", which, in OCS, include verbs, substantives, and adjectives. Chapters 9–13 deal with nominal paradigmatics; Chaps. 14–22 cover verbal paradigmatics. Chapter 8 outlines the basic concepts of paradigmatics.[8] Each paradigmatic lexeme owns a paradigm, which can be seen as an ordered set of wordforms, organized upon grammatical categories. The three inflectional lexical classes adopted in the Grammar – noun, adjective and verb – are each defined by a specific "free paradigm". A free paradigm compares to an empty table, whose cells, called "paradigmatic cells", are associated with a specific set of grammatical values. It is noteworthy that, in this grammar, a wordform is not conceived as a two-sided unit composed of a signifier and a signified (as is usually assumed in traditional grammars), but rather as a one-sided unit, which is presentable as either a string of segments or of formatives. As a consequence, identical wordforms, even if associated with different paradigmatic cells, are treated as the same wordforms; thus, *straně* (LocSg), *straně* (DatSg), *straně* (NomDu) and *straně* (AccDu) are treated as the one and same wordform, with a complex "paradigmatic address", that is: LocDatSgNomAccDu.[9] All the remaining lexemes, being uninflected, comprising adverbs, prepositions, conjunctions and particles, are considered part of the same "extra-paradigmatic" lexical class.

The author describes paradigmatics as oriented to the procedure of synthesis of canonical wordforms rather than to the analysis of the wordforms found in the sources, as one might

[8] It should be noted that the running headers of Chap. 8 are erroneously identical to those of Chap. 7.

[9] This idea of the onesidedness of the wordform is taken into consideration already by Zalizniak (1967, p. 19, §1.2); more on this approach, cf. §248 and Polivanova and Keidan (2022, §12).

expect from a traditional grammar (p. 123). The synthesis of a wordform begins with the so-called "paradigmatic call", consisting of a lexeme and the name of a paradigmatic cell where the sought for wordform is located; thus, LocPl ⟨*gradъ*⟩ is the paradigmatic call for obtaining the wordform *graděxъ*. Note that the paradigmatic call is always univocal, while the address of a given wordform may be associated with several paradigmatic cells. Lexemes are compiled in the Paradigmatic Dictionary (p. 525 ff.), where the information on the paradigmatic class (flagged by the "paradigmatic indexes") and the segmentation into formatives, i.e. the morphophonological representation, of the "starting wordform" are provided. Together they make it possible to construct a step-by-step derivation of the requested wordform down to the ph/norm representation, following the rules of the grammar. To facilitate such derivations, a summary is provided in Chap. 25 which, separately for nouns and for verbs, refers to the relevant paragraph of the grammar at each branching point of this process.

Finally, a useful grammatical device frequently employed in this grammar is the so-called "paradigmatic effect".[10] Paradigmatic effects intervene in the synthesis of wordforms, deviating this process from the standard path. Such effects may be either optional or obligatory. They prove particularly useful for describing the formation of certain paradigmatic classes and subclasses, as well as for representing paradigmatic aberrations.

Chapters 9–13 are entirely dedicated to nominal inflection. Both substantives and adjectives are treated together, since the paradigmatic shape of the free paradigm of the substantive can be intended as a narrowing of that of an adjective.[11] Chap. 9 introduces the two free paradigms: one for substantives and another for adjectives and participles, along with the corresponding grammatical categories. Chapter 10 addresses the formation of nominals: it includes the building procedure of the workstem, the selection of terminals, and the boundary adjustment rules.

The author introduces a total of seven "sets of terminals", subdivided into "standard" and "non-standard". Among the standard and non-standard types, there are both "monovariate" and "twofold" sets. The twofold terminals are those presenting a hard and a soft variant, distributed according to the twofold rule.[12] For the first time, a non-standard twofold type is introduced, the so-called "new twofold", which includes a number of deviant endings (e.g., DatSg *ovi*/*evi*). The twofold declension includes three standard terminals sets: "base" (compatible with both nouns and adjectives), "pronominal", and "combined" (exclusively for adjectives), plus a non-standard set. The monovariate declension includes one standard set and two non-standard sets.

A distinctive feature of this grammar is the separation of terminal sets from declensions. Declensions, called here "inflectional classes", take from one or more sets of endings (terminals). Note that different inflectional classes can take the same sets of endings and different sets of endings can be combined into the same inflectional class.

There are eight declensions, organized according to word class and grammatical gender.[13] Each class is associated with a paradigmatic index listed in the Paradigmatic Dictionary.

[10] This notion goes back to the ideas of Andrei Zalizniak, see Polivanova and Keidan (2022, §9).

[11] The nominals that may be classified as either nouns or adjectives purely on semantic grounds (e.g., *drugъ* 'friend (n.)' vs. *drugъ* 'other (adj.)') are listed in the Paradigmatic Dictionary following Večerka et al.'s (1994) approach, which sometimes results in doublets (e.g., *drugъ* 1/m and *drugъ* 1/a).

[12] From a diachronic perspective, hard terminals continue, roughly speaking, the simple thematic declension, while soft terminals continue the iotacized thematic declension. In contrast, the standard monovariate terminals mainly continue the inherited *i*-declension.

[13] Following Trubeckoj (1954) and Zalizniak (1967), the traditional *a*- and *o*-declensions are unified into a single declension, called "twofold base".

Nouns have five inflectional classes (twofold masculine, neuter and feminine, and monovariate masculine and feminine), while adjectives have three (twofold adjectival, pronominal and monovariate; the latter is exhibited by one lexeme only: the word *trije* 'three'). These eight inflectional classes admit deviations, called "deformations", that involve the substitution of certain terminals with "alien" ones (e.g., the NomPlm terminal *e* in the place of *i* for comparatives, as in *nověiše* 'newer') and the presence of "syncopated stems" (e.g., NomSgm *nověi* vs. NomSgf *nověiši*).

Chapter 11 provides an overview of inflectional classes and their deformations, with commentary on individual lexemes found in the sources. Chapter 12 discusses a small group of "unique" lexemes whose inflectional patterns are too idiosyncratic to be divided into subclasses. This group includes only 46 lexemes.[14] The fact that terminal sets function independently of inflectional classes allows the grammar to treat heteroclite nominals as the result of the contamination between standard and non-standard sets. Finally, Chap. 13 is dedicated to the examination of the aberrant nominal forms found in the sources.

Chapters 14–22 focus on verbal inflection. Chapter 14 presents the free paradigm of the verb: it consists of twelve "subparadigms", divided into three so-called "systems" (the wordforms belonging to one system are constructed upon same "workstem"). Regardless of the system, each subparadigm is realized as a finite or a nominal so-called "representation". The nominal representations include all non-finite forms, i.e. participles, infinitive and supine. The PRAE-system includes the present, the imperative, the *-m* and the *-št* participles; the IMF-system includes the imperfect and the *n*- and *š*-participles; the INF-AOR-system includes the aorist, the *l*- and *t*-participles, the infinitive and the supine.[15] Chap. 15 describes the morphological composition of verb forms and their synthesis. Chapter 16 introduces the paradigmatic classes of the verb. The classification divides verbs into seven paradigmatic classes, along with a unique "class 0" of 19 "unique verbs" whose paradigms are so peculiar that it makes no sense to construct them by rule-based procedures. The author also distinguishes "irregular" verbs; the paradigm of an irregular verb results from a local deformation of the standard paradigm belonging to one of the regular classes. The number of distinct types of such deformations is fewer than ten.

Verbs may feature a "truncated" stem, an "expanded" stem, or both. The distribution of the stems across the subparadigms is regulated by the specific paradigmatic class the verb belongs to, which is found in the Paradigmatic Dictionary. Athematic stems may be simple (as in Classes 1–4) or suffixal (as in Classes 5 and 6); Class 7, characterized by the "expanders" *a* and *ě*, presents an intermediate case, as these elements function both as suffixes and as themes. As an example, here is a portion of Table 416 (p. 242), where the main paradigmatic classes are organized and exemplified (Table 4).[16]

One of the author's distinctive features is the treating of the paradigmatic irregularities as rule-based deviations from the standard. Verbs are no exception to this approach. Class 4 is further subdivided in three subclasses, depending on the CVC-scheme of the root: 4v for roots ending in a vowel (e.g., *znati*), 4c for those ending in a consonant (e.g., *nesti*) and 4h

[14] In the text the number of these unique lexemes is mistakenly given as 49 (p. 199). Traditionally, most of them are assigned either to the C-declension or to the *u*-declension.

[15] Note that the participles are divided into 5 classes according to the formatives (suffixes) used to construct them, with no reference to their semantic or syntactic functions, as is customary in traditional grammars (cf. such traditional distinctions as "active" vs. "passive" participles and "present" vs. "past" participles).

[16] Class 4, labeled "thematic" in this table, should in fact be considered "athematic". Comparison with the original Russian version of the grammar indicates that this discrepancy is a typographical error, which has been corrected in our reproduction of the table. Conversely, it remains unclear why the label "athematic" is applied to the five verbs that follow the *-mь* conjugation on p. 242.

Table 4 Main paradigmatic classes of verbs

Morphological type and composition of infinitive			Class	Basic stems and distribution by systems		
Lexical component	Verb class suffix	Theme		PRAE	IMF	INF-AOR
Simple thematic			1	Truncated		Expanded
l'jub	–	*i*	*l'jubiti*	*l'jub*		*l'jub.i*
Simple thematic			2	Truncated	Expanded	
trъp	–	*ě*	*trъpěti*	*trъp*	*trъp.ě*	
Simple thematic			3	Truncated	Expanded	
plak	–	*a*	*plakati*	*plak*	*plak.a*	
Simple athematic			4	Truncated		
nes	–	–	*nesti*	*nes*		
Suffixal thematic			5	Truncated		Expanded
dvig	*n*	*ǫ*	*dvignǫti*	*dvig.n*		*dvig.n.ǫ*
Suffixal thematic			6	Truncated	Expanded	
mil	*ov/u*	*a*	*milovati*	*mil.ov/u*	*mil.ov.a*	
Mixed			7	Expanded		
žel	*ě*		*želěti*	*žel.ě*		

for the so-called "sonant" roots, having both C- and V-ending alloforms (e.g., *klęti*, with two alloforms of the root: *klę* and *klьn*). Classes 3 and 4 each have a set of specific "paradigmatic effects", signaled by a corresponding symbol in the Paradigmatic Dictionary.

Some paradigmatic effects may deform the paradigmatic standard, i.e. the main verbal paradigm, both in one of the regular classes and in the irregular verbs (the formation of the workstems of both is described in Chap. 17). For example, the effect called "substitutive softening" applies to the regular verbs with truncated stem in the Class 3 (e.g., the verb *plakati* forms the present workstem *plač* departing from the truncated stem *plak*); in the Classes 1 and 2 it applies only in the form of Pres1Sg and, in Class 1 only, in all the forms of the IMF system. As for irregular verbs, for instance, Class 3 has a group of verbs that is defined by being unaffected by the regularly expected substitutive softening; this group is labeled as 3° (thus, the verb *iskati* forms the present workstem *isk* instead of the expected *išt*; see Pres1Sg *iskǫ*).[17]

Chapter 18 presents the sets of verbal terminals and suffixes, along with the respective boundary adjustment rules. Chapter 19 provides an overview of the verbal forms organized by systems (PRAE, IMF, INF-AOR), while Chap. 20 focuses on the individual paradigmatic classes and their peculiarities. As it was done with the nominal classes, also verbal classes are accompanied by commentaries on specific lexemes. Chapter 21 is then dedicated to the 19 "unique" verbs (such as *dati*, *byti*, *iti*, etc.), and Chap. 22 examines the aberrant verbal forms found in the sources.

Part III is a collection of heterogeneous "addenda". Chapter 23 is a collection of formative inventories, including roots, prefixes and suffixes. The inventory of roots is organized in such a way to group together roots with similar morphophonological properties. Each root is provided with a table where the main inflected forms and the possible derivatives are exemplified. Chapter 24 contains a number of excursuses on issues related to some theoretical

[17]The so-called *j*-present, frequently mentioned in diachronic grammars of OCS, is thus reformulated in Polivanova's grammar as the outcome of this substitutive softening effect applied to either regular or irregular verbs (more on this in §465).

aspects of grammar. Chapter 25 provides a summary of the process of synthesis of nominal and verbal forms, completed by some examples. This section is essential for the reader to get acquainted with the practical use of the grammar, which may not be immediately accessible. Chapter 26 is a chrestomathy of texts, some in the original form and some in the normalized version, as a useful exercise for the reader.

Finally, Part IV contains the two dictionaries (Root Dictionary and Paradigmatic Dictionary), as well as the indices.

In conclusion, Polivanova's grammar proves to be a valuable tool for scholars with diverse aims. It is a precious resource for the morphologist, since it provides a precise and rigorous criterion for word parsing in OCS. When working with the morphology of dead languages, especially from an old-time synchrony perspective, sometimes the issue of tracing a precise line between synchronically productive word-formation rules and the residues of word-formation rules that ceased to be productive is raised.[18] However, the structure of this grammar, which seeks to systematize as many phenomena as possible under a norm while explaining the remaining cases as deviations that are, in a certain sense, regularized, allows for a comprehensive account of the fully productive word-formation rules.

This grammar is undoubtedly of great interest to theoretical linguists, as it represents the application of the author's distinctive theoretical approach to an actual language. In essence, this approach derives from the Structuralist tradition of the 1960s, seeking a comprehensive and formal description of linguistic structures from phonology upwards. The most remarkable prior example of this approach is A. Zalizniak's 1967 monograph on Russian nominal inflection. Polivanova's grammar of OCS, while following Zalizniak's traces, aims at an even major completion as she includes segmental grammar and all types of grammatical dictionaries. The choice of OCS for the application of this approach is appropriate, as it is a language with sufficiently broad attestation and a degree of variation wide enough due to the lack of canonization in antiquity, yet not so extensive as to result in distinct dialects.

In addition to the errors already reported in the footnotes, one major theoretical observation may be made. The author exhibits considerable precision in defining the so-called "benchmark tasks", both for the grammar as a whole and for each of its constituent parts. By benchmark task, a term borrowed from informatics, the author refers to a type of content that (1) must necessarily be provided by the grammar and (2) whose successful treatment can be evaluated in a relatively formal manner (p. 10, fn. 15). Each benchmark task is formulated with reference to a "benchmark corpus", likewise defined in advance: all data within this corpus must be analyzable within the framework of the grammar, whereas data outside it may legitimately remain unanalyzed.

A potential inconsistency arises in this context. The benchmark task of the grammar as a whole, and of the paradigmatic chapters in particular, is formulated in such a way so as to enable the user to perform analytical procedures on the wordforms of the benchmark corpus, namely, to qualify each wordform in terms of the grammatical characteristics defined in the grammar (p. 136, §265). This is understandable, since texts, rather than native speakers, constitute the only empirical evidence available for the study of a dead language. An analytical procedure, proceeding from texts to meanings, is thus the most obvious choice, whereas the reverse direction, from meanings to texts, is virtually impossible.

However, the summary given in Chap. 25, which provides practical instructions for the user of the grammar, outlines procedures that move in the direction of synthesis. This inversion apparently gives rise to a contradiction with respect to the declared benchmark task of

[18] For a direct application of Polivanova's morphological parsing system see also Luinetti (in prep.).

the grammar. The author addresses this contradiction by invoking the concept of "analysis-by-synthesis" (p. 126, fn. 4). According to this principle, the analysis of a wordform begins with a hypothesized underlying form, which is then confirmed or rejected by attempting to generate the observed surface form through synthesis. Although the principle of analysis-by-synthesis was introduced in linguistics as early as the 1950s by M. Halle and others (see Halle & Stevens, 1959, 1962), the specific procedures it entails remain underdeveloped and are not elaborated upon in the present grammar. Anyway, general pedagogical experience shows that the synthetic approach proves most accessible to students in the context of paradigmatic morphology.

One may wonder whether this grammar is suitable for those approaching OCS for the first time. At first glance, several aspects may appear challenging. The academic style of presentation and the considerable size of the book, together with the lack of translations for OCS words and the systematic use of the Cyrillic script, may discourage beginners. However, the reader soon discovers that translations are not necessary, as semantics and syntax lie outside the scope of the grammar. It should also be noted that the inclusion of a Latin transliteration – necessarily distinct from the phonological representation – would have introduced only unnecessary complexity.

In contrast to these initial hurdles, the grammar offers substantial didactic support. Unlike any other textbook on OCS, this work contains a large amount of material that is extremely useful and appealing to beginners, such as the following.

1. Complete paradigms, as well as "profiles" (sort of abbreviated paradigms) for exemplars of all paradigmatic classes and unique nominal and verbal lexemes.

2. A paradigmatic dictionary, which makes it possible, using the paradigmatic indexes, to construct any form either by analogy with exemplars or by means of the rules.

3. A morphophonological representation of the starting wordforms of all the paradigmatic lexemes, i.e. a representation of the starting wordform as a sequence of formatives; for the oblique wordforms forms, these representations may be easily derived according to the rules of declension/conjugation.

4. A dictionary of all the OCS roots, with all their alloforms.

5. Complete inventories of all grammatical affixes and roots, with their morphophonological description.

6. A survey of the sources, with illustrations and commentary, as well as a chrestomathy containing a fairly long normalized text and a well-chosen selection of original texts from the sources discussed in the book.

The materials provided in this grammar were originally developed by the author for educational purposes and have been successfully used in the teaching of OCS, as demonstrated by the author's thirty years of teaching experience.

The auxiliary apparatus is also helpful: a subject index, an index of difficult forms, and a glossary of terms compiled by the translator (p. XI–XV). The already mentioned summary (Chap. 25) is also helpful in supporting practical exercises in paradigmatic synthesis.

Lastly, it is noteworthy that the volume is published in open access and can be freely downloaded, making it readily available to students and scholars alike.

Declarations

Competing interests The author declares no competing interests.

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