

Affix Order and the Structure of the Slavic Word

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1. Introduction

This article investigates the structural properties of the Slavic word in terms of affix ordering in three Slavic languages, the South Slavic Bulgarian, the East Slavic Russian, and the West Slavic Polish and thus covers all three subgroups of the Slavic family.¹ The discussion is with a focus on suffixation, in particular on suffixation in derivation.²

Recently much research has been carried out on affix ordering in lesser-studied languages; see the overviews in Manova and Aronoff (2010) and in Rice (2011). There has been much research on the ordering of the English derivational affixes as well, especially on the order of the suffixes, and a number of specific proposals have been formulated (in chronological order): level ordering or stratal approach (Siegel 1974; Allen 1978; Selkirk 1982; Kiparsky 1982, Mohanan 1986; Giegerich 1999); selectional restrictions (Fabb 1988; Plag 1996, 1999); the monosuffix constraint (Aronoff and Fuhrhop 2002), and the parsability hypothesis (Hay 2001, 2002, 2003) or complexity-based ordering (Plag 2002; Hay and Plag 2004; Plag and Baayen 2009). In this list of approaches, every following approach was formulated in response to its predecessor; that is, every following approach demonstrates that the predecessor

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²Abbreviations used in the text: ADJ–adjective, ASP–aspect, C–consonant, DEF–definite, DIM–diminutive, FEM–feminine, GEN–genitive, GEND–gender, MASC–masculine, N–noun, NEUT–neuter, NUM–number, PER–person, PL–plural, PREF–prefix, SG–singular, SUFF–suffix, TM–thematic marker, TNS–tense, V–verb.

approach makes incorrect predictions. Therefore in the present article we will pay attention only to the most recent proposal, that of complexity-based ordering. Despite the many recent studies on affix ordering in various languages, the ordering of the Slavic affixes, especially that of the derivational suffixes, has been neglected so far. The goal of the present paper is therefore to fill this gap. Unlike the derivational suffixes, the Slavic verbal prefixes have been subject of intensive research recently (Svenonius 2004; Tatevosov 2008, among others), which is maybe due to the following facts: prefixes are much less numerous than the suffixes; attach primarily to verbs to mark the perfective aspect, while the suffixes derive nouns, adjectives, and verbs; and prefixes are easier to identify in dictionaries and corpora because of their initial position in the word form, while the derivational suffixes are often followed by inflection. So far, the ordering of the Slavic prefixes has been explained as primarily due to syntactic and semantic factors (see section 6.4). Nevertheless, the most recent approach to affix ordering in English, the complexity-based ordering, has been tested against data from suffixation in Slavic. In a paper on the order of the Bulgarian derivational and inflectional suffixes Manova (2010) shows that the complexity-based ordering cannot account for the order of the Bulgarian derivational suffixes, and in Manova (2011b) she makes a novel proposal, the so-called cognitive approach. Manova's (2011b) approach to affix order differs from the other proposals in the literature as it is based on the following two assumptions: (1) affixes are not organized in the same way in the whole word, but the latter has different domains with respect to affixation; and (2) suffix order is best analyzed in terms of binary combinations of suffixes of the type SUFF1-SUFF2 where SUFF1 and SUFF2 are any two neighboring suffixes in a word (sub)domain. This article provides novel data, from Russian, in support of Manova's (2011b) proposal. The paper is with a focus on derivational suffixation and for the ordering of the nonevaluative derivational suffixes, following Manova (2011b) it is claimed that the lexical-category specification of the suffix (whether a noun (N), an adjective (ADJ), or a verb (V)), the suffix-particular semantics (whether the suffix derives persons, objects, etc.), and the notion of default are the factors responsible for suffix combinability. The lexical- and semantic-category specifications of a suffix are seen as being cognitive in nature. As the majority of the suffix combinations under scrutiny in this paper are either fixed or predictable, it is claimed that they are (most probably) rote learned and represent instances of entrenched morphological structure in the sense of cognitive grammar. To gain a typological perspective, the paper also compares the structure of the Slavic word with that of the English word.

The article is organized as follows. Section 2 introduces the basic theoretical assumptions of the analysis. Section 3 lists and explains the sources of data used. Section 4 discusses the structure of the Slavic word. Section 5 briefly presents the most recent approach to affix ordering in English, the complexity-based ordering, and shows with data from Bulgarian, Russian, and Polish why this approach fails to account for affix ordering in Slavic. Section 6 defines the affix-order domains in the structure of the Slavic word and illustrates them with numerous examples from the three Slavic languages under scrutiny. Section 7 accommodates the discussion, and in section 8 conclusions are drawn.

2. Theoretical Assumptions

The theoretical framework of this study mixes principles and assumptions from cognitive grammar (Langacker 1987, 1991; Taylor 2002; and Geeraerts 2006), including recent research in cognitive neuroscience (Mestres-Missé et al. 2010, and the references therein), and Natural morphology (Dressler et al. 1987; Dressler 2005).

With cognitive grammar, it is assumed that there are only three objects of study: language in its perceptible form, symbolized content, and symbolic associations between phonological and semantic structures. Thus grammar is an inventory of units (phonological, semantic, and symbolic structure) that has been established or entrenched in the speaker's mind through frequency of previous use (Taylor 2002). We speak of entrenchment if an affix combination does not need to be assembled (compositionally) from its parts on each occasion of its use. Following cognitive grammar, this study is also strictly usage-based; that is, bottom-up, and the analysis takes place from data to theory.

The lexical category specification of a suffix plays a pertinent role in the analysis, and we define the major lexical categories in the spirit of cognitive grammar; that is, with Langacker (1987) and Croft (2001). Langacker (1987), based on *relationality* (i.e., +/- relational) and *way of scanning* (whether summarily scanned, i.e., conceived statistically and holistically, or sequentially scanned, i.e., mentally scanned through time), recognizes *things* (N), *processes* (V), and *modifiers* (ADJ). Croft (2001) defines objects, properties, and actions in terms of four semantic properties: *relationality*, *stativity*, *transitoriness*, and *gradability*. Thus prototypically, nouns name things or objects, verbs denote processes or actions, and adjectives are modifiers and express properties.

Additionally, we see research in cognitive neuroscience showing that nouns and verbs have different representations in the brain (Mestres-Missé et al. 2010, among many others) as evidence for the correctness of an analysis that pays attention to the lexical category specification of an affix.

As for the cognitive nature of the semantic categories used in the analysis, following cognitive semantics (e.g., Fillmore's 1982 frame semantics) and conceptual semantics (Jackendoff 1990), we assume that there is no principle difference between meaning and conceptualization.

We also refer to Natural morphology, a semiotic and cognitively oriented theory of morphology compatible with cognitive grammar (Dressler 1990). According to the naturalness parameter of iconicity (constructional diagrammaticity), there are different types of affixation (see also Manova 2011a): affixation by addition in which addition of meaning is reflected by addition of form, and the less iconic affixation by substitution (truncation in Aronoff 1976). The English derivation *beauti-ful* → *beautiful-ness* and its Russian equivalent *kras-ivyj* → *krasiv-ost'* (-*ost'* is inflection) are examples of affixation by addition, while the derivation *Marx-ism* → *Marx-ist* is an instance of affixation by substitution. Although *beautifulness/krasivost'* and *Marxist* are analyzable as compositional units, only affixation by

addition involves affix ordering. Thus in this study we will always control how two suffixes interact, and make a clear distinction between addition and substitution (see Table 9.4 in 6.2).

3. Data

As already mentioned in the previous section, this study is usage-based and thus data are of particular importance for the analysis. The data cited herein were collected for the project *(De)composing the Slavic Word* (grant V64-Go3 from the Austrian Science Fund-FWF) and come from various sources such as dictionaries, corpora, and the Internet. The collected material was also checked by native speakers. The role of the native speakers was to ensure the usage-based character of the study; that is, to consider suffix combinations that are really in use. The Internet was particularly helpful for the verification of the existing combinations of the diminutive suffixes.

The following dictionaries and corpora are the major sources of data for this study. For Bulgarian: Stankov (2002), *New Spelling Dictionary of Modern Bulgarian*; Andrejčin (1975), *Reverse Dictionary of Modern Bulgarian*, and *the Bulgarian National Corpus*. For Russian: Kuznecova and Efremova (1986), *A Morpheme Dictionary of Russian*; electronic version of Zaliznjak (1977), *A Grammatical Dictionary of Russian*, the *Yandex Dictionaries*, as well as *The Russian National Corpus*. For Polish: Doroszewski (1997), electronic version of *Słownik Języka Polskiego* (SJP); Dubisz (2008), electronic version of *Uniwersalny Słownik Języka Polskiego* (USJP); Saloni (2007), electronic version of *Słownik Gramatyczny Języka Polskiego* (SGJP); Jadacka (2001), *Słownik gniazd słowotwórczych współczesnego języka polskiego* (SGSWJP); and *the Polish National Corpus*.

4. The Structure of the Slavic Word

According to the traditional morphological typology (Skalička 1979), the Slavic languages represent the inflecting-fusional type and make a clear distinction between derivational and inflectional suffix slots. This is best visible in the inflectional paradigms of derived words and is illustrated in Table 9.1 with the paradigm of the Russian noun *učitel'* 'teacher': the latter contains the derivational suffix *-tel'* written in bold italic. The suffixes that follow *-tel'* are inflectional.

Based on the principle of constructional iconicity (diagrammaticity) mentioned in section 2 and the notion of prototype;—that is, that the easiest way of accessing a phenomenon is via that manifestation of it that is most salient (cf. Langacker 1987)—I postulate the generalized form of the structure of the Slavic word in (1) (cf. Manova 2005, 2010):

TABLE 9.1

Declension of R. učitel' 'teacher'

NUMBER CASE	SG	PL
NOM	<i>učī-tel'</i>	<i>učī-tel-i</i>
ACC	<i>učī-tel-ja</i>	<i>učī-tel-ej</i>
GEN	<i>učī-tel-ja</i>	<i>učī-tel-ej</i>
DAT	<i>učī-tel-ju</i>	<i>učī-tel-jam</i>
INSTR	<i>učī-tel-em</i>	<i>učī-tel-jami</i>
LOC	<i>učī-tel-e</i>	<i>učī-tel-jax</i>

- (1) (PREFIX)-BASE-(DERIVATIONAL SUFF)-(THEMATIC MARKER)-
(INFLECTIONAL SUFF)

As indicated by the brackets, the slot BASE is always occupied (in Table 9.1, the base is *učī-*), whereas the other slots may be empty; for example, the prefix slot of the noun *učitel'* in Table 9.1 is empty. Additionally, the BASE can be a root, a stem, or a word: *učī-* in is a stem (consists of the root *uč-* and the suffix *-i-* that is a TM); see the explanations in Manova (2011a). Prototypically, derivation takes place in the derivational slot of the word, whereas inflection operates in the inflectional slot. Thematic markers are assumed only in verbal morphology, where they have inflectional status (cf. Manova 2005, 2011a). Crucially, the different word slots can be occupied by more than one affix. Table 9.2 lists the inflectional forms of the adjective *učī-tel'-sk-ij* that has two derivational suffixes, namely *-tel'-sk-*.

Since in Bulgarian, in contrast to Russian (and Polish), there is no category of case but definiteness is morphologically marked by suffixes, the definite form of the Bulgarian equivalent of the Russian *učī-tel'-sk-ij* in (2) contains not only more than one derivational suffix but also two inflectional suffixes:

- (2) Bg. *učitel'ski* 'teacher's'
 MASC SG *učī-tel-sk-i* (like in Russian, two derivational suffixes, *-tel* and *-sk-*)
 MASC SG DEF *učī-tel-sk-i-jat* (two inflectional suffixes)
 PL *učī-tel-sk-i* (is syncretic with the MASC SG, but there is no gender in the PL)
 PL DEF *učī-tel-sk-i-te* (two inflectional suffixes)

TABLE 9.2

Declension of R. učitel'skij 'teacher's' (Derivational Suffixes -tel' and -sk-)

GENNUM CASE	MASC SG	PL
NOM	<i>učī-tel'-sk-ij</i>	<i>učī-tel'-sk-ie</i>
ACC	<i>učī-tel'-sk-ij /-ogo</i>	<i>učī-tel'-sk-ie /-ix</i>
GEN	<i>učī-tel'-sk-ogo</i>	<i>učī-tel'-sk-ix</i>
DAT	<i>učī-tel'-sk-omu</i>	<i>učī-tel'-sk-im</i>
INSTR	<i>učī-tel'-sk-im</i>	<i>učī-tel'-sk-imi</i>
LOC	<i>učī-tel'-sk-om</i>	<i>učī-tel'-sk-ix</i>

The examples in (3) illustrate the use of more than one prefix:

- (3) Russian
- a. *pre-pod-nesti* ‘to present’ (from *nesti* ‘to carry’ → *pod-nesti* ‘to serve’)
 - b. *pere-pere-delat* ‘to remake again’ (from *delat* ‘to make’ → *pere-delat* ‘to remake’)
 - c. *pere-pere-delka* ‘sth that has been remade twice’

The noun *pereperedelka* in (3c) is derived from the verb *pereperedelat* in (3b) and was found in the Russian National Corpus and on the Internet.

With respect to multiple prefixation, Bulgarian and Polish behave like Russian, and therefore I do not give Bulgarian and Polish examples here.

5. Complexity-Based Ordering (CBO) and Why It Fails to Account for Slavic Data

In this section, I briefly review the most recent proposal in the literature on affix ordering, the so-called complexity-based ordering (CBO), and explain why it cannot account for the structure of the Slavic word.

CBO is based on the so-called parsability hypothesis (Hay 2001, 2002, 2003). According to Hay’s proposal, affixes order in such a way that more parsable affixes always follow less parsable ones in the word form because this order is easier to process. Parsability correlates with a number of factors such as productivity, semantic transparency, phonotactics across the morpheme boundary, and relative frequency. It occurs by gradations; parsability can be measured, and affixes can be ordered hierarchically according to their ability to parse. The parsability hypothesis assumes a double route access of morphologically complex words—that is, a derived word can be accessed either as a whole unit (whole-word route) or as a decomposable unit (decomposition route). Which route is preferred depends on relative frequency. If the derivative is more frequent than its base, the relative frequency is high and the whole-word route is more probable, as in *whiteness* versus *white*. If the base is more frequent than the derivative, the relative frequency is low and the decomposition route is more probable, as in *green* versus *greenness*. As parsable affixes add structure, affix ordering based on parsability has been termed complexity-based ordering (CBO). The label indicates that complexity increases from the innermost to the outermost affix. There has been much research on affix ordering in CBO: see Plag (2002), Hay and Plag (2004), Plag and Baayen (2009), and Zirkel (2010), to mention just a few articles. CBO also relies on a hierarchy, which can be illustrated with the following hypothetical example. If the suffixes A, B, C, D, and E form a hierarchy, they occur in a complex word in such a way that if we attach, let us say, C to a base, then we can attach only suffixes that follow C on the hierarchy; that is, the combination CDE is possible while the combination *CAD is not. This is how CBO predicts and restricts the order of the English suffixes.

Manova (2010) applies CBO to data from Bulgarian and shows that it cannot account for the order of the derivational suffixes in this language. In Manova's (2010) paper, the ordering of 12 out of the 22 derivative suffixes discussed is incompatible with CBO. The major problems for CBO pose permutations and repetitions of suffixes, as in (4) through (17) below.

(I) AB - BA order of affixes

Bulgarian

- (4) **-(l)iv & -ost**
 a. *mil-ost* 'mercy' → *mil-ost-iv* 'merciful'
 b. *săn-liv* 'sleepy' → *săn-liv-ost* 'sleepiness'
- (5) **-en & -ota**
 a. *măč-en* 'difficult' → *măč-n-ota* 'difficultness'
 b. *sam-ota* 'loneliness' → *sam-ot-en* 'lonely'

Russian

- (6) **-ost' & -(l)ivyj**
 a. *mil-ost'* 'mercy' → *mil-ost-ivyj* 'merciful'
 b. *son-livyj* 'sleepy' → *son-liv-ost'* 'sleepiness'
- (7) **-ota & -nyj**
 a. *dobr-ota* 'goodness' → *dobr-ot-nyj* 'good'
 b. *tem-n-y* 'dark' → *tem-n-ota* 'darkness'

Polish

- (8) **-ość & -iwy/-ywy**
 a. *lit-ość* 'mercy' → *lit-ość-iwy* 'merciful'
 b. *robacz-ywy* 'wormy' → *robacz-yw-ość* 'wormyness'
- (9) **-ny & -ota**
 a. *dusz-ny* 'stuffy' → *dusz-n-ota* 'stuffiness'
 b. *rob-ota* 'work' → *rob-ot-ny* 'hard-working'

(II) ABA order of affixes

- (10) Bulgarian
 a. *revn-iv* 'jealous' → *revn-ost'* 'jealousy' → *revn-ost-en* 'devoted' → *revn-ost-n-ost'* 'devotedness'
 b. *verojaten* 'probable' → *verojatn-ost* 'probability' → *verojatn-ost-en* 'related to probability' → *verojatn-ost-n-ost'* '(greater) probability'
- (11) Russian
 a. *revn-iv-yj* 'jealous' → *revn-ost'* 'jealousy' → *revn-ost-n-yj* 'devoted' → *revn-ost-n-ost'* 'devotedness'

- b. *verojatn-yj* ‘probable’ → *verojatn-ost* ‘probability’ → *verojatn-ost-n-yj* ‘related to probability’ → *verojatn-ost-n-ost* ‘(greater) probability’

(III) ABAB order of affixes

Bulgarian

- (12) *lice* ‘face’ → *lič-en* ‘personal’ → *lič-n-ost* ‘person, personality’ → *lič-n-ost-en* ‘related to personality’ → *lič-n-ost-n-ost* ‘(greater) personality’

Russian

- (13) *lico* ‘face’ → *lič-n-yj* ‘personal’ → *lič-n-ost* ‘person, personality’ → *lič-n-ost-n-yj* ‘related to personality’ → *lič-n-ost-n-ost* ‘(greater) personality’

Examples such as these in (II) and (III) are less typical of Polish.

(IV) AA order of affixes in double diminutives

Bulgarian

- (14) *kuče* ‘dog’ → DIM₁ *kuč-ence* → DIM₂ *kuč-enc-ence*

Russian

- (15) *kartina* ‘picture’ → DIM₁ *kartin-ka* ‘small picture’
→ DIM₂ *kartin-oč-ka* ‘very small picture’

Polish

- (16) *dom* ‘house’ → DIM₁ *dom-ek* ‘small house’
→ DIM₂ *dom-ecz-ek* ‘very small house’

(V) AAA order of affixes in triple diminutives

(17) Bulgarian

- dete* ‘child’ → DIM₁ *det-ence*
→ DIM₂ *det-enc-ence*
→ DIM₃ *det-enc-enc-ence*

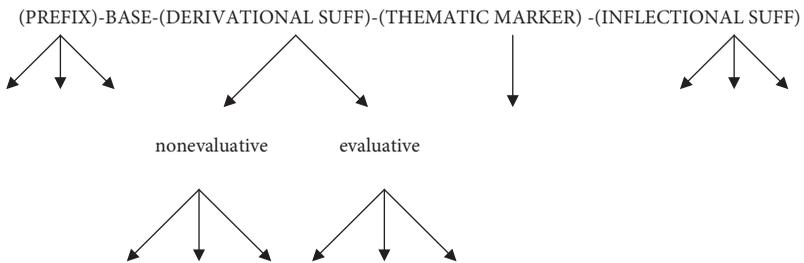
Triple diminutives are less typical of Russian and Polish.

As already mentioned, examples such as these in (4) through (17) pose a real challenge to CBO as the latter is a hierarchy-based theory; that is, in CBO a suffix is in a fixed relationship to all other suffixes in the CBO hierarchy and can either precede or follow another suffix, but not both. Additionally, CBO allows a suffix to be accessed only once in the derivation of a word i.e., a suffix cannot be repeated. Problems with CBO due to affix permutations have been reported for English prefixes (Zirkel 2010) and for Italian (Talamo, this volume) and German derivational suffixes (Zirkel-Hilkenbach 2011). Therefore, in this paper I do not follow CBO but Manova’s (2011b) cognitive approach.

6. Affix Order Domains in the Slavic Word

In section 4 we postulated a generalized form of the Slavic word (1) and illustrated that in Slavic the word can exhibit more than one derivational and more than one inflectional suffix. In (IV) and (V) in the previous section, we demonstrated that diminutive suffixes could be repeated. Thus, the schema in (18) below is a version of (1), and, through the separation of the derivational slot into a nonevaluative and evaluative subslots, it accommodates the fact that the Slavic word can have more than one diminutive suffix. In (18), every slot and subslot that can host more than one affix is associated with more than one arrow; that is, a single arrow means that within a word, only one single affix can occur in that slot; two arrows stand for two (types of) affixes; and three arrows mean that more than two affixes can co-occur in a particular slot. I refer to the slots that can host more than one suffix as word domains. I distinguish prefixational domain and suffixational domain, the latter with derivational and inflectional domains, and nonevaluative and evaluative subdomains within the derivational domain. In 6.1 through 6.3, I illustrate the order of the suffixes in the different domains, showing that (i) each domain has its own specific ordering, and (ii) fixed binary combinations of the type SIFF₁-SUFF₂, where SUFF₁ and SUFF₂ are any two neighboring suffixes in a domain, play an important role in affix ordering.

(18) Affix order domains in the Slavic word



6.1. INFLECTIONAL DOMAIN

In this subsection, the order of the inflectional suffixes is illustrated with data from Bulgarian, as the other two languages under scrutiny in this paper, Russian and Polish, use a single inflectional suffix in noun and adjective morphology.

As regards the ordering of the inflectional suffixes in Bulgarian nouns, adjectives, and verbs, Manova (2010) shows that it is governed by phonological factors and is consonant with the principle of relevance (Bybee 1985) that may be interpreted as being cognitive in nature; see Muysken (1986). However, for the present study, it is more important that the order of the suffixes is templatic and can be described in terms of fixed (i.e., entrenched) binary combinations.

Actually, Bulgarian nouns and adjectives cannot have more than two inflectional suffixes, as the templates of the noun (19) and adjective inflection (20) indicates:

Bulgarian noun inflection:

- (19) BASE-NUM-DEF
- a. *măž-∅* ‘man’
măž-∅-a (for objects) & *măž-∅-ăt* (for subjects and predicatives)
 ‘man-DEF’
măž-e-∅ ‘man-PL’
măž-e-te ‘man-PL-DEF’
 - b. *žen-a-∅* ‘woman-SG’
žen-a-ta ‘woman-SG-DEF’
žen-i-∅ ‘woman-PL’
žen-i-te ‘woman-PL-DEF’
 - c. *sel-o-∅* ‘village-SG’
sel-o-to ‘village-SG-DEF’
sel-a-∅ ‘village-PL’
sel-a-ta ‘village-PL-DEF’

As only one single combination exists, namely -NUM-DEF, it is a fixed combination; native speakers use it every time when they express -NUM-DEF, which implies that they should know it by heart and most probably access it as an inseparable whole. In other words, the fixed combination -NUM-DEF is an example of entrenched morphological structure.

In contrast to nouns, adjectives mark GEND and NUM cumulatively:
 Bulgarian adjective inflection:

- (20) BASE-GEND/NUM-DEF
- a. *mil-∅-∅* ‘dear’ (masculine)
*mil-∅-ijat*³ ‘dear-DEF’
 - b. *mil-a-∅* ‘dear-FEM/SG’
mil-a-ta ‘dear-FEM/SG-DEF’
 - c. *mil-o-∅* ‘dear-NEUT/SG’
mil-o-to ‘dear-NEUT/SG-DEF’
 - d. *mil-i-∅* ‘dear-PL’
mil-i-te ‘dear-PL-DEF’

³The suffix *-ijat* attaches as a single morpheme, and its initial *-i* is not the same as the *-i* that marks plural in (20d). The *-i* in *-ijat* is inherited from the long form of the Old Bulgarian adjectives. Modern Bulgarian does not distinguish between long and short adjectives, and although diachronically *-ijat* consist of two suffixes (*-i-* that made the adjective long, and *-jat* for definiteness), synchronically *-ijat* is a single suffix.

In adjective inflection, –GEND/NUM–DEF is a fixed (i.e., entrenched) combination that should be rote-learned by speakers.

In verb inflection, more than two suffixes are possible. The template for verbs is given in (21). Since Bulgarian verbs are seldom derived, the BASE coincides with the verb root by default. TNS/PER/NUM are cumulatively expressed by a single suffix.

(21) PREF–BASE–ASP–TM–TNS/PER/NUM

Crucially, the three suffixes that may follow the base participate in two fixed binary combinations: (i) aspectual suffixes, if present, are always followed by the thematic marker *-a-*; that is, the combination –ASP–TM– is always of the type –ASP-*a-*, as in *na-pis-v-a-m* ‘(I) write,’ and (ii) as it is typical of inflectional morphology, thematic markers (the suffixes in the TM slot) govern the selection of the TNS/PER/NUM suffixes. In other words, *-a-*, whether preceded by an ASP-suffix or not, is always followed by the same TNS/PER/NUM suffix in 1 SG PRES; that is, by *-m*, as in *na-pis-v-a-m* and *slag-a-m* ‘to put.’ Such verbs are even called *am*-verbs in some descriptions of Bulgarian, as all verbs terminating in *-am* in 1 SG PRES have a conjugation pattern of their own. As the Bulgarian verb inflection is the most complex among Slavic and for the purposes of this study it is not necessary to give the full inflectional paradigm, for additional examples that illustrate the template in (21) I refer the curious reader to Manova (2008, 2010, 2011a), where the paradigm of the Bulgarian verbs is explained from different perspectives. Thus in verbal morphology we have two fixed combinations, –ASP-TM- and –TM-TNS/PER/NUM that should be learned by heart; that is, they are instances of entrenched morphological structure.

In sum, the order of the inflectional suffixes is fixed and can be described in terms of fixed binary combinations of suffixes that appear to be instances of entrenched morphological structure. As can be seen from the templates in (19) through (21), inflectional suffixes cannot be repeated. Thus, (i) templatic order in terms of entrenched binary combinations of suffixes and (ii) no repetition of suffixes define the inflectional domain. As we will see in the next subsection, the affixes in the evaluative domain are characterized by other properties.

6.2. EVALUATIVE DOMAIN

This subsection discusses the order of the diminutive suffixes in Bulgarian, Russian, and Polish double diminutives, as well as in triple diminutives in Bulgarian. Triple diminutives are less typical of Russian and Polish. Augmentative suffixes that are also evaluative suffixes are not considered, as they do not combine with each other.⁴ Intriguingly, although all diminutive suffixes have the same semantics,

⁴A combination of an augmentative and a diminutive suffix is possible but extremely rare, and not all augmentative suffixes can be followed by a diminutive suffix. I therefore see nouns that exhibit a combination of an augmentative and a diminutive suffix as rote-learned, and do not discuss them herein.

TABLE 9.3

Combinability of the DIM Suffixes in Bulgarian (cf. Manova and Winternitz 2011; Manova, in press)

Nouns in	DIM1 suffixes	DIM2 suffixes	DIM3 suffixes
in -C	-ec (unproductive)		
	-le (unproductive) -če	-ence	-ence
	-ičica (unproductive)		
in -a	-ica	-ka	
	-ka	-ica	-ica
	-ička (unproductive)		
in -o	-ce	-ence	-ence
in -e	-ence		
	-ice (unproductive)		

they do not combine freely, but only particular fixed combinations are allowed and those combinations often involve repetition of the same suffix form, although it would have been possible to combine the suffixes so that no repetition of form occurs. In Bulgarian, the suffixes *-ica* and *-ence* can be repeated (Table 9.3). In Russian ((22) through (24)) and Polish (Table 9.4), the repetitions are of the type *-ek+ -ek*, *-ka+ -ka*, and *-ko+ -ko*. Moreover, the combinations of diminutive suffixes either involve only two suffixes (the case of Bulgarian, Russian, and Polish double diminutives) or can be modeled in terms of two-suffix pairings (the case of Bulgarian triple diminutives).

With respect to the combinability of the diminutive suffixes, Russian resembles Polish (Table 9.4) to some extent. Examples (22) through (24) illustrate the combinations of diminutivizers found in Russian double diminutives (repeated suffixes are in bold italic):

- (22) basic nouns in -C / C' → DIM₁ → DIM₂
- ok + -ek*: *golos* 'voice' → *golos-ok* → *golos-oč-ek*
 - ek + -ek***: *den* 'day' → *den-ek* → *den-eč-ek*
 - ik + -ek*: *nož* 'knife' → *nož-ik* → *nož-ič-ek*
 - ica + -ka* (feminine basic nouns, unproductive): *čast* 'part' → *čast-ica* → *čast-ič-ka*
- (23) basic nouns in -a → DIM₁ → DIM₂
- ka + -ka***: *igla* 'needle' → *igol-ka* → *igol-oč-ka*
 - ica + -ka*: *voda* 'water' → *vod-ica* → *vod-ič-ka*;
 - eška + -ka*: *ryba* 'fish' → *ryb-eška* → *ryb-ešeč-ka*
- (24) basic nouns in -o and -e → DIM₁ → DIM₂
- ko + -ko***: *sito*, sieve' → DIM₁ *sit-ko* → DIM₂ *sit-eč-ko*
 - yško + -ko*: *sol'nce* 'sun' → DIM₁ *soln-yško* → DIM₂ *soln-yšeč-ko* (found on the Internet)

TABLE 9.4

Combinability of DIM Suffixes in Polish (cf. Szymanek and Derkach 2005; Manova and Winternitz 2011)

Nouns in	DIM1 suffixes	DIM2 suffixes	
		Productive (attach by addition)	Unproductive (attach by substitution of a DIM1 suffix, i.e., do not combine with DIM1 suffixes)
-C	-ek -ik / -yk -uszek (unproductive)	-ek	-uszek, -aszek
	-iszek / -yszek (unproductive) -aszek (unproductive) -ulek (unproductive) -ka (unproductive, selects feminine nouns)		
-a	-ka	-ka	
	-uszka (unproductive) -iczka / -yczka (unproductive)		
-o / -e	-ko	-ko	
	-uszko (unproductive)		

In sum, the suffixes in the evaluative domain, like the inflectional suffixes, appear in a fixed order, but in contrast to the inflectional suffixes, evaluative suffixes can apply recursively and even repetition of the same suffix (phonological form) is possible.

6.3 NONEVALUATIVE DERIVATIONAL DOMAIN

Due to the fairly limited number of the inflectional and diminutive suffixes it is easy to list all their combinations, which is what we actually did in the two subsections above. However, listing all combinations of all nonevaluative derivational suffixes is virtually impossible. Therefore, in the literature the order of the derivational suffixes (in any language) is discussed with the help of a set of suffixes. This strategy is also employed in the present paper. We will analyze the combinations of 20 Russian derivational suffixes with all other suffixes in Russian. The analysis considers data from Russian that have not been examined as evidence for affix ordering in the literature so far, and follows Manova's (2011b) cognitive approach:

First, (i) as it is hard to formulate a single rule that accounts for all SUFF2 suffixes that may follow a particular SUFF1 (Table 9.5), the SUFF2 suffixes are distributed into three groups according to their lexical-category specifications; that is, into SUFF2_N, SUFF2_V, and SUFF2_{ADJ}, as illustrated in (25) and exemplified in Table 9.6, which is a version of Table 9.5.

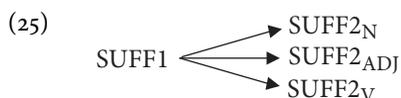


TABLE 9.5

Combinability of the Russian Suffix *-tel'* Deriving Persons

No	SUFF1	SUFF1 lexical category & semantics	SUFF2	Examples
1.	<i>-tel'</i>	N person	<i>-stvo</i> , <i>-ščina</i> , <i>-skij</i>	<i>učitel'stvo</i> 'being a teacher; teachers (coll.)', <i>ljubitel'sščina</i> 'dilettantism', <i>učitel'skij</i> 'teacher's'

TABLE 9.6

Combinability of the Russian Suffix *-tel'* Deriving Persons, SUFF2 Suffixes Distributed According to Their Lexical Category

No	SUFF1	SUFF1 lexical category & semantics	SUFF2	Examples
1.	<i>-tel'</i>	N person	N: <i>-stvo</i> , <i>-ščina</i> (2) ADJ: <i>-skij</i>	<i>učitel'stvo</i> 'being a teacher; teachers (coll.)', <i>ljubitel'sščina</i> 'dilettantism' <i>učitel'skij</i> 'teacher's'

As illustrated in (25), in Table 9.6 all SUFF2 suffixes in Russian that follow the SUFF1 *-tel'* for nouns denoting persons are distributed into two groups according to their lexical category specifications. Crucially, there is now one single SUFF2 that derives adjectives; that is, the combination *-tel'-skij* is **fixed**; and there are two SUFF2 suffixes, *-stvo* and *-ščina*, that both derive abstract nouns. However, the suffix *-ščina* forms only two types, which is indicated by the number in brackets after the suffix—that is, by (2). The information about the types formed by the suffix *-ščina* is based on counting of derivatives in the Morpheme dictionary of Russian (Kuznecova and Efremova 1986) that contains 52,000 words and the Russian National Corpus that has over 500 million tokens. (Intriguingly, the numbers of types derived by a particular SUFF1-SUFF2 combination do not differ significantly in both sources; see also the discussion in Manova and Talamo, accepted). There is no number after the suffix *-stvo*, since this suffix derives a great number of types. Actually, for all suffixes that derive more than 10 types no information about the derived number of types is provided. However, it is important for the analysis that of the combinations *-tel'-stvo* and *-tel'-ščina*, *-tel'-stvo* is the default option. Manova (2011b) refers to such defaults as **predictable** combinations.

Manova (2011b) assumes that in cases of suffixation by default, the exceptions (i.e., the competing suffixes) should derive up to five types, which are rote-learned and should be listed (i.e., ignored in the analysis), since if a particular suffix combination occurs only in five words, the speaker should know those words by heart irrespective of whether there is a rule that accounts for the derivation of those five words. The five types in Manova (2011b) were assumed based on the data analyzed and in order to have a threshold that is not very high and maximally challenges the theoretical framework. Recent research on suffixation in Italian (Manova and Talamo, accepted) provides evidence that the precise number of exceptions in cases of suffixation by default seems to be 10. Manova and Talamo count the exceptions to default suffixation patterns in Italian in two sources: the *derIvaTario*

that is based on the 4 Mio CoLFIS corpus (Bertinetto et al. 2005) and annotated for research on derivational morphology, and the 380 Mio La Repubblica corpus. Crucially, the number of exceptions does not depend on the corpus size, and in both corpora SUFF2 suffixes that derive up to ten types (exceptions) accompany a default suffixation pattern. Therefore, in Table 9.8 no numbers of types are given for suffixes that derive more than 10 types. Nevertheless, as can be seen from Table 9.8, the combinations of the 20 Russian derivational suffixes under scrutiny in this article can be described with an even lower threshold.

Next, (ii) in cases where more than one SUFF2 of a particular lexical category is available, suffix-particular semantics differentiates among the suffixes. To illustrate, in Table 9.7 two nominalizing suffixes, *-ec* and *-ost'* follow the adjectivizer *-livyj*, but while *-ec* derives persons, the attachment of *-ost'* results in an abstract noun. Thus, both suffixes *-ec* and *-ost'* are clearly differentiable in terms of intentional semantics (or conceptualization); that is, in terms of what the speaker wants to say. In such instances, we also speak of **predictable** combinations.

In Table 9.8, the methodology introduced in (i) and (ii) above is applied to the description of the combinations of 20 derivational suffixes in Russian. Fixed combinations are marked by '1' in the last column of Table 9.8, whereas a **bold italic number** in the same column indicates a predictable combination. Thus, as can be seen from the last column in Table 9.8, all combinations of the 20 Russian derivational suffixes under scrutiny in this paper with all other suffixes in Russian are either fixed or predictable. Nevertheless, there are a few peculiar cases: see, for example, the suffix *-ar'* (no. 2 in Table 9.8) which combines with three nominalizing suffixes, *-stvo*, *-nik*, and *-nja*. In the last column of Table 9.8 it is written 'N: (3) 2'. This means that two of the three suffixes, namely *-nik* and *-nja*, derive the same semantics, which is then illustrated with *svin-ar-nik* and *svin-ar-nja*, both meaning 'piggery.' Similar to the suffix *-ar'* to which two suffixes, *-nik* and *-nja*, with exactly the same semantics attach, is the suffix *-ost'* (see Table 9.9). Note, however, the number of types that *-ar-nik* (1) and *-ost-(l)ivyj* (4) derive, a single type and 4 types respectively (Table 9.9). Thus, of the combinations *-ar-nik* and *-ar-nja*, *-ar-nja* is the default; and then of *-ar-stvo* and *-ar-nja*, *-ar-stvo* derives abstract nouns, while *-ar-nja* forms nouns for places; that is, *-ar-stvo* and *-ar-nja* differ in terms of intentional semantics. Therefore, all combinations of *-ar'* with SUFF_{2N} suffixes are classified as predictable. As for *-ost-nyj*, *-ost-noj*, and *ost-livyj* (Table 9.9), the first two derive the majority of types, *-ost-nyj* being the more usual combination, but there are still many adjectives with *-noj*, and one finds a number of doublets on the Internet—such as *skorostnoj poezd* and *skorostnyj poezd*, both

TABLE 9.7

The Role of the SUFF2 Particular Semantics

SUFF1	SUFF1 lexical category & semantics	SUFF2	Examples
<i>-livyj</i>	ADJ qualitative	N: <i>-ec</i> , <i>-ost'</i>	<i>son-liv-ec</i> 'sleepy person' <i>molča-liv-ost'</i> 'taciturnity'

TABLE 9.8

Combinability of 20 Russian Derivational Suffixes with All Other Suffixes in Russian

No	SUFF1	Lexical & semantic category	SUFF2 suffixes according to their lexical category	Examples	Translations	SUFF2 types in numbers
1.	-tel'	N person	N: -stvo, -ščina (2) ADJ: -skij	<i>pisa-tel'-stvo</i> <i>ljubi-tel'-ščina</i> <i>pisa-tel'-skij</i>	being a writer, writers (collect.) dilettantism writer's	N: 2 ADJ:1
2.	-ar'	N person	N: -stvo, -nik (1) / -nja ADJ: -skij	<i>aptek-ar-stvo</i> <i>svin-ar-nik</i> / <i>svin-ar-nja</i> <i>aptek-ar-skij</i>	being a chemist, chemists (collect.) piggery / piggery chemist's	N: (3) 2 ADJ: 1
3.	-(j)ak	N person	N: -estvo ADJ: -eskij	<i>zeml-jač-estvo</i> <i>zeml-jač-eskij</i>	countrymen (collect.) countryman's	N: 1 ADJ: 1
4.	-ač	N person	N: -estvo ADJ: -eskij	<i>cirk-ač-estvo</i> <i>cirk-ač-eskij</i>	being a circus actor, circus actors (collect.) circus actor's	N: 1 ADJ: 1
5.	-un	N person	N: -stvo ADJ: -skij	<i>opek-un-stvo</i> <i>opek-un-skij</i>	guardianship guardian's	N: 1 ADJ: 1
6.	-(e)stvo	N abstract	ADJ: -ennyj	<i>rod-stv-enn-yj</i>	kindred	ADJ: 1
7.	-(iz)acija	N abstract	ADJ: -onnyj	<i>inform-aci- onn-yj</i>	informational	ADJ: 1
8.	-ost'	N abstract	N: -nik ADJ: -nyj /-noj, -(l)ivyj (4)	<i>skor-ost-nik</i> <i>slad-ost-nyj</i> <i>skor-ost-noj</i> <i>mil-ost-ivyj</i>	fast worker delightful high-speed merciful	N: 1 ADJ: (3) 2
9.	-izm	N abstract				
10.	-tel'	N object	ADJ: -nyj	<i>ukaza-tel'-nyj</i>	indicatory	ADJ: 1
11.	-ar'	N object	N: -nik ADJ: -nyj	<i>slov-ar-nik</i> <i>slov-ar-nyj</i>	lexicographer dictionary-	N: 1 ADJ: 1
12.	-nik	N place	ADJ: -nyj /-ovyj	<i>tajn-ič-nyj</i> = = <i>tajn-ik-ovyj</i>	secret	ADJ: (2) 1
13.	-livyj	ADJ qualitative	N: -ec, -ost'	<i>son-liv-ec</i> <i>molča-liv-ost'</i>	sleepy person taciturnity	N: 2
14.	-istyj	ADJ qualitative	N: -ost'	<i>gor-ist-ost'</i>	mountainousness	N: 1
15.	-skij	ADJ possessive/ relational	N: -ost'	<i>det-sk-ost'</i>	childishness	N: 1
16.	-abel'nyj	ADJ qualitative	N: -ost'	<i>comfort- abel'n-ost'</i>	amenities	N: 1
17.	-atel'nyj	ADJ relational	N: -ost'	<i>dyh-atel'n-ost'</i>	respiration	N: 1
18.	-astyj	ADJ qualitative	N: -ost'	<i>zubast-ost'</i>	with sharp teeth	N: 1
19.	-(n)ičat'	V impf. inchoative	N: -nie / -n'e	<i>obezjann- iča-nie</i> = <i>obezjann- iča-n'e</i>	apery	N: (2) 1
20.	-nut'	V impf. inchoative	N: -nie	<i>sox-ne-nie</i>	drying	N: 1

TABLE 9.9

More Than One SUFF2 Deriving the Same Semantics (1)

No in table 9.8	SUFF1	Lexical & semantic category	SUFF2 suffixes according to their lexical category	Examples	Translations	SUFF2 types in numbers
2.	-ar'	N person	N: -stvo, -nik (1) / -nja ADJ: -skij	aptek-ar-stvo svin-ar-nik = svin-ar-nja aptek-ar-skij	being a chemist, chemists (collect.) piggery / piggery chemist's	N: (3) 2 ADJ: 1
8.	-ost'	N abstract	N: -nik ADJ: -nyj /-noj, -(l)ivyj (4)	skor-ost-nik slad-ost-nyj skor-ost-noj mil-ost-ivyj	fast worker delightful high-speed merciful	N: 1 ADJ: (3) 2

meaning 'high-speed train.' *Skorostnyj* is registered only once in the Russian National Corpus, but used many times on the Internet.

The examples in Table 9.10 are to some extent similar to the *-nyj/-noj* case in Table 9.9.

The Russian examples in Table 9.9 and Table 9.10 present a real challenge to morphological theory, as the latter postulates blocking in derivation claiming that two derivatives never have exactly the same semantics (Aronoff 1976; Rainer 1988, and many others). Note that Manova (2011b) did not find such examples in English and Bulgarian, and, actually, used the principle of blocking to differentiate between two or more SUFF2 suffixes with the same lexical-category specification. We see this peculiarity of the Russian derivational morphology as evidence for semantically governed combinations of suffixes; that is, both SUFF2 suffixes with the same semantics in Russian are the same suffix at a semantic level, and therefore they do not violate Manova's (2011b) cognitive ordering. I will return to this issue in the discussion in section 7. All fixed and predictable suffix combinations are actually instances of entrenched morphological structure.

6.4. A NOTE ON PREFIXATION

The present article is focused on suffixation, but as I claim for the existence of word domains with respect to affix ordering, the goal of this note is to provide evidence for the existence of a prefixational domain.

TABLE 9.10

More Than One SUFF2 Deriving the Same Semantics (2)

No in table 9.8	SUFF1	Lexical & semantic category	SUFF2 suffixes according to their lexical category	Examples	Translations	SUFF2 types in numbers
12.	-nik	N place	ADJ: -nyj /-ovyj	tajn-ič-nyj = = tajn-ik-ovyj	secret	ADJ: (2) 1
19.	-(n)ičat'	V impf. inchoative	N: -nie / -n'e	obezjann-iča-nie = obezjann-iča-n'e	apery	N: (2) 1

If one looks at the studies on prefixation in the literature, it appears that cross-linguistically, the ordering of prefixes is much less restricted than that of suffixes. Thus in the literature on affix ordering so far, Chintang (Sino-Tibetan, Nepal) prefixes (Bickel et al. 2007) have been cited as a clear instance of ‘free’ affix order. Note, however, that Bickel’s et al. (2007) use of ‘free’ is misleading, since the authors show that the order of the prefixes is governed by a phonological factor—prosodic subcategorization; that is, “prefixes occur in variable orders because each prefix and each stem element project a phonological word of their own, and each such word can host a prefix, at any position” (p. 43). Thus, ‘free’ only means that semantic or morphosyntactic factors cannot explain the ordering of the prefixes in Chintang.

Zirkel (2010), in a discussion of the CBO hierarchy of the English prefixes, comes to the conclusion that the ordering of the English prefixes is less restricted in comparison to that of the English suffixes, as more prefixes than suffixes participate in AB-BA mirror-image combinations and thus violate CBO.

Recently, much research has been carried out on the ordering of the Slavic verbal prefixes. The analyses are usually based on syntactic and semantic factors. Babko-Malaya (1999) and Svenonius (2004) explain the position of a prefix in the verb form with semantic compositionality: superlexical prefixes have fixed meaning and their attachment means semantic compositionality, lexical prefixes are highly idiosyncratic in meaning, and there are also purely perfectivizing prefixes (idiosyncratic prefixes are the closest to the root). Tatevosov (2008) adds to this classification a class of intermediate prefixes; that is, prefixes that are neither lexical nor superlexical. Markova (2011) proposes the following types of prefixes: lexical prefixes with a syntactic position below VP, inner prefixes that are above VP and below vP, and outer prefixes that are above vP. However, one and the same (phonological form of a) prefix often belongs to more than one group of prefixes; that is, in a sequence of prefixes, the same prefix can occupy different positions with respect to the root, which means permutation and repetition of prefixes. For examples of prefix combinations from Slavic, I refer the reader to the studies mentioned in this paragraph; recall also (3) above.

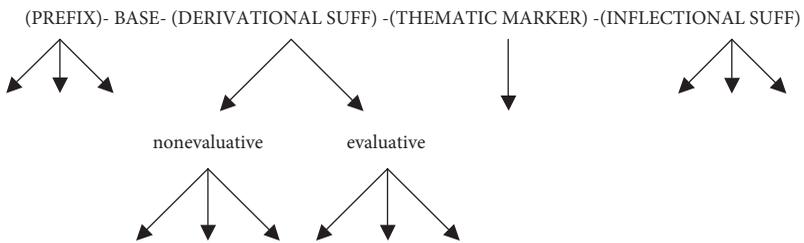
In sum, there is evidence in the literature on affix order that the ordering of the affixes in the prefixational word domain is less restricted than that of the affixes in the suffixational word domain. This fact is seen as supportive for the domain-specific analysis promoted in the present article.

7. Discussion

We started the description of the ordering of the suffixes in the Slavic word with the assumption of domains that accommodate more than one affix of the same type. We also demonstrated that the affixes in each domain order differently, in the sense that they exhibit different affix order peculiarities: (i) inflectional suffixes

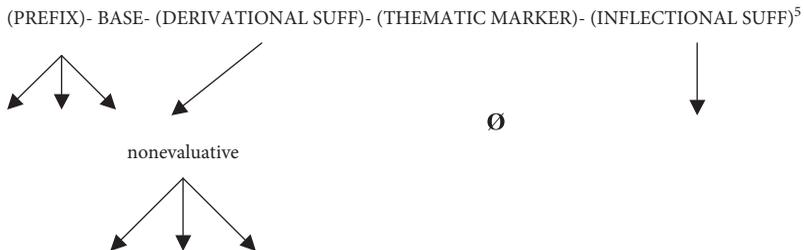
have a fixed order and cannot be repeated; (ii) evaluative suffixes also form fixed combinations but can be repeated; and (iii) the ordering of the nonevaluative derivational suffixes depends on the lexical-category specification of a suffix, the suffix-particular semantics, and the notion of default, but the 20 nonevaluative derivational suffixes from Russian under scrutiny in this paper form only fixed and predictable combinations—that is, in all free domains entrenchment of morphological structure (cf. on cognitive grammar in section 2) in terms of fixed (and predictable) suffix combinations seems to play an important role. We also discussed that the ordering of the prefixes is less restricted than that of the suffixes. Thus we are ready now to compare the structure of the Slavic word with that of the English word, and provide some additional explanation of why theories that are formulated to account for the ordering of the English derivational suffixes fail to account for the ordering of the Slavic suffixes. The structure of the Slavic word in terms of word domains, (18) above, is repeated in (26) for convenience.

(26) Affix order domains in the structure of the Slavic word



The schema in (27) gives the domains found in the structure of the English word.

(27) Affix order domains in the structure of the English word



⁵Forms such as *children's*, with two inflectional suffixes, are rather exceptional and not considered here. Note that the second suffix does not attach in the way the other inflectional suffixes do but requires a special marking (').

Ø means that there are no thematic markers in English, or at least English does not possess affixes that could be seen as parallel to the thematic markers in Slavic languages. Of course, English also has evaluative suffixes; that is, suffixes that derive the meaning ‘small X,’ for example the suffix *-ette*, as in *cigar* → *cigar-ette*, *opera* → *operette*. However, it does not make sense to put *-ette* in a different suffix slot. There is nothing related to affix order that would motivate such a decision for English.

A comparison between (26) and (27) shows that the Slavic word has a greater number of suffix slots and domains than the English word. These facts thus explain why affix order approaches (CBO and others) designed to account for the ordering of the English suffixes has difficulty in accounting for the order of the Slavic suffixes. Manova’s (2011b) approach assumes the existence of domains in suffixation, which thus makes it more flexible and suitable to explain the affix ordering in the Slavic word. Moreover, Manova’s approach allows for typological comparisons. Thus, Manova (2011b) demonstrates that the type of suffix ordering we illustrated with the combinations of the 20 nonevaluative derivational suffixes in Russian is also operative in English and Bulgarian—the only difference being that in English and Bulgarian the principle of morphological blocking holds (better), whereas in Russian it is often the case that two nonevaluative derivational suffixes derive the same semantics (recall the examples in Table 9.9 and Table 9.10).

Suffix-particular semantics plays an important role in this study, and it was claimed that in cases in which there is more than one SUFF2 that derives the same lexical category, the available SUFF2 suffixes are expected to derive different meanings (or exactly the same meaning in Russian). The importance of suffix-particular semantics can be further illustrated with the behavior of homophonous (Table 9.11) and synonymous (Table 9.12) SUFF1 suffixes. Homophonous suffixes, such as the suffix *-tel’* that derives concepts such as persons and objects (examples in Table 9.11), have the same form but different semantics, and are therefore followed by different SUFF2 suffixes while synonymous SUFF1 suffixes have different form but the same semantics (all suffixes in Table 9.12 derive nouns denoting persons), and are therefore followed by the same SUFF2 suffixes.

Examples such as these in Table 9.11 (of homophonous suffixes) and Table 9.12 (of synonymous suffixes), together with the examples in Table 9.9 and Table 9.10 in

TABLE 9.11

Combinability of Homophonous Suffixes in Russian, Based on Table 9.8

No in table 9.8	SUFF1	Lexical & semantic category	SUFF2 suffixes according to their lexical category	Examples	Translations	SUFF2 types in numbers
1.	<i>-tel’</i>	N person	N: <i>-stvo, -ščina</i> (2) ADJ: <i>-skij</i>	<i>pisa-tel’-stvo</i> <i>ljubi-tel’-ščina</i> <i>pisa-tel’-skij</i>	being a writer, writers (collect.) dilettantism writer’s	N: 2 ADJ: 1
10.	<i>-tel’</i>	N object	ADJ: <i>-nyj</i>	<i>ukaza-tel’-nyj</i>	indicatory	ADJ: 1

TABLE 9.12

Combinability of Synonymous Suffixes in Russian, Based on Table 9.8

No in table 9.8	SUFF1	Lexical & semantic category	SUFF2 suffixes according to their lexical category	Examples	Translations	SUFF2 types in numbers
1.	-tel'	N person	N: <i>-stvo</i> , <i>-ščina</i> (2) ADJ: <i>-skij</i>	<i>pisa-tel'-stvo</i> <i>ljubi-tel'-ščina</i> <i>pisa-tel'-skij</i>	being a writer, writers (collect.) dilettantism writer's	N: 2 ADJ: 1
2.	-ar'	N person	N: <i>-stvo</i> , <i>-nik</i> (1) / <i>-nja</i> ADJ: <i>-skij</i>	<i>aptek-ar-stvo</i> <i>svin-ar-nik</i> / <i>svin-ar-nja</i> <i>aptek-ar-skij</i>	being a chemist, chemists (collect.) piggery / piggery chemist's	N: (3) 2 ADJ: 1
3.	-(j)ak	N person	N: <i>-estvo</i> ADJ: <i>-eskij</i>	<i>zeml-jač-estvo</i> <i>zeml-jač-eskij</i>	countrymen (collect.) countryman's	N: 1 ADJ: 1
4.	-ač	N person	N: <i>-estvo</i> ADJ: <i>-eskij</i>	<i>cirk-ač-estvo</i> <i>cirk-ač-eskij</i>	being a circus actor, circus actors (collect.) circus actor's	N: 1 ADJ: 1
5.	-un	N person	N: <i>-stvo</i> ADJ: <i>-skij</i>	<i>opek-un-stvo</i> <i>opek-un-skij</i>	guardianship guardian's	N: 1 ADJ: 1

which two derivational suffixes derive exactly the same semantics, seem to speak for a model of grammar in which (1) suffixes have semantics; that is, are word-like, and (2) that suffixes that express the same semantics should be treated as the same suffix, which is consonant with Distributed morphology (DM) (Halle and Marantz 1993). However, as the fixed and predictable suffix combinations we define do not depend on lexical bases (roots in DM), DM would not be able to derive them, as derivation in DM takes place step by step, starting from the root. Moreover, fixed and predictable combinations, since entrenched pieces of morphological structure are most probably not always attached as derived structure but as semantic wholes where SUFF2 gives the final semantic meaning of the unit, a fixed combination such as *-ar-stvo* that means 'person-abstract/collective' is accessed through the semantics of the SUFF2. Therefore, we maintain that the Slavic fixed and predictable suffix combinations are instances of semantically compositional morphological structure that is derived in terms of fixed combinations of cognitive concepts: lexical (such as nouns, adjectives, and verbs) and semantic (such as person, object, etc.), and does not have anything to do with syntax. Thus, we see such combinations as evidence for independency of morphology from syntax; that is, not for distributed but for autonomous morphology.

8. Conclusions

In this paper, the structure of the Slavic word was discussed in terms of affix ordering. The Slavic word was divided into domains, each domain with affix-order

peculiarities of its own. The order of the Slavic suffixes was described with the help of binary combinations of suffixes of the type SUFF₁-SUFF₂, where SUFF₁ and SUFF₂ are any two neighboring suffixes in a domain. In most instances the SUFF₁-SUFF₂ combinations are fixed; that is, a SUFF₁ selects only one particular SUFF₂, this is especially true of the suffixes in the inflectional and evaluative word domains. In the nonevaluative derivational domain, SUFF₁-SUFF₂ combinations depend on the lexical- and semantic-category specification of a suffix in the sense that SUFF₁ either combines with a single suffix of a major lexical category (N, ADJ, V) or in cases in which more than one SUFF₂ of the same lexical category attaches to a SUFF₁, (i) one of the SUFF₂ suffixes applies by default (i.e., the majority of types are derived by that SUFF₂); (ii) the available SUFF₂ suffixes derive completely different meanings (concepts), e.g., an abstract noun and a place noun; or (iii) exactly the same semantics. Type (iii) appears to be a typical feature of the Russian derivational suffixes. Lexical and semantic categories are seen as cognitive by nature. Moreover, the cognitive grammar principle of entrenchment seems to play an important role in affix ordering in Slavic and the fixed and predictable suffix combinations are most probably rote-learned and accessed as wholes. Thus, this study speaks for the existence of word-like affixes and of affix combinations with a status of their own; that is, affix combinations that may be produced without reference to lexical bases, and that are pieces of semantically compositional but purely morphological structure.

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