Glossos Issue 6, Fall 2005 http://seelrc.org/glossos/ glossos@seelrc.org

*Stela Manova*[1]
*University of Vienna*

# Towards a Theory of Conversion in Slavic: Evidence from Bulgarian, Russian and Serbo-Croatian

## 1. Introduction

Conversion is morphosemantic change without morphotactic change, e.g. *a telephone* → *to telephone*. In morphological theory, the term conversion (zero-derivation in some frameworks) is usually mentioned in connection to Modern English word-formation where the decay of the Old English inflectional system, due to the turn from root-based and stem-based morphology to word-based morphology and regularization of root alternations such as ablaut (Kastovsky 1989), has led to homophony of forms belonging to different word classes. Slavic languages are, however, characterized by rich inflection and their morphology is nearer to Old English than to Modern English. Thus, at first glance, the Slavic family seems to be incompatible with the notion of conversion.

Taking into consideration the inflecting-fusional character of the Slavic languages, the present paper aims to suggest a theory of conversion relevant to Slavic-type morphology. The analysis is situated within the theoretical framework of Natural Morphology (NM) supplemented with Prototype theory (section 2), in order to demonstrate that morphological changes concerning conversion are gradual. After a brief discussion of terminological matters (section 3), a precise definition of conversion is given (section 4), with the help of which a classification of conversion in Slavic (with data from Bulgarian (Bg.), Russian (R.) and Serbo-Croatian (SC.)) is made (section 5). The last section (6) summarizes the analysis and draws conclusions.

[1] The author was financially supported by the Austrian National Bank (Jubiläumsfonds), grant P-10366. The support is gratefully acknowledged.

## 2. Theoretical framework

NM (Dressler et al. 1987; Dressler 1990 & 2000) is a cognitively-oriented theory of morphological organization looking for internal (purely morphological) and external (grammatical evidence outside the morphological level, e.g. from phonology and syntax; functional analysis; evidence from language acquisition, language impairments, language change and language death) motivation of morphological changes. Thus, 'natural' is to be understood as synonymous to cognitively simple, less marked, easily accessible, and universally preferred. The theory consists of the three subtheories of universal naturalness, typological naturalness, and language-specific naturalness. These subtheories interact in a hierarchical fashion in the sense that typological naturalness is a filter of universal naturalness and language-specific naturalness is a filter of typological naturalness, i.e. in case of naturalness conflicts language-specific preferences have precedence. If language-specific parameters are intact, the typological adequacy has precedence over universal naturalness.

The subtheory of universal naturalness (Mayerthaler 1987; Dressler 2000) operates with a set of preference parameters, the most important of which is that of iconicity, also called constructional diagrammaticity. Here diagrams are meant as subtypes of icons in the sense of Pierce (1965)[2].

According to the parameter of iconicity (constructional diagrammaticity), NM distinguishes five basic morphological techniques (Manova 2003; Manova and Dressler, in press; cf. also Dressler 1987):

1) Addition, i.e. X → X + Y, e.g. R. *učitel´* 'teacher' → FEM *učitel´-nica*

2) Substitution, i.e. X + Y → X + Z, e.g. Bg. *irland-ec* 'Irishman' → FEM *irland-ka*

[2] Pierce (1965) distinguishes between three fundamental varieties of semiosis based on different relationships between signans and signatum: icons, indices, and symbols. An icon is a linguistic sign which resembles its signatum in some respect. An index refers to its signatum only by contiguity. A symbol is characterized by a learned convention between signans and signatum. In addition, there are three subtypes of icons: images, diagrams, and metaphors. An image represents the simple qualities of the signatum (e.g. onomatopoeic words). A diagram reflects the similarities between a signans and signatum in respect to the relations of their parts. A metaphor exhibits only some partial similarities between signans and signatum.

3) Modification (phonological and morphonological changes), i.e. X → X', e.g. R. *byt'* 'to be' → *byt* 'mode of life'

4) Conversion, i.e. X → X, e.g. E. *clean* → *to clean*

5) Subtraction, i.e. X → X –Y, e.g. Bg. *bălgarin* '(a) Bulgarian' → PL *bălgari*

Morphological techniques are prototypical instances of morphological rules and correspond to all possible operations with existing forms. The techniques constitute a scale beginning with the most iconic (natural) addition (usually called affixation), where addition of meaning (morphosemantic complexity) is expressed by addition of form (morphotactic complexity). Substitution and modification come into play after affixation. The latter two are less iconic than addition, but since they involve some addition of morphotactic features (see 2 & 3 above), they are more iconic than conversion, where one and the same form is used for the expression of different meanings. Thus conversion represents non-iconicity. The last technique, subtraction, is even anti-iconic because when applied, addition of meaning (the plural in 5) is expressed by subtraction of form. (Note that the formal expression of the plural in Bulgarian involves either the morphological technique of addition or that of substitution, cf. Manova & Dressler 2001).

The other universal naturalness parameters relevant to the discussion (cf. Manova & Dressler, in press) are indexicality, biuniqueness, transparency (morphotactic and morphosemantic), and the parameter for the base of a morphological rule.

Morphological formations are usually indexical in the way affixes refer to the morphological bases to which they are bound. Therefore affixation of some morphological material to an immediately adjacent base is better than conversion.

Biuniqueness holds if one and the same form always corresponds to the same meaning and vice versa. Uniqueness is less natural: One form has two different meanings, as is usually the case in conversion (e.g. *to cut* → *a cut*). Least natural is ambiguity, i.e. there are many to many relations between form and meaning, e.g. triple conversions such as ADJ *better – to better – a better* (Bauer 1988: 30).

Full morphosemantic transparency means fully compositional meaning. Clearly, according to this parameter conversion which adds no morphotactic form is more unnatural than affixation. In respect to morphotactic transparency, the most natural forms are those which show no opacifying obstruction to perception. In the most transparent

case no phonological or morphonological alternations occur. Thus in conversion, where by definition no phonological and morphological alternations are allowed, the base is maximally transparent, but the formal exponent of the morphological change, because it is not overtly signalled, is maximally opaque.

Morphotactic transparency is related to the criterion for bases of morphological rules. A base of a morphological rule is a morphological unit which is presented in the input as well as in the output of the rule. According to this criterion, words as primary signs in semiotic terms are the most natural type of bases. Word is understood as a hyperonym of word-form and lexeme, i.e. it is a form which exists autonomously in a given language. An example of word-based morphology is R. NOM SG *učitel'* 'teacher' → GEN SG *učitel-ja*.

A stem is that part of a word form which remains when a suffix is removed and which by definition has at least one suffix more than a root. Stems are less transparent than words. Therefore, stem-based morphology (e.g. R. *uč-i-t'* 'to teach, learn' → *uč-i-tel'* 'teacher') is less natural.

A root is that part of a word form which remains when all suffixes have been removed. Root-based changes (e.g. *uč-i-t'* 'to teach, learn' → *uč-enie* 'learning, doctrine') are the least natural type of change. Since Slavic languages are characterized by right-hand headedness[3], in the discussion below, only suffixes are taken into consideration for the classification of bases, i.e. the root is the basic part of a multimorphemic word which cannot be further decomposed on the right edge. This means that both Bg. *xód-j-a* 'I go, walk', 3 SG *xód-i* → *xod* 'walk, pace, tread' and Bg. *razgrom-j-á* 'I rout', 3 SG *razgrom-í* → *razgróm* 'rout' are root-based.

According to the above universal naturalness parameters, conversion is more marked and less natural than addition, substitution, and modification (conversion is unmarked only in regard to morphotactic transparency of the base). This predicts lesser productivity of conversion in comparison to more natural techniques, and this also means

[3] A principle proposed in Williams (1981) which says that the right-hand member of a morphologically complex word is the head of that word, i.e. the rightmost constituent determines all the properties of the word.

that the existence of conversion in a language implies the existence of addition, substitution, and modification.

For the second subtheory of NM, that of typological adequacy (Dressler 1985), it is particularly important to note that Slavic languages represent the inflecting-fusional type which makes a clear distinction between inflectional and derivational suffixes (cf. Skalička 1979). Since the addition of meaning is usually expressed by the addition of form, for a Slavic word we will assume a general structure involving the following slots:

PREFIX-ROOT-DERIVATIONAL SUFF-(THEMATIC MARKER)-INFLECTIONAL SUFF

This generalized construct will serve as a device for producing and controlling morphological forms. For example:

| | PREF | ROOT | DSUFF | TM | ISUFF | |
|---|---|---|---|---|---|---|
| Bg. | *de-* | *stabil-* | *izir-* | *a-* | *m* | '(I ) destabilize' |
| | *de-* | *stabil-* | *izaci-* | | *ja* | 'destabilization' |

Thematic markers (TM) are recognized only in verbal morphology where aspectual suffixes usually occupy the derivational slot of indigenous verbs (cf. Manova 2005), as the latter are seldom derived. Consider: Bg. *raz-grom-jav-a-m* 'I defeat' derived with the aspectual suffix *-jav-*.

The advantage of the generalized form assumed is that it allows for addition/substitution/deletion of inflectional material in derivation. Put differently, a derivational morphosemantic change has to be adequately marked by derivational morphotactic change. If no derivational material accompanies a derivational change, the latter will be seen as parallel to conversion in English where, due to typological reasons, no inflection is added/substituted/deleted.

Therefore, examples such as the following from Slavic are instances of conversion:

PREF- ROOT - DSUFF - TM- ISUFF

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Bg. *razgrom-ja* → | *raz-* | *grom* | | | | | ‘I defeat’ → ‘defeat’ |
| SC. *rad-i-ti* → | | *rad* | | | | | ‘to work’ → ‘work’ |
| R. *rabot-a-t’* → | | *rabot-* | *ø-* | | | *a* | ‘to work’ → ‘work’ |
| Bg. *pečat* → | | *pečat-* | *ø-* | *a-* | | *m* | ‘seal’ → ‘(I) print’ |
| R. *čist-yj* → | | *čist-* | *ø-* | *i-* | | *t′* | ‘clean’ → ‘to clean’ |
| Bg. *krav-a* → | | *krav-* | *ø-* | | | *i* | ‘cow’ → ‘cow-’ |

The third subtheory of NM, that of language-specific or system-dependent naturalness, defines what is natural (system-congruous) for a given language (Wurzel 1984; Wurzel 1987). Due to the limited scope of the present article, system-dependent naturalness will not be discussed in detail, but will always be noted if of importance to the analyses. For a language-specific analysis of conversion in Bulgarian, Russian, and Serbo-Croatian see Manova (2003).

The inflectional richness of the inflecting-fusional type consists not only in the number of inflectional affixes expressing one and the same category, but also in the number of morphologically expressed inflectional categories. For example, the category of gender is type-specific for inflecting-fusional languages. On the other hand, Slavic languages exhibit the category of aspect as a family-specific feature. Both gender and aspect are non-prototypical inflections (in the sense of Dressler 1989, inherent inflection according to Booij 1996). Thus, another issue to clarify before starting the analysis concerns the nature of the derivation-inflection distinction. Following Dressler (1989), we will assume that derivation and inflection constitute a continuum situated between the poles of prototypical derivation and prototypical inflection (on prototypical categories in morphology, see Dressler 1989; cf. also Booij 2000). The most salient feature of prototypical derivation is its word-class-changing ability, e.g. V *work* → N *worker*. Non-prototypical derivation is word-class-preserving, though exhibiting a semantic change typical for derivation, e.g. *garden* → *gardener*. On the derivation-inflection continuum, non-prototypical inflection neighbours non-prototypical derivation and shares some of its features. However, as Manova (2005) establishes, in an inflecting language the output of a non-prototypical derivational rule enters different inflection classes (e.g. diminutivization of nouns in Slavic), while the output of non-prototypical inflection

always belongs to one and the same inflection class (or complementary classes), e.g. imperfectivization in Slavic. Moreover, non-prototypical inflection allows two types of expression: derivational (i.e. by a special suffix that appears to be in the derivational slot of the word, a. examples below) and inflectional (by addition of inflection only, b. examples below). Consider the following examples from Bulgarian:

Gender (formation of females from males)

a. MASC *car* 'king, tsar' → FEM *car-ic-a* 'queen'

b. MASC *zabravan* 'chuckle-head' →
FEM *zabravan-ø-a*

Aspect (imperfectivization)

a. PFV *raz-grom-j-a* 'I defeat', 3 SG *raz-grom-i* →
IMPFV *raz-grom-jav-a-m*, 3 SG *raz-grom-jav-a*

b. PFV *ob-misl-j-a* 'I think over', 3 SG *ob-misl-i* →
IMPFV *ob-misl-ø-ja-m*, 3 SG *ob-misl-ø-ja*

Although in the morphological theory it is usually assumed that conversion operates only in derivation, formation of females from males and imperfectivization are an exact formal parallel to the Slavic examples of derivational conversion above. Therefore, following the conversion rule on the derivation-inflection continuum, we will discuss non-prototypical inflection under conversion.

## 3. Terminology

In the literature, the type of morphological change that this paper deals with can be found under either conversion or zero derivation.

The zero derivation concept (Marchand 1969) can be illustrated with the following pairs:

*to announce* → *announce-ment*
*to answer* → *answer-ø*

Both derivations express the same semantic change, but in the output of the second derivation no overt suffix occurs, and therefore it is said to have zero affixation. The suffix *-ment* in the noun *announcement* is an overt analogue of the zero suffix in the noun *answer* (Sanders 1988).

Slavic grammars also discuss zero affixation, although in the different languages it has been interpreted in different ways: Babić (1991) and Bojadžiev (1999) postulate zero suffixation only if after a deletion of inflectional material nothing else is added, e.g. SC. *pogled-a-ti* 'to look (at) → *p`ògl*ē*dØ* 'look, glance' (Babić 1991: 310); Bg. *zaliv-a-m* '(I) overflow', 3 SG *zaliv-a* → *zalivØ* 'bay, gulf' (Bojadžiev 1999: 266), while the Russian Academy Grammar allows for addition of nominal inflection, e.g. *xval-i-t'* 'to praise' → *xval-a* 'praise', *sel-i-tsja* 'to settle' → *sel-o* 'village' (Švedova et al. 1980: 222, 224).

Whereas for some linguists conversion and zero derivation seem to be synonymous terms, others (e.g. Vogel 1996) make a clear distinction between them, reserving conversion for the English-type change (*to attempt* → *an attempt*) and speak of zero affixation if inflection intervenes, as in German *versuchen* 'to attempt, test' → *Versuch* 'attempt, test'. However, it should be noted that the term conversion is preferred in present-day morphological theory, which is due to some significant disadvantages of the zero derivation concept:

1) There exist enough examples of conversion without overt analogues or with more than one analogue (for discussion and examples see Sanders 1988).

2) The zero suffix does not behave as a real suffix.

2a) As Lieber (1981) pointed out, all lexemes derived with the same suffix belong to the same inflectional class, but all lexemes derived with a zero suffix do not. Consider, for example, R. *lovit'* 'to hunt' → *lov-ø* 'hunting', *rabotat'* 'to work' → *rabot-ø-a* 'work' and *selit'sja* 'to settle' → *sel-ø-o*. The three nouns decline in three different ways, and it seems that we have to do with three different zero suffixes.

2b) Since the output of zero derivation can belong to different word-classes, one should postulate different nominalizing, verbalizing, etc. zeroes which leads to multiplication of non-existing forms.

2c) Zero derivatives of the same type (e.g. nominalization of verbal bases) cannot be described in terms of a uniform semantic rule, as is typical for normal affixation (cf. Manova & Dressler, in press). For example in Bulgarian, all verbal nouns derived with the suffix *-ne* are, as a rule, action nouns (and seldom have other lexicalized meanings) whereas nominalizations from verbal bases are usually event, result, or concrete nouns: *stroja* 'I build, construct, erect', 3 SG *stroi* → *stroj* 'system, regime' (cf. *stroene* 'action of building'), *vikam* 'I cry (out), shout (out)', 3 SG *vika* → *vik* 'cry, shout' (cf. *vikane* 'action of crying'), *zidam* 'I build (of brick/stone)', 3 SG *zida* → *zid* 'wall' (cf. *zidane* 'action of building'). Very few conversions can also have an action noun meaning with specialized semantics, e.g. *xodja* 'I go, walk', 3 SG *xodi* → *xod* 'gate, pace, tread, walk' vs. *xodene* 'going, walking'

Therefore from now on we will use the term 'zero' only for the following two phenomena concerning inflection (cf. Bybee 1985 and Mel'čuk 2002):

(1) *Zero expression* is a morphosemantically and morphotactically unmarked inflectional form. In the literature, zero expression is also called 'basic form of a paradigm' (Bybee 1985: 50), as it tends to occur in unmarked members of categories, e.g. NOM SG (Jakobson 1971: 220ff; 1985: 222ff; Mayerthaler 1987: 48).

(2) *Zero sign* means that a morphosemantically marked inflectional form (e.g. GEN PL of feminines in Russian, see the paradigm below) is left morphotactically unmarkered (cf. Melčuk 2002).

| SG | PL |
|---|---|
| N. *cen-a* 'price' | *cen-y* |
| G. *cen-y* | *cen-ø* |
| D. *cen-e* | *cen-am* |
| A. *cen-u* | *cen-y* |
| L. *cen-e* | *cen-ax* |
| I. *cen-oj* | *cen-ami* |

We will define zero sign as possessing three obligatory characteristics, all simultaneously satisfied (Mel'čuk 2002: 242):

1. *Expressiveness* – a zero sign must carry some meaning or some syntactic function.

2. *Exclusiveness* – there should be no other physically observable candidate to be carrier of the meaning under consideration.

3. *Contrastiveness* – a zero should always be contrasted with an overt item.

NM understands zero sign instances as 'phonologische Störungen des konstruktionellen Ikonismus' (Mayerthaler 1981: 43). According to the scale of morphological techniques, a zero sign is a subcase of addition, i.e. the absence of a marker serves as a marker, as can be seen from the above Russian paradigm. GEN PL *cen* differs from all the other forms of the paradigm and thus represents distinctivity which is more natural than syncretism (when certain cells of a paradigm are occupied by the same word-form, e.g. DAT SG and LOC SG, both *cene*, or GEN SG and NOM PL, both *ceny*). Since syncretism links homophonous forms, it seems to resemble conversion, in particular conversion in English. For a discussion on syncretism and conversion see the next section.

## 4. Definition of conversion

In linguistic literature, definitions of conversion vary from very simple ones requiring only the same form and different word classes (Bauer 1983, 1988; Ljung 1994: 758-59), to others requiring a paradigmatic change only (Smirnickij 1953, 1954; see also Dokulil 1968), to those based on a cluster of features (called 'morphological syntactics' in Mel'čuk 1996, 2000; cf. also Mel'čuk 1976 [1973], 1982: 102), or including a complex of semantic, paradigmatic, and syntagmatic changes, as in Štekauer (1996: 45-53; 2000: 13f). Unfortunately, despite the great number of attempts, there is no widely-accepted definition of conversion.

Based on the scale of morphological techniques and Dressler & Manova (2002), we will define conversion as a morphological technique parallel to the most natural type of morphological rule: affixation. Prototypically, conversion means *word class change of a base to/from which addition/substitution and deletion of inflectional affixes are*

*allowed.* The input and the output of conversion are semantically related and exhibit different inflectional paradigms.

Since this definition describes prototypical (in the sense of Langacker 1987) conversion, it allows for deviations and we can classify even instances which do not satisfy all its conditions. For example, the derivation R. *matematik-a* 'mathematics' → *matematik* 'mathematician' connects semantically related input and output with different paradigms, but without word-class change. In such cases, by analogy to non-prototypical derivation, we will speak of non-prototypical conversion. For non-prototypical inflection without special suffixes (e.g. Bg. PFV *xvărl-ja* 'I throw', 3 SG *xvărl-i* → IMPFV *xvărl-ja-m* 'I throw', 3 SG *xvărl-ja*) where only categorical change occurs and the semantic change is insignificant, but the input and the output have different paradigms and there is a formal analogue to conversion, we will postulate formal conversion. If a lexeme is used in the syntactic position of another word class which leads to some restrictions in semantics but no paradigmatic change takes place, we will speak of syntactic conversion, e.g. R. *bol'noj*, meaning 'sick' as an adjective and 'patient' as a noun.

The types of conversion discussed so far cover prototypical derivation (word-class-changing conversion), non-prototypical derivation (word-class-preserving conversion), non-prototypical inflection (formal conversion) and syntax (syntactic conversion). However, on the derivational-inflectional continuum, between non-prototypical inflection and syntax stands prototypical inflection (such as the category of case, for example) where morphological forms can also coincide (e.g. R. NOM = ACC for MASC inanimates). As already mentioned in the previous section, this phenomenon is known as syncretism. Syncretic forms, though morphologically equal, can be identified on the basis of their syntactic function and agreement, i.e. like in syntactic conversion, syncretic forms are distinguishable syntactically. However, forms connected by syncretism, since from the same paradigm, have the same word-class (in contrast to syntactic conversion where the change consists in taking the syntactic position of another word class). Moreover, syncretic forms do not satisfy the requirement for different paradigms and do not involve semantic change. Put differently, syncretism satisfies neither of the conditions for conversion.

In sum, on the derivational-inflectional continuum we can predict the following instances of conversion and conversion-like coincidences of forms:

A) Derivation

1) Word-class-changing conversion (i.e. prototypical conversion)
2) Word-class-preserving conversion (i.e. non-prototypical conversion)

B) Inflection

1) Formal conversion (in non-prototypical inflection)
2) Syncretism (in prototypical inflection)

C) Syntax

1) Syntactic conversion

As can be expected from the assumption of the scale of morphological techniques (section 2), conversion has often been confused with its neighbour techniques, in particular with the more iconic modification. There are linguists who classify prosodic and segmental changes as marginal (Bauer 1983:228), minor or secondary cases of conversion, such as partial conversion (Bauer 1983:229) or conversion with formal modifications (Quirk et al. 1985: 1566-7; Mel'čuk 1996: 131-2, 2000: 148-50; Štekauer 1996: 94).

Since modifications are markers of morphological change, we distinguish them from conversion where no marker occurs. Stress or accent changes are prosodic modifications and thus exclude conversion. For example:

Bg. *osnov-á* 'I found', 3 SG *osnov-é* → *osnóv-a* 'base'
SC. *zaštítiti* 'to defend' → *zâštita* 'defence'

However, superficial stress shift, due to deletion of stressed word-final inflectional suffix, does not count as modification, e.g. Bg. *otčet-á* 'I give an account', 3 SG *otčet-é* → *otčét* 'an account'. Here the prosodic pattern of word-final stress is preserved. In contrast, word-final stress is modified into word-initial stress in Bg. *ustrem-j-á (se)* 'I rush', 3 SG *ustrem-í (se)* →*ústrem* 'a rush'.

Note that for Serbo-Croatian, it is not the contour of accent (whether short/long or falling/rising), but the accent placement which is taken into consideration for the postulation of conversion, i.e. SC. *škôl-a* 'school' → *šk`òl-ov-a-ti* 'to educate' and *zlât-o* 'gold' → *zlát-i-ti* 'to gild' represent conversion, but the above-cited *zaštít-i-ti* 'to defend' → *zâštit-a* 'defence' does not.

Modifications are also all segmental changes of a morphonological or allomorphic nature, such as palatalization as in R. *drug* 'friend' → *druž-i-t'* 'to be a friend'; depalatalization as in SC. *skoč-i-ti* 'to jump, leap' → *skok* 'jump, leap'; and ablaut, e.g. Bg. *podnesa* 'I serve, present, 3 SG *podnese* → *podnos* 'tray'.

Note that conversion can be paralleled by modification, e.g. R. *lov-i-t'* 'to hunt, catch' → *lov* (conversion) versus *lovl-ja* (modification) 'hunting, catching', cf. Jakobson (1971:126), which proves the correctness of our understanding of modification and conversion as two different morphological techniques.

## 5. Conversion in Slavic

The account of conversion proposed in this section is based on Manova (2003) and illustrates (with some discussion) the types of conversion predicted in the previous section. In addition, the analysis of prototypical conversion is expanded with the criterion for base of morphological rule.

Data come form Bulgarian, Russian, and Serbo-Croatian, but language-specific instances are always noted. It should be stressed that the classification below concentrates on specific features of conversion in Slavic, without being exhaustive.

### Prototypical conversion

Whereas languages approaching the isolating type (e.g. English) are rich in word-based conversions (e.g. E. V *to walk* → N *a walk*), in Slavic languages, which represent the inflecting-fusional type, **word-based word-class-changing conversion** is rare, since in an inflecting language where even basic forms of paradigms are inflected and the main word classes, by rule, use different sets of inflectional suffixes, such full coincidence of morphotactic forms is unlikely to happen. Moreover, the participation of inflection in the input and in the output of conversion sometimes results in dubious cases. For example,

although at first sight the derivation Bg. *von-j-á* 'I stink', 3 SG *von-í* → *von-já* 'stink' seems to be similar to the above-cited English derivation V *to walk* → N *a walk*, the noun *von-ja* [von'á] and the verb *von-j-a* [von'ʹə] are, as can be seen from the respective transcriptions, only homographs and cannot therefore represent word-based conversion. In fact, this is an instance of root-based conversion, since the base and the output have the same root but differ in inflection.

The clearest example of word-based conversion (i.e. without intervention of inflectional material) is represented by adjective-to-noun conversion, e.g. SC ADJ MASC SG *nèčist* 'dirty' → N FEM *n`èčīst* 'dirt'. However, such instances are very few and have been registered only in Serbo-Croatian, which marks them as language-specific. Sometimes word-based adjective-to-noun conversion connects non-basic (in our case neuter) forms, e.g. Bg. ADJ MASC *blag* 'gentle, kind, sweet, mild', NEUT *blág-o*, PL *blág-i* → N SG *blág-o* 'good, welfare, wealth', PL *blag-á*; SC. ADJ MASC *blâg* 'gentle, meek, mild', NEUT *blag-o*, GEN SG *blag-ōga* → NEUT *blâg-o* 'wealth, property', GEN SG *blâg-a* (Barić et al. 1997: 180). Conversion of this type often has an incomplete nominal paradigm, e.g.: R. ADJ NEUT *blago* → N NEUT NOM SG *blago*, GEN SG *blaga*, etc., and only the following forms in the plural: NOM *blaga*, GEN. *blag*, DAT *blagam*; ADJ NEUT *zl-o* 'bad' → N NEUT *zl-o* 'the bad' GEN SG *zl-a*, with a single form in the plural, namely GEN PL *zol* (Zaliznjak 1977: 519), cf. the respective adjectival GEN SG *zl-ogo* and GEN PL *zl-yx*.

From a "technical" point of view the easiest case of word-class-changing word-based conversion in an inflecting language is found when inflectional suffixes are added to a word that serves as a base of the rule. The most frequent instances of this type are noun-to-verb conversions such as R. *špion* 'spy' → *špion-i-t'* (colloq.) 'to spy' or adjective-to-verb conversions such as SC. *sl`àb* 'weak, feeble' → IMPFV *sl`àb-e-ti* 'to lose weight', IMPFV *sl`àb-i-ti* 'to weaken'. In addition, it may happen that a nominal inflection suffix coincides with a verbal thematic marker, e.g. Bg. *četka* 'brush' → *četkam* 'I brush'; R. *dovol'stvo* 'contentment, prosperity' → *dovol'stvovat'* 'to supply contentment, prosperity'; SC. *vága* 'balance' → *vágati* 'to balance'.

Noun-to-adjective conversion can also be word-based, e.g. SC. *m`ìš* 'mouse' → *m`ìš-jī* 'mouse-'. This type is unproductive and thus often doubled by the more iconic

affixation: R. *myš'* 'mouse' → ADJ *myš-ij* (old) and *myš-in-yj* 'mouse-'; SC. *jèlen* 'deer' → *jèlen-jī* 'deer-' and *jèlen-sk-ī* 'related to a deer'.

The clearest case of **word-class-changing stem-based** conversion is found when a verbal stem (prototypically ROOT + TM) fully coincides with a word of a different word class, e.g. R. *igr-á-t'* 'to play, act, perform' → *igr-á* 'play, acting, game, sport'; SC. *vlád-a-ti* 'to govern, reign' → *vlád-a* 'government, reign, rule'.

Since Bulgarian has no infinitive and the present tense is the base of verb-to-noun derivations, the above-given conversion rule deletes the TM of the verb (*-e-* in the examples below), but preserves the root amplification *-a-*:

*igr-á-j-a* 'I play, dance, act', *igr-á-e* → *igr-á* 'game, sport'
*mečt-á-j-a* 'I dream', *mečt-á-e* → *mečt-á* 'dream'

Here the base of the rule is shorter than the verbal stem, but still longer than the respective root; therefore, this is an instance of stem-based conversion.

Derived stems (i.e. ROOT + DSUFF) may also be bases of conversion, e.g. Bg. *ljubopitstvo* 'curiosity' → *ljubopitstvam* 'I am curious'.

Word-based and stem-based conversion depend on some coincidences of forms: either on homophony of adjectival and nominal inflection, as in the word-based conversion Bg. ADJ NEUT SG *sladko* 'sweet' → N NEUT *sladko* 'marmalade, dessert', or on coincidence of a verbal thematic marker and a nominal inflectional suffix, as in the stem-based conversion R. IMPFV *rabót-a-t'* 'to work'→ FEM *rabót-a* 'labour, task, work, job'. However, **word-class-changing root-based conversion** does not rely on such coincidences. Root-based morphology is typologically adequate for Slavic and therefore "technically easier" than word-based and stem-based conversion. In fact, root-based conversion is the most frequent type of conversion in Bulgarian, Russian, and Serbo-Croatian. By root-based conversion one can derive the following:

1) Nouns
Bg. IMPFV *zov-á* 'I call', *zov-é* → MASC *zov* 'call, appeal'
R. IMPFV *bég-a-t'* 'to run'→ MASC *beg* 'run'

SC. IMPFV *rád-i-ti* 'to work'→ MASC *râd* 'work, labour'

Bg. IMPFV *vin-j-á* 'I blame'*, vin-í* → FEM *vin-á* 'blame'
R. IMPFV *dél-a-t'* 'to do, make' → NEUT *dél-o* 'affair, business, deed'
SC. IMPFV *hrán-i-ti* 'to feed, nourish'→ FEM *hrán-a* 'food, nourishment'

2) Verbs
R. *číst-yj* 'clean' → IMPFV *číst-i-t'* 'to clean'

Bg. NEUT *petn-ó* 'stain, spot' → IMPFV *petn-j-á* 'I soil, spot, tarnish'*, petn-í*
R. FEM *žen-á* 'wife' → PFV & IMPFV *žen-í-t'(sja)* 'to marry (off)'
SC. NEUT *srèbr-o* 'silver' → IMPFV *srèbr-i-ti* 'to silver'

3) Adjectives
Bg. *kráv-a* 'cow' → *kráv-i*, but also *krav-ešk-i* 'cow-'
SC. *kòz-a* 'goat' → *k`òzjī* 'goat-'
There are no such examples in Russian.

If conversion and affixation compete as in the case of Bg. *kráv-i* and *krav-ešk-i*, conversion usually has more specific semantics. It is used as neuter only and in idiomatic expressions, e.g. *krave*-NEUT *sirene* 'cow cheese' (the typical Bulgarian white cheese), *krave*-NEUT *mljako* 'cow milk', whereas the more iconic form MASC *krav-ešk-i* expresses the meaning 'cow-' in general.

Note that the rarest type of root-based conversion is that of verb-to-adjective. The derivation R. *ljub-ít'* 'to love, like' → *ljúb-yj* (modification)*, ljub* (poetic, colloq.) 'dear, loved, beloved' (conversion) (cf. Švedova 1980: 304; Efremova 2000) can possibly be an example, but the verb-to-adjective rule usually requires modification. Consider the following Russian examples:

*xvor-á-t'* 'to be ill, ailing' → *xvór-yj* (colloq.) 'ailing, sick'
*tošn-í-t'* 'to feel sick; to vomit' → *tóšn-yj* 'tiresome, tedious, nauseous'
*vxod-í-t'* 'to enter' → *vxóž-ij* 'accepted' (Švedova et al. 1980: 304)

**Non-prototypical conversion**

It is well-known that diminutivization, since it is a non-prototypical morphological category, is difficult to classify. Yet in Bulgarian, Russian, and Serbo-Croatian, diminutives behave more derivation-like than inflection-like (Manova 2005): they use a set of suffixes hosted by the derivational slot of the word and the output of diminutivization cannot be identified inflectionally. Therefore, we will consider diminutivization a case of non-prototypical derivation (cf. Dressler & Merlini Barbaresi 1994), and if its output has no diminutive suffix in the derivational slot but is indicated by addition of a suffix in the inflectional slot, we will speak of non-prototypical conversion. Moreover, in Bulgarian, diminutives derived by conversion require an additional alternation from masculine to neuter. The change is thus greater than inflectional class change but less radical than word class change. Consider the following examples from Bulgarian:

MASC *kotél* 'caldron' → NEUT DIM *kotl-ø-é*
MASC *petél* 'rooster, cock'→ NEUT DIM *petl-ø-é*
MASC *kozél* 'he-goat'→ NEUT DIM *kozl-ø-é*
MASC *ovén* 'ram' → NEUT DIM *ovn-ø-é*

Note that in Bulgarian, the group **Cl* is impossible in word-final position.
(Compare the above diminutive formations to diminutives derived with diminutive suffixes in the derivational slot such as MASC *učitel* 'teacher'→ DIM NEUT *učitel-č-e*, MASC *stol* 'chair' → DIM NEUT *stol-č-e* → DIM NEUT *stol-če-nc-e*.)

Dialectal diminutives are often derived by conversion: Bg. MASC *zăb* 'tooth' → DIM *zăb-e*, MASC *nos* 'nose' → DIM *nos-e*, etc. (cf. Stojanov 1993: 187)

In Serbo-Croatian the diminutive inflection *-e* is bound to the semantic pattern 'young of animals', e.g. *lisic-a* 'fox' → *lisič-e*, *ptic-a* 'bird' → *ptič-e*. As for nouns such as *vojnič-e* 'soldier VOC' which are homophonous with the respective Bulgarian diminutives, in Serbo-Croatian these forms express only vocative case, without any diminutive meaning at all. It seems that the existence of the category of vocative, which

often inflects with the suffix *-e*, has blocked the development of the diminutivization rule with the same suffix.

Modern Russian has no vocative. Nevertheless, even the semantics 'young of animals' is expressed by suffixes in the derivational slot, e.g. *medvež-onok* 'bear-cub', *tel-ënok* 'calf'*, l'v-ënok* 'lion-cub'.

Due to the addition of the suffix *-e*, the above diminutivization pattern is often accompanied by segmental modifications such as palatalizations, e.g. Bg. MASC *učenik* 'pupil' → DIM NEUT *učenič-e*, MASC *vojnik* 'soldier' → DIM NEUT *vojnič-e*, MASK *vălk* 'wolf' → DIM NEUT *vălč-e*. Cf. SC. FEM *lisic-a* 'fox' → NEUT *lisič-e,* FEM *ptic-a* 'bird' → NEUT *ptič-e,* MASC *zec* 'rabbit' → NEUT *zeč-e*; Bg. FEM *lisic-a* 'fox' → NEUT *lisič-e*, FEM *ptic-a* 'bird' → DIM NEUT *ptič-e*, etc.

The semantic pattern 'science' → 'scientist / specialist in', which seems to be cross-linguistically diagrammatic (e.g. E. *mathematics* → *mathematic-ian*, G: *Matematik* → *Mathematik-er*, SC. *matematik-a* → *mathematič-ar*), leaves the derivational slot of the word empty in Russian, e.g.: N *matemátik-a* 'mathematics' → N *matemátik* 'mathematician', *fízik-a* 'physics' → *fízik* 'physicist'. Compare with the prosodic modifications in Bulgarian *matemátik-a* 'mathematics' → *matematík* 'mathematician' and *fízik-a* 'physics' → *fizík* 'physicist'. Russian conversions change 1) the subclass of the base (from inanimate to animate), and 2) the word's gender (from feminine to masculine). The more class features are changed, the less non-prototypical is the conversion, since it thus approaches prototypical derivation.

The conversion pattern 'science' → 'scientist' has some exceptions derived by more iconic techniques, e.g. by substitution as in R. *fonét-ik-a* 'phonetics' → *fonet-íst* 'phonetician'; and by suffixation, e.g. *práktik-a* 'practice' → *praktik-ánt* 'practitioner' (this example belongs to the periphery of the semantic pattern).

## Formal conversion

As already discussed, formal conversion involves the categories of gender (formation of females from males) and aspect (imperfectivization), both cases of non-prototypical inflection.

Formation of females from males:

Bg. *săprug* 'husband' → *săprug-ø-a* 'wife'

R. *suprug* 'husband' → *suprug-ø-a* 'wife'

SC. *s`ùprug* 'husband' → *s`ùprug-ø-a* 'wife'

Imperfectivization:

Bg. PFV *za-xvắrl-i-š* 'you throw away, abandon' → IMPFV *za-xvắrl-ø-ja-š*,

R. PFV *smen-í-t'* 'to change' → IMPFV *smen-ø-já-t'*

SC. PFV *bác-i-ti* 'to throw' → IMPFV *bàc-ø-a-ti*.

Formal conversion is an exact formal parallel to conversion in derivation and its input and output have different paradigms, but this type of conversion exhibits lesser semantic change (if any) than in case of non-prototypical conversion, therefore the term 'formal conversion'.

Of both rules, formation of females from males is nearer to non-prototypical derivation. It, like diminutivization, has two different referents in the reality (which speaks for semantic change) and uses a set of suffixes. However, all females derived from males belong to the same inflection class, whereas all diminutives derived from nouns do not.

Formal conversion is entirely unproductive. Moreover, if aspect is expressed without a special suffix, usually concomitant prosodic and segmental modifications arise:

Bg. PFV *raz-gled-a-m* 'I look at, examine' → IMPFV2 *raz-gležd-a-m*

R. PFV *vstret-i-t'* 'to meet' → IMPFV *vstreč-a-t`*

SC. PFV *is-pùst-i-ti* 'to release, miss, emit'→ IMPFV2 *is-púšt-a-ti*

Similar to conversion in derivation, in Bulgarian, formal conversion has a competitor in suffixation:

PFV *potulja* 'I conceal' → IMPFV *potuljam* vs. IMPFV *potulvam*

PFV *podlepja* 'I paste (under)' → IMPFV *podlepjam* vs. IMPFV *podlepvam*

PFV *zakrepja* 'I fix' → IMPFV *zakrepjam* vs. IMPFV *zakrepvam*

Such examples undoubtedly show that a non-iconic morphological technique, regardless of whether it is derivational or inflectional, is never preferred.

Formal conversion in case of formation of females from males can also be paralleled by affixation, e.g.: SC. *n`èćak-a* vs. *nećàk-inj-a* 'niece' ← *n`èćāk* 'nephew', the form derived by suffixation being the usual one (cf. Babič 1991: 66; Anić 1991); consider also Bg. *vnuk-a* (old) and *vnuč-k-a* 'grand-daughter' from *vnuk* 'grandson' where conversion is stylistically marked as archaic. In some cases instead of conversion prosodic modifications occur, e.g.: R. *rab* 'slave' → FEM *rab-á*, Bg. *kum* 'first witness' → FEM *kum-á*.

## Syntactic conversion

Syntactic conversion consists in the use of a word in the syntactic position of another word-class and is word-based. The input and the output of syntactic conversion share the same paradigm, sometimes with some restrictions of sematics, e.g. the Bulgarian adjective FEM *detska* 'children-' has been converted into a noun with the specific semantics 'children's room'. In Slavic, syntactic conversion involves substantivization (conversion of adjectives, participles, infinitives or minor word-classes into nouns) and adjectivization (conversion of participles into adjectives).

### *Substantivization*

Substantivization of adjectives is the most interesting type of syntactic conversion in Bulgarian, Russian and Serbo-Croatian. It usually arises after ellipsis of a noun, e.g. Bg. *detska staja* 'children's room' → *detska* 'children's (room)'. Language-specific factors play a great role in this type of conversion. For example, whereas in Serbo-Croatian both definite (long) and indefinite (short) adjectives can be used attributively and therefore substantivized by ellipsis (cf. Laškova 2001: 127), in Russian only the long forms of adjectives can be used attributively and thus substantivized. However, the inflection of Serbo-Croatian short adjectives coincides to a great extent with the nominal inflection and thus does not always allow for the establishment of syntactic conversion, since both the input and the output have the same paradigm from the very beginning. Moreover, if the accentuation pattern is not taken into consideration, the inflection of short and long feminine adjectives in the singular and in the plural, and of masculine and

neuter adjectives in the plural also fully coincide. Maybe for that reason Serbo-Croatian grammars usually illustrate substantivization only with long adjectives such as family names, e.g. *Zrînskī* – GEN SG *Zrînskōga*, or names of countries, e.g. *hr̀vātskā zèmlja* 'Croatian land' → *Hr̀vātskā* 'Croatia' – DAT & LOC SG *Hr̀vātskōj* (both *Zrînskī* and *Hr̀vātskā* have only long forms as adjectives), or male proper nouns, e.g. *D`òbrī* – GEN SG *D`òbrōga* (the short form of the adjective is *d`òbar* 'good'), cf. Stevanović (1964: 268-272); Babić (1991: 47-9); Barić (1997: 180f).

Note that the type of conversion in case of substantivization can also be language-specific. For example, Bg. ADJ NEUT *sladk-o* 'sweet', PL *sladk-i* → N NEUT *sladk-o* 'marmalade, dessert, third course', PL *sladk-a* is a case of prototypical conversion in derivation, whereas the substantivization of the same adjective in Russian results in syntactic conversion: R. ADJ NEUT *sladk-oe* 'sweet', GEN SG *sladk-ogo* → N NEUT *sladk-oe* 'dessert, third course' with adjectival GEN SG *sladk-ogo*.

For a detailed account of substantivization in Bulgarian, Russian and Serbo-Croatian see Manova (2003).

*Adjectivization*

Since syntactic conversion of the type E. *government job* (Marchand 1969: 360) is impossible in Slavic, Slavic grammars understand the term adjectivization as use of participles as adjectives (Barić et al. 1997: 301; Bojadžiev 1999: 274, cf. also Dokulil 1968: 231; Švedova et al. 1980: 666). For example: Bg. *pišešt čovek* 'writing-PRES ACT PART man', R. *postroennyj dom* 'built-PAST PASS PART house', SC *osvežavajuća pića* 'refreshing-PRES ACT PART drinks'.

Adjectivization of participles is language-specific. For example, the Bulgarian and the Russian translations of the above Serbo-Croatian example use adjectives: Bg. *osvežitelni napitki* 'refreshing-ADJ drinks'; R. *proxladitel'nyj napitok* 'refreshing-ADJ drink'. In addition, Russian has developed some interesting strategies for distinguishing between participles and adjectives (cf. Dilevski 1985: 226f; Harrison & le Fleming 2000: 130f; Wade 2000: 384f) and thus avoids conversion.

Some Russian past passive participles, like adjectives, distinguish between long and short forms, but in both cases differ from the respective adjectives morphotactically:

1) Long forms

| Participle | Adjective |
|---|---|
| *-nn-* | *-n-* |
| *ranennyj* 'injured' | *ranenyj* |
| *za-žarennyj* 'fried' | *žarenyj* |
| *za-morožennyj* 'frosted' | *moroženyj* |

2) Short forms

Now the spelling is reversed, i.e. the participle has one *-n-*, whereas the adjective retains the double *-nn-* in the FEM, NEUT and PL, as in the following examples:

MASC, FEM, NEUT, PL

Participle: *obrazovan, obrazovana, obrazovano, obrazovany* 'formed'
Adjective: *obrazovan, obrazovanna, obrazovanno, obrazovanny* 'educated'

Participle: *ozabočen, ozabočena, ozabočeno, ozabočeny* 'worried'
Adjective: *ozabočen, ozabičenna, ozabočenno, ozabočenny* 'anxious'

Participle*: rassejan, rassejana, rassejano, rassejany* 'dispersed'
Adjective: *rassejan, rassejanna, rassejanno, rassejanny* 'absent-minded'

In Russian, the difference between some present active participles and their respective adjectives is also morphotactically expressed (cf. Dilevski 1985):

| Participle | Adjective |
|---|---|
| *-šč-* | *-č-* |
| *koljuščij* 'pricking' | *kolјučij* 'prickly, thorny' |
| *letjaščij* 'flying' | *letučij* 'flying' |
| *sidjaščij* 'sitting' | *sidjačij* 'sitting' |
| *stojaščij* 'standing' | *stojačij* 'standing' |

Consider: R. *gorjačij vozdux* 'hot ADJ air' vs. R. *gorjaščij gaz* 'burning-PRES ACT PART gas' (likewise in Bg. *gorešt văzdux* vs. *gorjašt gaz*).

Babić (1991: 47) gives two examples from Serbo-Croatian which appear to be similar to the above-discussed Russian ones. Consider: PART *svijétlēći* 'shining' vs. ADJ *svjètlēćī* and PART *slijédēći* 'following' vs. ADJ *sljèdēćī*.

Bulgarian can also distinguish between adjectives and participles: Old Bulgarian present active participles have turned into adjectives and now oppose Modern Bulgarian present active participles. For example, adjectives: *gorešt* 'hot', *vonešt* 'stinking' (former participles) vs. participles: *gorjašt* 'burning', *vonjašt* 'stinking'. Participles such as *vedušt* 'leading', *cvetušt* 'flourishing' which are borrowed from Russian (R. *veduščij*, *cvetuščij* both participles) are adjectives in Modern Bulgarian, cf. the participles *vodešt* 'leading' and *căvtjašt* 'flourishing'.

Clearly, participles which differ morphotactically from adjectives do not represent syntactic conversion, since the base and the output of the rule have two different forms.

## 6. Conclusion

Conversion is one of the five possible morphological techniques used for word-formation in a language. It is an exact parallel to affixation, but its derivational slot is empty. Conversion in Slavic, like affixation, operates in derivation and in inflection; has word-class-changing and word-class-preserving realizations in derivation; and uses roots, stems and words as bases. Of all types of bases, roots, though the least natural type, are the most preferred by conversion in Slavic. This can be explained by the typological adequacy of roots, i.e. a well-formed word in an inflecting-fusional language, by default, exhibits inflection, the latter usually added to roots. Therefore, the Slavic type of conversion involves alternation in the inflectional slot of the word.

Like the morphological rule of affixation, morphological conversion in Slavic covers the whole derivation-inflection continuum and can be graded according to its derivation-inflection properties. Morphological conversions start with prototypical derivation (i.e. word-class-changing conversion), go through non-prototypical derivation (i.e. word-class-preserving conversion) and non-prototypical inflection (i.e. formal conversion), and finally are reduced to syntax where they turn into syntactic conversion (substantivization, adjectivization). The main distinction between morphological and

syntactic conversion is in regard to paradigmatic change. While morphological conversion (be it derivational or inflectional) has morphological consequences in terms of different paradigms of its input and output, in syntactic conversion no morphological change takes place.

Since conversion belongs to the level of the other morphological techniques, in Slavic it often competes with more natural rules. In such cases, as predicted by NM, the more natural technique always wins over conversion, which accounts for the lesser productivity of conversion.

The above suggested theory of conversion in Slavic has the advantages of universal applicability as well as typological adequacy. The treatment of conversion as one of the set of morphological techniques makes possible the modelling of all morphological alternations in a language. The typologically adequate distinction of derivational and inflectional slots takes into consideration the inflectional richness of the Slavic type morphology and allows for classification of all instances (be they derivational or inflectional) of empty slots.

## References


Anić, Vladimir 1991. *Rječnik hravtskoga jezika*. Zagreb: Novi Liber.

Babić, Stjepan 1991 [1986]. *Tvorba riječi u hrvatskom književnom jeziku: nacrt za gramatiku.* 2 izd. Zagreb: Djela Hrvatske akademije znanosti i umjetnosti.

Barić, Eugenija; Mijo Lončarić; Dragica Malić; Slavko Pavešić; Mirko Peti; Vesna Zečević & Marija Znika 1997. *Hrvatska gramatika.* II. promijeneno izdanje. Zagreb: Školska knjiga.

Bauer, Laurie 1983. *English Word-formation*. Cambridge: Cambridge University Press.

Bauer, Laurie 1988. *Introducing Linguistic Morphology*. Edinburgh: Edinburgh University Press.

Bojadžiev, Todor 1999. Slovoobrazuvane. In Bojadžiev, Todor; Ivan Kucarov & Jordan Penčev 1999. *Săvremenen bălgarski ezik. Fonetika. Leksikologija. Slovoobrazuvane. Morfologija. Sintaksis*. Sofija: P. Beron, 227-276.

Booij, Geert 1996. Inherent versus contextual inflection and the split morphology hypothesis. In Booij, G. & J. van Marle (eds.) *Yearbook of Morphology 1995*. Dordrecht: Kluwer, 1-16.

Booij, Geert 2000. Inflection and Derivation. In Booij, et al. (eds.), 360-369.

Booij, Geert, Christian Lehmann & Joachim Mugdan (eds.) 2000. *Morphologie / Morphology. An International Handbook on Inflection and Word-Formation*. Vol. 1. Berlin: Walter de Gruyter.

Bybee, Joan L. 1985. *Morphology. A Study of the Relation between Meaning and Form*. Amsterdam/ Philadelphia: Benjamins.

Dilevski, Nikolaj 1985. *Ruska gramatika*. Sofija: Nauka i izkustvo.

Dokulil, Miloš 1968. Zur Frage der Konversion und verwandter Wortbildungsvorgänge und –beziehungen. *Travaux linguistiques de Prague* 3, 215-239.

Dressler, Wolfgang U. 1985a. Typological Aspects of Natural Morphology. *Wiener Linguistische Gazette* 36, 3-26 [*Acta Linguistica Hungarica* 35, 1987, 51-70].

Dressler, Wolfgang U. 1987. Word formation (WF) as part of Natural Morphology. In Dressler et al., 99-126.

Dressler, Wolfgang U. 1989. Prototypical differences between inflection and derivation. *Zeitschrift für Phonetik, Sprachwissenschaft and Kommunikationsforschung* 42, 3-10.

Dressler, Wolfgang U. 1990. The cognitive perspective of "naturalist" linguistic models. *Cognitive Linguistics* 1-1, 75-98.

Dressler, Wolfgang U. 2000 Naturalness. In Booij, et al. (eds.), 288-296.

Dressler, Wolfgang U.; Willi Mayerthaler; Oswald Panagl; Wolfgang U. Wurzel 1987. *Leitmotifs in Natural Morphology*. Amsterdam: Benjamins.

Dressler, Wolfgang U. & Lavinia Merlini Barbaresi 1994. *Morphopragmatics. Diminutives and Intensifiers in Italian, German, and Other Languages.* Berlin: Mouton de Gruyter.

Dressler, Wolfgang U. & Stela Manova. 2002. Conversion versus modification and subtraction. Paper presented at the Seminar of Conversion/Zero Derivation. 12. 05. 2002. Szentendre. Hungary.

Efremova, T. F. 2000. *Novyj slovar' russkogo jazyka. I, II. Tolkovo-slovoobrazovatel'nyj*. Moskva: Russkij jazyk.

Harrison, William & Stephen le Fleming 2000. *Intermediate Russian Grammar*. Cardiff: University of Wales Press.

Jakobson, Roman 1971. *Selected Writings II. Word and Language*. The Hague: Mouton.

Kastovsky, Dieter. 1989. Typological changes in the History of English Word-Formation. In Müllenbrock, Heinz-Joachim & Renate Noll-Wiemann (eds.). *Anglistentag 1988 Göttingen.* Vorträge. Tübingen: Max Niemeyer, 281-293.

Langacker, Ronald W. 1987. *Foundations of Cognitive Grammar*. Vol.1. Theoretical Prerequisities. Stanford: Stanford University Press.

Ljung, M. 1994. Conversion. In Asher, R. E. (ed.) *The Encyclopedia of Language and Linguistics*. Oxford: Pergamon Press, 758-759.

Lieber, Rochelle 1981. *On the Organisation of the Lexicon*. Bloomington Ind.: Indiana University Linguistic Club.

Manova, Stela 2002. Between inflection and derivation: on morphotactic expression of aspect and gender in Bulgarian, Russian and Serbo-Croatian. *Wiener Slavistisches Jahrbuch* 48, 203-217.

Manova, Stela 2003. *Conversion and Subtraction in Bulgarian, Russian and Serbo-Croatian*. Ph.D. Thesis, University of Vienna.

Manova, Stela. 2005. Derivation versus inflection in three inflecting languages. In Dressler, Wolfgang U.; Dieter Kastovsky, Oskar Pfeiffer & Franz Rainer (eds.). *Morphology and its Demarcations*. *Selected papers from the 11th International Morphology Meeting, Vienna, February 2004*. Amsterdam: Benjamins, 233-253.

Manova, Stela & Wolfgang U. Dressler. 2001. Gender and declensional class in Bulgarian. *Wiener Linguistische Gazette* 67-69, 45-81.

Manova, Stela & Wolfgang U. Dressler, in press. The morphological technique of conversion in the inflectional/fusional type. In Bauer, Laurie & Salvador H. Valera. *Approaches to Conversion/Zero-Derivation*. Münster: Waxmann, 67-102.

Marchand, Hans 1969 [1960]. *The Categories and Types of Present-Day English Word-Formation.* 2nd completely revised and enlarged edition. München: Beck.

Maslov, Jurij. S. 1981. *Grammatika bolgarskogo jazyka*. Moskva: Vysšaja škola.

Mayerthaler, Willi 1981. *Morphologische Natürlichkeit*. Wiesbaden: Athenaion [English translation: 1988. *Morphological Naturalness*. Ann Arbor: Karoma Publ.]

Mayerthaler, Willi 1987. System-independent morphological naturalness. In Dressler et al., 25-58.

Mel'čuk, Igor A. 1973. Konversija kak morfologičeskoe sredstvo. Reprinted in Mel'čuk 1976. *Das Wort* [Die Konversion als morphologisches Mittel], 288- 318.

Mel'čuk, Igor A. 1982. *Towards a Language of Linguistics*. Munich: Fink

Mel'čuk, Igor, A. 1996. *Cours de morphologie générale*. vol. 3. Montréal: Les Presses de l'Université de Montréal [Russian translation: 2000. *Kurs obščej morfologii*. Tom III. Moskva – Vena: Wiener Slawistischer Almanach, Sonderband 38/3].

Mel'čuk, Igor A. 2002. Towards a formal concept 'zero linguistic sign'. Applications in typology. In Bendjaballah, Sabrina; Wolfgang U. Dressler; Oskar E. Pfeiffer & Maria D. Voeikova (eds.). *Morphology 2000*. Amsterdam: Benjamins, 241-258.

Pierce, Charles S. 1965. *Collected Papers*. Cambridge/MA: Harvard University Press.

Quirk, Randolph, Sidney Greenbaum, Geoffrey Leech & Jan Svartvik. 1985. *A Comprehensive Grammar of the English Language* London: Longman.

*Russian Academic Grammar* = Švedova et al. (1980).

Sanders, Gerald 1988. Zero derivation and the Overt Analogue Criterion. In Hammond, M. & M. Noonan (eds.) *Theoretical Morphology. Approaches in Modern Linguistics*, 155-175.

Skalička, Vladimir 1979. *Typologische Studien*. Red. P. Hartmann. Wiesbaden: Braunschweig.

Smirnickij, A. I. 1953. Tak nazyvaemaja konversija i čeredovanie zvukov v anglijskom jazyke. *Inostrannnye jazyki v škole* 5, 21- 31.

Smirnickij, A. I. 1954. Po povodu konversii v anglijskom jazyke. *Inostrannnye jazyki v škole* 3, 12- 24.

Stevanović, Mihailo 1978. *Gramatika srpskohrvatskog jezika*. Osmo izdanje. Obog- Cetinje.

Štekauer, Pavol 1996. *A theory of conversion in English*. Frankfurt am Main: Peter Lang.

Štekauer, Pavol 2000. *English Word-Formation*: *A History of Research (1960-1995)*. Tübingen: Narr.

Švedova, Natalija Ju. et al. (ed.) 1980. *Russkaja grammatika*. Tom I. Fonetika, Fonologija, Udarenie, Intonacija, Slovoobrazovanie, Morfologija. Moskva: Izdatel'stvo 'Nauka' (Izdatel'stvo Akademii Nauk SSSR).

Vogel, Petra M. 1996. *Wortarten und Wortartenwechsel*. Berlin / New York: Walter de Gruyter.

Wade, Terence 2000 [1992]. *A Comprehensive Russian Grammar*. Second Edition, revised and expanded. Oxford: Blackwell.

Williams, Edwin 1981. On the notions 'Lexically Related' and 'Head of a Word', *Linguistic Inquiry* 12, pp. 245-274

Wurzel, Wolfgang U. 1984. *Flexionsmorphologie und Natürlichkeit*. Berlin: Akademie-Verlag. [English translation: 1989. *Inflectional Morphology and Naturalness*. Dordrecht: Kluwer].

Wurzel, Wolfgang U. 1987. System-dependent morphological naturalness in inflection. In Dressler et al., 59-98.

Zaliznjak, Andrej A. 1977. *Grammatičeskij slovar' russkogo jazyka: slovoizmenenie*. Moskva: Izdatel'stvo 'Russkij jazyk'.