

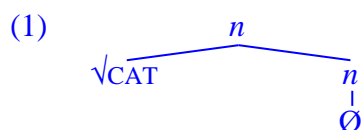
## SLAVIC COMPOUNDS AND ACATEGORIAL ROOTS

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#### 1. INTRODUCTION: THE ISSUE OF ACATEGORIAL ROOTS

Within DM as a framework, there is broad consensus that **roots are acategorical** (Josefsson 1995, 1997, 1998, 2001, Marantz 1997, 2001, Arad 2003, Embick and Marantz 2006, Embick and Noyer 2007, Acquaviva 2009, Harley 2014, Haugen and Siddiqi 2013, among many others)

Lexical roots become nouns, verbs or adjectives in syntax as a result of merger with *n*, *v* or *a* functional heads, which can be phonologically null and whose grammatical content defines a nominal, verbal or adjectival domain:



Thus in DM roots have

- no morphosyntactic category
- no gender or declension/conjugation class (Acquaviva 2009, following Harris 1996, though with caveats, for Harris roots have a category)
- no phonology
- for some researchers (e.g., Pfau 2000, 2009, Acquaviva 2009, Harley 2014), no meaning

“On their own, roots are unpronounceable. It is “words”—roots combined with nominal, adjectival, or verbal features—that we pronounce. Roots also lack a fixed or precise semantic interpretation. It is only in the specific environment of certain morphemes that they acquire an actual interpretation as nouns or verbs. The root *✓hammer*, for example, is assigned an interpretation of a manner verb when embedded in a verbal environment, and an interpretation of an instrument used for hammering when embedded in a nominal environment.” (Arad 2003:10)

Similar approach in Borer 2005a, b

Harley 2009, De Belder 2011, 2017, Steddy 2019, etc., vs. Nóbrega 2020: compounding may involve acategorical roots

This talk: does it really?

- morphologically robust languages like Russian (R) and Serbo-Croat (SC) provide better evidence because there one can see if something has a category
- R and SC compounds at least distinguish between verbal and nominal stems

If the option of acategorical compounding is available, why do R and SC avoid it?

#### 2. COMPOUNDS AS EVIDENCE FOR THE LACK OF CATEGORY

De Belder 2011, 2017: a subtype of Dutch primary compounds involves an acategorical non-head

Steddy 2019: an acategorical non-head yields a non-compositional relationship between the two members of the compound

#### 3. RUSSIAN AND SERBO-CROAT INFLECTED COMPOUNDS

Like Polish (Szymanek 2009), neither Russian nor Serbo-Croat have phrasal compounds: the first member (*M*<sub>1</sub>) and the second member (*M*<sub>2</sub>) are always **syntactic heads rather than phrases**

Two parameters of variation:

- (i) **interfixed** (vowel-linked) or **non-interfixed**
- (ii) **exocentric**, **parasyntetic**, or **endocentric**

As we will see, all these types involve lexical categorization:

- explicit: the choice of the linking vowel is determined by the lexical category of the first member of the compound
- implicit: non-interfixed compounds are constructed with nominal stems only

All these types can give rise to (semi)compositional as well as idiomatic interpretation

### 3.1. Parasyntetic compounds

Parasyntetic (aka suffixed) compounds combine compounding with derivation:

- (2) a. churchgoer: [[church-go]-er] or [church-[go-er]]
- b. horse racing
- c. breathtaking

Their internal structure is subject to debate

In Slavic languages parasyntetic compounds are just as productive and also based on regular morphology:

- (3) a. *oč-e-vid-ac* ‘witness’ ← *oči* ‘eyes’ + *-vid-* ‘see.ROOT’ + *-ac-* (-er.AGT) SC
- b. *viš-e-bož-ac* ‘polytheist’ ← *-viš-* ‘higher’ + *bog* ‘god’ + *-ac-* (-er.AGT)
- c. *sam-o-dovol’-n-yj* ‘smug’ ← *sam* ‘self’ + *-dovol’-* ‘satisfied.ROOT’ + *-n-* ‘-y’ R
- d. *odn-o-obraz-ie* ‘uniformity’ ← *-odīn-* ‘one’ + *-ob.raz-* ‘image.ROOT’ + *-ij-* ‘-ness’

All parasyntetic compounds are interfixed

The lexical categories of M<sub>1</sub> and M<sub>2</sub> seem rather free:

- M<sub>1</sub> can be a noun (3a), an adjective (3b), a numeral (3c), or a pronoun (3d)
- M<sub>2</sub> can be a verbal (3a, c), a nominal (3b) or an adjectival (3c) root

Yet they are not acategorical

### 3.2. V<sub>1</sub> compounds

M<sub>1</sub> can be a verbal stem, productively in Serbo-Croat, non-productively in Russian:

- (4) a. *seci-kesa* ‘cut-purse’ ← *-sek-* ‘cut.ROOT’ + *kesa* ‘purse’ SC
- b. *perekati-pole* ‘tumbleweed’ ← *-pere.kat-* ‘roll over.ROOT’ + *pole* ‘field’ R

The linking vowel [i] here is actually the imperative suffix *-i-*: it follows the theme vowel (and so the verbal stem) in Russian, it creates forms clearly distinct from 3SG or bare root in Serbo-Croat:

See Vinogradov 1999, Tolstaya 2020 for Russian V<sub>1</sub>-compounds, Progovac 2006 for Serbo-Croat ones

- (5) a. *guli-a-j-* *gorod* R  
       wander-TH-IMP town  
       *a wagon-fort, a siege-tower*
- b. *der-i-* *koža* SC, Progovac 2006  
       rip.IMP skin  
       *a person who rips you off*

NB: In Serbo-Croat cf. *derati*.INF, *dere*.PRES.3SG, *der*.ROOT, as in *oblak-o-der* ‘skyscraper’

**So if M<sub>1</sub> is verbal, it must bear clearly verbal morphology**

And even if it is not the imperative, the choice of the vowel clearly juxtaposes [–V] in M<sub>1</sub>

Apparently roots that are used to form verbs cannot be used as M<sub>1</sub> in compounds

### 3.3. Non-V<sub>1</sub> compounds

If M<sub>1</sub> is a noun (6), an adjective (7), a numeral (8), or a pronoun (3d), it is followed by a linking vowel [o] (turning to [e] after palatalized consonants (3a,b)).

Such interfixed compounds can be null-derived or parasynthetic (containing a suffix):

- (6) M<sub>1</sub> is a noun...
- a. *krv-o-tok* ‘bloodstream’ ← *krv-* ‘blood’ + *-tok-* ‘stream’ SC
  - b. *volk-o-dav* ‘wolfhound’ ← *-volk-* ‘wolf’ + *-dav-* ‘press.ROOT’ R
- which can be plural:
- c. *ljud-o-žder* ‘cannibal’ ← *ljudi* ‘people’ (sg: *čovek* ‘man’) + *-žder-* ‘devour’ SC
  - d. *oč-e-vid-ec* ‘witness’ ← *oči* ‘eyes’ + *-vid-* ‘see.ROOT’ + *-ec-* (-er.AGT) R
- (7) M<sub>1</sub> is an adjective...
- a. *plav-o-ok* ‘blue-eyed’ ← *plav* ‘blue’ + *ok(o)* ‘eye’ SC
  - b. *razn-o-obraz-n-yj* ‘varied’ ← *-razn-* ‘different’ + *-ob.raz-* ‘image.ROOT’ + *-n-* ‘-y’R
- which can be a comparative or even an adverb (very rare)
- c. *viš-e-bož-ac* ‘polytheist’ ← *-viš-* ‘higher’ + *bog* ‘god’ + *-ac-* (-er.AGT) SC
  - d. *skor-o-xod* ‘footman’ ← *-skor-* ‘fast’ + *-xod-* ‘go.ROOT’ R
- (8) M<sub>1</sub> is a cardinal
- a. *jedn-o-rog* ‘unicorn’ ← *jedan* ‘one’ + *rog* ‘horn’ SC
  - b. *odn-o-obraz-ie* ‘uniformity’ ← *-odn-* ‘one’ + *-ob.raz-* ‘form.ROOT’ + *-ij-* ‘-ness’R
- (9) M<sub>1</sub> can even be a functional adjective/pronoun/quantifier
- a. *mnog-o-storon-n-ij* ‘multifaceted’ ← *mnogo* ‘many’ + *storona* ‘side’ + *-n-* ‘-y’ R
  - b. *sam-o-ljub-ie* ‘amour-propre’ ← *sam* ‘self’ + *-ljub-* ‘love.ROOT’ + *-ij-* ‘-ness’ R

For all non-verbal M<sub>1</sub>, the linking vowel is [o] (except when there is none, see below)

The only exceptions are when the linking morphology is more specifically nominal:

- (10) Linking can be done by case
- a. *brat-u-čed* ‘nephew’ ← *brat* ‘brother’ + *-u* (DAT) + *čedo* ‘child’ SC
  - b. *Bog-u-mil* ‘Bogumil’ (proper name, lit., ‘God-pleasing’) ← *bog* ‘god’ + *-u* (DAT) + *mil* ‘pleasant’
- obligatorily for some numerals in Russian
- c. *tri-ox-nog-ij* ‘three-legged’ ← *tri* ‘three’ (GEN: *tri-ox*) + *noga* ‘leg’ + *ø* ‘-y’ R
  - d. *p’at-i-nog-ij* ‘five-legged’ ← *p’ati* ‘five’ (GEN: *p’ati*) + *noga* ‘leg’ + *ø* ‘-y’

So when M<sub>1</sub> is [–V], it is flagged by the linking vowel

This [±V] juxtaposition clearly shows that M<sub>1</sub> is not devoid of lexical category

See Borer 2015 for evidence that the [±V] contrast may be universal and Gouskova 2021 for its relevance for the affixes-as-roots hypothesis

### 3.4. M<sub>2</sub> as a root

M<sub>2</sub> in compound nouns can be either a noun or a verb:

- (11) a. *jedn-o-rog* ‘unicorn’ ← *jedan* ‘one’ + *rog* ‘horn’ noun, SC
- b. *nos-o-rog* ‘rhinoceros’ ← *nos* ‘nose’ + *rog* ‘horn’ R

- (12) a. *ljud-o-žder* ‘cannibal’ ← *ljudi* ‘people’ + *-žder-* ‘devour’ verb, SC  
 b. *sam-o-gon* ‘moonshine’ ← *sam* ‘self’ + *-gün-* ‘chase.ROOT’ R

Irrespective of whether the resulting noun contains a nominalizing suffix:

- (13) a. *oč-e-vid-ac* ‘witness’ ← *oči* ‘eyes’ + *-vid-* ‘see.ROOT’ + *-ac-* (-er.AGT) SC  
 b. *viš-e-bož-ac* ‘polytheist’ ← *-viš-* ‘higher’ + *bog* ‘god’ + *-ac-* (-er.AGT)  
 c. *m<sup>i</sup>as-o-rub-k-a* ‘meat grinder’ ← *m<sup>i</sup>aso* ‘meat’ + *-rub-* ‘chop.ROOT’ + *-k-*<sub>DIM</sub> R  
 d. *verti-xvost-k-a* ‘a flirt’ ← *verteti* ‘to turn’ + *xvost* ‘tail’ + *-k-*<sub>DIM</sub>

Can M<sub>2</sub> here be a root?

For: the verbal theme is absent (yet it is also absent in deverbal nouns formed with the same suffixes outside of compounds):

The suffix *-ec-* is not productive outside of compounding in Russian, but *-k-* is

- (14) a. *kupec* ‘merchant’ ← *kup-i-ti* ‘to buy’ (if the theme were retained: \**kuplec*)  
 b. *rubka* ‘chopping’ ← *rub-i-ti* ‘to chop’ (if the theme were retained: \**rubika* or \**rubl’ka*, though phonology can be also made to force *rubka*)

Both suffixes are category-neutral outside compounds:

- (15) a. *bel-ac* ‘white person’ ← *bel* ‘white’ SC  
 b. *bor-ac* ‘fighter’ ← *boriti se* ‘to fight’  
 c. *bosan-ac* ‘Bosnian’ ← *Bosnia* ‘Bosnia’  
 (16) a. *zel’on-k-a* ‘brilliant green’ (a disinfectant) ← *zel’onyj* ‘green’ R  
 b. *protir-k-a* ‘wiping out’ ← *protirati* ‘to wipe clean’  
 c. *ruč-k-a* ‘a handle’ ← *ruka* ‘a hand’

Even with null-derived compounds the corresponding covert deverbal suffix (which is what triggers the ablaut in yer-containing stems) is available:

- (17) a. *gon* ‘rut’, GEN.SG: *gona* ← *gnati* ‘to chase’ ([[gün-a<sub>TH</sub>]-t<sub>INF</sub>]) ‘to chase’ R  
 b. *zakat* ‘sundown’ ← *zakatiti* ([[[[za<sub>PFX</sub>.kat<sub>V</sub>]-i<sub>TH</sub>]-t<sub>INF</sub>]-s<sub>aREFL</sub>]) ‘to roll behind’  
 c. *ispad* ‘disorderly conduct’ ← *izpadati* ([[[[iz<sub>PFX</sub>.pad<sub>V</sub>]-a<sub>TH</sub>]-t<sub>INF</sub>]) ‘to fall out’ SC

Such deverbal compounding always yields masculine nouns of the declension class I (the root *-pis-* is an exception)

The fact that such nominalizations **can include aspectual prefixes** (17b, c) strongly suggests that they are deverbal rather than root-derived

The lack of a theme vowel can therefore be attributed to truncation (phonology) rather than to the lack of the verbal category *per se*

Irrespective of whether such nominalizations involve a root or a categorized stem, this issue is broader than that of compounding

#### 4. DVANDVA COMPOUNDS

**Dvandva** compounds are semantically intersective and involve two clear nouns characterized by nominal declension:

- (18) a. *Kupila sam sodu/soda vodu.* SC  
 bought.SG be.PRES.1SG soda.ACC/NOM water.ACC  
*I bought a soda.*  
 b. *s izboj- čitalnej* R  
 with log cabin.INS reading-room.INS  
*with a village library & reading room*

There is no question about the lexical category of both  $M_1$  and  $M_2$  in dvandva compounds

## 5. INTERMEDIATE SUMMARY

The  $[\pm V]$  category of  $M_1$  is indicated by the imperative inflection (for  $V_1$ -compounds) or by the linking vowel (for non- $V$  compounds)

The relevant criterion seems to be conjugation vs. declension (there are no linking vowels for words derived from PPs), so the linking vowel seems to be an inflectional suffix

The information whether a stem conjugates or declines is categorial information, so the roots (or stems) involved in inflected compounds are not acategorical

Furthermore, inflected compounds may be interpreted idiosyncratically ((3b), (4b), (5), (6b), etc.), showing that a categorized  $M_1$  is no impediment for special meaning (contra Steddy).

Maybe inflected compounds do not involve roots at all?

## 6. UNINFLECTED COMPOUNDS

Both Russian (Shagalova 2003, Yanovich 2006, Kapatsinski and Vakareliyska 2013, among others) and Serbo-Croat (Bidwell 1969, Surdučki 1978, etc.) have nominal compounds with an uninflected  $M_1$  (henceforth *uninflected compounds*):

Germanic borrowings aside, these are a lot more frequent in Serbo-Croat than in Russian

- (19) a. *rak-rana* ‘greatest problem’ ← *rak* ‘cancer’ + *rana* ‘wound’ SC  
 b. *žar-ptica* ‘Firebird’ ← *žar* ‘ember, heat’ + *ptica* ‘bird’ SC/R  
 c. *stormtrap* ‘jacob’s ladder’ ← *štor* ‘sea storm’ + *trap* ‘ship/plane ladder’ R

They productively use nominal loanwords as  $M_1$  (these are independently used as nouns) but neither adjectival nor verbal ones

While typically, in both Russian and Serbo-Croat,  $M_1$  belongs to the Class I masculine noun declension, characterized by a zero ending in the nominative, in some cases  $M_2$  is a feminine Class II noun. The nominative *-a* here shows that  $M_2$  is not a bare root (a bare root would be consonant-final):

- (20) *bez data- štampa* R  
 without date.NOM stamp.GEN (NOM.SG: *data* ‘date’, GEN.SG: *daty*, ROOT: *-dat-*)  
*without a timestamp*

$M_1$  can be themselves derived, clearly showing non-root status:

- (21) *iz lutka- filma* SC  
 from doll.NOM movie.GEN (NOM: *lutka* ‘doll’, GEN: *lutke*, ROOT: *-lut-* + *-k-* (dim.))  
*from a puppet movie*

Russian, however, has a subset of uninflected compounds whose  $M_1$  very much looks like a bare and maybe acategorical root:

- (22) a. *social- demokrat*  
 social democrat  
*a social democrat*  
 b. *jaxt- klub* (from *jaxta* ‘a yacht’)  
 yacht club  
*a sailing club*

In such compounds  $M_1$  can be bound stems (*-social-* cannot be used as an independent word, *-jaxt-* can only be used with declension class-II inflection or as part of another word)

Bound stems may have a lexical category (in fact, *-social-* is probably as nominal as *-jast-*)

Furthermore, this may be part of a different phenomenon. Russian also has compounds with a truncated  $M_1$  (and even  $M_2$ ) where truncation may fail to select a root (Molinsky 1973):

- (23) a. *goskomitet* ‘state committee’ ← *gosudarstvo* ‘state’ + *komitet* ‘committee’  
 b. *diztoplivo* ‘diesel fuel’ ← *dizel* ‘diesel’ + *toplivo* ‘fuel’  
 c. *molzavod* ‘milk factory’ ← *moloko* ‘milk’ + *zavod* ‘factory’

However this process is analyzed, assuming acategorical roots is not enough to account for it

## 7. CONCLUSION

Russian and Serbo-Croat compounds do not seem to offer any evidence for acategorical roots:

- $V_1$ -compounds are inflected
- uninflected compounds systematically have a nominal  $M_1$
- other non- $V_1$ -compounds involve a linking vowel

A subset of exocentric interfixed compounds may be taken to argue for the lack of category for  $M_2$  too, as  $M_2$  can be a noun (6a-c) or a verb (6d), (12). Yet the category issues they raise are independent of compounding

### 7.1. Special cases 1: interfixed $V_1$ compounds

There are a few examples (Vinogradov 1999, see also Fedorova 2015, Tolstaya 2020) where [o] is used as a linker for a verbal  $M_1$ :

- (24) a. *lupoglazyj* ‘pop-eyed’ ← *lupati* ‘to blink (dial.)’ + *glaz* ‘eye’ adjectives  
 b. *pučeglazyj* ‘goggle-eyed’ ← *pučiti* ‘to expand from within’ + ‘eye’  
 (25) a. *lizobljud* ‘lick-spittle’ ← *lizati* ‘to link’ + *bljudo* ‘dish’ (cf. also *bljudoliz*) nouns  
 b. *ščelkopěr* ‘scribbler’ ← *ščělkati* ‘to click’ + *pero* ‘feather, quill’  
 c. *vertoprax* ‘flibbertigibbet’ ← *verteti* ‘to turn’ + *prax* ‘dust, ashes’  
 d. *skalozub* ‘scoffer’ (arch., the modern form is *zuboskal*) ← *skaliť* ‘to bare (of teeth only)’ + *zub* ‘tooth’  
 e. *lomonos* ‘nose-breaker (arch.), clematis’ ← *lomati* ‘to break’ + *nos* ‘nose’  
 f. *ležebok/ležeboka* ‘lie-abed’ ← *ležati* ‘to lie’ + *bok* ‘side’

The existence of one parasyntetic  $V_1$ -compound with a linking vowel strongly suggests that  $M_1$  is not regarded as a verb here: there are no other parasyntetic  $V_1$ -compounds

Also many of these verbal roots can form null-derived deverbal nouns, which used to be far more productive

- (26) *triasoguzka* ‘wagtail’ ← *trjasti* ‘to shake’ + *guzno* ‘butt’ + -k- parasyntetic

Most of them are archaic and synchronically irreducible to the originally motivating roots

In Russian the numbers of imperative  $V_1$ -compounds and interfixed ones are comparable, but neither is productive

In Serbo-Croat, only imperative  $V_1$ -compounds are possible

### 7.2. Special cases 2: single-accent compounds

Generally compounds have more than one stress, with the secondary stress falling on  $M_1$  (see Gouskova 2010 for a discussion)

But some compounds only have one stress:

- (27) a. *svrsishodan* ‘purposeful’ ← *svrha* ‘purpose’, DAT: *svrsi* + *shodan* ‘fitting’ SC  
 b. *čuvárkuća* ‘Easter egg’, ‘houseleek’ ← *čúvar* ‘watchman.AGT’ + *kùća* ‘house’

- c. *Djurdjevdan* ‘St. George’s day’ ← *Djurdj-ev* ‘George-POSS’ + *dan* ‘day’
- d. *dàngubiti* ‘to waste time’ ← *dan* ‘day’ + *gubiti* ‘lose’
- e. *starmal* ‘young and old’ ← *star* ‘old’ + *mal* ‘small’

A single accent does not indicate the lack of a lexical category for  $M_1$ :  $M_1$  in (27a-c) are derived or inflected nouns or adjectives.

### 7.3. Special cases 3: Russian miscellanea

Among special cases:

(28) *stop-kran* ‘emergency brake’

In principle, *stop* can be an imperative here (this is how it is used)

- (29) a. *cari-puška* ‘Tsar cannon’
- b. *cari-kolokol* ‘Tsar bell’

These are proper names and non-productive

Traditional grammars: *tsar* was originally an expression of high degree, listing as well:

- (30) a. *gore-oxotnik*  
           sorrow hunter  
           *a mess of a hunter*
- b. *čudo-derevo*  
           miracle tree  
           *a miraculous tree*

Both are productive

The first component does not decline:

- (31) a. *pro cari-pušku*  
           about tsar cannon.ACC  
           *about the Tsar bell*
- b. *pro gore-oxotnika*  
           about sorrow hunter.ACC  
           *about this mess of a hunter*

Neuter nominative ([o]/[e]) is indistinguishable from the interfix

Attributive:

- (32) *son-trava*  
       sleep-grass  
       ‘pasqueflower’

Compounding is not needed for special interpretation, cf. *Tasmanian tiger*

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