Semantically-conditioned two-suffix constructions in Bulgarian and English

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Goals

- to study two-suffix combinations in Bulgarian and English
- to uncover relevant, specific semantic factors in affix ordering
- to establish whether two-suffix combinations constitute sublexical, morphological constructions

Structure of the talk

- Preliminaries
- Languages analyzed and sources of data
- The current proposal
- Illustrations from Bulgarian and English
- Morphological constructions
- Discussion
- Conclusions

Preliminaries I

- Of the numerous possible combinations of affixes in a language a few are realized. Why?

- Numerous answers provided (for English and Bulgarian)

  Fabb 1988; Hay 2002, 2003; Hay and Bayeen 2003; Hay and Plag 2004; Manova 2010, 2011a,b; Plag 1996, 1999; Plag and Bayeen 2009, *inter alia*

Preliminaries II

- No consensus as to what the mechanisms that govern these restricting processes are and what can exhaustively explain the linguistic facts.
- Numerous factors have been identified:
  1) phonological
  2) morphological
  3) syntactic
  4) semantic
  5) parsability/processing
  6) base/affix selectional restrictions

Preliminaries III

- In the traditional view affixes as morphemes are the smallest meaningful elements in language (Bloomfield 1933; Hocket 1947).

- Theories such as Split morphology (Beard 1987, 1995), Realizational morphology (Anderson 1992; Aronoff 1994, Stump 2001) & Construction morphology (Booij 2010) view affixes as lacking semantics. Affixes get semantically interpreted in words and/or constructions.

Preliminaries IV

- General lack of attention to affixal semantics and the semantics of affix stacking in the literature, especially on the languages of Europe (see the discussion in Lieber 2005).
- Nevertheless, there are exceptions:

  Zimmer (1964) on negative prefixes; Aronoff and Cho (2001) on *-ship* suffixation and Lieber on principles of the combinations of bases and derivational affixes (2005).

Preliminaries V

- The relevance of semantics to affix ordering has been frequently noticed (Plag 1996, 1999; Zirkel 2010, etc.) but the specific semantic factors remain vague.

  **-ship-ess; *-ness-ess*

- General semantic principles in explaining affixation models:
  - Relevance model (Bybee 1985)
  - Scopal model (Rice 2000)
  - Redundancy Restriction (Lieber 2005, based on Plag 1999).
  - Blocking (Aronoff 1976, Rainer 1988)

Languages studied and sources of data

- English and Bulgarian
- A lot of research on English affix ordering; very little research on Bulgarian.

- The data for Bulgarian have been extracted from:
  - Bulgarian National Corpus
  - Bulgarian Reverse Dictionary (2011)
  - Word-formation Dictionary of Modern Literary Bulgarian (1999)
  - Dictionary of New Words in Bulgarian (2010)

- The data for English have been extracted from:
  - British National Corpus
  - Reverse Dictionary of Present-Day English (1971)
  - Oxford English Dictionary (1994), 2nd Edition, on CD-ROM

The current proposal I

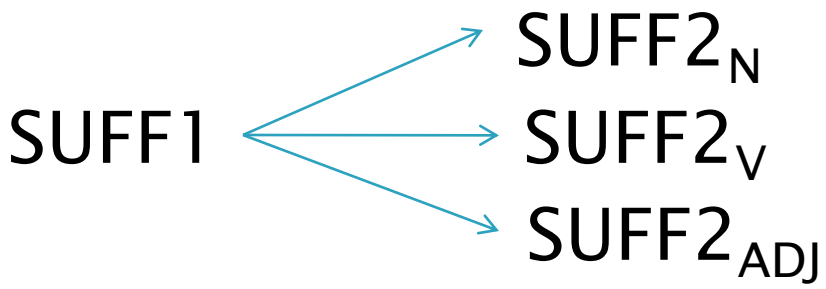
- Bottom-up, data-driven approach, analysis in terms of two suffix combinations (with no reference to a lexical base)

- Studying SUFF1-SUFF2 in terms of salient semantic factors

The current proposal II

1) only non-evaluative derivational suffixes considered (significant differences in the behaviour of evaluative and non-evaluative suffixes in Bulgarian, only evaluative suffixes can be repeated on adjacent cycles, Manova 2010)

2) affix ordering is lexical category sensitive



(Manova 2011a)

The current proposal III

- SUFF1 (person) – SUFF2 (possessive/relational adjective)
- SUFF1 (person) – SUFF2 (abstract and collective noun)

Bulgarian: SUFF1 *–ač*SUFF2 *–eski;* SUFF1 *–ač* SUFF2 *–estvo*

zubr–ač, zubr–ač–eski, zubr–ač–estvo

'crammer, crammer's, being a crammer, crammers' (coll.)

English: SUFF1 *–or*SUFF2 *–y;* SUFF1 *–or*SUFF2 *–ship*

advis–or, advis–or–y; advis–or–ship

The current proposal IV

- SUFF1 (object) – SUFF2 (relational/qualitative adjective)

  Bulgarian: SUFF1 *–ač* SUFF2 *–en*

  prekusv–ač –en ‘switch, circuit-breaker’

  English: SUFF1 *–ary* SUFF2 *–ian*

  abeced–ary, *abeced–ar–ian*

SUFF 1 deriving PERSON in Bulgarian (I)

No	SUFF1	SUFF2 according to lexical category	Examples	Translations
1.	**- tel$_1$**	ADJ: -ski N: -stvo	*uči-tel; uči-tel-ski* *uči-tel-stvo*	*teacher; teacher's* *being a teacher, teachers (collect.)*
2.	**- ar$_1$**	ADJ: -ski N: -stvo; N: - nica	*sladk-ar; sladk-ar-ski* *sladk-ar-stvo*	*confectioner; confectionary*
3.	**- ak$_1$**	ADJ: -ski N: -ina N: -stvo	*div-ak; div-aš-ki* *div-aš-ina; div-ač-estvo*	*savage; savage's; like a savage; savagery; being a savage; savages (collect.)*
4.	**- er$_1$**	ADJ: -ski N: -stvo	*bank-er; bank-er-ski* *bank-er-stvo*	*banker; banker's* *being a banker; bankers (collect.)*
5.	**-or$_1$**	ADJ: -ski N: -stvo	*instrukt-or;* *instrukt-or-ski;* *instrukt-or-stvo*	*instructor; instructor's* *being an instructor; instructors (collect.);*

SUFF 1 deriving PERSON in Bulgarian (II)

No	SUFF1	SUFF2 according to lexical category	Examples	Translations
6.	**- džija/čija**	ADJ: -ski N: -stvo N: -nica	*sladoled-čija* *sladoled-čij-ski* *slodeld-čij-stvo* *ladoled-čij-nica* *han-džija; han-džij-ski;* *han-džij-stvo*	*ice-cream maker/seller* *ice-cream maker's/seller's* *being an ice-cream maker/seller;* *ice-cream makers/sellers* *(collect.); place where ice-cream* *is made/sold*
7.	**-an$_1$**	ADJ: -ski N: -stvo	*velik-an; velik-an-ski* *velik-an-stvo* *slad-ur-an-ski* *slad-ur-an-stvo*	*giant* *giant's* *being a giant; giants (collect.)*
8.	**-ant$_1$**	ADJ: -ski N: -stvo	*proekt-ant* *proekt -ant-ski* *proekt -ant-stvo*	*designer; designer's* *being a designer; designers* *(collect.)*
9.	**-ur$_1$**	ADJ: -ski N: -stvo	*slad-ur; slad-ur-ski* *slad-ur-stvo*	*cutie; cutie's* *being a cutie; cuties (collect.)*

SUFF 1 deriving OBJECT in Bulgarian

No	SUFF1	SUFF2 according to lexical category	Examples	Translations
1.	**-tel$_2$**	ADJ: -en	*udalži-tel* *udalži-tel-en*	*extension*
2.	**- ar$_2$**	ADJ: -en	*barzov-ar* *barzov-ar-en*	*immersion heater*
3.	**-ant$_2$**	ADJ: -en	*relaks-ant* *relaks-ant-en*	*relaxing agent/medicine*
4.	**- ač$_2$**	ADJ: -en	*vlek-ač* *vlek-ač-en*	*tug, tow-boat*
5.	**-(t)or$_2$**	ADJ: -en	*separa-tor* *separa-tor-en*	*separator*

SUFF 1 deriving PERSON in English (I)

No	SUFF1	SUFF2 according to lexical category	Examples
1.	**- er_1/ -or_1/ -ar_1**	ADJ: - y; -ly ; -ish; N: -ship; -dom; -ism; -age	assess-or-y; *assess-or-ship; digger-dom; dapp-er-ism; bugg-er-age*
2.	**- ant_1 / -ent_1**	ADJ: ish N: -ship	*account-ant* *account-ant-ship*
3.	**- ian_1**	ADJ: ic N: -ship; -dom	*pre-Christ-ian-ic* *custod-ian-ship; Christ-ian-dom*
4.	**- man_1**	ADJ: -ish N: -ship	*police-man-ish;* *air-man-ship*
5.	**- ary_1**	N: -ness	*access-ari-ness*
6.	**- ist_1**	ADJ: - ic; -y N: -dom; -ship; -hood V: -ize	*art-ist-ic; tour-ist-y* *art-ist-dom; tour-ist-ship; tour-ist-hood;* *tourist-ize*
7.	**-ee**	ADJ: ish N: -ship; -ism	*group-ee-ish;* *group-ee-ism; employ-ee-ship;*

SUFF 1 deriving OBJECT in English

No	SUFF1	SUFF2 according to lexical category	Examples
1.	**- er_2 /-or_2**	ADJ: -y	*accelerat-or; accelerat-or-y*
2.	**- ary_2**	ADJ: *-ian*	*abeced-ary; abeced-ar-ian*
3.	**- ent_2 /-ant_2**	ADJ: Ø	*abrad-ant*
4.	**- man_2**	ADJ: -ly	*snow-man-ly*

Morphological Constructions

- Word-formation patterns are abstract schemas that generalize over sets of existing complex words with a systematic correlation between form and meaning in a hierarchically-organized networks of constructions.
- Semantically-determined two-suffix combinations in English and Bulgarian of the type $[[x_V]$ *-telstvo*$_N]_N$/ $[[x_V]$ *-ership*$_N]_N$ 'all who V' constitute sublexical constructions.

Person vs. Object in suffixation

- Semantic notions of general cognitive significance (Pustejovski 1995, Jackednoff 2010)

- Lexical category specification of the suffixes, along with, conceptual intensional semantics determine two-suffix combinations (Manova in press)

Sublexemic constructional idioms

- Semantically-determined two suffix combinations

  SUFF1 $_{person}$: Bulgarian [[-tel][-ski]]; [[-tel][-stvo]]

  English [[- ee][-ish]]; [[-ee][-ism]]

  SUFF1 $_{object}$: Bulgarian [[-tel][-en]]; X

  English [[-ary][-ian]]; X

  - Schema unification – sublexemic affix constructional idioms in Bulgarian

    $[X\ [-telen]_{Aobject}]_{Aobject} \longrightarrow [X\ [-tel_N]_N\text{-}en_{Aobject}]]_{Aobject}$ or [-telen]

    $[X\ [-telski]_{Aperson}]_{Aperson} \longrightarrow [X\ [-tel_N]]_N\text{-}ski_{Aperson}]]_{Aperson}$ or [-telski]

  and in English – semantically specified constructional schemas (with variability of exponence >10)

Discussion I: Strength of the SUFF1–SUFF2 combinations

If discernible object → [[–*tel*][–*en*]], if not [–*telen*])

udalži → [udalži– [–tel]] → [udalži–[[–tel][–en]]]
'extend/ extension cord /extension'

uča → [[po–][–uča–]] → *poučitel [[po–][uči–][–telen]]]
'learn, instruct, instructive /educational'

–*ist* and –*istic* in English as allomorphs (Aronoff 1976; Lieber 2005). The complex network of –*ist* and –*ic* combinations (*art, art–ist, art–ist–ic* vs. *sadist–ic* vs. *totemistic*)

Discussion II – The relevance and motivation of Person vs. Object

- Domain specific representations of Person and Object in the mental lexicon
  (Barsalou et al. 2003; Damasio et al. 2004)

- Face recognition vs. object recognition
  (Eysenck and Keane 2010)
  Interestingly, *lice* 'face' in Bulgarian means both 'face' and 'person'

Discussion III
SUFF2 on newly borrowed words

- Newly borrowed words in Bulgarian from English subscribe to the established stacking pattern:

  asistent-ski; asitent-stvo

  repelent-en; repelent- ∅

- [-en] on a new, unfamiliar word indicates object status
- [-ski] on a new, unfamiliar word indicates person status

Discussion IV
Relevance of argument accounts for SUFF1-SUFF2 constructions

- *-er* vs. *-ee*

  Uniform behaviour in subsequent suffixation:
  - [[-er]-**ship**] and [[-ee]-**ship**] - *readership*, *traineeship*

- Argument-based accounts of SUFF1-SUFF2 constructions seem irrelevant

Discussion V
Bheavioural profile of suffixes

The behaviour of suffixes in further suffixation processes indicates homonymous rather than polysemous nature of the formal identity between *-tel*$_1$ and *-tel*$_2$; *-er*$_1$ and *-er*$_2$, etc.

(see Manova in press; on behavioural profiles in cognitive semantics see Gries and Divjak 2009; contra Booij 2010; Rainer 2005)

Conclusions

- In English and Bulgarian up to 85% of the two suffix combinations reported in the different studies have constructional nature. In the constructions, a SUFF1 combines with only one SUFF2 of a particular word class, N, ADJ or V (Manova 2011a) and the constructions are either fixed or predictable (Manova 2011b).
- The behavioural profile of SUFF1 in further combinability can be used to diagnose the distinction between polysemous and homonymous status of formally identical suffixes (cf. Manova, in press).
- Suffixes seem to be minimally semantically specified in the lexicon for Person and Object.

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