

Morphologische Theorien

Minimalistische Morphologie

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Basic Assumptions

Lit.: Wunderlich (1996, 1997)

- pre-syntactic approach
- lexical-incremental approach
- no abstract morphemes
- no zero affixes
- maximal underspecification
- no inflection class features
- three information sources:
 - lexical entry of the stem (plus stem alternations)
 - lexical entry of the affix
 - organization of paradigm structures
- paradigms as filtering devices blocking overgeneration: compatibility and specificity

- (1) **Principles of affixation:**
- a. Monotonicity: The output of affixation must be more informative than the input.
 - b. Adjacency: The input requirements of affixes must be met locally.
 - c. Affix order: The order of affixes must conform to the hierarchy of functional categories, i.e., affixes that express lower ranked categories must be attached first.
- (2) **Paradigm principles:**
- a. Completeness: Every cell of a paradigm must be occupied.
 - b. Uniqueness: Every cell of a paradigm is uniquely occupied.

Observation:

Most candidate word forms have fewer specifications than the form that defines the paradigm.

(3) **Selection Principles:**

- a. Output Specificity: Word forms with more feature specifications take precedence over those with fewer feature specifications.
- b. Input Specificity: Word forms with underlying (lexically specified) feature values take precedence over those with derived values.
- c. Simplicity: Strings made of fewer affixes take precedence over those made up of more affixes.

(Note: Simplicity is ranked below Output Specificity.)

Basic assumption:

Word forms that are maximally specific define the dimensions of a paradigm!

Consequence:

In contrast to what is the case in DM and PFM, specificity does not select the most specific (underspecified) form for a **fully specified** (= syntactic) context; rather, it selects the most specific (underspecified) form for a paradigm, which need not be fully specified.

(4) **Affixes** (verb inflection in German):

- a. /t/ → [+2,+pl]
- b. /st/ → [+2]
- c. /n/ → [+pl]
- d. /te/ → [+pret]
- e. /e/ → [+1]/_[-pret]
- f. /t/ → []/_[-pret]

(5) **Simple application** (weak verbs, present tense):

	[+pl]	[-pl]
[+2]	bau-t	bau-st
[-2]	bau-n	bau-e

Note:

Given that affixation by (the most specific marker) /t/ instantiates the dimensions of the present tense (indicative) paradigm, it seems that an additional assumption might be necessary to integrate 3.SG. forms into the paradigm: $[\pm 1]$ is not a dimension introduced by the most specific marker. Then again, /t/ may define a subparadigm of its own.

(6) **Candidate word forms** (strong verb inflection in German):

warf-t	[+2,+pl,+pret,+V]	
warf-n-t	[+2,+pl,+pret,+V]	*Simp
warf-n-st	[+2,+pl,+pret,+V]	*Simp
werf-te-t	[+2,+pl,+pret,+V]	*In-Spec, *Simp
werf-te-n-t	[+2,+pl,+pret,+V]	*In-Spec, *Simp
werf-te-n-st	[+2,+pl,+pret,+V]	*In-Spec, *Simp
<hr/>		
warf-st	[+2,+pret,+V]	
werf-te-st	[+2,+pret,+V]	*In-Spec, *Simp
<hr/>		
warf-n	[+pl,+pret,+V]	
werf-te-n	[+pl,+pret,+V]	*In-Spec, *Simp
<hr/>		
warf	[+pret,+V]	
werf-te	[+pret,+V]	*In-Spec, *Simp

Feature Deletion by Constraint Interaction

Background:

MM has a technical means that is comparable in its effects to impoverishment (DM) and rules of referral (PFM): The interaction of violable constraints in an optimality-theoretic system may lead to unfaithful output realization of features that are part of the input (MAX, DEP violations).

Empirical domain:

Genitive/accusative syncretism with animate nouns in Russian

Lit.: Wunderlich (2004)

(7) Russian nouns with animacy split in forms that are used in accusative contexts

	inanimates				animates		
	class 2	class 3	class 1	class 4	class 2	class 3	class 1
	fem. 'map'	fem. 'door'	masc. 'table'	neut. 'word'	fem. 'squirrel'	fem. 'mother'	masc. 'student'
N.sg.	kárt-a	dver'	stol	slov-o	bélk-a	mat'	studént
A.sg.	kárt-u	dver'	stol	slov-o	bélk-u	mat'	studént-a
G.sg.	kárt-y	dvér-i	stol-á	slov-á	bélk-i	máter-i	studént-a
N.pl.	kárt-y	dvér-i	stol-ý	slov-á	bélk-i	máter-i	studént-y
A.pl.	kárt-y	dvér-i	stol-ý	slov-á	bélok	máter-ej	studént-ov
G.pl.	kart	dver-ěj	stol-óv	slov	bélok	máter-ej	studént-ov

(8) Case features:

- a. Nom = ()
- b. Acc = (+hr)_V
- c. Gen = (+hr)_N

(9) Suffixes

- | | | |
|----|--------------------------------------|----------------------|
| a. | /-y/, +pl | N.pl (class 1,2 & 3) |
| b. | /-a/, +pl/neuter | N.pl (class 4) |
| c. | /-u/, (+hr) _V / a] | A.sg (class 2) |
| d. | /-y/, (+hr) _N / a] ∨ PAL] | G.sg (class 2 & 3) |
| e. | /-a/, +hr / C] ∨ o] | A/G.sg (class 1 & 4) |
| f. | C], +pl,+hr / a] ∨ o] | A/G.pl (class 2 & 4) |
| g. | /-ej/, +pl,+hr / PAL] | A/G.pl (class 3) |
| h. | /-ov/, +pl,+hr | A/G.pl (class 1) |

(10) Lexical entries for some Russian case affixes

	inanimates			animates		
	class 2	class 3	class 1	class 2	class 3	class 1
	'map'	'door'	'table'	'squirrel'	'mother'	'student'
N.sg.	a]	PAL]		a]	PAL]	
A.sg.	/-u/, (+hr) _V			/-u/, (+hr) _V		
G.sg.	/-y/, (+hr) _N		/-a/, +hr	/-y/, (+hr) _N		/-a/, +hr
N.pl.	/-y/, +pl			/-y/, +pl		
A.pl.						
G.pl.	C], +pl,+hr	/ej/, +pl,+hr	/ov/, +pl,+hr	C], +pl,+hr	/ej/, +pl,+hr	/ov/, +pl,+hr

Observation:

The interaction of the suffixes alone does not yet make the correct predictions in all cases.

Assumption:

In addition, the distribution of suffixes is regulated by a system of violable constraints in an optimality-theoretic approach.

(11) **Constraints**

- a. $*(+hr)/_V$ inanim. Do not realize the feature [+hr] in accusative contexts of inanimate nouns.
- b. MAX(+hr). Realize the feature [+hr].
- c. Ranking of the constraints:
 $*(+hr)/_V$ inanim \gg MAX(+hr) \gg $*(+hr)/_V$ anim

(12) **More constraints**

- a. MAX(+hr)/ [-pl, a]
- b. SPECIFICITY
Choose the affix with the more specific selectional information.
- c. COMPATIBILITY
Do not insert a form in a context in which the categorial specifications are incompatible.

(13) **Ranking of the constraints**

SPEC, COMP, MAX(+hr)/[-pl, a] \gg $*(+hr)/_V$ -anim \gg MAX(+hr)

Put into words: “Realize both accusative and genitive, unless inanimate nouns occur in accusative contexts, excluding class 2 nouns (ending in -a, where there exists the accusative morpheme /-u/).”

(14) Selection of optimal forms in an accusative singular context

a. Inanimate class 2 nouns (a])

	SPEC	COMP	MAX(+hr)/ -pl, a]	*(+hr)/ _v -anim	MAX(+hr)
karta			*!		*
kart-y		*!			
→ kart-u					

b. Inanimate class 1 nouns (masc)

	SPEC	COMP	MAX(+hr)/ -pl, a]	*(+hr)/ _v -anim	MAX(+hr)
→ stol					*
stol-a				*!	
stol-y		*!			

(15) a. Animate class 1 nouns (masc)

	SPEC	COMP	MAX(+hr)/ -pl, a]	*(+hr)/ _v -anim	MAX(+hr)
student					*!
→ student-a					
student-y		*!			

b. Animate class 3 nouns (PAL)]

	SPEC	COMP	MAX(+hr)/ -pl, a]	*(+hr)/ _v -anim	MAX(+hr)
→ mat'					*
mater'-i		*!			

(16) A/N and A/G syncretisms in Russian nouns

A/N syncretism		A/G syncretism	
appears because	is blocked because	appears because	is blocked because
no affix is available (class 3)	an affix is available (class 2)	only underspecified affixes are available (class 1 and plural)	two specific affixes are available (class 2)
a higher-ranked constraint blocks the existing affix (class 1, class 4)	an even higher-ranked constraint forces the existing affix to appear (class 2)		only one specific genitive affix is available (class 3)

Note:

This analysis can be extended to the plural.

(17) Selection of optimal forms in an accusative plural context

a. Inanimate class 2 nouns (a])

	SPEC	COMP	MAX(+hr)/ -pl, a]	*(+hr)/ _v -anim	MAX(+hr)
→ kart-y					*
kart-ov	*!			*	
kart				*!	

b. Animate class 2 nouns (a])

	SPEC	COMP	MAX(+hr)/ -pl, a]	*(+hr)/ _v -anim	MAX(+hr)
belk-i					*!
belk-ov	*!				
→ belok					

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