

## Theorien der Morphologie 9

Modul 006-1006: Grammatiktheorie, SoSe 2019

Di, 11:15–12:45, HSG, HS 20

### Minimalistische Morphologie

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*Lit.*: Wunderlich (1996; 1997)

## 1. The Original Model

### Basic Assumptions

- 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:

- Monotonicity: The output of affixation must be more informative than the input.
- Adjacency: The input requirements of affixes must be met locally.
- 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:

- Completeness: Every cell of a paradigm must be occupied.
- 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:

- Output Specificity: Word forms with more feature specifications take precedence over those with fewer feature specifications.

- Input Specificity: Word forms with underlying (lexically specified) feature values take precedence over those with derived values.
- 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):

- /t/ → [+2, +pl]
- /st/ → [+2]
- /n/ → [+pl]
- /te/ → [+pret]
- /e/ → [+1]/\_[-pret]
- /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: [±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
warf-st	[+2, +pret, +V]	
werf-te-st	[+2, +pret, +V]	*In-Spec, *Simp
warf-n	[+pl, +pret, +V]	
werf-te-n	[+pl, +pret, +V]	*In-Spec, *Simp
warf	[+pret, +V]	
werf-te	[+pret, +V]	*In-Spec, *Simp

## 2. Integrating Optimality Theory

### 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:

- Nom = ( )
- Acc = (+hr)<sub>V</sub>
- Gen = (+hr)<sub>N</sub>

#### (9) Suffixes

- /-y/, +pl N.pl (class 1,2 & 3)
- /-a/, +pl/neuter N.pl (class 4)
- /-u/, (+hr)<sub>V</sub> / a] A.sg (class 2)
- /-y/, (+hr)<sub>N</sub> / a] ∨ PAL] G.sg (class 2 & 3)
- /-a/, +hr / C] ∨ o] A/G.sg (class 1 & 4)
- C], +pl,+hr / a] ∨ o] A/G.pl (class 2 & 4)
- /-ej/, +pl,+hr / PAL] A/G.pl (class 3)
- /-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) <sub>V</sub>			/-u/, (+hr) <sub>V</sub>		
G.sg.	/-y/, (+hr) <sub>N</sub>	/-a/, +hr		/-y/, (+hr) <sub>N</sub>	/-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

- \*(+hr)<sub>V</sub> inanim. Do not realize the feature [+hr] in accusative contexts of inanimate nouns.
- MAX(+hr). Realize the feature [+hr].
- Ranking of the constraints:  
\*(+hr)<sub>V</sub> inanim ≫ MAX(+hr) ≫ \*(+hr)<sub>V</sub> anim

#### (12) More constraints

- MAX(+hr)/-pl, a]
- SPECIFICITY  
Choose the affix with the more specific selectional information.
- 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] ≫ \*(+hr)<sub>V</sub> -anim ≫ 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)/ <sub>V</sub> -anim	MAX(+hr)
karta			*!		*
kart-y		*!			
→ kart-u					

b. Inanimate class 1 nouns (masc)

	SPEC	COMP	MAX(+hr)/ -pl, a]	*(+hr)/ <sub>V</sub> -anim	MAX(+hr)
→ stol					*
stol-a				*!	
stol-y		*!			

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

a. Inanimate class 2 nouns ( a ] )

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

b. Animate class 2 nouns ( a ] )

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

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

	SPEC	COMP	MAX(+hr)/ -pl, a]	*(+hr)/ <sub>V</sub> -anim	MAX(+hr)
student					*!
→ student-a					
student-y		*!			

b. Animate class 3 nouns ( PAL ] )

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

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

A/N syncretism appears because		A/G syncretism appears because	
is blocked because no affix is available (class 3)	is blocked because an affix is available (class 2)	is blocked because only underspec- ified affixes are available (class 1 and plural)	is blocked because 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.

**References**

- Wunderlich, Dieter (1996): Minimalist Morphology: The Role of Paradigms. In: G. Booij & J. van Marle, eds., *Yearbook of Morphology 1995*. Kluwer, Dordrecht, pp. 93–114.
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- Wunderlich, Dieter (2004): Is There Any Need for the Concept of Directional Syncretism?. In: G. Müller, L. Gunkel & G. Zifonun, eds., *Explorations in Nominal Inflection*. Mouton de Gruyter, Berlin, pp. 373–395.