

Swedish Adjective Patterns

En *fin-Ø* *stol*
INDEF.UTER nice-UTER.SG chair
'a nice chair'

Ett *fin-t* *bord*
INDEF.NEUTER nice-NEUTER.SG table
'a nice table'

Några *fin-a* *stolar/bord*
some nice-PLUR chairs/tables
'some nice chairs/tables'

Missing Neuter Forms

- (i) Polysyllabic adjectives with a stem ending in a long vowel + *d*
gravid [gra'vi:d] 'pregnant', *morbid* [mɔr'bi:d] 'morbid'
- (ii) Two monosyllabic adjectives with short vowels ending in *d*
rädd [rɛd] 'afraid', *fadd* [fad] 'stale'
- (iii) Certain monosyllabic adjectives with long vowels ending in *t*
lat [lɑ:t] 'lazy', *flat* [flɑ:t] 'flat'
- (iv) Certain monosyllabic adjectives with long vowels ending in *d*
pryd [pry:d] 'prude', *vred* [vre:d] 'wrathful'
- (v) Polysyllabic adjectives with final stress ending in a vowel
disträ [dist'rɛ:] 'absent-minded', *blasé* [bla'se:] 'jaded'

Common Adjective Paradigms

d-final stems:

död ('dead') [dø:d] → [dœt]

glad ('happy') [glɑ:d] → [glæt]

t-final stems:

het ('hot') [he:t] → [hæt]

slät ('smooth') [slɛ:t] → [slæt]

Vowel-final stems

ny ('new') [ny:] → [nyt]

fri ('free') [fri:] → [frit]

Two morphophonological 'rules'

Vowel shortening

Affects long final vowels when a *-t* suffix is added:

$$[ny:] + [t] = [nyt]$$

Dental assimilation

Affects dental plosives when a *-t* suffix is added:

$$[d\theta:d] + [t] = [d\theta\text{et}]$$

Vowel shortening also appears in verb paradigms

ge ('give'): [je:] → [jɛt] ('have given')
ro ('row'): [ru:] → [rʊt] ('have rowed')
fly ('flee'): [fly:] → [flyt] ('have fled')
stā ('stand'): [sto:] → [stɔt] ('have stood')

Not a phonological rule:

get ('goat') = [je:t]
rot ('root') = [ru:t]
flyt ('luck') = [fly:t]
stāt ('pomp') = [sto:t]

Previous explanations

Derivational Rules (Hellberg 1974)

Semantic Constraints (Pettersson 1990)

Traditional assumptions:

Vowel shortening and dental assimilation apply by default

Defective adjectives are formally different from non-defective ones

Productivity versus Analogy



Productivity



Degrees of Analogy

Selected Definition of Productivity:

A process which creates novel forms that do not draw any more attention to themselves than previously encountered forms

Cf. Baayen & Lieber (1991)

Hypothesis:

Neuter gender in Swedish is formed by:

[stem + *t*]

This is a productive process within certain constraints:

1. Avoid clusters of dental plosives
2. Avoid long vowels preceding plosive suffixes

Processes to avoid violating constraints:

Dental assimilation

Vowel shortening

I will argue:

Vowel shortening and certain types of dental assimilation represent unproductive processes for *all* adjectives, not only the defective ones.

Are both processes unproductive?

fadd ('stale'): [fad] → *[fat]

Shows the unproductive nature of dental assimilation

lat ('lazy'): [la:t] → *[lat]

Shows the unproductive nature of vowel shortening

These facts are supported by a pilot study using nonce adjectives with relevant phonological forms

Morphotactic Transparency

Hierarchy of Morphotactic Transparency (Dressler 1985)

- I: Intrinsic allophonic phonological rules (*excite* → *excitement*)
- II: Phonological rules – resyllabification (*exist* → *exis'tence*)
- III: Neutralizing phonological rules ([raid] → [raɪrə])
- IV: Morphophon. rules – velar softening (*electric* → *electricity*)
- V: Morphophon. rules with fusion (*conclude* → *conclusion*)
- VI: Morphophon. rules – vowel shift (*decide* → *decision*)
- VII: Weak suppletion (*child* → *children*)
- VIII: Strong suppletion (*is* → *am*)

How do learners recognize productivity?

Transparent phonological/morphological processes

Large proportion of low-frequency types

(Cf. Plag 1999:38)

Vowel shortening and dental assimilation =

Lack of transparency

Low proportion of low-frequency forms

Adjectival Morpho(phono)logical Processes

1. Add a *-t* suffix to form the neuter (productive)
2. Assimilate identical plosives (productive)
3. Assimilate same-place unstressed syllable plosives (productive)
4. Assimilate same-place stressed syllable plosives (unproductive)
5. Shorten vowels directly preceding suffixes (unproductive)
6. Use null suffixation (unproductive)
7. Use suppletion, i.e. other types of stem changes (unproductive)

The unproductive processes (4-7) all have *inherent restrictions* =

The process itself constrains productivity

Constraints blocking productivity

[*SUP]: Avoid strong and weak suppletion

[*CIP]: Avoid clusters of identical plosives (*t-t, d-d, k-k, g-g, etc.*)

[*IGA]: Avoid incorrect gender association

[*LVS]: Avoid long vowels immediately preceding the suffix

[*VSF]: Avoid vowel shortening immediately preceding the suffix

[*CSP]: Avoid clusters of similar but unidentical plosives (*d-t, etc.*)

[*ASC]: Avoid assimilation of *salient unidentical* consonants

[*NSX]: Avoid null suffixation

[*ASC] and Degree of Salience

- (i) Avoid assimilation of similar but unidentical consonants in stressed syllables in monosyllabic words = [*ASC]: [rɛd] → [rɛt] ('afraid')
- (ii) Avoid assimilation of similar but unidentical consonants in stressed syllables in polysyllabic words = [*ASC] (?): [kan'dɪd] → [kan'dɪt] (nonce adj)
- (iii) Avoid assimilation of similar but unidentical consonants in unstressed syllables in polysyllabic words: ['kɔrkəd] → ['kɔrkət] ('stupid')
- (iv) Avoid assimilation of the short consonant in a stressed syllable coda cluster: [trɪn:d] → [trɪn:t] ('chubby')
- (v) Avoid assimilation of identical consonants in stressed syllables in monosyllabic words: [trɔ:t] → [trɔ:t] ('tired')
- (vi) Avoid assimilation of identical consonants in stressed syllables in polysyllabic words: [bɪ'gɔt] → [bɪ'gɔt] ('bigoted')
- (vii) Avoid assimilation of identical consonants in unstressed syllables in polysyllabic words: ['kɔlɪt] → ['kɔlɪt] (nonce adj)

New problem:

Neuter forms that violate the constraints exist of frequent adjectives such as:

död ('dead'), *fri* ('free') and *het* ('hot')

But no neuter forms exist of similarly frequent adjectives such as:

rädd ('afraid'), *gravid* ('pregnant') and *lat* ('lazy')

Frequency distribution

Non-Defective Adjectives

ny ('new')	55492
död ('dead')	13108
fri ('free')	10115
glad ('happy')	9082
blå ('blue')	7529
röd ('red')	4523
bred ('broad')	4494
het ('hot')	2359
rå ('raw')	1602
söt ('sweet')	1261
fet ('fat')	1053
slät ('smooth')	537
våt ('wet')	463
solid ('solid')	279
spröd ('brittle')	174

Defective Adjectives

rädd ('afraid')	8256
gravid ('pregnant')	807
lat ('lazy')	343
kåt ('horny')	135
paranoid ('paranoid')	131
flat ('flat')	118
fadd ('stale')	93
rigid ('rigid')	76
disträ ('absent-minded')	70
rät ('straight')	68
valid ('valid')	59
pryd ('prude')	58
blasé ('jaded')	58
timid ('timid')	30
morbid ('morbid')	28

The role of Animacy

Most animate nouns in Swedish have uter gender

Non-defective adjectives which describe inner states are rarely used with neuter nouns, for example:

ledsen ('sad', uter): 2364 occurrences (99%)

ledset ('sad', neuter): 25 occurrences (1%)

Conclusion: Unavailable neuter adjectives have restricted communicative motivation

For neuter forms affected by the constraints:

Existing neuter forms have been formed either

1. At a time when these processes were productive
2. By analogy because a form was needed

Neuter forms are kept alive by positive evidence if there is sufficient communicative motivation

However, such forms do not appear automatically when the utter form of an adjective has been acquired

Explanation of Defective Adjectives in Swedish

1. The occurrence of certain strong constraints, for example:
 - Avoid clusters of dental plosives
 - Avoid long vowels preceding dental plosive suffixes
2. Due to lack of morphotactic transparency, the processes normally used to avoid violating the constraints are based on analogy rather than productivity.
3. Only neuter forms with sufficient communicative motivation become established in the language.
4. Defective adjectives are either generally infrequent or collocate strongly with animate (uter) nouns.