

Defaults in morphological theory: Introductory remarks May 2012

1. background I: automatic phonology

```
1.1. allophones of /t/ in AmE:
```

```
/ accented V _____ unaccented V :
    voiced tap (bottom)
/ # _____ V, / unaccented V _____ accented V :
    aspirated t (top, toboggan, atomic)
/ ____ $ :
    glottalized t or ? (pot, atlas; button if t is syllabified with preceding
    syllable before syllabic n)
    otherwise, unaspirated t (stop, comatose)
(an allophone is voiceless and a stop unless otherwise specified)
```

1.2. natural treatment is processual, **basic** + **derived**: the basic phoneme is a voiceless alveolar stop, altered in particular cases via processes of fortition (aspirated t) or lenition (the rest); treating it as unaspirated as well covers the overall elsewhere case

2. background II: syntax

2.1. choice between SVP (Subject + VP) and SVI (Subject-Verb Inversion) as a component of other constructions (*You must go now* vs. *Must you go now*?)

2.2. natural treatment specifies **default** and **override** (SVP is default, SVI is called for in specific construction), although processual analyses (with SVP as basic and SVI as derived) have a long and influential history

3. background III: for morphology, a **conceptual framework** (not (yet) a theory) based on the **lexeme** (and the **syntactic word**)

4. the constructs: (inflectional) **forms** of lexemes, **shapes** of those forms, **stems** on which forms are based and on which forms of related lexemes are based

all of these can be given conventional names, but in the general case they can simply be referred to by arbitrary labels, for instance by numerical indices

5. properties of lexemes

Sound P1: conditions on the phonological makeup of at least one stem

Meaning **P2**: either semantics of the ordinary sort, or (for grammatical-category lexemes) a set of grammatical categories

Syntax **P3**: (morpho)syntactic category membership (along the lines of N A V P)

Syntax **P4**: syntactic subcategory membership – eligibility to appear in some distinguished position (e.g. head) in particular syntactic constructions (*GIVE* is in the head subcategory for the "dative movement" construction, *DONATE* is not)

Morphology **P5**: purely morphological properties – applicability of particular morphological rules (*DREAM* is eligible for both /d/-Past and /t/-Past inflectional rules, *SCREAM* only for the former, *LEAVE* only for the latter; *SANE* and *TOUCHABLE* are eligible for both *-ness* nominalization and *-ity* nominalization, *CRAZY* only for the former); note that inflection classes (declensions and conjugations) are clusters of rule-applicability properties

Morphosyntax **P6**: inherent morphosyntactic category membership (e.g. inherent gender for Ns)

Morphosyntax **P7**: shape class membership (e.g. eligibility for Auxiliary Reduction)

Extragrammar **P8**: extragrammatical properties of lexemes – association with one mode (speech, writing), register, genre, style, social or geographical dialect, etc.

6. rules

concerning stems:

stem realization rules (expressing phonological relationships between stems) stem selection rules (calling for a particular stem in an inflectional or derivational rule

concerning forms:

form realization rules (a.k.a. inflectional rules)

form selection rules (calling for a particular form in some syntactic rule) concerning shapes:

shape realization rules (expressing phonological relations between shapes) shape selection (or distribution) rules (calling for a particular shape in some context)

interproperty rules: generalizations relating different properties of rules

concerning derived lexemes (derivational rules, or "extraproperty rules"): generalizations relating the corresponding properties of different lexemes (in particular, P1 to P1 and P2 to P2; but all other properties might be affected)

7. overall phonological defaults, giving identities for free, zeroes for free: except as specified by rule or stipulated for a lexeme,

(a) all stems are identical

(b) all forms are identical (to the basic stem)

(c) all shapes of a form are identical (to the basic shape)

(d) derivatives are identical to their sources

7. default property settings (some exx.):

a lexeme belongs to the category N by default; an English V is, by default, eligible for the /d/-Past and not for the /t/-Past; an English Adj is, by default, eligible for *-ness* nominalization and not for *-ity* nominalization

8. interproperty rules (some exx.):

an English N denoting animals hunted for sport is not eligible for the default Pl rule (/z/-Plural), hence can be expected to have a Pl form identical to the default stem a Latin N of D1 is has Fem gender an English Adj eligible for inflectional comparison has fewer than 3 syllables

English plant names (Zwicky 2001): Default: tacsim ("things are C, stuff is M": DAISY/IVY): nouns referring to things are C, to stuff M

Botanical Name (AGAPANTHUS): botanical names of plants are M

Inheritance (FOXGLOVE/HONESTY): plant names that are existing nouns (or have such nouns as heads) are C or M as these nouns are

Mode of Growth Metaprinciple: names of plants are C or M according to whether the plants are conventionally grown as individuals or in masses: ELM: names of trees are C

CLOVER/CLEMATIS/WEIGELA: names of ground covers, vines, and hedge shrubs are M

Product Metaprinciple: a noun referring to a plant inherits its C/M assignment from the noun referring to the product that is its (culture-specific) "reason for being":

ROSE/BEET: names of flower plants and root vegetables are C WHEAT/SPINACH/LAVENDER: names of grain plants, leafy greens, and herb plants are M

(competition between these principles, not always predictably resolved: variation for *ice plant*, as C (by Inheritance) or M (by Mode of Growth))

## 9. extraproperty rules (some exx.)

Inheritance:

Spanish -*it*- diminutive has same gender as its source

English *un*- negative has same eligibility for inflectional comparison as its source Adj: *happi-er / un-happi-er*, \**chic-er / \*un-chic-er* 

Setting in a derivational rule:

German diminutives in *-chen* and *-lein* have Neut gender despite default for English Adj (no for *-ity* nominalization), derivatives in – *-able* are eligible (Fabb 1988) despite default for English Adj (yes for *-ly* adverbialization), time-unit derivatives in *-ly* are not eligible (*\*hourlily*, *\*yearlily*)

10. natural "ordering" (default/override): Pāṇini's Principle in the accent patterns of English compounds, with layers of defaults (Zwicky 1986a)

10.1. N+N compounds have forestress: a hummingbird lane, a Christmas city

10.2. proper-name N+N compounds have afterstress: *Hummingbird* 

Lane/Road/Avenue, Christmas City

10.3. proper-name N+N compounds with certain second elements (e.g. *street* 'road', *town* 'city') have forestress: *Hummingbird Street*, *Christmas Town* (cf. *Picabo Street*, *Robert Towne*)

10.4. certain proper-name N+N compounds otherwise of type 10.2 have forestress: for some Utah residents, *Heber City* 

11. Bulgarian definite article (Perlmutter handout from 1998): M Sg: -â(t) F Sg: -ta N Sg: -to Pl: -te

11.1. Perlmutter's OT analysis:

| -ta after a (phonological conditioning)         | Α |
|---|---|
| >> *F-CLASH:NBR (syntactic number agreement)    | В |
| >> -to after V (more phonological conditioning) | С |
| [given A, this means V other than a]            |   |
| >> *F-CLASH:GDR (syntactic gender agreement)    | D |
| [applicable only in the Sg]                     |   |

[assumption shared by Perlmutter and "feature manipulation" analyses: one-to-one corresponence between phonological content and mophosyntactic properties (-to = N Sg, -ta = F Sg, etc.); feature manipulation analyses refer to these entities via ms properties, Perlmutter refers to them sometimes via phonological content, sometimes via ms properties]

## 11.2. array of shapes

\_

| index   | M Sg | F Sg | N Sg | Pl  |
|---------|------|------|------|-----|
| Shape 0 | -ât  | -ta  | -to  | -te |
| Shape 1 | -ta  | -ta  | -ta  | -ta |
| Shape 2 | -to  | -to  | -to  | -te |

11.3. shape realization

default: all shapes of a form are identical to the basic shape, Shape 0 shape realization rule 1: Shape 1 is *-ta* shape realization rule 2: Shape 2 in the Sg is *-to*.

11.4. shape distribution rule 1: use Shape 1 after *a* shape distribution rule 2: use Shape 2 after V [given SDR1, this means V other than *a*]

## Some references

Brown, Dunstan & Andrew Hippisley. 2012. Network Morphology: A defaults-based theory of word structure. CUP.

Fabb, Nigel. 1988. English suffixation is constrained only by selectional restrictions. NLLT 6.527-39.

Levine, Robert D. (ed.). 1992. Formal grammar: Theory and implementation. OUP.

Stump, Gregory T. 2001. Inflectional morphology: A theory of paradigm structure. CUP.

Zwicky, Arnold M. 1986a. Forestress and afterstress. OSU WPL 32.46-62. http://www.stanford.edu/~zwicky/forestress-and-afterstress.pdf

- 1986b. The general case: basic form versus default form. BLS 12.305-14. http://www.stanford.edu/~zwicky/the-general-case.pdf

- 1992. Some choices in the theory of morphology. Levine 1992: 327-71. http://www.stanford.edu/~zwicky/some-choices-morfphology-theory.pdf

- 2001. Counting chad. Stanford Semantics Fest handout: http://www.stanford.edu/~zwicky/CountingChad.pdf