# Verbal diminutives and cross-categorial syncretism

#### Laura Grestenberger & Dalina Kallulli

University of Vienna

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### Introduction: Cross-categorial diminutive morphemes

In many languages, apparently cross-categorial diminutive or "attenuative" morphemes can be used to derive both nouns and verbs (sometimes also adjectives):

(1) Nominal & verbal diminutives (SG = Standard German)

	a. Base = verb		b. $Base = noun$	
$\overline{SG}$	koch-en	$k\ddot{o}ch$ - $el$ - $n$	Bund	$B\ddot{\boldsymbol{u}}nd$ - $oldsymbol{e}oldsymbol{l}$
	boil-inf	boil-DIM-INF	bunch.M	bunch-DIM.N
	'to boil	'to simmer'	'bunch'	'bundle'
Ital.	fisch-iare	fischi- <b>ett</b> -are	fischi-o	fischi-ett-o
	whistle-INF	whistle-DIM-INF	whistle-M	whistle-DIM-M
	'to whistle'	'to whistle, emit	'whistle'	'whistle' (object)
		short whistles'	(action)	
Hebr.	$\sqrt{cxk}$	cixkek		cixkuk
	laugh	giggle.DIM.VB		giggle.DIM.NOM
		'to giggle'		'a giggle'

### Introduction: Cross-categorial diminutive morphemes

This pattern raises several questions for morphological/morphosyntactic theory:

- ▶ Are diminutive morphemes always/sometimes/never categorizing? Under what circumstances?
- ▶ Is there (always/sometimes/never) a **direction** of derivation?
  - ▶ It.  $fischiettare \rightarrow fischietto$  vs. Gm.  $B\ddot{u}ndel \rightarrow b\ddot{u}ndel$ -n?
- ... is the syncretism accidental?

Our proposal (Grestenberger & Kallulli 2019, Forthcoming):

- ▶ Identity of form = identity of underlying syntactic structure
- ... explains the cross-linguistically observable uniformity of diminutive morphology across categories (N, V, Adj.) and morphological devices (affixation, reduplication).

### Roadmap

- ▶ Background on nominal diminutives
- ▶ Properties of **verbal diminutives**: case study of SG-(e)l-& Austro-Bavarian/Viennese -erl-verbs and their classification
- ► Analysis
  - $\triangleright$  verbal diminutives contain a categorizing  $n_{\text{DIM}}$  in their structure
  - ▶ this functional head  $n_{\text{DIM}}$  is the same as in nominal diminutives  $\rightarrow$  identity of structure
- ▶ Theoretical ramifications: diminutives & ergativity/iterativity in the verbal domain
- ► Summary and conclusion



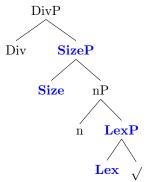
### Background: nominal diminutives

- Nominal diminutives are semantically characterized as *attenuative* in the literature (e.g., Jurafsky 1996).
- Syntactically, they turn mass nouns into count nouns and can change the noun gender or class (Jurafsky 1996, Borer 2005, Wiltschko 2006, De Belder 2011), (2).
- (2) Nominal diminutives in Viennese and Standard German viel Wein viel-e Weind-erl(-n) (Viennese) much wine.M many-PL wine-DIM.N(-PL) viel Schlaf viel-e Schläf-chen-Ø (SG) much sleep.M many-PL sleep-DIM.N-PL

### Background: high vs. low diminutives

De Belder et al. (2014) argue that cross-linguistically, there are two different functional heads that are responsible for diminutive formation, as shown in (3) (diminutive projections are bolded/blue). These are **not category-forming** and can co-occur (depending on the language).

(3) Structure of nominal diminutives, De Belder et al. 2014



### High vs. low diminutives

- ► "Low" diminutive **LexP**:
  - selects roots
  - $\triangleright$  attaches below category-forming heads (v, n, a)
  - ▶ may be semantically non-compositional
- (4) Examples: diminutive LexP (De Belder et al. 2014)
  - a. Italian cas-a 'house': cas-in-o 'brothel' (#'small house')
  - b. Hebrew xatul 'cat': xataltul 'kitten'
  - c. SG: Busch 'bush': Büsch-el 'tuft, bunch' (#'small bush')

### High vs. low diminutives

- ► "High" diminutive **SizeP**:
  - ▶ Selects n
  - located between DivP (the projection that hosts number marking or classifier morphology, Borer 2005) and nP
  - adds boundedness/a unit-reading
  - always fully compositional
- (5) Examples: diminutive SizeP (De Belder et al. 2014)
  - a. Italian cas-a 'house': cas-in-a 'small house'
  - b. Hebrew xatul 'cat': xatul-on 'small cat'
  - c. Viennese German Sock-n 'sock': Sock-erl 'small sock'

### German diminutives: high or low?

 $SG_{-}(e)l$ - seems to spell out Lex: it is non-compositional, non-productive, and can be selected by higher, productive diminutive morphology, (6c), and arguably by verbal morphology, (6d).

(6) Standard German -(e)la. b. c. d.  $Bund \quad B\underline{\ddot{u}}nd-el \quad B\underline{\ddot{u}}nd-el$ -chen  $b\underline{\ddot{u}}nd-el$ -n
bunch bunch-DIM bunch-DIM bunch-DIM-INF

Diminutive -(e)l-nouns are always grammatically neuter; the diminutive affix triggers <u>umlaut</u> of the base vowel.

'small bundle' 'to bundle'

► -(e)l-<sub>DIM</sub> is a functional head that projects/imposes its own features

'bunch' 'bundle'

#### Confound? German instrument nouns

SG also has a non-compositional, non-diminutive affix -(e)l- that does not trigger umlaut and is mostly found on grammatically masculine instrument nouns, unlike diminutive -(e)l-.

- ▶ We tentatively characterize this -el- as an affix (in this group) because of its uniform semantics, (7a), but this analysis is less obvious for (7b-c) which are arguably monomorphemic.
- (7) a. masculine instruments: Nagel 'nail', Hobel 'plane', Sattel 'saddle', Dübel 'pleg', Schlegel 'mallet', Hebel 'lever', Deckel 'lid', Zügel 'rein', Riegel 'bolt', Kübel 'bucket', Säbel 'saber', Knebel 'gag', Wedel 'frond', Stiefel 'boot', Löffel 'spoon', Spiegel 'mirror', etc.
  - b. feminine: Gabel 'fork', Nadel 'needle', Tafel 'table, board', Zwiebel 'onion', Eichel 'acorn', Regel 'rule', Rassel 'rattle', Raspel 'rasp', Kugel 'sphere, ball', Semmel 'bread roll', Kurbel 'crank', Spindel 'spindle', Gondel 'gondola', Nudel 'noodle', etc.
  - c. neuter: Kabel 'cable', Übel 'evil', Seidel 'pint', Pendel 'pendulum', Rudel 'herd, pack', Segel 'sail', etc.

#### Confound? German instrument nouns

- ▶ The instrument nouns in (7) productively form denominal manner-of-motion/use verbs that are formally indistinguishable from verbal diminutives (though we'll get back to the question of the umlaut)
- (8) a. Spiegel m. 'mirror' spiegel-n 'to mirror'
  - b. Kurbel f. 'crank' kurbel-n 'to crank'
  - c. Segel n. 'sail' segel-n 'to sail'
  - ▶ But they differ from "true" diminutive verbs in that they do not display itensive, attentuative or other typically "diminutive" semantics.
  - ▶ Previous studies (e.g., Weidhaas & Schmid 2015) do not always distinguish between these two classes, but we think this is crucial to understanding the semantic contribution of -el- in different contexts.
  - ► This is also the class in which the direction of derivation becomes relevant (instrument noun from verb, or denominal verb from instrument?)

### German diminutives: high or low?

Unlike SG/Viennese -(e)l-, the Viennese/Austro-Bav. diminutive affix -erl-/vl/ does not trigger umlaut and has compositional semantics:

(9) Viennese -*erl*- vs. -*l*-

a <i>erl</i> -		b <i>l</i> -	
Sack	Sack- <b>erl</b>	Haus	Heis-l
sack.M	sack-DIM.N	house.N	house-DIM.N
'sack, bag'	'small bag'	'house'	'toilet'
Suppe, Suppn	$Supp$ - $m{erl}$	Buasch	Biasch-(e) $l$
soup.F	soup-DIM.N	boy.M	boy-DIM.N
'soup'	'small amount of soup'	'boy'	'little boy'

- ► -erl- = high/Size: compositional, productive (Haus-erl, Häus-erl 'small house', Maus-erl 'small mouse')
- ► -l- = low/Lex: can be non-compositional (*Heis-l* 'toilet'; small house')

### German diminutives: high or low?

Like SG (umlauting) -el-, Viennese -erl- can form nominal and verbal diminutives:

(10) Viennese nominal and verbal diminutives in -erl-

a. verbal		b. nominal	
tratsch-en	tratsch- $erl$ - $n$	Tratsch	Tratsch- <b>erl</b>
chat-inf	chat-dim-inf	chat.M	chat-DIM.N
'to chat, gossip'	'to chat a little'	'chat' (obj.)	'little chat'
			(action)
stink-en	stink- $erl$ - $n$	Maus	Maus- <b>erl</b>
$\operatorname{stink}$ -INF	$\operatorname{stink} ext{-DIM-INF}$	mouse.F	mouse-DIM.N
'to stink, smell'	'to be a little	'mouse'	'little mouse'
	smelly'		
schreib-en	schreib- $erl$ - $n$	Schnaps	Schnaps- <b>erl</b>
write-INF	write-DIM-INF	schnaps.M	schnaps-DIM.N
'to write'	'to write badly,	'schnaps	'(small) unit of
	inexpertly'		schnaps'

#### Nominal vs. verbal diminutives

- ▶ The core question: Can the SG **nominal** diminutive affix -(e)l- and its Austro-Bav. variants -erl- and -l- be equated with their formally identical **verbal** equivalents? Do these suffixes contribute the same meaning/syntactic structure across categorial environments?
- ▶ In order to answer this, we took a closer look at the properties of verbal diminutives in SG & Viennese German.

#### The data

- $\triangleright$  Corpus of 302 verbs containing the German affix -(e)l- and its Austro-Bavarian variant -erl-, based on Weidhaas & Schmid 2015, Dressler & Merlini Barbaresi 1994, and Hornung & Grüner 2001.
- ► Cross-checked with the Digitales Wörterbuch der deutschen Sprache (= DWDS, "Digital dictionary of the German language"), the Deutsches Wörterbuch (= DWB, "German dictionary"), and Kluge's Etymologisches Wörterbuch der deutschen Sprache ("Etymological dictionary of the German language", Kluge 1999).
- ▶ Divided into four basic classes, (11) & Fig. 1.

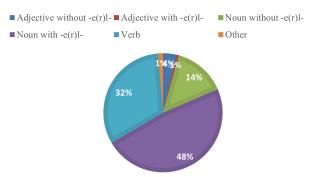
#### The data

- (11) Derivational basis of German -e(r)l-verbs
  - 1. Class I: base = adjective
    - a. base without -e(r)l-suffix (11 verbs)
    - b. base with -e(r)l-suffix (2 verbs)
  - 2. Class II: base = verb (97 verbs)
  - 3. Class III: base = noun
    - a. base without -e(r)l-suffix (43 verbs)
    - b. base with -e(r)l-suffix (145 verbs)
  - 4. Class IV: "other"
    - a. base = inflected verb form (2)
    - b. base = adverb (2)

(We excluded 64 verbs: (i) verbs with onomatopoeic or synchronically and/or diachronically unclear bases (e.g. bimmeln 'to ring', nuscheln 'to speak indistinctly', wuseln 'to scuttle, bustle', etc.), (ii) loanwords (e.g.  $handeln/h\ddot{a}ndeln$  /hɛndln/ < Engl. handle, recyceln < Engl. recycle, etc.), and (iii) words from different dialects that are not used by us and our informants (e.g.  $b\ddot{u}ffeln$  'to study').)

#### The data

FIG. 1 Derivational basis of German -e(r)lverbs



(Grestenberger & Kallulli Forthcoming)

#### Class I

```
(12)
       Class I (base = adjective)
             Base
                    Dim. verb
             schwach schwäch-el-n
         а..
             weak weak-dim-inf
             'weak'
                        'to be/act a little weak'
         b.
             bl\ddot{o}d
                    blöd-el-n
             silly silly-DIM-INF
             'silly'
                        'to be/act a little silly'
             arau
                        qr\ddot{a}u-el-n
         c.
                        grey-DIM-INF
             grey
                        'to be(come) somewhat grey, greyish'
             'grey'
```

- ► DIM triggers umlaut
- seems to act as a verbalizer



### Class II

(13)Class II (base = verb) Base Dim. verb köch-el-n koch-en а.. boil-INF boil-DIM-INF 'to boil' (anticaus./caus.) 'to almost boil, to simmer'  $dr\ddot{a}ng$ -el-nb. dräng-en urge-INF urge-DIM-INF 'to urge/push' 'to jostle, to push less intensely' funk-enfunk-el-nspark-inf spark-dim-inf 'to spark, emit sparks' 'to sparkle'

> schreib-en d. write-INF 'to write'

schreib-**erl**-n (Vienn.) write-DIM-INF 'to write badly, inexpertly'

#### Class II

- ▶ DIM adds iterative, intensive, or pejorative semantics (but often "bleached")
- Does not consistently trigger umlaut on the base vowel.
- Diachronically, some verbs of this class had (or have) both umlauting and non-umlauting variants, e.g., Middle High German (MHG) lacheln besides New High German (NHG) *lächeln* 'to smile'.

### Class IIIa

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(14)
       Class IIIa: base = noun without e(r)l-affix
              Base
                       Dim. verb
             Frost fr\ddot{o}st-el-n
         a.
                       frost-DIM-INF
             frost
             'frost'
                       'to shiver, be cold'
             Stiick
                       stück-el-n
         b.
             piece
                       piece-DIM-INF
                       'to divide into pieces'
             'piece'
             Maus
                       maus-l-n (Vienn.)
             mouse
                       mouse-DIM-INF
             'mouse'
                       'to smell of mice'
```

- ▶ DIM triggers umlaut in SG (fewer exceptions than in class II)
- ▶ seems to act as a verbalizer (cf. class I).



(15) Class IIIb: base = noun with e(r)l-affix

No umlaut Umlaut Verb Base Base Verb Sattel sattel-n d. Brösel brösel-n a. saddle saddle-INF crumb crumb-inf 'saddle' 'to saddle' 'crumb' 'to flake, crumble' hagel-nBündel bündel-n b. Hagelhail hail-INF bundle 'hail' 'to hail' 'bundle'

c. Wurzel wurzel-n
root root-INF
'root' 'be rooted in'

bundle bundle-INF
'bundle' 'to bundle'

f. Zügel zügel-n
rein rein-INF
'rein' 'to put reins on,

rein in'

#### ClassIIIb

- ▶ Derived verb only has umlaut if the base does (unlike in classes II & IIIa)
- Iterative, intensive, or pejorative semantics less pronounced/discernible in this class than in class II, or absent altogether.
- ▶ In those cases in which "diminutive" meaning is present, it is clearly part of the base (e.g., bröseln 'to crumble into small crumbs': Brösel 'small crumb').
- ... but this is also the class in which the direction of derivation is the most murky—historically many deverbal instrument nouns.

### Summary

- Same DIM-suffix in the nominal and verbal domain (-e(r)l-)
- Three main classes in the verbal domain: 1) adj  $\rightarrow$  verb, 2) verb  $\rightarrow$  verb, 3) noun  $\rightarrow$  verb
  - ▶ In the noun  $\rightarrow$  verb class (class III) the problem of derivational directionality becomes relevant for those cases in which -e(r)l- is also contained in the noun.
- ▶ Is this accidental syncretism? Two (or more) homophonous suffixes with different features/meaning?
- ... or is a unified analysis possible, in which DIM always contributes the same syntactic structure/features?
- $\rightarrow$  We argue for the latter (Grestenberger & Kallulli 2019, Forthcoming).

Standard tests show that class II (deverbal) verbal diminutives, (16), are activities: they are incompatible with temporal adverbs that mark the endpoint of an event.

- Die Suppe hat zwei Stunden (lang) /\* in zwei Stunden (16)the soup has two hours (long) in two hours ge-köch-**el**-t. PTCP-boil-DIM-PTCP "The soup was simmering for two hours." in two hours."
  - Die Cora hat eine Stunde lang /\* in einer Stunde b. the Cora has an hour long in an ge-schreib-erl-t. PTCP-write-DIM-PTCP

"Cora wrote inexpertly for an hour/\*in an hour."

... and the same holds for class I (deadjectival), (17), and class IIIa (denominal, e(r)l-less base), (18):

- (17)Die Cora hat zehn Minuten lang /\* in zehn Minuten the Cora has ten minutes long in ten minutes ge-blöd-**el**-t. PTCP-silly-DIM-PTCP "Cora acted silly for ten minutes/\*in ten minutes."
- (18)Es hat im August eine Woche (lang) /\* in einer Woche it has in August one week (long) in one week ge-herbst-el-t. PCTP-Fall-DIM-PTCP
  - "It was fall-like for a week/\*in a week in August."

Class II (deverbal) verbs often differ in their argument structure, aspectual behavior, and selection of preverbs with respect to their apparent verbal base:

(19) a. Intransitive/anticausative

Das Wasser koch-t / köch-el-t.

the water boil-3sg.pres boil-dim-3sg.pres

"The water is boiling/simmering."

b. Transitive/causative

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Die Cora koch-t (das) Wasser /* köch-el-t the Cora boil-3sg.pres (the) water boil-dim-3sg.pres (das) Wasser. (the) water
```

"Cora is boiling (the) water/\*is causing (the) water to simmer."

#### (20)Transitivity

- Die Livia nerv-t (herum) / nerv-el-t the Livia nerve-3sg.pres (around) nerve-dim-3sg.pres (herum). (around) "Livia acts annoying/acts continually, somewhat annoying."
- b. Die Livia nerv-t mich /\* nerv-el-t the Livia nerve-3sg.pres me.acc nerve-DIM-3sg.pres mich. me.ACC "Livia annoys me/\*continually acts annoying towards me."

"Deverbal" e(r)l-verbs are not always compatible with the same preverbs as their apparent verbal bases, especially w.r.t. telicity/boundedness, (21a-b). In those cases in which both verbs occur with the same preverb, the e(r)l-verb does not have the same idiomatic readings as the apparent base, (21c-d).

- (21) "Deverbal" e(r)l-verbs and preverbs
  - a. auf-schreib-en up-write-INF 'write down'
  - b. sich ent-zünd-en REFL in-flame-INF 'to inflame, self-ignite'
  - c. ab-tanz-enup-dance-INF'to exhaust onself dancing'
  - d. ver-schütt-en through-pour-INF 'to spill sth.'

- a'. \*auf-schreib-erl-n up-write-DIM-INF
- b'. \* $sich\ ent\-z\ddot{u}nd\-el\-n$  REFL in-flame-DIM-INF
- c'. ab-tänz-el-n up-dance-DIM-INF 'to prance off, away' d'. ver-schütt-el-n
- d'. ver-schütt-el-n through-pour-DIM-INF 'to mix by shaking gently'

Viennese/AB non-umlauting -(er)l- productively derives optionally expletive verbs of emission from nouns:

 $\label{eq:Viennese - (er)l-verbs of emission} Viennese - (er)l-verbs of emission$ (22)

Base	Dim. verb	Base	Dim. verb
Schweieta	$schweieta$ - $\emph{l}$ - $n$	Brand	brand- $l$ - $n$
sweat	sweat-DIM-INF	fire	fire-DIM-INF
'sweat'	'to smell of sweat'	'burning, fire'	'to smell of fire'
Maus	maus- $l$ - $n$	Speibe	speib- $erl$ - $n$
mouse	mouse-DIM-INF	vomit	vomit-dim-inf
'mouse'	'to smell of mice'	'vomit'	'to smell of vomit'

- (23) a. Der Hans schweiß-l-t. the Hans sweat-DIM-3SG.PRES "Hans smells of sweat." / "Hans sweats a little."
  - b. Es schweiß-l-t (hier). it sweat-DIM-3SG.PRES (here) "It smells of sweat (here)."

These facts suggest that class I, II, and IIIa verbs are unergative activity verbs/verbs of emission.

#### The structure of verbal diminutives

#### Proposal:

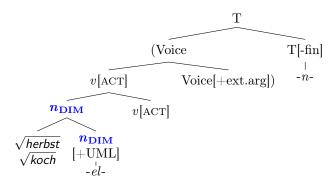
- ightharpoonup German verbal diminutives contain a nominal core, the functional head  $n_{ ext{DIM}}$  even the seemingly deverbal ones of class II
- ▶ this is the same diminutivizer as in nominal diminutives, hence the (cross-linguistically observable) "syncretism" between nominal and verbal diminutives is non-accidental
- $\to$  The "diminutive" semantics of -e(r)l-verbs follow from the presence of an incorporated nominal DIM head.
  - Function of  $n_{\text{DIM}}$ : individuation; creation of (countable) units (Borer 2005, Wiltschko 2006, De Belder 2011, Ott 2011, De Belder et al. 2014)
  - $\blacktriangleright n_{\text{\tiny DIM}}$  can select  $\surd$  or n (Wiltschko 2006, Wiltschko & Steriopolo 2007, De Belder et al. 2014)

### Proposal

- ▶ In verbal diminutives,  $n_{\text{DIM}}$  is embedded under a verbalizer v[ACT] that classifies the event as action
- ▶ In this verbal environment,  $n_{\text{DIM}}$  = identified with the 'natural atomic function' of Rothstein (2004): a set  $P_{\min}$  contained in semelfactives & activity predicates that picks out the *minimal events* in their denotation (or the "lower boundary" of the event)
- ▶ The external argument of these verbs is semantically an actor, not an agent
  - Cf. Doron 2003, Kastner 2020 on the Hebrew intensive template as introducing an actor theta-role; Harley 2005 on unergative activity verbs
  - ▶ Unlike agents, actors can be animate or inanimate → unergative "verbs of internal causation" & "verbs of emission" (Levin & Rappaport Hovav 1995, Rothmayr 2009)

#### The structure of verbal diminutives

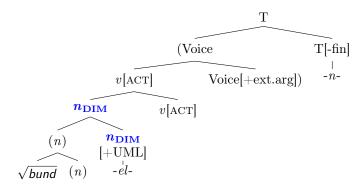
(24) Proposed structure of herbst-el-n 'be fall-like', köch-el-n 'to simmer'



- "Upwards reanalysis"/conflation of  $n_{\text{DIM}} \to v[\text{ACT}]$  a possible diachronic trajectory for the rise of verbalizing  $-e(r)l_-$ , i.e., class II.
- ▶ ... but assuming the structure in (24) captures the parallelism with denominal diminutive/instrument verbs, (25).

#### The structure of verbal diminutives

(25)Proposed structure of bünd-el-n 'to bundle'



- ▶ The only difference between (24) and (25), then, is that the functional sequence  $\sqrt{(-n-)}n_{\text{DIM}}$  in (25) can be spelled out on its own (Bündel 'bundle').
  - Let though that's not excluded in principle for (24), cf. Viennese Herbst-erl 'would-be fall'

#### Theoretical ramifications

- ▶ Our analysis of "cross-categorial syncretism" in the domain of nominal and verbal diminutives fits into a broader picture: denominal verbs reflect their nominal basis compositionally (Arad 2003, Harley 2005)
  - Unergatives contain an incorporated bare noun (n; Hale & Keyser 1993, 1998, 2002)
  - ▶ Harley (1999, 2005): certain roots are "nominal"/denote "things" the argument structure/Aktionsart of the derived verb is determined by the feature content/denotation of the incorporated "thing" (i.e., boundedness of noun ≈ telicity of verb)
- $\blacktriangleright$  (different types of) denominal verbs  $\rightarrow$  (different types of) unergatives
- ▶ This also suggests a diachronic pathway from denominal, "de-diminutive" verbs to unergative (iterative/frequentative/"diminutive") verbs and/or verbalizers (cf. Grestenberger Forthcoming).
- ▶ It also means that there is a clear directionality for diminutives: diminutive verbs are structurally derived from nominal diminutives, at least diachronically.

#### Conclusion

- ► Case study from SG & Viennese suggests that "cross-categorial syncretism" in diminutive morphology is *not* accidental
- ▶ But different classes of -e(r)l-verbs must be carefully distinguished
- ▶ An analysis that takes the core semantic component to be individuation/atomicity (discrete units of things/events) can account for the meaning of both nominal and verbal diminutives
  - ▶ We take other meanings, especially the pejorative/attentuative ones, to follow pragmatically from this ("unit of x" = "not quite x" = "less than x", vel sim.)
- ▶ This analysis also implies that "cross-categorial syncretism" in diminutive/pluractional morphology always reflects an identical underlying structure.
- ▶ ... which would explain the cross-linguistically observable uniformity of diminutive morphology across categories (N, V, Adj.) and morphological devices (affixation, reduplication).

## Appendix: "high" DIM

Examples like (26)–(27) show that  $-e(r)l-/n_{\text{DIM}}$  can attach to already categorized n's ( $\approx$  SizeP)

use -dom -DIM -INF

'to be overly concerned with preserving customs and traditions'

- (27) a. (Berg-**erl** /) Ge-birg-e / Ge-birg-**erl** (mountain-DIM) COLL-mountain-COLL COLL-mountain-DIM ('small mountain' /) 'mountain range' / 'small mountain range'
  - b. Faschist / Faschist-erl fascist fascist-DIM'fascist' / 'small/would-be fascist'



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