Plural Formation and Variation in Plautdietsch

Prosody Meets Multiple Exponence

Roslyn Burns
University of Texas Austin

Laura Catharine Smith
Brigham Young University

May 3-4, 2019

Introduction to West Germanic Pluralization

What is Plural Formation Like

In West Germanic languages, plurals are shaped by prosody. Standard German typically exhibits disyllabic trochees which are sometimes accompanied by umlaut.

Non-trochaic Stem		Trochaic Stem	
Uhr-Uhr+en	'clock(s)'	*Steuer-Steuer+n*	'tax(es)'
Buch-Büch+er	'book(s)'	*Vogel-Vögel*	'bird(s)'
Tisch-Tisch+e	'table(s)'		

Table 1. Standard German Pluralization

Standard Dutch exhibits disyllabic trochees without umlaut.

From Standards to Dialects

Variation in Structure

Smith and Anderson (2010) demonstrate a variety of different constraints across West Germanic dialects based on data from Russ (1989).

- Some varieties are close to Standard German; others have very different structures
- Extraterritorial varieties of West Germanic are not included in the survey

Research Goal

This talk explores Plautdietsch (Prussian Low German, West Germanic) plural formation with respect to its **historical sources** and **synchronic consequences**.

- Phonological Properties
  - What phonological properties help mark plural?
- Morphological Expression Properties (aka exponence)
  - How do independent markers of plural interact with one another?

Synchronic Phonology

Between Conservatism and Innovation

Plautdietsch plurals are constrained synchronically by a variety of phonological properties as a consequence of phonological change. Some of these properties are very innovative while others are still quite conservative.

- Plautdietsch has innovative segmental relationships
  - Consonant Voicing
  - Consonant Place
  - Vowel quality
- Plautdietsch has conservative prosodic relationships
  - tendency for plurals to end in a trochee

Synchronic Morphology

Phonological changes are also responsible for the proliferation of Multiple Exponence (ME).

> *Multiple (or extended) exponence is the occurrence of multiple* **realizations** *of a single feature, bundle of features, or derivational category in more than one position in a domain.*
> *-Caballero and Harris 2010:165, emphasis our own*

Given this definition we will not consider zero as an exponent.

Why So Many Exponents?

Two is Company; Three is a Crowd

ME literature often explores *double exponence* because examples of this type of ME are easy to find (Harris 2009, 2017). Morphosyntactic theories of ME sometimes adjust feature realization to allow for a maximum of two exponents.

At present, a maximum of four exponents of pluralization can be found on some Plautdietsch plurals as in [kɔʊlf]-[caːlvɐ] ‘calf’.

- Vowel Change
- Consonant Voicing Change
- Suffixation
- Palatalization

Value of Study: Germanic Linguistics

Standard German ME is the best studied West Germanic ME

There are a maximum of 2 markers (umlaut and suffixes). Within Germanic, affixes are traditionally treated as more independent than accompanying process morphology. Umlaut usually co-occurs with a suffix unless the suffix is blocked.

- Maximally Iconic: *Freund-Freund+e* 'friend(s)'
- Iconic: *Vogel-Vögel* 'bird(s)'
- Non-Iconic: *Lehrer-Lehrer* 'teacher(s)'

This property is called *constructional iconicity* (Mayerthaler 1981, Dressler 1985)

Value of Study: General Linguistics

Often ME literature describes Standard German ME because of Mathews (1974)'s introduction of the term with Standard German examples, but present works often fail to analyze ME with similar phonological origins.

Much of work on ME is more interested in describing the historical origin of ME as either:

- morpho-syntactic
- morpho-semantic
- paradigmatic

Caballero's body of work on Rarámuri treats phonologically (prosodically) conditioned ME as not common (2008: 225, 2011). Other typological studies of ME agree with this perspective (Harris 2017:163).

Goal

In this talk, we explore several issues regarding the morphophonological structure of pluralization.

- Plautdietsch **plural exponence** differs from other West Germanic languages
- Plural suffix structure is **constrained by prosody** (like Standard German and Standard Dutch)
- Specific plural suffixes are constrained by lexical properties of roots and derivational affixes
- ME is constrained by specific affixes

Outline

- Theoretical Assumptions
- Language Background
- Historical/Comparative Structure of Plurals
- Synchronic Structures of Plurals
- Conclusion

Note: Because we discuss several different structures, our organization will always be (1) Prosody, (2) Exponence.

Assumptions

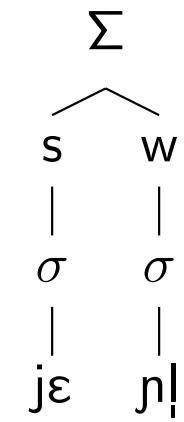
- Multiple Exponence
- Prosody

Assumptions: Multiple Exponence

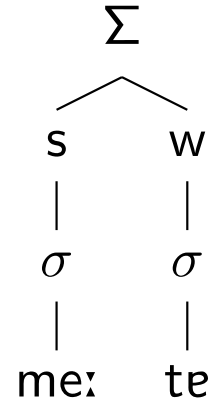
- Multiple Exponence
  - Caballero and Harris (2010)'s definition refers to the **overt marking** of a morphosyntactic or semantic feature
  - Zeros and deleted/blocked material are excluded from analysis
- Prosody

Assumptions: Syllable Based Foot Structure

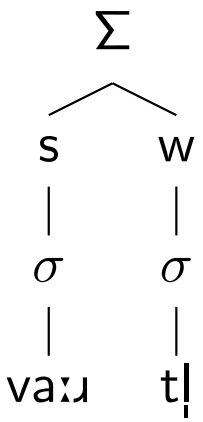
- Multiple Exponence
- Prosody
  A foot (Σ) has the basic structure of two syllables (σ) with stress on the leftmost syllable (a **disyllabic trochee**).



'rocker'



'measuring tool'



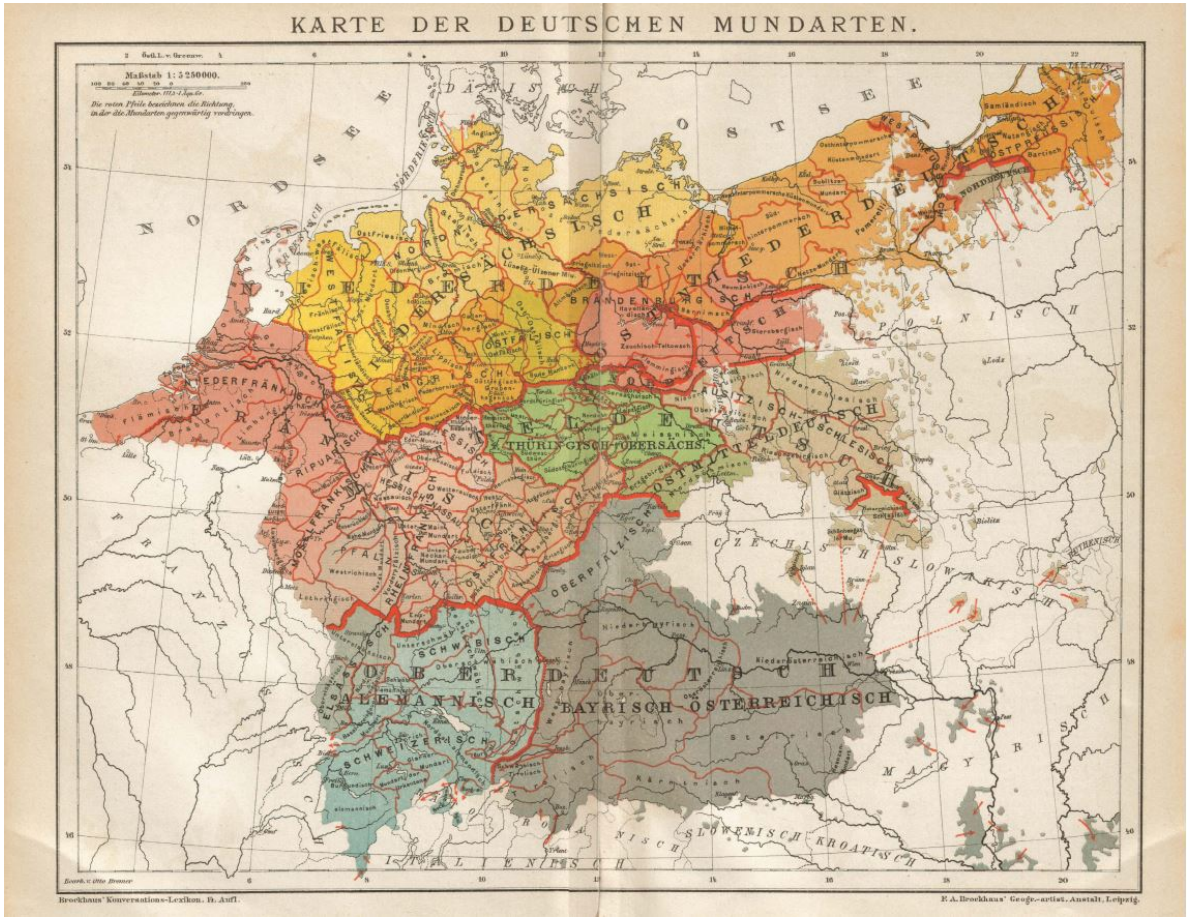
'root'

Assumptions: Weight Based Foot Structure

- Multiple Exponence
- Prosody
  A heavy monosyllable can also form a foot equivalent to the disyllabic trochee (Smith 2007, 2009, Forthcoming; Féry 1998; Riad 1992).
  - CVVC
  - CV:C
  - CVCC

What is Plautdietsch?

Low German and High German are related, but separate languages.



We will occasionally provide Standard German data solely because of its availability and preexisting analyses.

The Many Ways to Carve Up Plautdietsch

A Language that Travels:

Plautdietsch is spoken in speech community enclaves across 5 continents. Its speakers entered central Canada in 1887. Native speakers started producing dictionaries in the 20th century (Rempel 1995, Zachrias 2009 and Thiessen 1977).

This report focuses on **Canadian Chortitza Plautdietsch**

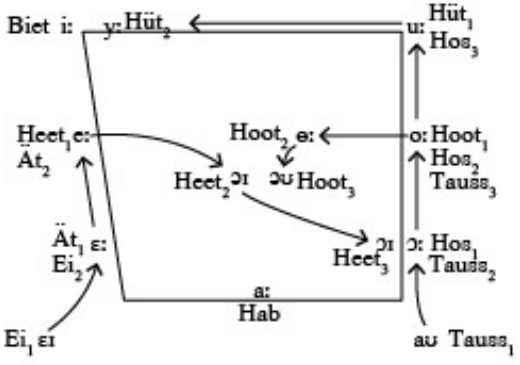
- Geographical regions differ primarily in terms of ongoing vowel quality innovations (Burns 2016)
- Chortitza differs from Molotschna in terms of final nasals (Rempel 1995, Thiessen 1977, Quiring 1928)

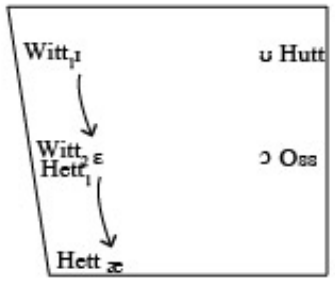
Sound System of Plautdietsch

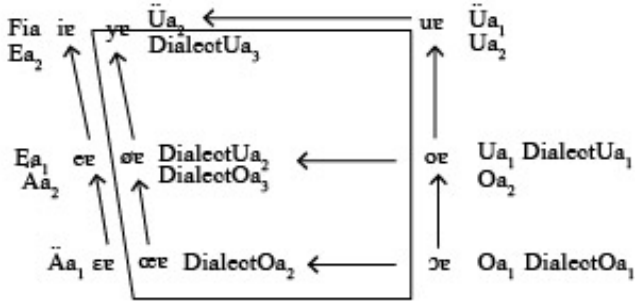
	Labial	Alveolar	Post-Alveolar	Palatal	Velar	Glottal
Plosive	p, b	t, d		c, ɟ	k, g	
Nasal	m	n		ɲ	ŋ	
Affricate			tʃ			
Fricative	f, v	s, z	ʃ, ʒ	ç	x, (ɣ)	h
Tap/Trill		r				
Approximant		l		j		

Table 2. Plautdietsch Consonant System (Burns 2016)

There are three vowel subsystems in Plautdietsch all currently undergoing substantial reorganizations (Burns 2016).







Relevant Phonological Background

1. Voicing is contrastive in word-final position
   - [brəʊt] ‘bread’ vs [brəʊd] ‘brood’
   - [rɛɪf] ‘tube/tire’ vs [rɛɪw] ‘raw’
   - [drɛp] ‘drop’ vs [rɛb] ‘rib’ (Note: both form -en plural with no change in voicing)
2. Palatalization is contrastive and always assumed to be in the UR.
   - [vaːç] ‘away’ vs [vaːx] ‘I watch’
   - [coeʃ] ‘cherry’ vs [koeʃ] ‘healthy’

West Germanic Prosodic Structures

The disyllabic trochee template is common across West Germanic. In Standard German and Dutch, it serves as the template for plural formation (Smith 2007, 2009; Smith and Anderson 2010).

	Non-trochaic Stem		Trochaic Stem	
German	*Uhr-Uhr+en*	'clock(s)'	*Steuer-Steuer+n*	'tax(es)'
	Buch-Büch+er	'book(s)'	*Vogel-Vögel*	'bird(s)'
	Tisch-Tisch+e	'table(s)'		
Dutch	*boek-boek+en*	'book(s)'	*vader-vader+s*	'father(s)'
	non-nonn+en	'nun(s)'	*natie-natie+s*	'nation(s)'

Table 3. Standard German Pluralization

Regardless of the stem input, the resulting plurals tend to be disyllabic trochees at the right edge of the word.

Interaction of Segmental Loss with Prosody

Vowel Reduction Across West Germanic

Vowel reduction in West Germanic is often prosodically driven. Prosody first impacts unfooted vowels.

Heavy Stem	$[\text{gas}]_\Sigma$ti 'guest'	$\longrightarrow$	gast
Light Stem	$[\text{ste.di}]_\Sigma$ 'place'	$\longrightarrow$	ste.di

Table 4. Old Saxon Apocope in i-Stem Nouns

This arises due to the equivalence between weight sensitive feet, i.e., moraic trochees, formed by a H syllable and LL. The LL foot is later reinterpreted in the modern languages as the disyllabic trochee $[\acute{\sigma}\sigma]$.

The H-foot continues to linger in some Dutch and German dialects, comprised of rhymes consisting of VVC or VCC.

Maintenance vs Loss of Plural Prosodic Structure

How do Regions with Schwa Apocope form Plurals?

Smith and Anderson (2010) note five general patterns in the retention of prosodically driven plural formation in Low and High German dialects (data, Russ 1989). There are now five general prosodic types.

- Plurals Still Relatively Trochaic
  - A Stable trochee with no schwa loss (few exceptions)
  - B Partial trochee; heavy monosyllables from open syllable lengthening
- Trochaic Patterns Lost or Obscured
  - C Non-trochaic from schwa loss
  - D Inconsistent schwa loss; some schwa addition
  - E Inconsistent schwa loss; consistent addition of schwa

Map of Synchronic Distribution of Prosodic Structures

Languages spoken in the Low Lands including Low German and some dialects of Dutch tend to have the mixed system that accepts disyllabic trochees or heavy monosyllables (purple).

Notice that Plautdietsch's region is not on this map.

Middle Low German Plural Affixes

Plautdietsch Descends from Middle Low German

Middle Low German (MLG) spoken from approximately 1250-1600 (Lübben 1882:1, Lasch 1914:3).

Historically, MLG plurals had four suffixes (Lübben 1882: 93-100, Lasch 1914: 191-203).

- *-e*
- *-(e)n*
- *-er(e)*
- *-(e)s*

Middle Low German Plural Affixes

Plautdietsch Descends from Middle Low German

Middle Low German (MLG) spoken from approximately 1250-1600 (Lübben 1882:1, Lasch 1914:3).

Historically, MLG plurals had four suffixes (Lübben 1882: 93-100, Lasch 1914: 191-203).

- *-e*
  - *dach-dage* 'day(s)'
  - *wort-worde* 'word(s)'
- *-(e)n*
- *-er(e)*
- *-(e)s*

Middle Low German Plural Affixes

Plautdietsch Descends from Middle Low German

Middle Low German (MLG) spoken from approximately 1250-1600 (Lübben 1882:1, Lasch 1914:3).

Historically, MLG plurals had four suffixes (Lübben 1882: 93-100, Lasch 1914: 191-203).

- *-e*
- *-(e)n*
  - *vrünt-vründen* 'friend(s)'
  - *wīse-wīsen* 'manner(s)'
- *-er(e)*
- *-(e)s*

Middle Low German Plural Affixes

Plautdietsch Descends from Middle Low German

Middle Low German (MLG) spoken from approximately 1250-1600 (Lübben 1882:1, Lasch 1914:3).

Historically, MLG plurals had four suffixes (Lübben 1882: 93-100, Lasch 1914: 191-203).

- *-e*
- *-(e)n*
- *-er(e)*
  - *wīf-wīwere* 'wife/wives'
  - *hūs-hȳsere* 'house(s)'
- *-(e)s*

Middle Low German Plural Affixes

Plautdietsch Descends from Middle Low German

Middle Low German (MLG) spoken from approximately 1250-1600 (Lübben 1882:1, Lasch 1914:3).

Historically, MLG plurals had four suffixes (Lübben 1882: 93-100, Lasch 1914: 191-203).

- *-e*
- *-(e)n*
- *-er(e)*
- *-(e)s*
  - *schip-schepes* 'ship(s)'
  - *herde-herdes* 'shepherd(s)'

Types of Phonological Processes in MLG

Phonological Predictability

Most processes are phonologically transparent in specific environments except for umlaut. Umlaut historically developed from a phonologically transparent vowel fronting process.

Lasch 1914 exhibits the following phonological alternations:

- Consonant Voicing Alternations (1914:193, 203)
- Umlaut in plural forms (1914: 198)
- Open Syllable Lengthening in disyllabic forms (1914: 191)

Plautdietsch Phonological Innovations

Innovations Can (and did) Alter Transparency

Plautdietsch underwent the several segmental innovations from MLG.

- Palatalization
- Vowel Merger
- Final Schwa Apocope
- Vowel Chain Shifting

Plautdietsch Phonological Innovations

Innovations Can (and did) Alter Transparency

Plautdietsch underwent the several segmental innovations from MLG.

- Palatalization
  - Innovation: [DORSAL] $\rightarrow$ [+front]/ [_ C_0 $V_{[+front]}$ _]$_{stem}$
  - Innovation: [DORSAL] $\rightarrow$ [+front]/ $C_{[+son-distr]}$ _]$_{stem}$
  - Examples: *kīken* $\rightarrow$ [cɪcn̩] 'to look', *wolke* $\rightarrow$ [vɔlc] 'cloud'
  - Result: Creates a secondary phonological cue in umlaut
- Vowel Merger
- Final Schwa Apocope
- Vowel Chain Shifting

Plautdietsch Phonological Innovations

Innovations Can (and did) Alter Transparency

Plautdietsch underwent the several segmental innovations from MLG.

- Palatalization
- Vowel Merger
  - Innovation: ɛ → a
  - Examples: *decke* → [daːc] 'blanket', *bet* → [baːt]
  - Result: Merges with preexisting a (*dak* → [daːk]). One of several innovations that removes the phonological motivation behind palatalization
- Final Schwa Apocope
- Vowel Chain Shifting

Plautdietsch Phonological Innovations

Innovations Can (and did) Alter Transparency

Plautdietsch underwent the several segmental innovations from MLG.

- Palatalization
- Vowel Merger
- Final Schwa Apocope
  - Innovation: ə $\rightarrow$ 0 / _]$_{word}$
  - Example: *sāge* $\rightarrow$ [zɛw] 'saw'
  - Result: Removes the environment of many voicing alternations. Removes the environment of Open Syllable Lengthening
- Vowel Chain Shifting

Plautdietsch Phonological Innovations

Innovations Can (and did) Alter Transparency

Plautdietsch underwent the several segmental innovations from MLG.

- Palatalization
- Vowel Merger
- Final Schwa Apocope
- Vowel Chain Shifting
  - Example *henne* → [haːn], *hēner* → [həɪnɐ] 'hen(s)'
  - Example *bōm* → [bəʊm], *bö̤me* → [bəɪm] 'trees'
  - Result: Collapses the difference between some reflexes from Open Syllable Lengthening and Umlaut

Affix Structure in Free Variation

Strong (but not absolute) prosodic preferences regulate which suffix selection.

1. Most monsyllabic bases build to disyllabic trochee in the plural by selecting a suffix with a syllabic component.

	Disyllabic Plurals		Monosyllabic Plurals
Long Vowel	[fryː]-[fryːəs]	‘woman/women’	
	[jlɛt]-[jliːdɐ]/[jleːdɐ]	‘member(s)’	
Short Vowel	[bɔl]-[bɔləs]	‘bull(s)’	
	[dɪŋc]-[dɪŋɐ]	‘thing(s)’	
	[flʊs]-[flɪsɐ]/[flʊsn̩]	‘river(s)’	

Table 5. Syllable Structure of Plurals

Affix Structure in Free Variation

Strong (but not absolute) prosodic preferences regulate which suffix selection.

1. Most monsyllabic bases build to disyllabic trochee in the plural by selecting a suffix with a syllabic component.
2. Forms that take the bare [-s] or no suffix tend to already fit the prosodic template in the base (most of these form have a long vowel in the base).

	Disyllabic Plurals		Monosyllabic Plurals	
Long Vowel	[fry:]-[fry:əs]	'woman/women'	[ry:m]-[ri:m]/[ry:ms]	'room(s)'
	[jlɛt]-[jli:dɐ]/[jle:dɐ]	'member(s)'	[dɔʊm]-[da:m]/[dɔʊms]	'dam(s)'
	[ky:gl̩]-[ky:gln̩]/[ky:gl̩s]	'ball(s)'	[dri:f]-[dri:fs]	'motive(s)'
	[fleɐjl̩]-[fleɐln̩]/[fleɐjl̩s]	'wing(s)'	[bəʊm]-[bəɪm]	'tree(s)'
Short Vowel	[bɔl]-[bɔləs]	'bull(s)'	[dɔɹn]-[dɔɹns]	'metal spike(s)'
	[dɪŋc]-[dɪŋɐ]	'thing(s)'	[ʃnɛt]-[ʃnɛts]	'cut(s)'
	[flʊs]-[flɪsɐ]/[flʊsn̩]	'river(s)'		

Table 5. Syllable Structure of Plurals

Plural Prosody: Disyllabic Trochee

Innovative but Conservative

Plautdietsch plurals conform to the general pattern of prosodic structures found in other types of Low German.[a]

[a] There are few exceptions (e.g. [oːvn̩t]-[oːvn̩dn̩] 'evening(s)')

The following examples show free variation in plural forms in the corpus.

Stem Type	Stem		Plural A	Plural B
Disyllabic	[kɔdɐ]	'rag'	[kɔdɐʃ]	[kɔdrn̩]
	[kyːgl̩]	'bullet'	[kyːgl̩s]	[kyːgln̩]
Monosyllabic	[vɔʊmz]	'coat'	[vɔʊmzn̩]	[vaːmzɐ]
	[cnəɪ]	'knee'	[cnəɪəs]	[cnəɪn̩]

Table 6. Disyllabic Trochee Plurals

Plural Prosody: Heavy Trochee

Innovative but Conservative

Plautdietsch plurals conform to the general pattern of prosodic structures found in other types of Low German.[a]

[a] There are few exceptions (e.g. [oːvn̩t]-[oːvn̩dn̩] 'evening(s)')

The following examples show free variation in plural forms in the corpus.

Stem		Plural A	Plural B
[dɔʊm]	'dam'	[dɔʊms]	[daːm]
[jlaːd]	'glade'	[jlaːdn̩]	[jleːd]
[tyːn]	'fence'	[tyːns]	[tiːn]
[ʃvɔʊt]	'swath'	[ʃvoːd]	[ʃveːd]

Table 7. Heavy Monosyllabic Foot Plurals

Determining the Use of Exponents

How are Plural Exponents Selected?

We have already shown that prosody plays a role in affix selection, but are there other factors which determine which plural exponents are used?

Harris (2017) claims that the type of ME exhibited in West Germanic is often lexically determined (2017: 61, 90).

We find that ME is determined by:

- Lexical (root and affix) information
- Affix Type

Affixes

Affixes After Plautdietsch Innovations

After the innovation of schwa apocope, Plautdietsch retained only three plural suffixes.

- /-s/
- /-n̩/
- /-ɐ/

Affixes

Affixes After Plautdietsch Innovations

After the innovation of schwa apocope, Plautdietsch retained only three plural suffixes.

- /-s/
  - Allophone [ʃ] following rhotics and opening diphthongs
  - Allophone [əs] in certain lexical items (used only to build a disyllabic foot)
- /-n̩/
- /-ɐ/

Affixes

Affixes After Plautdietsch Innovations

After the innovation of schwa apocope, Plautdietsch retained only three plural suffixes.

- /-s/
- /-n̩/
  - Phonetically [n̩] in Chortitza dialect
  - Non-nasal in Molotschna dialect
- /-ɐ/

Affixes

Affixes After Plautdietsch Innovations

After the innovation of schwa apocope, Plautdietsch retained only three plural suffixes.

- /-s/
- /-n̩/
- /-ɐ/
  - From the MLG *-er* suffix

Process Morphology[1]

The Independent Status of Process Pluralization

In Plautdietsch, phonological processes can be exponents of pluralization. There are three process morphology exponents.

- Vowel Alternation
- Voicing Alternation
- Place alternation

[1] Manner mutations always accompany other types of consonant alternation.

Process Morphology[1]

The Independent Status of Process Pluralization

In Plautdietsch, phonological processes can be exponents of pluralization. There are three process morphology exponents.

- Vowel Alternation
  Historical Vowel Lengthening
  - [ʃɛp]-[ʃeːp] ‘ship(s)’
  - [haːn]-[həɪnɐ] ‘hen(s)’
  - [ʃvɔʊt]-[ʃveːd]/[ʃvoːd] ‘swath(s)’
  - [daːx]-[dɛw] ‘day(s)’
- Voicing Alternation
- Place alternation

[1] Manner mutations always accompany other types of consonant alternation.

Process Morphology[1]

The Independent Status of Process Pluralization

In Plautdietsch, phonological processes can be exponents of pluralization. There are three process morphology exponents.

- Vowel Alternation
  Historical Umlaut
  - [vʊlf]-[vɪlv] ‘wolf(ves)’, [hyːs]-[hiːzɐ] ‘house(es)’, [brəʊdɐ]-[brəɪdɐ] ‘brother(s)’, [vuɐt]-[viɐdɐ] word(s)
  - [rɔʊt]-[reːdɐ] ‘wheel(s), [braːt]-[breːdɐ] ‘board(s)’, [hɔf]-[heːv] ‘yard(s)’
  - [ɔʊpl̩]-[aːpl̩] ‘apple(s)’, [rɔk]-[raːc] ‘skirt’
  - [lɔʊnt]-[lɛndɐ] ‘land(s)’, [ʃtraːŋk]-[ʃtrɛɲ] ‘string(s)’, [hɔlt]-[hɛltɐ] ‘wood(s)’
- Voicing Alternation
- Place alternation

[1] Manner mutations always accompany other types of consonant alternation.

Process Morphology[1]

The Independent Status of Process Pluralization

In Plautdietsch, phonological processes can be exponents of pluralization. There are three process morphology exponents.

- Vowel Alternation
- Voicing Alternation
  - [brəɪf]-[brəɪv] 'letter(s)'
  - [faːɹʃ]-[faːɹʒ] 'verse(s)'
  - [friːnt]-[friːnd] 'friend(s)'
  - [vaːç]-[veɐj] 'path(s)'
- Place alternation

[1] Manner mutations always accompany other types of consonant alternation.

Process Morphology[1]

The Independent Status of Process Pluralization

In Plautdietsch, phonological processes can be exponents of pluralization. There are three process morphology exponents.

- Vowel Alternation
- Voicing Alternation
- Place alternation
  - [zaːk]-[zaːc] 'bag(s)'
  - [hʊnt]-[hʊɲ] 'dog(s)' (no historical trigger of palatalization)
  - [trɔx]-[treɐj] 'trough(s)'

[1] Manner mutations always accompany other types of consonant alternation.

Lexical Morphology Subcategorization

Root and Derivational Affix Behavior

Roots and derivational affixes can select a specific suffix independent of phonological properties of the root.

Root A		Root B	
[zeːn]-[zeːns]	‘son(s)’	[zeːn]-[zeːnn̩]	‘tendon(s)’
[rɔʊt]-[rɔʊtn̩]	‘rat(s)’	[rɔʊt]-[reːdɐ]	‘wheel(s)’
[huɐn]-[huɐns]	‘horn(s) instr’	[huɐn]-[hiɐnɐ]	‘horn(s) animal’

Table 8. Suffix Selection among Homophonous Roots

Lexical Morphology Subcategorization

Root and Derivational Affix Behavior

Roots and derivational affixes can select a specific suffix independent of phonological properties of the root.

Root Form		Derived Form	
[knəʊp]-[cnəɪp]	'button(s)'	[knəʊpcə]-[knəʊpcəs]	'button(s) DIM'
[cɪnt]-[cɪɲɐ]	'child(ren)'	[cɪnthɛɪt]-[cɪnthɛɪtn̩]	'childhood(s)'

Table 9. Derivational Affix Selection

Multiple Exponence (ME) in Plautdietsch

Affixes Restrict ME

In Plautdietsch, the affixes /-s/ and /-n̩/ resist multiple exponence. All other marked plural forms tend to encourage ME in so far as it can occur.

Base		Non-ME Plural	ME Plural
[flʊs]	'river'	[flʊsn̩]	[flɪsɐ]
[brɔʊnt]	'inferno'	[brɔʊnts]	[braːnd]
[-ʃəɪt]	'departure'	[-ʃəɪts]	[-ʃeːd]
[huɐn]	x2	[huɐns] 'horns instr.'	[hiɐnɐ]'horns anim.'

Table 10. Variation in ME According to Suffix

but... [ʃʊlɐ]-[ʃʊlrn̩]/[ʃʊlɐʃ] 'shoulder(s)'

Findings

West Germanic Typology: Prosody

Plautdietsch prosodic templates match those found in other varieties of Low German. These constraints only partially overlap with Standard Dutch and Standard German.

- Disyllabic foot
  - Standard German
  - Standard Dutch
  - Many varieties of Low German
- Weight sensitive foot
  - Many varieties of Low German

Findings

West Germanic Typology: Exponence

Plautdietsch is unique because it has four independent exponents of pluralization that can co-exist.

Many of the new exponents arose due to phonological changes specific to this dialect of Low German.

- Standard German uses a maximum of two exponents: suffix + umlaut.
- Standard Dutch uses just prosodically constrained suffixes.

References 1 of 2

Burns, Roslyn 2016. *New World Mennonite Low German: An Investigation of Changes in Progress*. Dissertation: UC Berkeley.

Caballero, Gabriela. 2008. *Choguita Rarámuri (Tarahumara) Phonology and Morphology*. Dissertation: UC Berkeley.

Caballero, Gabriela and Alice Harris. 2010. "A working typology of multiple exponence". Kiefer, F., Ladányi, M., & Siptár, P. (Eds.). *Current issues in morphological theory : (ir)regularity, analogy and frequency*. 163-188.

Dressler, Wolfgang. 1985. *Morphonology: The Dynamics of Derivation*. Ann Arbor: Karoma

Féry, Caroline. 1998. "German Word Stress in Optimality Theory". *Journal of Comparative Germanic Linguistics* 2(2): 101-142.

Harris, Alice. 2009. "Exuberant exponence in Batsbi". *Natural Language and Linguist Theory 27*: 267–303

Harris, Alice. 2017. *Multiple Exponence*. Oxford: Oxford University Press

Lasch, Agathe. 1914. *Mittelniederdeutsche Grammatik*. Halle: Niemeyer Verlag

Lübben, August. 1882. *Mittelniederdeutsche Grammatik: nebst Chrestomathie und Glossar*. Leipzig: T.O. Weigel

Matthews, Peter. 1974. *Morphology*. Cambridge: Cambridge University Press.

Mayerthaler, Willi. 1981. *Morphologische Natürlichkeit*. Wiesbaden: Athenaion. Engl. Transl. Morphological Naturalness. 1986. Ann Arbor: Karoma.

Quiring, Jacob. 1928. *Die Mundart von Chortitza in Süd-Rußland*. Dissertation: Ludwig-Maximilians-Universität zu München.

References 2 of 2

Rempel, Herman. 1995. *Kjenn Jie Noch Plautdietsch*. Grenta: Prairie View Press.

Riad, Tomas. 1992. *Structures in Germanic Prosody: A diachronic study with special reference to the Nordic languages*. Dissertation: Stockholm University.

Russ, Charles V.J. 1989. *The Dialects of modern German: a linguistic survey*. London: Routledge.

Smith, Laura Catharine. 2007. "The resilience of prosodic templates in the history of West Germanic." In Joseph C. Salmons and Shannon Dubenion-Smith (Eds.) *Historical Linguistics 2005: Selected papers from the 17th International Conference on Historical Linguistics*, Madison, 31 July–5 August 2005. Amsterdam: John Benjamins, pp. 351-365. Smith, Laura Catharine. 2009. "Dialect variation and the Dutch diminutive: Loss, maintenance and extension of prosodic templates." In Monique Dufresne, Fernande Dupuis and Etleva Vocaj (Eds.) *Historical Linguistics 2007*. Amsterdam: John Benjamins, pp.37-46.

Smith, Laura Catharine and Jessica Anderson. 2010. "The Prosodic Template for German Plurals: Does it exist in dialects or just Standard German". Paper presented at GLAC (Germanic Linguistics Annual Conference), at the University of Wisconsin-Milwaukee, April 30, 2010.

Thiessen, Jack. 1977. *Mennonite Low German Dictionary*. Marburg: N.G. Elwert.

Zacharias, Ed. 2009. *Ons Ieeschtet Wieedabuak.: Met awa 17,000 Wieed*. Winkler: Self Published.