Uninflectedness: Concepts & Consequences

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Outline

Roadmap

- Brief summary of uninflectedness:
  uninflecting vs uninflectable lexemes
  lexical vs contextual uninflectability
- Consequences:
  - What counts as inflection?
  - Uninflectability and derivation/compounding
- Analysis

Roadmap

Analysis:

- uninflectable lexeme is inflectable 'in the syntax' but not 'in the morphology'
- treatment appealing to paradigms, specifically, content vs form/realized paradigm
  form paradigms defined in terms of purely morphomic features
- generalization of 'lexical insertion' within paradigm-based model of morphology∼syntax to handle inflecting, uninflecting, uninflectable lexemes
  (and defective lexemes)

Uninflectedness

Uninflectedness

- uninflecting vs uninflectable lexemes ($L_{uninflectable}$)
- 'inflectional expectation'
- lexical vs contextual uninflectability

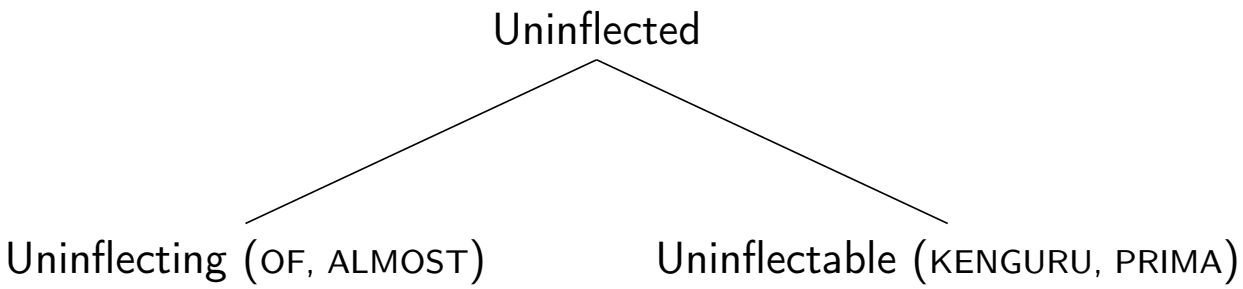
Slogan for talk

Unflektierbarkeit zeigt die Grenzen und damit die innere Struktur des morphologischen Systems einer Sprache (Doleschal 2001, 2002)

(roughly): Uninflectedness (that is, the behaviour of uninflecting and uninflectable lexemes) is a window on morphosyntax

Uninflectedness

Two ways of not inflecting



Uninflecting lexemes

Uninflecting lexemes **never** inflect

No 'inflectional expectation'

Null 'morpholexical signature'

Uninflectable lexemes ($L_{uninflectable}$)

$L_{uninflectable}$ should inflect
(positive 'inflectional expectation', non-null morpholexical signature)

but only appear in a base/root form

E.g Russian *kangaroo*-nouns — morphologically 'inert/frozen' (Baerman et al 2005; Jenny Audring's talk)
'paradigmatic uninflectability' (Doleschal)

Contextually uninflectable lexemes

Contextually uninflectable lexemes
should inflect (positive 'inflectional expectation')

usually do inflect

but in certain contexts only appear in the base/root form, hence behave like $L_{uninflectable}$

'syntagmatic uninflectability' (Doleschal)

Contextually uninflectable lexemes

Terminological note: It might be useful to think of (morphosyntactic) constructional uninflectability as a subtype of the broader category of contextual uninflectability

Example: German predicative adjectives

Contextual uninflectability: German predicative adjectives

Ich bin ein **kleines** Känguru
I am a little.N.SG.NOM/ACC kangaroo
'I am a little kangaroo'

Das Känguru ist **klein**(*-e/*-es/...)
the kangaroo is little[UNINFL]
'The kangaroo is little' [German]

Contextual uninflectability: German predicative adjectives

More than just 'adjective after copular verb SEIN', since it's found with secondary predication, postnominal attributive adjectives, etc.

(Trost 2006: 376, Mittelbayerische Zeitung, 1999)

Studentin, **launisch, faul, rechthaberisch, unordentlich**, aber sehr **attraktiv** sucht das Gegenteil

'(Female) student: moody, lazy, opinionated, untidy, but very attractive, seeks opposite'

This suggests that more is at stake than just a feature marking [+Predicative] or some such

Contextual uninflectability: German predicative adjectives

For details, see u.a.

Dürscheid, 2002.

Trost, I 2006

Contextual uninflectability: German predicative adjectives

Crucial point about German contextually uninflectable adjectives:

In

*Das Känguru ist **klein***

the form /klaɪn/ isn't the form of any cell in the paradigm of KLEIN

Therefore, it doesn't express any morphosyntactic property set at all

Russian foreign names

Another (intermediate?) type: Russian foreign names

reč′ ‘speech’ . . .

(i) Bill-a Klinton-a
(ii) Xillari Klinton
(iii) Xilari Benn-a

Hilary Benn is a (male) British politician

Not all women

Some foreign female names look sufficiently like Russian feminine gender nouns to be declinable

knigi Teres-y **Solan-y**
books Teresa-GEN.SG Solana-GEN.SG
‘los libros de Teresa Solana’ [Russian]

Not all foreign names

Marcus Tullius Cicero

Marc-i Tulli-i Ciceron-is (genitive case) [Latin]

Mark Tullij **Ciceron** [Russian]

(All three components inflect normally)

There's no reason in principle why a female name like *Klinton* couldn't be inflected just like the male name but taking feminine gender agreements

Or female names could take a special feminine gender ending, like Czech *-ová*

But this would completely go against the organization of Russian morphology

So we have to regard *Klinton*[M] and *Klinton*[F] as distinct, though related(!), lexemes

Partial lexical uninflectability

Partial lexical uninflectability

Sometimes a lexeme is uninflectable only for part of its paradigm

Polish nouns inflect just like Russian nouns (only worse)

(See Grev Corbett's talk)

Polish *muzeum* lexemes

case	number	
	singular	plural
nom	muzeum	muze-a
acc	muzeum	muze-ów
gen	muzeum	muze-a
dat	muzeum	muze-om
inst	muzeum	muze-ach
loc	muzeum	muze-ami

Partial lexical uninflectability

'Sporadic agreement' (Sebastian Fedden):

Some verbs fail to show expected agreement with arguments, but show regular inflection for TMA categories

This is not the same as differential object marking/agreement, where the presence of absence of agreement is semantically of pragmatically significant (focus, definiteness, . . .)

Partial *contextual* uninflectability?

Partial *contextual* uninflectability?

Lexeme L is expected to inflect in a given context/construction

but fails to inflect in a subset of those contexts/constructions

Typology of uninflectability

So far:

	lexical	*contextual*
total	*kangaroo*-nouns	German pred adj
partial	sporadic agreement	???

Hungarian inflecting infinitive

Hungarian inflecting infinitive

Infinitive inflects like possessed noun agreeing with (understood) subject as complement to certain auxiliary(-like) verbs:

kell 'need', *lehet* , *szabad* 'is possible/allowed'

Hungarian inflecting infinitive

Nekem most **men-n-em** kell
me.DAT now go-INF-1SG.PX need
'I have to go now' [present]
KVF:314

Hungarian inflecting infinitive

Korábban kell-ett volna neked haza
earlier need-PAST CONDITIONAL you.DAT home
men-n-ed
go-INF-2SG.PX
'You needed to have gone home earlier' [past conditional]
Kiss 2002:210

Hungarian inflecting infinitive

Nem fontos magyarul **beszél-ni-e**
not important Hungarian speak-INF-3SG.PX
'It isn't important that s/he speak Hungarian'
KVF:318

Hungarian inflecting infinitive

With other (auxiliary-like) verbs, no inflection

Nem tud-ok/bír-ok **fel-áll-ni**
not able-1SG.PRS up-stand-INF
'I am not able to stand up'
KVF:314

Hungarian inflecting infinitive

No inflection with unspecified subjects:

Mit kell a kerttel **csinál-ni**
what need to the garden do-INF
'What needs to be done to the garden?'

presumably because as far as the verb is concerned, there is no subject

Uninflectability and word classes

Uninflectability and word classes

Total uninflectability is often found with nouns

But also common with adjectives:

German *rosa*, *prima*, ...

Greek, Macedonian, Bulgarian, ...

Not very common with verbs (perhaps because of communicative load of verbs?) BUT

le rap français ...

Sirène – Luidji

Sirène – Luidji

Baby girl, si je te follow, je te follow

https://music.youtube.com/watch?v=0EeheHnqQio

follow

The French verb *follow* is completely uninflectable . . .

. . . but it has a "past participle"

follow-past participle

follow-past participle

https://www.youtube.com/watch?v=GbzBfr2aBus

follow

Question:

Are there any liaison contexts agreeing past participles, e.g. French′

Elles ont été suivies [z] en masse ⇒

Elles ont été follow [z] en masse

This is the sort of question that uninflectability might throw light on

Non-uninflectability

Phenomena which are distinct from uninflectability

overdetermination:

- Basque inflecting verbs
- the Chichewa inflecting preposition
- etc

Phenomena which are (probably) distinct from uninflectability

multiword constructions with inflecting ancillary/auxiliary and non-inflecting lexical form

- light verb constructions (unless the light element is inflectable elsewhere in the grammar, e.g. Persian)
- light adjective constructions (e.g. Chukchi)

Unclear cases

- occasional syncretisms (*sheep*, *hit*)
- (some types of) compounding (including noun incorporation)
- classes in which only a small majority (say 60%) of lexemes inflect (e.g. are French nouns inflectable?)
  See Grev Corbett's talk and several others

Some consequences

What counts as inflection?

- 'core' vs marginal inflection
- inflection vs. derivation
- inflection vs. compounding

What counts as inflection?

Uninflectability seems to relate only to 'standard/core' types of inflection

Doesn't apply to:

- clitic-like affixes (phrasal affixation, edge inflection):
  - *je te follow*
  - *taze-to* 'the fresh (one)' (Macedonian)
- periphrasis: *elle m'a follow*
- evaluative morphology: Russian diminutive
  Xari 'Harry' ⇒ *Xarik*

Derivation

Uninflectable lexemes may undergo derivation

Russian:

kino	'cinema'	⇒	*kinoščnik*	'cinema worker'
kenguru	'kangaroo'	⇒	*kengurjonok*	'joey (baby kangaroo)'
kofe	'coffee'	⇒	*kofejnyj*	'pertaining to coffee' (relational adjective)

Derivation-like inflection

German contextually uninflectable predicate adjectives have comparative forms

Das Känguru ist **klein**
the kangaroo is little[UNINFL]
'The kangaroo is little'

Aber dieses ist noch **klein-er**
but this-one is even little-COMPARATIVE[UNINFL]
'but this one is even smaller'

But the comparative itself is uninflectable (**kleineres* etc)

Compounding

Uninflectable lexemes may undergo compounding

Russian:

kino	'cinema'	⇒	*kin-o-operator*	'cameraman'	cf
zvuk	'sound'	⇒	*zvuk-o-operator*	'sound engineer'	and cf
klin	'wedge'	⇒	*klin-o-obraznyj*	'wedge-shaped'	

Analysis

Analysis

How should uninflectability be analysed?

How does uninflectability fit into theories of (inflectional) morphology?

How does uninflectability relate to models of the morphology-syntax interface and the lexicon?

Leading idea

$L_{uninflectable}$ behaves just like an ordinary lexeme

except that it doesn't take on the expected morphology for that word class

Leading idea

$L_{uninflectable}$ is treated as

(i) inflectable by the syntax/semantics

(ii) uninflecting by the morphology

By virtue of point (i) $L_{uninflectable}$ isn't defective

By virtue of point (ii) $L_{uninflectable}$ lacks the expected inflectional paradigm

Paradigm-based implementation

Paradigm-based implementation

Uninflectability is hard to understand without appeal to some notion of paradigm

Here, 'paradigm' := space defined by the set of features, their permissible values, their permissible combinations

Morpholexical signature ('inflectional expectation') = declaration of 'paradigm'

Paradigm-based implementation

These claims can be implemented in a model which distinguishes two sorts of (non-periphrastic) paradigm (e.g PFM2)

Content/property paradigm (Π_C): specification of all those properties to which the syntax and/or semantics appeal

Form/realized paradigm ($\Pi_{F/R}$): specification of all those properties which systematically distinguish wordforms of a given lexeme; set of actual ⟨wordform,property⟩ pairings

Paradigm-based implementation

Π_C and $\Pi_{F/R}$ are linked ('paradigm linkage'), and canonically have identical structuring, but in practice there are always (?) mismatches (Stump 2016)

These include:

- syncretisms
- overdifferentiation
- periphrastic expression
- defectiveness
- overabundance
- deponency
- heteroclisis
- ...

Paradigm-based implementation

$\Pi_C \sim \Pi_{F/R}$ mismatches often mean that there is no simple correspondent in syntax/semantics for a given wordform

The properties/features which define the actual forms of inflected words are therefore morphomic (cf Boyé & Schalchli 2019)

Hence, /dogz/ isn't [NUM:PL] of DOG

Rather, /dogz/ is in cell [form:2] of the $\Pi_{F/R}$ of DOG,

where [form:2] is the $\Pi_{F/R}$ correspondent of Π_C cell $\langle$ DOG,[NUM:PL]$\rangle$

This is an automatic consequence of the autonomy-of-morphology postulate (Aronoff 1994)

Non-cases of uninflectability

Non-cases of uninflectability

Proper identification of uninflectability presupposes correct analysis of morphological system

This especially relates to the form/realized paradigm

Non-case of (near) uninflectability: German weak nouns

Standard story:

German nouns inflect for four cases, two numbers

Non-case of (near) uninflectability: German weak nouns

'Weak' noun: *der Student* 'the student'

case	number			
	singular		plural	
nom	der	Student	die	Studenten
acc	den	Studenten	die	Studenten
gen	des	Studenten	der	Studenten
dat	dem	Studenten	den	Studenten

Non-case of (near) uninflectability: German weak nouns

Student looks as though it is uninflectable for 7/8ths of the paradigm and only inflects (subtractively) in the nom sg

But this seems to be the result of a mis-analysis of German noun inflection

How to analysis German noun declension

Recall that forms in $\Pi_{F/R}$ are determined by purely morphomic features (Boyé/Schalchli 2019; Spencer 2009)

The morphomic feature inventory depends on lexical class

How to analysis German noun declension

$\Pi_{F/R}$(VATER) 'father' (regular masculine noun):

- Form1=Vater
- Form2=Vaters
- Form3=Väter
- Form4=Vätern

How to analysis German noun declension

$\Pi_{F/R}$(HAND) 'hand' (regular feminine noun):

- Form1=Hand
- Form2=Hände
- Form3=Händen

How to analysis German noun declension

$\Pi_{F/R}$(WOHNUNG) 'apartment' (regular feminine noun):

- Form1=Wohnung
- Form2=Wohnungen

How to analysis German noun declension

$\Pi_{F/R}$(STUDENT):

- Form1=Student
- Form2=Studenten

How to analysis German noun declension

So why should anyone imagine that STUDENT has a 4 x 2 case/number paradigm?

How to analysis German noun declension

The determiner system defines an 8-celled paradigm in the syntax

Definite article masculine gender

	singular	plural
nom	*der*	*die*
acc	*den*	*die*
gen	*des*	*der*
dat	*dem*	*den*

How to analysis German noun declension

The eight Π_C properties needed for syntax get mapped to the morphomic $\Pi_{F/R}$ cells for each lexical class by the (rather complex) Correspondence function (***Corr***) for German

How to analysis German noun declension

Examples

[NUM:pl, CASE:dat]	⇒	Form 4, Class:VATER
[NUM:pl]	⇒	Form 2, Class:WOHNUNG
[NUM:sg, CASE:acc]	⇒	Form 2, Class:STUDENT

The ***Corr*** function regulates the SYN/SEM∼MORPHOLOGY interface by specifying which $\Pi_{F/R}$ cell occupant corresponds to a given Π_C feature set

That is, ***Corr*** regulates lexical insertion for inflecting lexemes

Implications: lexical insertion

Uninflecting lexemes

If the content paradigm (Π_C) regulates the SYN/SEM∼MORPHOLOGY interface, how does Lexical Insertion (*LexIn*) work for uninflecting lexemes such as OF, THE?

Uninflecting lexemes

Two proposals:

- Uninflecting lexeme actually has $\Pi_{F/R}$; acquires some kind of 'trivial' Π_C (effectively the 'type-shifting' SBCG solution of Sag 2012) – 'mass syncretism' solution
- Uninflecting lexeme has no Π_C (therefore no $\Pi_{F/R}$);
  LexIn defined over the root
  'reversion-to-root' solution
  lexeme literally lacks a purely morphological inflectional paradigm of any sort

Uninflecting lexemes

'Mass syncretism' solution for uninflecting lexemes is conceptually problematical

If English OF has an inflectional paradigm ('trivial' $\Pi_{F/R}$) its (sole) $\Pi_{F/R}$ feature is morphomic, but what kind of Π_C feature would it map to?

In other words, if OF has an inflectional paradigm, however trivial, what inflectional property could it possibly express in syntax∼semantics?

Uninflecting lexemes

LexIn by 'reversion-to-root':

OF has no inflectional paradigm of any sort;

LexIn is defined solely over the lexical root

Lexical insertion

How to formalize generalized version of lexical insertion

Assume a lexical entry for any lexeme, $\mathcal{L}$, is minimally a triple consisting of attributes FORM, SYN, SEM

Assume the FORM attribute maps to the set of all possible forms of $\mathcal{L}$

Lexical insertion

Where $\mathcal{L}$ is inflecting the value of the FORM attribute is the pair <root,PF> for $\mathcal{L}$

Where $\mathcal{L}$ is uninflecting the (sole) value of the FORM attribute is the lexical root, <root,$\emptyset$>

Lexical insertion: general principle

This implies a fairly common-sense view of *LexIn*

Given a syntactic terminal τ, morphosyntactic feature set ϕ, $[_{\tau}\ \phi\ ]$, selected lexeme $\mathcal{L}$.

Associate $[_{\tau}\ \phi\ ]$ with the most highly specified value of $\mathcal{L}$'s FORM attribute compatible with ϕ

Lexical insertion: inflecting lexeme

For a standardly inflecting lexeme

the most highly specified value of $\mathcal{L}$'s FORM attribute corresponding to $[_{\tau}\ \phi]$ is that cell in $\mathcal{L}$'s $\Pi_{F/R}$ which is defined by ***Corr***(ϕ)

(Stump's 'paradigm linkage')

Lexical insertion: uninflecting lexeme

For an uninflecting lexeme (e.g. OF):

the most highly specified value of $\mathcal{L}$'s FORM attribute corresponding to $[_{\tau}\ \phi]$ is simply the lexical root (the sole value of FORM for $\mathcal{L}$)

Lexical insertion: uninflectable lexemes

How does *LexIn* work for uninflectable lexemes?

Uninflectable lexemes: lexical insertion

As with uninflecting lexemes we can propose two possible solutions

- Uninflectable lexeme has trivial $\Pi_{F/R}$.
  All forms are syncretic with the base/root form – 'mass syncretism' solution
- Uninflectable lexeme has Π_C but lacks a $\Pi_{F/R}$;
  LexIn defined over the root – 'reversion-to-root' solution

Uninflectable lexemes: lexical insertion

'Mass syncretism' approach more plausible for $\mathrm{L}_{uninflectable}$ than for uninflecting words

Assume ***Corr*** function along the lines of

Corr($\langle$KANGAROO,[CASE:α,NUM:β]$\rangle$) $\Rightarrow$ [Form:root(KANGAROO)]

This is a trivial $\Pi_{F/R}$ defined over a single morphomic feature-value pairing [Form:root]

Hard to reconcile with some types of uninflectability

Lexical vs contextual uninflectability revisited

Lexical vs contextual uninflectability revisited

German uninflected predicative adjectives

The predicative adjective/compound combining form isn't identical to **any** inflected form in the adjective's $\Pi_{F/R}$,

rather, it's the uninflected lexical root

- . . . ist/sind {tot, rot, . . . } 'is/are {dead, red, . . . }
- Studentin launisch . . . 'Student, moody, . . . '
- Rotwein 'red wine'
- totmüde 'dead tired'

Lexical vs contextual uninflectability

These adjective forms don't seem to express any morphosyntactic features

This suggests that for these lexemes,
LexIn is defined over the bare root form ('reversion-to-root'),
not over some kind of depleted $\Pi_{F/R}$('mass syncretism')

Assume that in these contexts the lexeme is also not associated with any Π_C

This reflects the idea that such occurrences do not express any morphosyntactic properties from the lexeme's usual paradigm

Lexical insertion for uninflectable lexemes

So — reversion-to-root model seems to account best for totally uninflectable lexemes (lexical and contextual)

'Mass syncretism' analysis might be needed for (some cases of) partial uninflectability

- Polish *muzeum* nouns
- Sporadic agreement

But these cases could equally just reflect a more complex version of the mapping between $\Pi_C \sim \Pi_{F/R}$

Lexical insertion for uninflectable lexemes

[Note added after Arbeitsgruppe]

In cases such as the Polish *widmo* 'ghost' nouns (Bożena Cetnarowska) we would have to say that WIDMO was a new (adjectival?) lexeme formed by taking the nom sg form of inflectable WIDMO as its root

This is similar to the formation of an (inflectable) nominalization from an infinitive, e.g. German *schreiben* 'to write' ⇒ *die Kunst des Schreibens*

Notice that the infinitive is here inflected as a noun —

Schreibens = gen sg.

Implications for defectiveness?

Implications for defectiveness?

Defective lexemes confound the 'inflectional expectation' for one or more cells in their paradigm

Russian *mečta* 'dream'

	SINGULAR	PLURAL
NOM	mečt-a	mečt-y
ACC	mečt-u	mečt-y
GEN	mečt-y	???
DAT	mečt-e	mečt-am
...		

Is this a gap in Π_C or $\Pi_{F/R}$?

Implications for defectiveness?

(i) $\Pi_{F/R}$ gap: ***Corr***(⟨[GEN, PL], DREAM⟩) ⇒ undefined

(ii) Π_C gap: ⟨[GEN, PL], DREAM⟩ ⇒ undefined

If (i) then LexIn should show reversion-to-root (*mečt*!)
⇏ defectiveness

If (ii) then LexIn cannot be defined
⇒ defectiveness

Conclusions

Conclusions

- Uninflecting lexeme has null Π_C
  hence, lacks $\Pi_{F/R}$ by definition
- Totally uninflectable lexeme has Π_C,
  lacks $\Pi_{F/R}$ by lexical stipulation
- Partially uninflectable lexeme (*muzeum* noun):
  Corr$(\Pi_C) \Rightarrow \Pi_{F/R}$ only for part of paradigm (e.g. [NUM:PL])
- Contextually uninflectable lexeme:
  Π_C undefined in certain morphosyntactic contexts
  (no 'inflectional expectation' wrt syntactic terminals)

Conclusions

Lexical insertion (LexIn) is defined over the FORM attribute of the lexeme's lexical entry

FORM attribute specifies/maps to

(i) lexical root

(ii) $\Pi_{F/R}$ provided by morphology (defined in terms of morphomic features)

LexIn is a function over the feature content, ϕ, of a syntactic terminal which associates ϕ with the most highly specified FORM value compatible with ϕ

Where $\Pi_{F/R}$ is lacking the image of the LexIn function resolves trivially to the lexeme's root

Conceptual queries

To what extent are total and partial uninflectability the same thing?

To what extent are lexical and contextual uninflectability the same thing?

Are there clear cases of partial contextual uninflectability?

Do we need different analyses for different cases of uninflectability?

By what criteria do we determine the analysis for borderline cases?

Vielen Dank!

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