The formal and functional architecture
of inflectional morphology

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1. Introduction

It is the pervading law of all things organic and inorganic, of all things physical and metaphysical, of all things human and all things superhuman, of all true manifestations of the head, of the heart, of the soul, that the life is recognizable in its expression, that form ever follows function. This is the law.

> Architect Louis Sullivan,
>
> in "The tall office building artistically considered," *Lippincott's Magazine* (March 1896)

(1) Canonical inflection (paraphrased from Corbett 2009)

    a. Properties of a canonical inflectional paradigm

- **Exhaustivity**: Every compatible combination of the relevant morpho-syntactic properties defines a cell.
- **Completeness**: Every cell has a realization.
- **Unambiguousness**: All realizations are distinct.
- **Freedom from stem alternation**: Every realization is based on the same stem.
- **Morphotactic uniformity**: the same morphotactic pattern (e.g. stem + suffix) is used in every realization.

    b. Properties of a canonical system of paradigms (for some syntactic category)

- **Parallelism**: All individual paradigms realize the same morphosyntactic property sets and all are canonical.
- **Distinctness**: Distinct paradigms are based on distinct stems and therefore have distinct realizations.
- **Uniformity of exponence**: Across paradigms, the same morphosyntactic property set is expressed by the same exponence.

(2) The paradigms of four inflecting prepositions in Breton

    a.   HERVEZ

                'according to'

1sg	*hervez-on*
2sg	*hervez-out*
3sgm	*hervez-añ*
3sgf	*hervez-i*
1pl	*hervez-omp*
2pl	*hervez-oc'h*
3pl	*hervez-o*

(2) The paradigms of four inflecting prepositions in Breton

a.	HERVEZ 'according to'	b.	E 'in'	A 'of'	OUZH 'against'
1sg	hervez-on		enn-on	ac'han-on	ouzh-in
2sg	hervez-out		enn-out	ac'han-out	ouzh-it
3sgm	hervez-añ		enn-añ	anezh-añ	out-añ
3sgf	hervez-i		enn-i	anezh-i	out-i
1pl	hervez-omp		enn-omp	ac'han-omp	ouzh-imp
2pl	hervez-oc'h		enn-oc'h	ac'han-oc'h	ouzh-oc'h
3pl	hervez-o		enn-o	anezh-o	out-o

Here, I discuss an architecture for inflectional morphology that elucidates the ways in which noncanonical inflection deviates from canonical patterns.

Talk outline
- I begin with a general discussion of the assumed architecture of inflection and
- how it relates to canonical inflection. I then
- examine how the various noncanonical inflectional phenomena in (3) are situated with respect to this architecture.

(3) Inflectional phenomena with noncanonical paradigm linkage

a.	Defectiveness	d.	Functor-argument reversal
b.	Syncretism	e.	Suppletion
c.	Deponency		

2. The architecture of content paradigms, form paradigms and paradigm linkage

The purpose of inflectional morphology is to give **phonological** expression to lexeme + property set pairings supplied by the **syntax**. It is therefore inherently an interface component, and this fact partially determines its formal architecture. But two additional facts are relevant to the details of this architecture.

First, words possess grammatical properties to which rules of syntax and semantics are insensitive; these include membership in inflection classes and other morphomic categories. The architecture of inflectional morphology should entail this fact.

Second, the same word may have (or may appear to have) distinct morphosyntactic properties for different purposes. Generally, morphosyntactic property sets serve the three purposes in (4):

(4) A word's morphosyntactic property set
    a.   constrains its lexical insertion
    b.   determines it semantic interpretation
    c.   induces the introduction of its inflectional exponents

Yet, some words behave as if the property set serving purpose (4c) is different from the set serving purposes (4a) and (4b); for instance, the Latin deponent verb *hortātur* 's/he urges' has the property set in (5a) for purposes of lexical insertion and semantic interpretation, yet its inflectional exponence instead presumes the property set in (5b).

(5) *hortātur* 's/he urges'
   a.   {3sg present indicative active}
   b.   {3sg present indicative passive}

The architecture of inflectional morphology should account for this sort of lack of parallelism.

In view of these considerations, I have argued that the architecture of inflection involves two levels of paradigmatic representation, one with syntacticosemantic relevance, the other with morphophonological relevance (Stump 2002, 2006, 2007; Stewart and Stump, 2007).

On this view, the job of the inflectional rule system is to relate the two sorts of paradigms and to determine their realization.   Thus, the architecture of inflectional morphology has the form in (6); that is, there are three kinds of representations (content cells, form cells, realizations) whose relation to one another is mediated by rules of paradigm linkage and realization rules.

(6) The architecture of inflectional morphology

Cells in content paradigms	← *Rules of paradigm linkage* →	Cells in form paradigms	← *Realization rules* →	Realizations
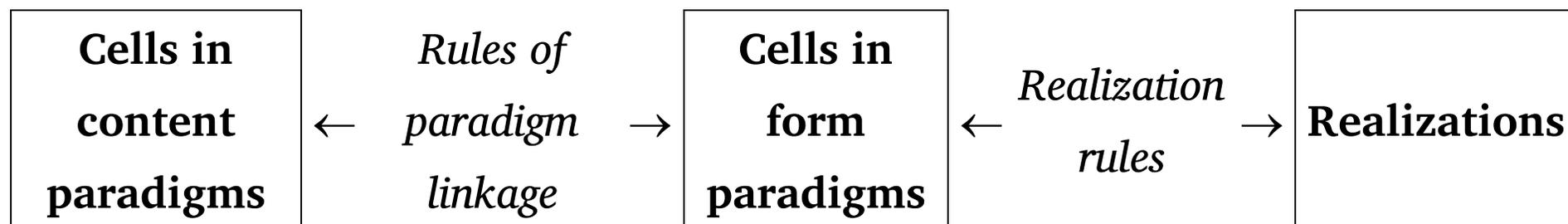
On one hand, lexemes have content paradigms, as in (7).

(7) a. A lexeme's **content paradigm** is its full inventory of content cells.

b. A **content cell** for a lexeme L is a pairing ⟨L, σ⟩ of L with a morphosyntactic property set σ with which L may be associated in syntax; thus, the cells in the content paradigm of lexeme L specify the range of syntactic contexts in which L appears.

(7) c. The content paradigm of the Breton prepositional lexeme HERVEZ ‘according to’:

⟨HERVEZ, {1sg}⟩

⟨HERVEZ, {2sg}⟩

⟨HERVEZ, {3sgm}⟩

⟨HERVEZ, {3sgf}⟩

⟨HERVEZ, {1pl}⟩

⟨HERVEZ, {2pl}⟩

⟨HERVEZ, {3pl}⟩

A lexeme's content cells determine lexical insertion and semantic interpretation.

For instance, the realization *hervezo* of the content cell ⟨HERVEZ, {3pl}⟩ is insertable in a prepositional node specified as third-person plural, and the content cell entails that the resulting structure will have a semantic interpretation something like (7d).

(7) d. Semantic interpretation of ⟨HERVEZ, {3pl}⟩:

$\lambda p \forall x[x \in X_i \rightarrow p \in$ **according-to$'$**$(x)]$ 'according to them$_i$'

(a set of propositions)

Stems, on the other hand, have form paradigms:

(8) a. A stem's **form paradigm** is its full inventory of form cells.
   b. A **form cell** for a stem X is a pairing ⟨X, σ⟩ of X with a set σ of morphosyntactic property sets for which X may be inflected; thus, the cells in the form paradigm of stem X specify the range of property sets for which X is inflectable.
   c. **Inflection classes** are seen as properties of stems rather than of lexemes; it is therefore at the level of form paradigms rather than that of content paradigms at which inflection class distinctions are made.

(8) d. The form paradigm of the Breton prepositional stem *hervez*[Class 1] 'according to' (a member of prepositional inflection class 1):

$\langle$ *hervez*[Class 1], {1sg}$\rangle$

$\langle$ *hervez*[Class 1], {2sg}$\rangle$

$\langle$ *hervez*[Class 1], {3sgm}$\rangle$

$\langle$ *hervez*[Class 1], {3sgf}$\rangle$

$\langle$ *hervez*[Class 1], {1pl}$\rangle$

$\langle$ *hervez*[Class 1], {2pl}$\rangle$

$\langle$ *hervez*[Class 1], {3pl}$\rangle$

A stem's form paradigm determines its realization; in particular, realization rules apply to each of a stem's form cells to determine its morphophonological expression. Thus, we might postulate the realization rules in (9) to account for the realization of the form cells in (8d); the resulting realizations are as in (2).

(9) Realization rules for Breton prepositions (Class 1)

	Form cell		Realization
a.	$\langle X_{[\text{Class 1}]}, \{1sg\}\rangle$	$\rightarrow$	Xon
b.	$\langle X_{[\text{Class 1}]}, \{2sg\}\rangle$	$\rightarrow$	$Xout$
c.	$\langle X, \{3sgm\}\rangle$	$\rightarrow$	$Xañ$
d.	$\langle X, \{3sgf\}\rangle$	$\rightarrow$	Xi
e.	$\langle X_{[\text{Class 1}]}, \{1pl\}\rangle$	$\rightarrow$	$Xomp$
f.	$\langle X, \{2pl\}\rangle$	$\rightarrow$	$Xoc'h$
g.	$\langle X, \{3pl\}\rangle$	$\rightarrow$	Xo

Content cells also have realizations; a content cell acquires its realization not directly (by means of realization rules), but indirectly—by association with a form cell and hence with its realization. The form cell with which a content cell is associated is what I shall call its **form correspondent**.

Thus, each of the cells in the content paradigm of the lexeme HERVEZ has, as its form correspondent, a cell in the form paradigm of the stem *hervez*, as in (10); each content cell shares the realization of its form correspondent.

(10) Correspondences between the content paradigm of HERVEZ and the form paradigm of *hervez*[Class 1]

Content cell	Form correspondent	Shared realization
⟨HERVEZ, {1sg}⟩	⟨*hervez*[Class 1], {1sg}⟩	*hervezon*
⟨HERVEZ, {2sg}⟩	⟨*hervez*[Class 1], {2sg}⟩	*hervezout*
⟨HERVEZ, {3sgm}⟩	⟨*hervez*[Class 1], {3sgm}⟩	*hervezañ*
⟨HERVEZ, {3sgf}⟩	⟨*hervez*[Class 1], {3sgf}⟩	*hervezi*
⟨HERVEZ, {1pl}⟩	⟨*hervez*[Class 1], {1pl}⟩	*hervezomp*
⟨HERVEZ, {2pl}⟩	⟨*hervez*[Class 1], {2pl}⟩	*hervezoc'h*
⟨HERVEZ, {3pl}⟩	⟨*hervez*[Class 1], {3pl}⟩	*hervezo*

The association of a content cell with its form correspondent is in general specified by a **rule of paradigm linkage**. Such associations are ordinarily effected by means of the universal default rule of paradigm linkage in (11).

(11)   The universal default rule of paradigm linkage
    Given a lexeme L having X as its σ-stem, the content cell ⟨L, σ⟩ has the form cell ⟨X, σ⟩ as its form correspondent.

Thus, given that the lexeme HERVEZ has *hervez* as its stem (as in (12)), (11) entails that all of the correspondences in (10) will hold by default.

In the definition of canonical paradigms, the default rule in (11) induces instances of paradigm linkage possessing the four characteristics in (13). Extending Corbett's typology, I propose that these be regarded as the properties of canonical paradigm linkage.

(13)   Canonical paradigm linkage
 a. The relation between a lexeme's content cells and their form correspondents is a total function, i.e. every content cell has a form correspondent.
 b. All of a lexeme's form correspondents share the same stem, i.e. all are drawn from the same form paradigm.
 c. The relation between content cells and their form correspondents is one-to-one rather than many-to-one, i.e. there is no sharing of form correspondents.
 d. A content cell's form correspondent is morphosyntactically faithful to it, i.e. it carries the same morphosyntactic property set.

Together, these properties characterize the pattern of paradigm linkage schematized in (14).

(14) Canonical paradigm linkage

Content cell	Form correspondent
$\langle L, \sigma \rangle$	$\langle X, \sigma \rangle$
$\langle L, \tau \rangle$	$\langle X, \tau \rangle$

If all inflection were purely canonical, the assumption that inflection involves both content paradigms and form paradigms might seem unnecessarily complicated; one might, for example, propose to eliminate any need for form paradigms (and hence any need for the rule of paradigm linkage in (11)) by formulating the realization rules in (9) directly in terms of content cells rather than in terms of form cells.

But once one begins looking at a wider array of inflectional phenomena, the need to distinguish between content paradigms and form paradigms becomes apparent. In particular, there is a range of noncanonical inflectional phenomena involving overrides of the canonical pattern of paradigm linkage in (14).

Instances of paradigm linkage in noncanonical inflection lack one or more of the characteristics in (13), either because the default rule of paradigm linkage cannot apply, or because the application of the default rule of paradigm linkage is overridden by that of a language-specific rule of paradigm linkage, or because the default rule of paradigm linkage itself draws a lexeme's form correspondents from more than one form paradigm.

I examine these various deviations from the canonical ideal in the inflectional morphology of the five phenomena in (15), each of which defines its own pattern of paradigm linkage.

(15)   Inflectional phenomena with noncanonical paradigm linkage
   a. Defectiveness   d. Functor-argument reversal
   b. Syncretism   e. Suppletion
   c. Deponency

3. Deviations from canonical paradigm linkage

3.1 Defectiveness: lack of a form correspondent

(16) Defective paradigm linkage

Content cell	Form correspondent
⟨L, σ⟩	⟨X, σ⟩
⟨L, τ⟩	—

(17) The defective inflection of Latin COEPISSE 'begin'

	Present	Perfect
1sg	—	*coepī*
2sg	—	*coepistī*
3sg	—	*coepit*
1pl	—	*coepimus*
2pl	—	*coepistis*
3pl	—	*coepērunt*

(18)   Stem specifications for the Latin verb COEPISSE 'begin'

Given any perfect-system (i.e. perfect, pluperfect or future perfect) property set σ, the lexeme COEPISSE has *coep* as its σ-stem.

Given any present-system (i.e. present, imperfect or future) property set σ, COEPISSE lacks a σ-stem.

(19) The content paradigm and form correspondents of Latin COEPISSE 'begin'

Content paradigm	Form correspondents	Shared realization
⟨COEPISSE, {1sg pres indic act}⟩	—	—
⟨COEPISSE, {2sg pres indic act}⟩	—	—
⟨COEPISSE, {3sg pres indic act}⟩	—	—
⟨COEPISSE, {1pl pres indic act}⟩	—	—
⟨COEPISSE, {2pl pres indic act}⟩	—	—
⟨COEPISSE, {3pl pres indic act}⟩	—	—
⟨COEPISSE, {1sg perf indic act}⟩	⟨*coep*, {1sg perf indic act}⟩	*coepī*
⟨COEPISSE, {2sg perf indic act}⟩	⟨*coep*, {2sg perf indic act}⟩	*coepistī*
⟨COEPISSE, {3sg perf indic act}⟩	⟨*coep*, {3sg perf indic act}⟩	*coepit*
⟨COEPISSE, {1pl perf indic act}⟩	⟨*coep*, {1pl perf indic act}⟩	*coepimus*
⟨COEPISSE, {2pl perf indic act}⟩	⟨*coep*, {2pl perf indic act}⟩	*coepistis*
⟨COEPISSE, {3pl perf indic act}⟩	⟨*coep*, {3pl perf indic act}⟩	*coepērunt*
⋮	⋮	⋮

3.2 Syncretism: shared form correspondents

(20) Syncretic paradigm linkage (directional)

Content cell	Form correspondent
⟨L, σ⟩	⟨X, σ⟩
⟨L, τ⟩	

(21) Syncretic paradigm linkage (nondirectional)

Content cell	Form correspondent
⟨L, σ⟩	⟨X, σ/τ⟩
⟨L, τ⟩	

(22)   The inflection of Latin BELLUM (neut.) 'war'

	Singular	Plural
Nom	*bellum*	*bella*
Gen	*bellī*	*bellōrum*
Dat	*bellō*	*bellīs*
Acc	*bellum*	*bella*
Abl	*bellō*	*bellīs*

(24)   Special rule of paradigm linkage for neuter nouns
        Where σ = {acc Y} and L is a neuter noun with σ-stem X,
        the content cell ⟨L, {nom Y}⟩ has ⟨X, σ⟩ as its form correspondent.

(25)   Special default rule of paradigm linkage for dative/ablative forms
        Where σ = {dat Y} or {abl Y} and L is a noun with σ-stem X, the content
        cell ⟨L, σ⟩ has ⟨X, {dat/abl Y}⟩ as its form correspondent.

(26) The content paradigm and form correspondents of Latin ꜱᴍᴀʟʟ BELLUM 'war' (neut.)

Content paradigm	Form correspondents	Shared realization
⟨BELLUM, {nom sg}⟩ ⟨BELLUM, {acc sg}⟩	⟨bell, {acc sg}⟩	bellum
⟨BELLUM, {gen sg}⟩	⟨bell, {gen sg}⟩	bellī
⟨BELLUM, {dat sg}⟩ ⟨BELLUM, {abl sg}⟩	⟨bell, {dat/abl sg}⟩	bellō
⟨BELLUM, {nom pl}⟩ ⟨BELLUM, {acc pl}⟩	⟨bell, {acc pl}⟩	bella
⟨BELLUM, {gen pl}⟩	⟨bell, {gen pl}⟩	bellōrum
⟨BELLUM, {dat pl}⟩ ⟨BELLUM, {abl pl}⟩	⟨bell, {dat/abl pl}⟩	bellīs

3.3 Other morphosyntactically unfaithful form correspondents

3.3.1 Deponency

(27) Deponent paradigm linkage

Content cell	Form correspondent
⟨L, σ⟩	⟨X, τ⟩
⟨L, τ⟩	—

(28) The present indicative inflection of Latin LAUDĀRE 'praise' and HORTĀRĪ 'urge'

LAUDĀRE 'praise'		HORTĀRĪ 'urge'	
Active	Passive	Active	Passive
laudō	laudor	hortor	—
laudās	laudāris	hortāris	—
laudat	laudātur	hortātur	—
laudāmus	laudāmur	hortāmur	—
laudātis	laudāminī	hortāminī	—
laudant	laudantur	hortantur	—

(30)   Special rule of paradigm linkage for Latin deponent verbs

Where σ is a finite active property set with τ as its passive counterpart and

L is a deponent verb with τ-stem X,

a. the content cell ⟨L, σ⟩ has ⟨X, τ⟩ as its form correspondent;

b. the content cell ⟨L, τ⟩ has no form correspondent.

(31) The content paradigms and form correspondents of Latin

Content paradigm	Form correspondents	Shared realization
⟨LAUDĀRE, {1sg pres indic act}⟩	⟨*laudā*, {1sg pres indic act}⟩	*laudō*
⟨LAUDĀRE, {2sg pres indic act}⟩	⟨*laudā*, {2sg pres indic act}⟩	*laudās*
⟨LAUDĀRE, {3sg pres indic act}⟩	⟨*laudā*, {3sg pres indic act}⟩	*laudat*
⟨LAUDĀRE, {1sg pres indic pass}⟩	⟨*laudā*, {1sg pres indic pass}⟩	*laudor*
⟨LAUDĀRE, {2sg pres indic pass}⟩	⟨*laudā*, {2sg pres indic pass}⟩	*laudāris*
⟨LAUDĀRE, {3sg pres indic pass}⟩	⟨*laudā*, {3sg pres indic pass}⟩	*laudātur*
⋮	⋮	⋮
⟨HORTĀRĪ, {1sg pres indic act}⟩	⟨*hortā*, {1sg pres indic pass}⟩	*hortor*
⟨HORTĀRĪ, {2sg pres indic act}⟩	⟨*hortā*, {2sg pres indic pass}⟩	*hortāris*
⟨HORTĀRĪ, {3sg pres indic act}⟩	⟨*hortā*, {3sg pres indic pass}⟩	*hortātur*
⟨HORTĀRĪ, {1sg pres indic pass}⟩	—	—
⟨HORTĀRĪ, {2sg pres indic pass}⟩	—	—
⟨HORTĀRĪ, {3sg pres indic pass}⟩	—	—
⋮	⋮	⋮

3.3.2 Functor-argument reversal

(32) Paradigm linkage with functor-argument reversal

Content cell	Form correspondent
$\langle L, \sigma \rangle$	$\langle f(\sigma), g(L) \rangle$

(33) Possessor marking on two Hungarian nouns (in the nominative)

| Possessor | KÖNYV 'book' Possessee | | HÁZ 'house' Possessee | |
	Singular	Plural	Singular	Plural
1sg	*könyv-e-m*	*könyv-e-i-m*	*ház-a-m*	*ház-a-i-m*
2sg	*könyv-e-d*	*könyv-e-i-d*	*ház-a-d*	*ház-a-i-d*
3sg	*könyv-e*	*könyv-e-i*	*ház-a*	*ház-a-i*
1pl	*könyv-ünk*	*könyv-e-i-nk*	*ház-unk*	*ház-a-i-nk*
2pl	*könyv-e-tek*	*könyv-e-i-tek*	*ház-a-tok*	*ház-a-i-tok*
3pl	*könyv-ük*	*könyv-e-i-k*	*ház-uk*	*ház-a-i-k*

(34)   Object-marking paradigm of the Hungarian postposition MÖGÖTT 'behind'

mögött-e-m	'behind me'
mögött-e-d	'behind you (sg.)'
mögött-e	'behind her/him'
mögött-ünk	'behind us'
mögött-e-tek	'behind you (pl.)'
mögött-ük	'behind them'

(35) Case forms of two Hungarian nouns

Case	KÖNYV 'book'		HÁZ 'house'		Gloss
	Singular	Plural	Singular	Plural	
Nom	*könyv*	*könyv-e-k*	*ház*	*ház-a-k*	(subject)
Acc	*könyv-e-t*	*könyv-e-k-e-t*	*ház-a-t*	*ház-a-k-a-t*	(direct object)
Dat	*könyv-nek*	*könyv-e-k-nek*	*ház-nak*	*ház-a-k-nak*	(indirect object)
Iness	*könyv-ben*	*könyv-ek-ben*	*ház-ban*	*ház-ak-ban*	'in a book …'
Illat	*könyv-be*	*könyv-ek-be*	*ház-ba*	*ház-ak-ba*	'into …'
Elat	*könyv-ből*	*könyv-ek-ből*	*ház-ból*	*ház-ak-ból*	'from inside …'
Superess	*könyv-ön*	*könyv-ek-en*	*ház-on*	*ház-ak-on*	'on …'
⋮	⋮	⋮	⋮	⋮	⋮

(36) Case forms of Hungarian personal pronouns

		First person	Second person	Third person
Singular	nom	*én*	*te*	*ő*
	acc	*engem(et)*	*téged(et)*	*őt*
	dat	*nek-e-m*	*nek-e-d*	*nek-i*
	iness	*benn-e-m*	*benn-e-d*	*benn-e*
	illat	*bel-é-m*	*bel-é-d*	*bel-e, bel-é(-je)*
	elat	*belől-e-m*	*belől-e-d*	*belől-e*
	superess	*rajt-a-m*	*rajt-a-d*	*rajt-a*
	⋮	⋮	⋮	⋮
Plural	nom	*mi*	*ti*	*ők*
	acc	*minket ~ bennünket*	*titeket ~ benneteket*	*őket*
	dat	*nek-ünk*	*nek-tek*	*nek-i-k*
	iness	*benn-ünk*	*benn-e-tek*	*benn-ük*
	illat	*bel-é-nk*	*bel-é-tek*	*bel-é-jük*
	elat	*belől-ünk*	*belől-e-tek*	*belől-ük*
	superess	*rajt-unk*	*rajt-a-tok*	*rajt-uk*
	⋮	⋮	⋮	⋮

(37)   Rule of paradigm linkage for oblique pronominal case forms

If L is a pronominal lexeme expressing person a and number b and X is a postpositional stem expressing oblique case c, the content cell $\langle L, \{c\}\rangle$ has $\langle X, \{a\ b\}\rangle$ as its form correspondent.

(38) The content paradigm and form correspondents of the Hungarian first-person singular pronoun ÉN

Content paradigm	Form correspondents	Shared realization
⟨ÉN, {nominative}⟩	⟨*én*, {nominative}⟩	*én*
⟨ÉN, {accusative}⟩	⟨*én*, {accusative}⟩	*engem(et)*
⟨ÉN, {dative}⟩	⟨*nek*, {1sg}⟩	*nekem*
⟨ÉN, {inessive}⟩	⟨*benn*, {1sg}⟩	*bennem*
⟨ÉN, {illative}⟩	⟨*bel*, {1sg}⟩	*belém*
⟨ÉN, {elative}⟩	⟨*belől*, {1sg}⟩	*belőlem*
⟨ÉN, {superessive}⟩	⟨*rajt*, {1sg}⟩	*rajtam*
⋮	⋮	⋮

Summarizing, the default rule of paradigm linkage may be overridden in instances of syncretism, deponency, and functor-argument reversal; each of these defines its own particular pattern of override, as in (39).

(39) Overrides of the default rule of paradigm linkage

Where L, L′ are distinct lexemes, σ, σ′ are distinct morphosyntactic property sets, and X, X′ are distinct stems,

f. The realization of ⟨L, σ⟩ exhibits SYNCRETISM:	⟨L, σ⟩ and ⟨L, σ′⟩ have the same form correspondent.
h. L's inflection is DEPONENT:	⟨X, σ′⟩ is the form correspondent of ⟨L, σ⟩ rather than of ⟨L, σ′⟩.
i. L's inflection exhibits FUNCTOR-ARGUMENT REVERSAL:	the form correspondent of ⟨L, σ⟩ is ⟨*f*(σ), *g*(L)⟩.

3.4 Suppletion: form correspondents drawn from distinct form paradigms

(40) Suppletive paradigm linkage

Content cell	Form correspondent
$\langle L, \sigma \rangle$	$\langle X_1, \sigma \rangle$
$\langle L, \tau \rangle$	$\langle X_2, \tau \rangle$

(41) The suppletive inflection of Latin FERRE 'carry'

	Present	Perfect
1sg	*ferō*	*tulī*
2sg	*fers*	*tulistī*
3sg	*fert*	*tulit*
1pl	*ferimus*	*tulimus*
2pl	*fertis*	*tulistis*
3pl	*ferunt*	*tulērunt*

(42)   Stem specifications for Latin FERRE 'carry'

Given any present-system (i.e. present, imperfect or future) property set σ, the lexeme FERRE has *fer*[Third conjugation] as its σ-stem.

Given any perfect-system (i.e. perfect, pluperfect or future perfect) property set σ, the lexeme FERRE has *tul* as its σ-stem.

(43) The content paradigm and form correspondents of Latin FERRE 'carry'

Content paradigm	Form correspondents	Shared realization
⟨FERRE, {1sg pres indic act}⟩	⟨*fer*, {1sg pres indic act}⟩	*ferō*
⟨FERRE, {2sg pres indic act}⟩	⟨*fer*, {2sg pres indic act}⟩	*fers*
⟨FERRE, {3sg pres indic act}⟩	⟨*fer*, {3sg pres indic act}⟩	*fert*
⟨FERRE, {1pl pres indic act}⟩	⟨*fer*, {1pl pres indic act}⟩	*ferimus*
⟨FERRE, {2pl pres indic act}⟩	⟨*fer*, {2pl pres indic act}⟩	*fertis*
⟨FERRE, {3pl pres indic act}⟩	⟨*fer*, {3pl pres indic act}⟩	*ferunt*
⟨FERRE, {1sg perf indic act}⟩	⟨*tul*, {1sg perf indic act}⟩	*tulī*
⟨FERRE, {2sg perf indic act}⟩	⟨*tul*, {2sg perf indic act}⟩	*tulistī*
⟨FERRE, {3sg perf indic act}⟩	⟨*tul*, {3sg perf indic act}⟩	*tulit*
⟨FERRE, {1pl perf indic act}⟩	⟨*tul*, {1pl perf indic act}⟩	*tulimus*
⟨FERRE, {2pl perf indic act}⟩	⟨*tul*, {2pl perf indic act}⟩	*tulistis*
⟨FERRE, {3pl perf indic act}⟩	⟨*tul*, {3pl perf indic act}⟩	*tulērunt*
⋮	⋮	⋮

(44) Indicative and subjunctive paradigms of three Old Icelandic verbs

(Shaded forms of ÞURFA inflect like shaded forms of BRENNA; heavy-bordered boxes enclose forms of ÞURFA and DUGA that inflect alike.)

			Strong BRENNA 'burn'	Preterite-Present ÞURFA 'need'	Weak DUGA 'help'
Indicative	Pres	Sg	*brenn, brennr, brennr*	*þarf, þarft, þarf*	*dugi, dugir, dugir*
		Pl	*brennum, brennið, brenna*	*þurfum, þurfuð, þurfu*	*dugum, dugið, duga*
	Past	Sg	*brann, brannt, brann*	*þurfta, þurftir, þurfti*	*dugða, dugðir, dugði*
		Pl	*brunnum, brunnuð, brunnu*	*þurftum, þurftuð, þurftu*	*dugðum, dugðuð, dugðu*
Subjunctiv	Pres	Sg	*brenna, brennir, brenni*	*þurfa, þurfir, þurfi*	*duga, dugir, dugi*
		Pl	*brennim, brennið, brenni*	*þurfim, þurfið, þurfi*	*dugim, dugið, dugi*
	Past	Sg	*brynna, brynnir, brynni*	*þyrfta, þyrftir, þyrfti*	*dygða, dygðir, dygði*
		Pl	*brynnim, brynnið, brynni*	*þyrftim, þyrftið, þyrfti*	*dygðim, dygðið, dygði*
Source: Zoëga 1910.					

(45) Paradigm linkage with deponency plus suppletion

Content cell	Form correspondent
$\langle L, \sigma \rangle$	$\langle X_1, \tau \rangle$
$\langle L, \tau \rangle$	$\langle X_2, \tau \rangle$

(46) The content paradigm and form correspondents of Icelandic ÞURFA 'need'

Content paradigm	Form correspondents	Shared realization
⟨ÞURFA, {1sg pres indic}⟩	⟨*þarf*[Strong], {1sg past indic}⟩	*þarf*
⟨ÞURFA, {2sg pres indic}⟩	⟨*þarf*[Strong], {2sg past indic}⟩	*þarft*
⟨ÞURFA, {3sg pres indic}⟩	⟨*þarf*[Strong], {3sg past indic}⟩	*þarf*
⋮	⋮	⋮
⟨ÞURFA, {1sg past indic}⟩	⟨*þurf*[Weak], {1sg past indic}⟩	*þurfta*
⟨ÞURFA, {2sg past indic}⟩	⟨*þurf*[Weak], {2sg past indic}⟩	*þurftir*
⟨ÞURFA, {3sg past indic}⟩	⟨*þurf*[Weak], {3sg past indic}⟩	*þurfti*
⋮	⋮	⋮

4. Discussion

The proposed architecture of inflection has a number of important consequences.

It clarifies the difference between morphological properties that have syntactic relevance and purely morphological properties: while the former are represented in both content paradigms and form paradigms, the latter are restricted to form paradigms. This means that because content cells are the interface of morphology with syntax and semantics, a word's syntax and semantics are invariably insensitive to its inflection-class membership.

Because the proposed architecture allows a content cell to have a different morphosyntactic property set from its form correspondent, it correctly entails that a word can have different morphosyntactic property sets for different purposes.

The proposed architecture provides an explicit account of how canonical and noncanonical inflection differ: the former conforms to the canonical pattern of paradigm linkage in (14), while the latter invariably deviates from this pattern. The details of this distinction can be articulated in terms of the relation between content cells and form cells, as in (47).

(47) Relations between content cells and form cells

	Canonical inflection	Noncanonical inflection
The relation of a lexeme's content cells to their form correspondents	is a total function [every content cell has a form correspondent]	may be a partial function (as in cases of defectiveness)
	has a single form paradigm as its range	may have many form paradigms in its range (as in cases of suppletion)
	is one-to-one [each content cell has a form correspondent entirely to itself]	may be many-to-one (as in cases of syncretism) [sharing]
A content cell's form correspondent	is morphosyntactically faithful	may not be faithful (as in cases of deponency and functor-argument reversal)

The ultimate conclusion of the ideas developed here is in a sense unsurprising: just as words can be seen as concrete units of morphological form or as abstract units of grammatical analysis, so paradigms exhibit a similar dichotomy.

Content paradigms specify the range of syntactic contexts in which a lexeme may appear; both the lexical insertion and the semantic interpretation of a given realization are sensitive to the content cell that it realizes.

Form paradigms specify the distinctions to which rules of inflectional exponence are sensitive; they determine a lexeme's inventory of inflected forms.

In canonical inflection, the two sorts of paradigm are in a Sullivan-like alignment of form and function, but in noncanonical inflection, they exhibit a variety of mismatches.

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