

Overriding default orderings in inflectional morphology

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1. Two types of default ordering in inflectional morphology

- the linear order of an affix with respect to the stem to which it attaches
- the linear order in which blocks of realization rules apply

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Talk outline

1. Examples of default ordering
2. Three default-ordering operators
3. French pronominal clitics
4. A PFM analysis of French pronominal clitics
5. Two concluding remarks

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1.1 A default-affixation override: Swahili relative affixes

(1) Swahili relative affixes

GENDER	SINGULAR	PLURAL
m/wa	<i>ye</i>	<i>o</i>
m/mi	<i>o</i>	<i>yo</i>
ki/vi	<i>cho</i>	<i>vyo</i>
ji/ma	<i>lo</i>	<i>yo</i>
n/n	<i>yo</i>	<i>zo</i>
u	<i>o</i>	—
u/n	<i>o</i>	<i>zo</i>
ku	<i>ko</i>	—

Swahili relative affixes are prefixed by default, but are suffixed in tenseless affirmative forms

(2a)

a-na-vyo-vi-soma

SUBJ:CL.m-TNS-REL:CL.vi-Obj:CL.vi-read
'(books) which he is reading'

(2a)

a-na-vyo-vi-soma

SUBJ:CL.m-TNS-REL:CL.vi-OBJ:CL.vi-read

‘(books) which he is reading’

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‘(books) which he is reading’

(2b)

a-si-vyo-vi-taka

SUBJ:CL.m-NEG-REL:CL.vi-OBJ:CL.vi-want

‘(books) which he doesn’t want’

(2b)

a-si-vyo-vi-taka

SUBJ:CL.m-NEG-REL:CL.vi-Obj:CL.vi-want

‘(books) which he doesn’t want’

(2b)

a-si-vyo-vi-taka

SUBJ:CL.m-NEG-REL:CL.vi-*OBJ:CL.vi-want*

‘(books) which he doesn’t want’

(2c)

a-vi-taka-vyo

SUBJ:CL.m-*OBJ:CL.vi-want-REL:CL.vi*

‘(books) which he wants’

(2c)

a-vi-taka-vyo

SUBJ:CL.m-*OBJ:CL.vi-want-REL:CL.vi*

‘(books) which he wants’

(2c)

a-vi-taka-vyo

SUBJ:CL.m-*OBJ:CL.vi-want-REL:CL.vi*

‘(books) which he wants’

1.2 A default-composition override: Fula subject and object agreement

In Fula relative past tense verb forms,
subject agreement precedes object
agreement by default;

this default is overridden in forms in which
1sg subject agreement coincides with 2sg or
3sg.class.1 object agreement

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(3a)

mball-u-mi-be'

help-REL.PAST.ACT-SUBJ:I-OBJ:them.CL.2

'I helped them'

(3a)

mball-u-mi-be'

help-REL.PAST.ACT-SUBJ:I-OBJ:them.CL.2

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mball-u-mi-be'

help-REL.PAST.ACT-SUBJ:I-OBJ:them.CL.2

'I helped them'

(3b)

mball-u-daa-mo'

help-REL.PAST.ACT-SUBJ:you-OBJ:him.CL.1

'you (sg.) helped him'

(3b)

mball-u-daa-mo'

help-REL.PAST.ACT-SUBJ:you-OBJ:him.CL.1

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mball-u-daa-mo'

help-REL.PAST.ACT-SUBJ:you-OBJ:him.CL.1

'you (sg.) helped him'

(3c)

mball-u-maa-mi'

help-REL.PAST.ACT-OBJ:you-SUBJ:I

'I helped you (sg.)'

(3c)

mball-u-maa-mi'

help-REL.PAST.ACT-OBJ:you-SUBJ:I

'I helped you (sg.)'

(3c)

mball–u–maa–mi'

help–REL.PAST.ACT–OBJ:you–SUBJ:I

'I helped you (sg.)'

(3d)

mball-u-moo-mi'

help-REL.PAST.ACT-OBJ:him.CL.1-SUBJ:I

'I helped him'

(3d)

mball-u-moo-mi'

help-REL.PAST.ACT-**OBJ:him.CL.1**-SUBJ:I

'I helped him'

(3d)

mball-u-moo-mi'

help-REL.PAST.ACT-OBJ:him.CL.1-SUBJ:I

'I helped him'

2. Three default-ordering operators

(4a) Default-prefixation operator [$<$]

[$<S, X$]

set of affixation-inversion property sets
affix

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(4a) Default-prefixation operator [\langle]

[$\langle S, X$]

applies to realize the pairing $\langle Y, \sigma \rangle$
of a stem Y with a morphosyntactic
property set σ

(4a) Default-prefixation operator [\langle]

$$\begin{aligned} [\langle \mathbf{S}, \mathbf{X}] (\langle \mathbf{Y}, \sigma \rangle) &= \langle \mathbf{YX}, \sigma \rangle \text{ if } \sigma \in \mathbf{S}; \\ &= \langle \mathbf{XY}, \sigma \rangle \text{ otherwise.} \end{aligned}$$

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(4b) Default-suffixation operator [$>$]

(analogous to [$<$])

[<] and Swahili relative affixes

(5) *Paradigm function* for
Swahili relative verb forms

Where σ is a morphosyntactic property set and
 X is the root of verbal lexeme L ,

$$\text{PF}(\langle L, \sigma \rangle) = [\text{IV} : [\text{III} : [\text{II} : [\text{I} : \langle X, \sigma \rangle]]]]$$

(6) *Nar notation*

$[n : \langle Y, \sigma \rangle]$ is the result of applying the
narrowest applicable rule in Block n to $\langle Y, \sigma \rangle$

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(7) *Realization rules*
for Swahili relative verb forms

- a. **Block I** (object agreement)
- b. **Block II** (relative affixes)
- c. **Block III** (tense, polarity)
- d. **Block IV** (subject agreement)

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(7b) **Block II** (in which $\mu = \text{su}$ or ob)

$V, \{\text{REL}(\mu): \{\text{sg}, \text{m/wa}\}\}: \langle X, \sigma \rangle \rightarrow [< \mathbf{S}, ye](\langle X, \sigma \rangle)$

$V, \{\text{REL}(\mu): \{\text{sg}, \text{ki/vi}\}\}: \langle X, \sigma \rangle \rightarrow [< \mathbf{S}, cho](\langle X, \sigma \rangle)$

$V, \{\text{REL}(\mu): \{\text{sg}, \text{n/n}\}\}: \langle X, \sigma \rangle \rightarrow [< \mathbf{S}, yo](\langle X, \sigma \rangle)$

$V, \{\text{REL}(\mu): \{\text{pl}, \text{m/wa}\}\}: \langle X, \sigma \rangle \rightarrow [< \mathbf{S}, o](\langle X, \sigma \rangle)$

$V, \{\text{REL}(\mu): \{\text{pl}, \text{ki/vi}\}\}: \langle X, \sigma \rangle \rightarrow [< \mathbf{S}, vyo](\langle X, \sigma \rangle)$

$V, \{\text{REL}(\mu): \{\text{pl}, \text{n/n}\}\}: \langle X, \sigma \rangle \rightarrow [< \mathbf{S}, zo](\langle X, \sigma \rangle)$

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(8) *Affixation-inversion property sets*
in Swahili

S is the set of only and all
tenseless affirmative property sets

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By default:

$$[\langle \mathbf{S}, vyo \rangle](\langle Y, \sigma \rangle) = \langle vyoY, \sigma \rangle$$

Where σ is an affixation-inversion property set:

$$[\langle \mathbf{S}, vyo \rangle](\langle Y, \sigma \rangle) = \langle Yvyo, \sigma \rangle$$

By default:

$$[\langle \mathbf{S}, vyo \rangle](\langle \mathbf{Y}, \sigma \rangle) = \langle vyo\mathbf{Y}, \sigma \rangle$$

Where σ is an affixation-inversion property set:

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(9) Proof of *a-na-vyo-vi-soma*
'(books) which he is reading'

(10) Proof of *a-vi-taka-vyo*
'(books) which he wants'

(11) Default-composition operator $[\circ]$

a. Recursive definition of *block construct*

- i. If m is a rule block, then m is a block construct.
- ii. If m, n are block constructs and S is a set of composition-inversion property sets, then $[\circ S, m, n]$ is a block construct.

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b. *Nar* [narrowest applicable rule] *notation* (revised)

Given block construct BC and pairing $\langle Y, \sigma \rangle$:

- if BC is a block construct $[\circ \mathbf{S}, m, n]$,
$$[\text{BC} : \langle Y, \sigma \rangle] = [n : [m : \langle Y, \sigma \rangle]] \text{ if } \sigma \in \mathbf{S},$$
$$= [m : [n : \langle Y, \sigma \rangle]] \text{ otherwise;}$$
- if BC is a rule block, $[\text{BC} : \langle Y, \sigma \rangle]$ is the result of applying the narrowest applicable rule in BC to $\langle Y, \sigma \rangle$.

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- if BC is a rule block, $[\text{BC} : \langle Y, \sigma \rangle]$ is the result of applying the narrowest applicable rule in BC to $\langle Y, \sigma \rangle$.

[○] and Fula verb agreement

(12) *Realization rules* for relative past tense verb forms in Fula

a. **Block TENSE**

b. **Block SUBJ**

c. **Block OBJ**

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a. **Block TENSE**

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(13)

Paradigm function for relative past
tense verb forms in Fula

PF($\langle L, \sigma \rangle$)

= $[[\text{OS}, \text{OBJ}, \text{SUBJ}] : [\text{TENSE} : \langle X, \sigma \rangle]]$

(14) *Composition-inversion property sets*
in Fula

S =

{ {AGR(su):{1sg}, rel. past act., AGR(ob):{2sg}},
{AGR(su):{1sg}, rel. past act., AGR(ob): {3sg, CL.1}},
{AGR(su):{1sg}, rel. past mid., AGR(ob):{2sg}},
{AGR(su):{1sg}, rel. past mid., AGR(ob): {3sg, CL.1}} }

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By default:

$[[\circ\mathbf{S}, \mathbf{OBJ}, \mathbf{SUBJ}] : \langle \mathbf{X}, \sigma \rangle]$

$= [\mathbf{OBJ} : [\mathbf{SUBJ} : \langle \mathbf{X}, \sigma \rangle]]$

Where σ is an affixation-inversion property set:

$[[\circ\mathbf{S}, \mathbf{OBJ}, \mathbf{SUBJ}] : \langle \mathbf{X}, \sigma \rangle]$

$= [\mathbf{SUBJ} : [\mathbf{OBJ} : \langle \mathbf{X}, \sigma \rangle]]$

By default:

$$\begin{aligned} & [[\circ\mathbf{S}, \mathbf{OBJ}, \mathbf{SUBJ}] : \langle \mathbf{X}, \sigma \rangle] \\ & = [\mathbf{OBJ} : [\mathbf{SUBJ} : \langle \mathbf{X}, \sigma \rangle]] \end{aligned}$$

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By default:

$$\begin{aligned} & [[\circ\mathbf{S}, \mathbf{OBJ}, \mathbf{SUBJ}] : \langle \mathbf{X}, \sigma \rangle] \\ & = [\mathbf{OBJ} : [\mathbf{SUBJ} : \langle \mathbf{X}, \sigma \rangle]] \end{aligned}$$

Where σ is an affixation-inversion property set:

$$\begin{aligned} & [[\circ\mathbf{S}, \mathbf{OBJ}, \mathbf{SUBJ}] : \langle \mathbf{X}, \sigma \rangle] \\ & = [\mathbf{SUBJ} : [\mathbf{OBJ} : \langle \mathbf{X}, \sigma \rangle]] \end{aligned}$$

(15) Proof of *mball-u-mi-be*'
'I helped them'

(16) Proof of *mball-u-moo-mi*'
'I helped him'

3. French pronominal clitics

(17) Basic template for proclitic
local-argument pronouns

A	B	C
(ACC or DAT)	(ACC)	(DAT)
<i>me</i>	<i>le</i>	<i>lui</i>
<i>te</i>	<i>la</i>	<i>leur</i>
<i>se</i>	<i>les</i>	
<i>nous</i>		
<i>vous</i>		

(17) Basic template for proclitic
local-argument pronouns

A	B	C
(ACC or DAT)	(ACC)	(DAT)
<i>me</i>	<i>le</i>	<i>lui</i>
<i>te</i>	<i>la</i>	<i>leur</i>
<i>se</i>	<i>les</i>	
<i>nous</i>		
<i>vous</i>		

(18) *Jean*

me

te

se

le

la

nous

vous

les

verra.

(19) *Jean* { *me*
te
se
lui } *donnera le livre.*
nous
vous
leur }

(20) *Jean* { *me*
te
se
nous
vous } { *le*
la
les } *présentera.*

(21) *Jean* { *le*
la
les } { *lui*
leur } *présentera.*

- (22) a. **Jean me te présentera.*
b. *Jean me présentera à toi.*
c. *Jean te présentera à moi.*

- (22) a. **Jean me te présentera.*
b. *Jean me présentera à toi.*
c. *Jean te présentera à moi.*

(23) **Jean* { *me*
te
se
nous
vous } { *lui*
leur } *présentera.*

(24) *Jean me présentera à lui.*

(23) **Jean* { *me*
te
se
nous
vous } { *lui*
leur } *présentera.*

(24) *Jean me présentera à lui.*

(25) Basic template for enclitic
local-argument pronouns

D
(ACC)

E
(ACC or DAT;
3rd person DAT only)

le

moi

la

toi

les

lui

nous

vous

leur

(26) a. *Présentez* - $\left\{ \begin{array}{l} le \\ la \\ les \end{array} \right\}$ - $\left\{ \begin{array}{l} moi! \\ lui! \\ nous! \\ leur! \end{array} \right\}$

b. *Dépêche-toi!*

c. *Dépêchez-vous!*

(27) Clitic climbing

a. *Marie le lui a fait manger.*

‘Marie made him eat it.’

b. *Jean me la fait envoyer.*

‘Jean has me send it.’

or ‘Jean has it sent to me.’

c. *Pierre la lui a fait écrire par Jean.*

‘Pierre made Jean write it to him.’

Extra datives: ethical datives

- (28) *Il te nous a passé un de ces savons!*
'He gave us an incredible telling-off!'
- (29) %*Nous ne nous vous le faisons pas dire.*
'We couldn't agree more, you don't need to tell us.'
[Literally: 'We don't make you say it, we really don't.']

Extra datives: ethical datives

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- (28) *Il **te** nous a passé un de ces savons!*
‘He gave us an incredible telling-off!’
- (29) *%Nous ne **nous** vous le faisons pas dire.*
‘We couldn’t agree more, you don’t need to tell us.’
[Literally: ‘We don’t make you say it, we really don’t.’]

(30) Extra datives: clitic climbing

a. *Elle me te les a fait envoyer.*

‘She made me send them to you.’

b. *Elle me les lui a fait envoyer.*

‘She made me send them to her.’

c. **Elle leur les lui a fait envoyer.*

Putatively:

‘She made them send them to her.’

(30) Extra datives: clitic climbing

a. *Elle me te les a fait envoyer.*

‘She made me send them to you.’

b. *Elle me les lui a fait envoyer.*

‘She made me send them to her.’

c. **Elle leur les lui a fait envoyer.*

Putatively:

‘She made them send them to her.’

(30) Extra datives: clitic climbing

a. *Elle me te les a fait envoyer.*

‘She made me send them to you.’

b. *Elle me les lui a fait envoyer.*

‘She made me send them to her.’

c. **Elle leur les lui a fait envoyer.*

Putatively:

‘She made them send them to her.’

(31) Extra datives: clitic climbing

a. %*Jean me te semble fidèle.*

‘Jean seems to me to be faithful to you.’

b. %*Jean me lui semble fidèle.*

‘Jean seems to me to be faithful to her.’

c. **Jean lui leur semble fidèle.*

Putatively:

‘Jean seems to her to be faithful to them.’

(31) Extra datives: clitic climbing

a. %*Jean me te semble fidèle.*

‘Jean seems to me to be faithful to you.’

b. %*Jean me lui semble fidèle.*

‘Jean seems to me to be faithful to her.’

c. **Jean lui leur semble fidèle.*

Putatively:

‘Jean seems to her to be faithful to them.’

(32) Expanded proclitic template for non-local-argument as well as local-argument pronouns

A'	A	B	C
(“extra” DAT)	(ACC or DAT)	(ACC)	(DAT)
<i>me</i>	<i>me</i>	<i>le</i>	<i>lui</i>
<i>te</i>	<i>te</i>	<i>la</i>	<i>leur</i>
<i>se</i>	<i>se</i>	<i>les</i>	
<i>nous</i>	<i>nous</i>		
<i>vous</i>	<i>vous</i>		

4. A PFM analysis
of French pronominal clitics:
Defaults and overrides

4.1 Preliminary assumptions

(35) Synthetic property sets:
Sets of specifications
of **AGR** and **TAM**

(36) Clitic property sets:
Sets of specifications of POL,
pronominal ACC
and pronominal DAT

(35) Synthetic property sets:
Sets of specifications
of AGR and TAM

(36) Clitic property sets:
Sets of specifications of POL,
pronominal ACC
and pronominal DAT

(37)

Synthetic paradigm of DONNER	Clitic-group paradigm of DONNER
------------------------------	---------------------------------

Sample cell

⟨DONNER,
{AGR:{3sg}, fut}⟩

⟨*donnera*,
{AGR:{3sg}, fut} ∪
{affirm, ACC:{3sgm}, DAT:{3sg}}⟩

Its realization

⟨*donnera*,
{AGR:{3sg}, fut}⟩

⟨*le lui donnera*,
{AGR:{3sg}, fut} ∪
{affirm, ACC:{3sgm}, DAT:{3sg}}⟩

(37)

Synthetic
paradigm
of DONNER

Clitic-group
paradigm
of DONNER

Sample
cell

⟨DONNER,
{AGR:{3sg}, fut}⟩

⟨*donnera*,
{AGR:{3sg}, fut} ∪
{affirm, ACC:{3sgm}, DAT:{3sg}}⟩

Its
realization

⟨*donnera*,
{AGR:{3sg}, fut}⟩

⟨*le lui donnera*,
{AGR:{3sg}, fut} ∪
{affirm, ACC:{3sgm}, DAT:{3sg}}⟩

(37)

	Synthetic paradigm of DONNER	Clitic-group paradigm of DONNER
Sample cell	$\langle \text{DONNER}, \{\text{AGR:}\{3\text{sg}\}, \text{fut}\} \rangle$	$\langle \textit{donnera}, \{\text{AGR:}\{3\text{sg}\}, \text{fut}\} \cup \{\text{affirm, ACC:}\{3\text{sgm}\}, \text{DAT:}\{3\text{sg}\}\} \rangle$
Its realization	$\langle \textit{donnera}, \{\text{AGR:}\{3\text{sg}\}, \text{fut}\} \rangle$	$\langle \textit{le lui donnera}, \{\text{AGR:}\{3\text{sg}\}, \text{fut}\} \cup \{\text{affirm, ACC:}\{3\text{sgm}\}, \text{DAT:}\{3\text{sg}\}\} \rangle$

(37)

	Synthetic paradigm of DONNER	Clitic-group paradigm of DONNER
Sample cell	$\langle \text{DONNER}, \{\text{AGR:}\{3\text{sg}\}, \text{fut}\} \rangle$	$\langle \textit{donnera}, \{\text{AGR:}\{3\text{sg}\}, \text{fut}\} \cup \{\text{affirm}, \text{ACC:}\{3\text{sgm}\}, \text{DAT:}\{3\text{sg}\}\} \rangle$
Its realization	$\langle \textit{donnera}, \{\text{AGR:}\{3\text{sg}\}, \text{fut}\} \rangle$	$\langle \textit{le lui donnera}, \{\text{AGR:}\{3\text{sg}\}, \text{fut}\} \cup \{\text{affirm}, \text{ACC:}\{3\text{sgm}\}, \text{DAT:}\{3\text{sg}\}\} \rangle$

(37)

	Synthetic paradigm of DONNER	Clitic-group paradigm of DONNER
Sample cell	$\langle \text{DONNER}, \{\text{AGR:}\{3\text{sg}\}, \text{fut}\} \rangle$	$\langle \textit{donnera}, \{\text{AGR:}\{3\text{sg}\}, \text{fut}\} \cup \{\text{affirm}, \text{ACC:}\{3\text{sgm}\}, \text{DAT:}\{3\text{sg}\}\} \rangle$
Its realization	$\langle \textit{donnera}, \{\text{AGR:}\{3\text{sg}\}, \text{fut}\} \rangle$	$\langle \textit{le lui donnera}, \{\text{AGR:}\{3\text{sg}\}, \text{fut}\} \cup \{\text{affirm}, \text{ACC:}\{3\text{sgm}\}, \text{DAT:}\{3\text{sg}\}\} \rangle$

4.2 Realizing clitic-group paradigms

(38) *Realization rules* for French pronominal clitics

a. **Block I.**

$V, \{\text{ACC}: \{3\text{sg}, \text{masc}, \text{nonrefl}\}\}: \langle X, \sigma \rangle \rightarrow [\langle S_1, le] (\langle X, \sigma \rangle)$

$V, \{\text{ACC}: \{3\text{sg}, \text{fem}, \text{nonrefl}\}\}: \langle X, \sigma \rangle \rightarrow [\langle S_1, la] (\langle X, \sigma \rangle)$

$V, \{\text{ACC}: \{3\text{pl}, \text{nonrefl}\}\}: \langle X, \sigma \rangle \rightarrow [\langle S_1, les] (\langle X, \sigma \rangle)$

b. **Block II.** Where $\mu = \text{ACC}$ or DAT ,

$V, \{\mu: \{1\text{sg}\}\}: \langle X, \sigma \rangle \rightarrow [\langle S_1, me] (\langle X, \sigma \rangle)$

$V, \{\mu: \{2\text{sg}\}\}: \langle X, \sigma \rangle \rightarrow [\langle S_1, te] (\langle X, \sigma \rangle)$

$V, \{\mu: \{3, \text{refl}\}\}: \langle X, \sigma \rangle \rightarrow [\langle S_1, se] (\langle X, \sigma \rangle)$

$V, \{\mu: \{1\text{pl}\}\}: \langle X, \sigma \rangle \rightarrow [\langle S_1, nous] (\langle X, \sigma \rangle)$

$V, \{\mu: \{2\text{pl}\}\}: \langle X, \sigma \rangle \rightarrow [\langle S_1, vous] (\langle X, \sigma \rangle)$

$V, \{\text{DAT}: \{3\text{sg}, \text{nonrefl}\}\}: \langle X, \sigma \rangle \rightarrow [\langle S_1, lui] (\langle X, \sigma \rangle)$

$V, \{\text{DAT}: \{3\text{pl}, \text{nonrefl}\}\}: \langle X, \sigma \rangle \rightarrow [\langle S_1, leur] (\langle X, \sigma \rangle)$

(38) *Realization rules* for French pronominal clitics

a. **Block I.**

- $V, \{\text{ACC}: \{3\text{sg}, \text{masc}, \text{nonrefl}\}\}: \langle X, \sigma \rangle \rightarrow [\langle \mathbf{S}_1, \textit{le} \rangle] (\langle X, \sigma \rangle)$
 $V, \{\text{ACC}: \{3\text{sg}, \text{fem}, \text{nonrefl}\}\}: \langle X, \sigma \rangle \rightarrow [\langle \mathbf{S}_1, \textit{la} \rangle] (\langle X, \sigma \rangle)$
 $V, \{\text{ACC}: \{3\text{pl}, \text{nonrefl}\}\}: \langle X, \sigma \rangle \rightarrow [\langle \mathbf{S}_1, \textit{les} \rangle] (\langle X, \sigma \rangle)$

b. **Block II.** Where $\mu = \text{ACC}$ or DAT ,

- $V, \{\mu: \{1\text{sg}\}\}: \langle X, \sigma \rangle \rightarrow [\langle \mathbf{S}_1, \textit{me} \rangle] (\langle X, \sigma \rangle)$
 $V, \{\mu: \{2\text{sg}\}\}: \langle X, \sigma \rangle \rightarrow [\langle \mathbf{S}_1, \textit{te} \rangle] (\langle X, \sigma \rangle)$
 $V, \{\mu: \{3, \text{refl}\}\}: \langle X, \sigma \rangle \rightarrow [\langle \mathbf{S}_1, \textit{se} \rangle] (\langle X, \sigma \rangle)$
 $V, \{\mu: \{1\text{pl}\}\}: \langle X, \sigma \rangle \rightarrow [\langle \mathbf{S}_1, \textit{nous} \rangle] (\langle X, \sigma \rangle)$
 $V, \{\mu: \{2\text{pl}\}\}: \langle X, \sigma \rangle \rightarrow [\langle \mathbf{S}_1, \textit{vous} \rangle] (\langle X, \sigma \rangle)$
 $V, \{\text{DAT}: \{3\text{sg}, \text{nonrefl}\}\}: \langle X, \sigma \rangle \rightarrow [\langle \mathbf{S}_1, \textit{lui} \rangle] (\langle X, \sigma \rangle)$
 $V, \{\text{DAT}: \{3\text{pl}, \text{nonrefl}\}\}: \langle X, \sigma \rangle \rightarrow [\langle \mathbf{S}_1, \textit{leur} \rangle] (\langle X, \sigma \rangle)$

(38) *Realization rules* for French pronominal clitics

c. **Block III.**

$V, \{\text{DAT2}:\tau\}: \langle X, \sigma \rangle \rightarrow \langle Y, \sigma \rangle,$

where $[\text{II} : \langle X, \{\text{DAT}:\tau\} \rangle] = \langle Y, \{\text{DAT}:\tau\} \rangle$

b. **Block IV.**

$V, \{\text{neg}\}: \langle X, \sigma \rangle \rightarrow \langle ne X, \sigma \rangle$

(39) The set S_1 of *affixation-inversion property sets* for (38a,b):

S_1 is the set of affirmative imperative property sets

(39) The set S_1 of *affixation-inversion property sets* for (38a,b):

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(40) Clause in the definition
of the French *paradigm function*

PF($\langle W, \sigma \rangle$)

= [IV : [III : [[$\circ S_2$, II, I] : $\langle W, \sigma \rangle$]]]

(41)

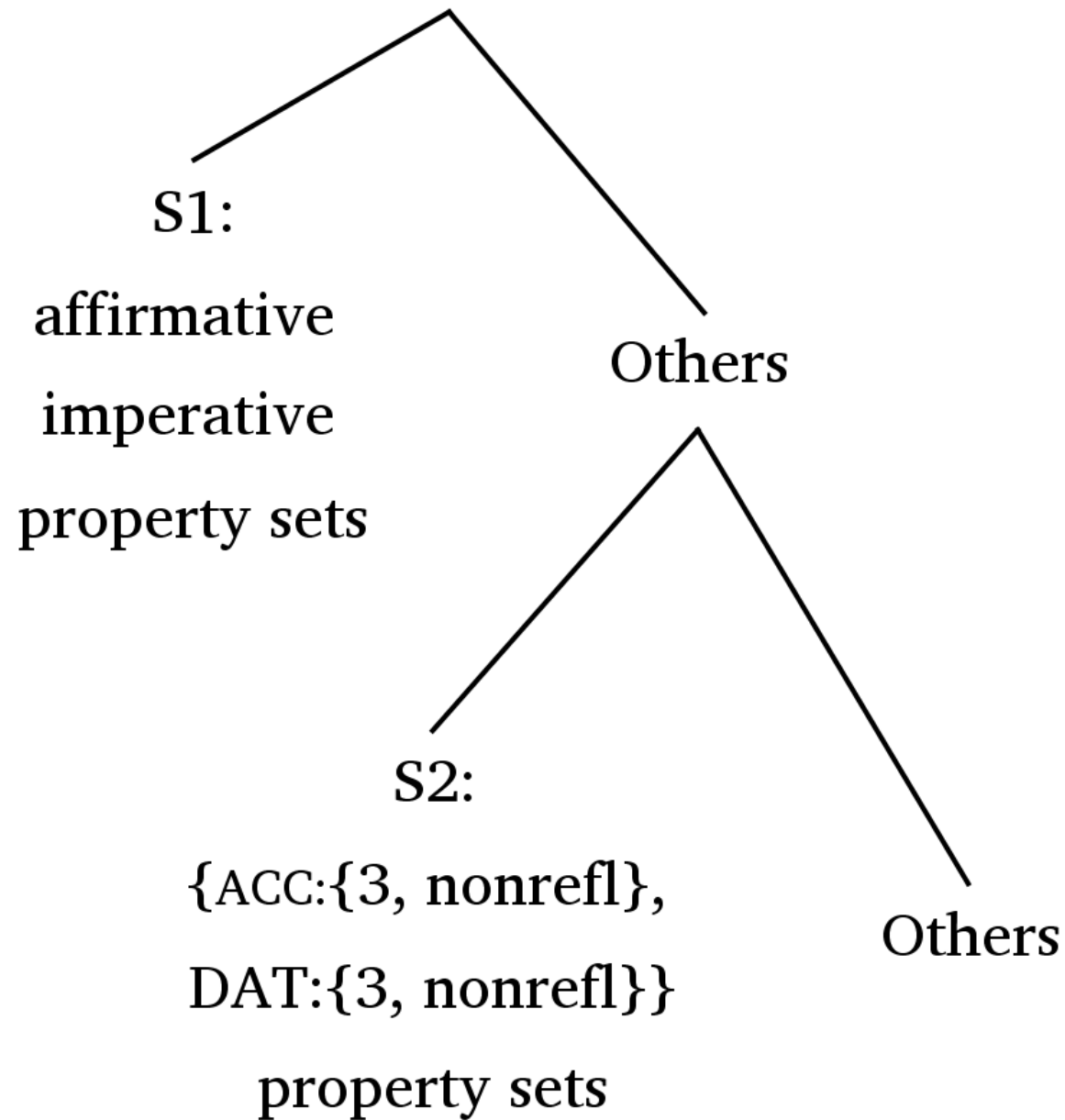
The set S_2 of *composition-inversion property sets* for (40):

S_2 is the smallest set containing every well-formed extension of (a) that is not an extension of (b):

- a. {ACC:{3, nonrefl}, DAT:{3, nonrefl}}
- b. {affirmative, imperative}.

(42)

Morphosyntactic property sets



(43) Proof of *(Vous) me la présentez*
‘You introduce her to me’

(44) Proof of *(Vous) la leur présentez*
‘You introduce her to them’

(45) Proof of *Présentez-la-moi!*
‘Introduce her to me!’

(N.B.: Finally in a clitic group, *me*,
te assume the shapes *moi*, *toi*.)

4.3 Predicting the “*me-lui* constraint”

(17) Basic template for proclitic
local-argument pronouns

A	B	C
(ACC or DAT)	(ACC)	(DAT)
<i>me</i>	<i>le</i>	<i>lui</i>
<i>te</i>	<i>la</i>	<i>leur</i>
<i>se</i>	<i>les</i>	
<i>nous</i>		
<i>vous</i>		

(46)

	A	B	C	
a.	<i>Jean</i>	<i>me</i>	<i>verra.</i>	‘Jean will see me.’
b.	<i>Jean</i>	<i>les</i>	<i>verra.</i>	‘Jean will see them.’
c.	<i>Jean</i>	<i>me les</i>	<i>présentera.</i>	‘Jean will introduce them to me.’
d.	<i>Jean</i>	<i>les</i>	<i>lui présentera.</i>	‘Jean will introduce them to her.’
e.	<i>*Jean</i>	<i>me</i>	<i>lui présentera.</i>	Putatively: ‘Jean will introduce me to her.’

(47) Person Case Constraint:

*1st/2nd/*se* acc. clitic + nonethical dat. clitic

(Rezac 2010:155)

(48) Czech

Chci mu tě ukázat.

I.want **him.DAT** **you.SG.ACC** show.INF

‘I want to show you (sg.) to him.’

(49) Polish

Wczoraj mnie jemu przedstawiłeś.

yesterday **me.ACC** **him.DAT** introduced.2SG.MASC

‘Yesterday you (sg. masc.) introduced me to him.’

(50) Feature cooccurrence restriction

If SL-2 or SL-[5] is nonempty,
then SL-4 is empty.

(Miller & Sag 1997: 597)

(51) Feature cooccurrence restriction

{CLTS $\langle \dots, x : \{obj\}, \dots, \{dat\}, \dots \rangle$ }

$\Rightarrow x : \{3, nonrefl\}$

(Bonami & Boyé 2007: 305)

(50) Feature cooccurrence restriction

If SL-2 or SL-[5] is nonempty,
then SL-4 is empty.

(Miller & Sag 1997: 597)

(51) Feature cooccurrence restriction

{CLTS $\langle \dots, x : \{obj\}, \dots, \{dat\}, \dots \rangle$ }

$\Rightarrow x : \{3, nonrefl\}$

(Bonami & Boyé 2007: 305)

Because clitics from Groups A and C are introduced by the same rule block, the proposed analysis entails the “*me-lui* constraint”

(38b) **Block II.** Where $\mu = \text{ACC}$ or DAT ,

$V, \{\mu: \{1\text{sg}\}\}$:	$\langle X, \sigma \rangle \rightarrow [\langle S_1, me \rangle (\langle X, \sigma \rangle)$
$V, \{\mu: \{2\text{sg}\}\}$:	$\langle X, \sigma \rangle \rightarrow [\langle S_1, te \rangle (\langle X, \sigma \rangle)$
$V, \{\mu: \{3, \text{refl}\}\}$:	$\langle X, \sigma \rangle \rightarrow [\langle S_1, se \rangle (\langle X, \sigma \rangle)$
$V, \{\mu: \{1\text{pl}\}\}$:	$\langle X, \sigma \rangle \rightarrow [\langle S_1, nous \rangle (\langle X, \sigma \rangle)$
$V, \{\mu: \{2\text{pl}\}\}$:	$\langle X, \sigma \rangle \rightarrow [\langle S_1, vous \rangle (\langle X, \sigma \rangle)$
$V, \{\text{DAT}: \{3\text{sg}, \text{nonrefl}\}\}$:	$\langle X, \sigma \rangle \rightarrow [\langle S_1, lui \rangle (\langle X, \sigma \rangle)$
$V, \{\text{DAT}: \{3\text{pl}, \text{nonrefl}\}\}$:	$\langle X, \sigma \rangle \rightarrow [\langle S_1, leur \rangle (\langle X, \sigma \rangle)$

Because clitics from Groups A and C are introduced by the same rule block, the proposed analysis entails the “*me-lui* constraint”

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$V, \{\mu: \{3, \text{refl}\}\}$:	$\langle X, \sigma \rangle \rightarrow [\langle S_1, se \rangle (\langle X, \sigma \rangle)$
$V, \{\mu: \{1\text{pl}\}\}$:	$\langle X, \sigma \rangle \rightarrow [\langle S_1, nous \rangle (\langle X, \sigma \rangle)$
$V, \{\mu: \{2\text{pl}\}\}$:	$\langle X, \sigma \rangle \rightarrow [\langle S_1, vous \rangle (\langle X, \sigma \rangle)$
$V, \{\text{DAT}: \{3\text{sg}, \text{nonrefl}\}\}$:	$\langle X, \sigma \rangle \rightarrow [\langle S_1, lui \rangle (\langle X, \sigma \rangle)$
$V, \{\text{DAT}: \{3\text{pl}, \text{nonrefl}\}\}$:	$\langle X, \sigma \rangle \rightarrow [\langle S_1, leur \rangle (\langle X, \sigma \rangle)$

(52) $\sigma = \{\text{AGR:}\{3\text{sg}\}, \text{fut},$
 $\text{affirm}, \text{ACC:}\{1\text{sg}\}, \text{DAT:}\{3\text{sg}, \text{nonrefl}\}\}$

(53) PF($\langle \textit{présentera}, \sigma \rangle$)

(38b) **Block II.** Where $\mu = \text{ACC}$ or DAT ,

$V, \{\mu: \{1\text{sg}\}\}$:	$\langle X, \sigma \rangle \rightarrow [\langle S_1, \textit{me} \rangle (\langle X, \sigma \rangle)$
$V, \{\mu: \{2\text{sg}\}\}$:	$\langle X, \sigma \rangle \rightarrow [\langle S_1, \textit{te} \rangle (\langle X, \sigma \rangle)$
$V, \{\mu: \{3, \text{refl}\}\}$:	$\langle X, \sigma \rangle \rightarrow [\langle S_1, \textit{se} \rangle (\langle X, \sigma \rangle)$
$V, \{\mu: \{1\text{pl}\}\}$:	$\langle X, \sigma \rangle \rightarrow [\langle S_1, \textit{nous} \rangle (\langle X, \sigma \rangle)$
$V, \{\mu: \{2\text{pl}\}\}$:	$\langle X, \sigma \rangle \rightarrow [\langle S_1, \textit{vous} \rangle (\langle X, \sigma \rangle)$
$V, \{\text{DAT:}\{3\text{sg}, \text{nonrefl}\}\}$:	$\langle X, \sigma \rangle \rightarrow [\langle S_1, \textit{lui} \rangle (\langle X, \sigma \rangle)$
$V, \{\text{DAT:}\{3\text{pl}, \text{nonrefl}\}\}$:	$\langle X, \sigma \rangle \rightarrow [\langle S_1, \textit{leur} \rangle (\langle X, \sigma \rangle)$

(52) $\sigma = \{\text{AGR:}\{3\text{sg}\}, \text{fut},$
affirm, ACC: {1sg}, DAT: {3sg, nonrefl}

(53) PF($\langle \textit{présentera}, \sigma \rangle$)

(38b) **Block II.** Where $\mu = \text{ACC}$ or DAT ,

$V, \{\mu: \{1\text{sg}\}\}$:	$\langle X, \sigma \rangle \rightarrow [\langle S_1, \textit{me} \rangle (\langle X, \sigma \rangle)$
$V, \{\mu: \{2\text{sg}\}\}$:	$\langle X, \sigma \rangle \rightarrow [\langle S_1, \textit{te} \rangle (\langle X, \sigma \rangle)$
$V, \{\mu: \{3, \text{refl}\}\}$:	$\langle X, \sigma \rangle \rightarrow [\langle S_1, \textit{se} \rangle (\langle X, \sigma \rangle)$
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$V, \{\mu: \{2\text{pl}\}\}$:	$\langle X, \sigma \rangle \rightarrow [\langle S_1, \textit{vous} \rangle (\langle X, \sigma \rangle)$
$V, \{\text{DAT:}\{3\text{sg}, \text{nonrefl}\}\}$:	$\langle X, \sigma \rangle \rightarrow [\langle S_1, \textit{lui} \rangle (\langle X, \sigma \rangle)$
$V, \{\text{DAT:}\{3\text{pl}, \text{nonrefl}\}\}$:	$\langle X, \sigma \rangle \rightarrow [\langle S_1, \textit{leur} \rangle (\langle X, \sigma \rangle)$

(52) $\sigma = \{\text{AGR:}\{3\text{sg}\}, \text{fut},$
 $\text{affirm}, \text{ACC:}\{1\text{sg}\}, \text{DAT:}\{3\text{sg}, \text{nonrefl}\}\}$

(53) PF($\langle \textit{présentera}, \sigma \rangle$)

(38b) **Block II.** Where $\mu = \text{ACC}$ or DAT ,

$V, \{\mu: \{1\text{sg}\}\}$:	$\langle X, \sigma \rangle \rightarrow [\langle S_1, \textit{me}] (\langle X, \sigma \rangle)$
$V, \{\mu: \{2\text{sg}\}\}$:	$\langle X, \sigma \rangle \rightarrow [\langle S_1, \textit{te}] (\langle X, \sigma \rangle)$
$V, \{\mu: \{3, \text{refl}\}\}$:	$\langle X, \sigma \rangle \rightarrow [\langle S_1, \textit{se}] (\langle X, \sigma \rangle)$
$V, \{\mu: \{1\text{pl}\}\}$:	$\langle X, \sigma \rangle \rightarrow [\langle S_1, \textit{nous}] (\langle X, \sigma \rangle)$
$V, \{\mu: \{2\text{pl}\}\}$:	$\langle X, \sigma \rangle \rightarrow [\langle S_1, \textit{vous}] (\langle X, \sigma \rangle)$
$V, \{\text{DAT:}\{3\text{sg}, \text{nonrefl}\}\}$:	$\langle X, \sigma \rangle \rightarrow [\langle S_1, \textit{lui}] (\langle X, \sigma \rangle)$
$V, \{\text{DAT:}\{3\text{pl}, \text{nonrefl}\}\}$:	$\langle X, \sigma \rangle \rightarrow [\langle S_1, \textit{leur}] (\langle X, \sigma \rangle)$

(52) $\sigma = \{\text{AGR:}\{3\text{sg}\}, \text{fut},$
affirm, ACC: {1sg}, DAT: {3sg, nonrefl}

(53) PF($\langle \textit{présentera}, \sigma \rangle$)

(38b) **Block II.** Where $\mu = \text{ACC}$ or DAT ,

$V, \{\mu: \{1\text{sg}\}\}$:	$\langle X, \sigma \rangle \rightarrow [\langle S_1, \textit{me} \rangle (\langle X, \sigma \rangle)$
$V, \{\mu: \{2\text{sg}\}\}$:	$\langle X, \sigma \rangle \rightarrow [\langle S_1, \textit{te} \rangle (\langle X, \sigma \rangle)$
$V, \{\mu: \{3, \text{refl}\}\}$:	$\langle X, \sigma \rangle \rightarrow [\langle S_1, \textit{se} \rangle (\langle X, \sigma \rangle)$
$V, \{\mu: \{1\text{pl}\}\}$:	$\langle X, \sigma \rangle \rightarrow [\langle S_1, \textit{nous} \rangle (\langle X, \sigma \rangle)$
$V, \{\mu: \{2\text{pl}\}\}$:	$\langle X, \sigma \rangle \rightarrow [\langle S_1, \textit{vous} \rangle (\langle X, \sigma \rangle)$
$V, \{\text{DAT:}\{3\text{sg}, \text{nonrefl}\}\}$:	$\langle X, \sigma \rangle \rightarrow [\langle S_1, \textit{lui} \rangle (\langle X, \sigma \rangle)$
$V, \{\text{DAT:}\{3\text{pl}, \text{nonrefl}\}\}$:	$\langle X, \sigma \rangle \rightarrow [\langle S_1, \textit{leur} \rangle (\langle X, \sigma \rangle)$

(52) $\sigma = \{\text{AGR:}\{3\text{sg}\}, \text{fut},$
affirm, ACC: {1sg}, DAT: {3sg, nonrefl}

(53) PF($\langle \textit{présentera}, \sigma \rangle$)

(54) **Narrowness.** Where (a) and (b) are realization rules, (a) is narrower than (b) iff either

(i) $C = C'$ and τ_2 is a proper subset of τ_1 or

(ii) C is a proper subset of C' .

(a) $C, \tau_1: \langle X, \sigma \rangle \rightarrow f_1(\langle X, \sigma \rangle)$

(b) $C', \tau_2: \langle X, \sigma \rangle \rightarrow f_2(\langle X, \sigma \rangle)$

4.4 A unified account of proclitic and enclitic pronouns

(55) A hypothetical possibility

a. Paradigm function:

$$\text{PF}(\langle X, \sigma \rangle) = [[\circ \mathbf{S}_3, \text{II}, \text{I}] : \langle X, \sigma \rangle]$$

b. Block I: $C, \{\}$: $\langle X, \sigma \rangle \rightarrow [< \mathbf{S}_3, y](\langle X, \sigma \rangle)$

c. Block II: $C, \{\}$: $\langle X, \sigma \rangle \rightarrow [< \mathbf{S}_3, z](\langle X, \sigma \rangle)$

d. $\mathbf{S}_3 = \{\sigma_2\}$

(56) a. $\text{PF}(\langle X, \sigma_1 \rangle) = \langle zyX, \sigma_1 \rangle$

b. $\text{PF}(\langle X, \sigma_2 \rangle) = \langle Xzy, \sigma_2 \rangle$

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a. Paradigm function:

$$\text{PF}(\langle X, \sigma \rangle) = [[\circ \mathbf{S}_3, \text{II}, \text{I}] : \langle X, \sigma \rangle]$$

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a. Paradigm function:

$$\text{PF}(\langle X, \sigma \rangle) = [[\circ S_3, \text{II}, \text{I}] : \langle X, \sigma \rangle]$$

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c. Block II: $C, \{\}$: $\langle X, \sigma \rangle \rightarrow [\langle S_3, z \rangle](\langle X, \sigma \rangle)$

d. $S_3 = \{\sigma_2\}$

(56) a. $\text{PF}(\langle X, \sigma_1 \rangle) = \langle zyX, \sigma_1 \rangle$

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(57) a. *Me lo spedisce.*
1SG.DAT 3SG.ACC sends
'He sends it to me.'

b. *Spedisci-me-lo!*
send.IMPV-1SG.DAT-3SG.ACC
'Send it to me!'

(58)

a. *O Paulo deu-no-lo.*

the Paulo gave-1.PL.DAT-3.SG.MASC.ACC

‘Paulo gave it to us.’

b. *O Paulo não no-lo*

deu.

the Paulo NEG 1.PL.DAT-3.SG.MASC.ACC

gave

‘Paulo didn't give it to us.’

The proposed analysis does not require clitic sequences to be generated as a separate constituent that is positioned as a unit with respect to its host.

(59)

a. *Je leur y en ai porté.*

‘I carried some there to them.’

b. *Envoyez-leur-y-en!*

‘Send some to them there!’

(60)

Realization rules for the “adverbial” clitics

a. **Block EN.**

$V, \{EN:yes\}: \langle X, \sigma \rangle \rightarrow [\langle \mathbf{S}_1, en \rangle](\langle X, \sigma \rangle)$

b. **Block Y.**

$V, \{Y:yes\}: \langle X, \sigma \rangle \rightarrow [\langle \mathbf{S}_1, y \rangle](\langle X, \sigma \rangle)$

(61) Revised *paradigm function*

PF($\langle W, \sigma \rangle$) =

[IV : [III : [[oS₁, [oS₂, II, I], [oS₁, Y, EN]] : $\langle W, \sigma \rangle$]]]

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(17) Basic template for proclitic local-argument pronouns

A	B	C
(ACC or DAT)	(ACC)	(DAT)
<i>me</i>	<i>le</i>	<i>lui</i>
<i>te</i>	<i>la</i>	<i>leur</i>
<i>se</i>	<i>les</i>	
<i>nous</i>		
<i>vous</i>		

(25) Basic template for enclitic local-argument pronouns

D	E
(ACC)	(ACC or DAT; 3 rd person DAT only)
<i>le</i>	<i>moi</i>
<i>la</i>	<i>toi</i>
<i>les</i>	<i>lui</i>
	<i>nous</i>
	<i>vous</i>
	<i>leur</i>

(62) a. *Vous nous le donnez.*

‘You give it to us.’

b. *Donnez-le-nous!* ‘Give it to us!’

(17) Basic template for proclitic local-argument pronouns

A	B	C
(ACC or DAT)	(ACC)	(DAT)
<i>me</i>	<i>le</i>	<i>lui</i>
<i>te</i>	<i>la</i>	<i>leur</i>
<i>se</i>	<i>les</i>	
<i>nous</i>		
<i>vous</i>		

(25) Basic template for enclitic local-argument pronouns

D	E
(ACC)	(ACC or DAT; 3 rd person DAT only)
<i>le</i>	<i>moi</i>
<i>la</i>	<i>toi</i>
<i>les</i>	<i>lui</i>
	<i>nous</i>
	<i>vous</i>
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‘You give it to us.’

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(59) a. *Je leur y en ai porté.*

‘I carried some there to them.’

b. *Envoyez-leur-y-en!*

‘Send some to them there!’

Proclitic and enclitic instances of the same clitic are introduced by the same rule, and the interaction of rule blocks conforms to a single structural generalization.

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The proposed analysis can be adapted to accommodate dialects other than the “standardized French” dialect considered here. Cf. e.g. (63), (64).

5. Two concluding remarks

(65) Huave completive affix *t*

a. *[mojk-o]-t*

face.down-THEME.VOWEL-COMPL

‘s/he lay face down’

b. *t-[e-mojk-o-r]*

COMPL-2-face.down-THEME.VOWEL-2.INTRANS

‘you (sg.) lay face down’

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‘you (sg.) lay face down’

(66)

a. A second default-suffixation operator $[>]_2$

Where σ is a morphosyntactic property set,
 X is an affix and Y is a stem:

$[> \mathbf{C}, X]_2$ is a function such that

$[> \mathbf{C}, X]_2(\langle Y, \sigma \rangle) = \langle XY, \sigma \rangle$ if Y satisfies \mathbf{C} ;
 $= \langle YX, \sigma \rangle$ otherwise.

b. $V, \{\text{completive}\}$: $\langle X, \sigma \rangle \rightarrow$
 $[> [\text{vowel}] \dots [\text{cons}], t]_2(\langle X, \sigma \rangle)$

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(67) Lithuanian reflexive affix *si*

a. *laikaũ-si*

maintain.1SG-REFL

‘I get along’

b. *iš-si-laikaũ*

PREVERB-REFL-maintain.1SG

‘I hold my stand’

c. *su-si-pa-žinti*

PREVERB₁-REFL-PREVERB₂-know.INF

‘to become acquainted with’