

# The interplay between paradigms and morphophonology. How is the stem selected in French derivation?

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# Introduction

- Pressure the existing lexicon
  - Derivational series play a central role (M. Roché & M. Plénat, 2014)
  - Paradigmatic approach
- Interaction between paradigmatic and morphophonological constraints
  - Variations are observed at the formal level
  - In derivation, most variations occur in stem
- Case study: words derived from **political personalities names** (PPN)

# Introduction

- Lexeme pairs in binary relations:

– *fille* → *fillette*  
/fij/ → /fijɛt/  
'girl' 'little girl'

– *glace* → *glaçon*  
/glas/ → /glasõ/  
'ice' 'ice cube'

# Introduction

	<b><i>catéchisme</i></b> ‘catechism’ /katefism/	<b><i>cathéchiste</i></b> ‘catechist’ /katefist/
<i>Alpes</i> ‘Alps’	<i>alpinisme</i> ‘mountaineering’ /alpinism/	<i>alpiniste</i> ‘mountaineer’ /alpinist/
	<i>communisme</i> ‘communism’ /komynism/	<i>communiste</i> ‘communist’ /komynist/
	<b><i>prédateur</i></b> ‘predator’ /predatœr/	<b><i>prédation</i></b> ‘predation’ /predasjõ/
<i>avion</i> ‘plane’ /avjõ/	<i>aviateur</i> ‘aviator’ /avjatœr/	<i>aviation</i> ‘aviation’ /avjasjõ/
<i>créer</i> ‘create’	<i>créateur</i> ‘creator’ /kreatœr/	<i>création</i> ‘creation’ /kreasjõ/

# Introduction

- Other couples

<i>âge</i> 'age' /aʒ/		<i>anti-âge</i> 'anti-aging' /ãtiaʒ/	<i>Crème anti-âge</i> 'anti-aging cream'
<i>cancer</i> 'cancer' /kãsɛr/	<i>cancereux</i> 'cancerous' /kãsɛrø/	<i>anti-cancéreux</i> 'anti-cancer' /ãtikãsɛrø/	<i>Traitement anti-cancéreux</i> 'anti cancer treatment'

# 1. The paradigmatic approach

# 1.1. Paradigmatic relations in inflexion

# Paradigmatic relations in inflexion

- Concept of paradigms: widely accepted in the domain of inflexion
  - “abstract” vs “concrete” paradigms (Carstairs 1987)
  - a “general pattern” (Pounder 2000) ;
  - “property” paradigm (Spencer 2013);



	1SG	2SG	3SG	1PL	2PL	3PL
PRS						
PST.IPFV						
PST.PFV						
FUT						
SBJV PRS						
SBJV PST						
COND						
IMP						

# Paradigmatic relations in inflexion

- Concept of paradigms: widely accepted in the domain of inflexion
  - a “general pattern” (Pounder 2000) ; “abstract” (Carstairs 1987) or “property” paradigm (Spencer 2013);
  - a “specific realization” (Pounder 2000) or “form paradigm” (Spencer 2013), in other words a set of forms filling these cells for a given lexeme.

<b>NAGER</b> <b>'to swim'</b>	<b>1SG</b>	<b>2SG</b>	<b>3SG</b>	<b>1PL</b>	<b>2PL</b>	<b>3PL</b>
<b>PRS</b>	наз	наз	наз	назõ	назе	наз
<b>PST.IPFV</b>	назе	назе	назе	назjõ	назje	назе
<b>PST.PFV</b>	назе	наза	наза	назам	назат	назев
<b>FUT</b>	назәве	назәва	назәва	назәвõ	назәве	назәвõ
<b>SBJV PRS</b>	наз	наз	наз	назjõ	назje	наз
<b>SBJV PST</b>	назас	назас	наза	назасjõ	назасje	назас
<b>COND</b>	назәве	назәве	назәве	назәvjõ	назәвje	назәве
<b>IMP</b>		наз		назõ	назе	

## 1.2. Paradigmatic relations in derivation

- “Derivational family” (Hathout 2011; Blevins 2014) or “lexical paradigm” (Pounder 2000)

1	2	3
<i>laver</i> ‘wash’	<i>lavage</i> ‘washing’	<i>laveur</i> ‘washer’
<i>nettoyer</i>	<i>nettoyage</i>	<i>nettoyeur</i>
<i>arroser</i>	<i>arrosage</i>	<i>arroseur</i>

- “Derivational family” (Hathout 2011; Blevins 2014) or “lexical paradigm” (Pounder 2000)
- Morphological or derivational series: a set of complex lexemes formed by the same rule

1	2	3
<i>laver</i> ‘wash’	<i>lavage</i> ‘washing’	<i>laveur</i> ‘washer’
<i>nettoyer</i> ‘clean’	<i>nettoyage</i> ‘cleaning’	<i>nettoyeur</i> ‘cleaner’
<i>arroser</i> ‘water <sub>v</sub> ’	<i>arrosage</i> ‘watering’	<i>arroseur</i> ‘sprinkler’

# Paradigmatic system

- Collection of morphological families structured by the same system of oppositions of content characterized by morphosemantic relations (O. Bonami & J. Strnadová, 2018)

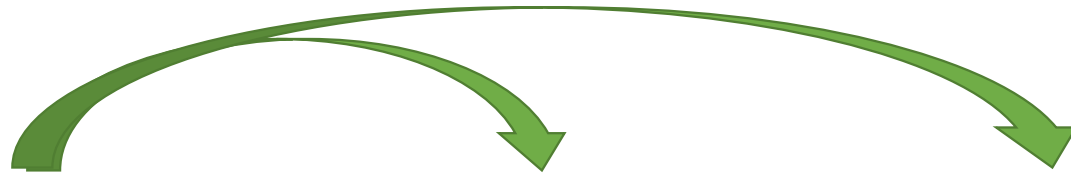
ROND 'round' /rõ/ - /rõd/	<i>rondeur</i> 'roundness' /rõdœr/	<i>arrondir</i> 'to round' /arõdir/	<i>arrondissement</i> 'rounding' /arõdismã/
DOUX 'soft' /du/ - /dus/	<i>douceur</i> 'softness' /dusœr/	<i>adoucir</i> 'soften' /adusir/	<i>adoucisement</i> 'softening' /adusismã/
GRAND 'large' /grã/ - /grãd/	<i>grandeur</i> 'greatness' /grãdœr/	<i>agrandir</i> 'enlarge' /agrãdir/	<i>agrandissement</i> 'enlargment' /agrãdismã/

# Paradigmatic system

ROND 'round' /rõ/ - <b>/rõd/</b>	<i>rondeur</i> 'roundness' /rõdœr/	<i>arrondir</i> 'to round' /arõdir/	<i>arrondissement</i> 'rounding' /arõdismã/
<i>doux</i> 'soft' /du/ - <b>/dus/</b>	<i>douceur</i> 'softness' /dusœr/	<i>adoucir</i> 'soften' /adusir/	<i>adoucisement</i> 'softening' /adusismã/
<i>grand</i> 'large' /grã/ - <b>/grãd/</b>	<i>grandeur</i> 'greatness' /grãdœr/	<i>agrandir</i> 'enlarge' /agrãdir/	<i>agrandissement</i> 'enlargement' /agrãdismã/



# Paradigmatic system



<p>ROND ‘round’ /rõ/ - /rõd/</p>	<p><i>rondeur</i> ‘roundness’ quality of what is round</p>	<p><i>arrondir</i> ‘to round’ make round</p>	<p><i>arrondissement</i> ‘rounding’ fact of make round</p>
<p><i>doux</i> ‘soft’ /du/ - /dus/</p>	<p><i>douceur</i> ‘softness’ quality of what is soft</p>	<p><i>adoucir</i> ‘soften’ make soft</p>	<p><i>adoucisement</i> ‘softening’ fact of make soft</p>
<p><i>grand</i> ‘large’ /grã/ - /grãd/</p>	<p><i>grandeur</i> ‘greatness’ quality of what is large</p>	<p><i>agrandir</i> ‘enlarge’ make large</p>	<p><i>agrandissement</i> ‘enlargement’ fact of make large</p>

<i>cancer</i> 'cancer'	<i>cancéreux</i> 'cancerous'	<i>anti-cancéreux</i> 'anti-cancer'
<i>soleil</i> 'sun'	<i>solaire</i> 'solar'	<i>anti-solaire</i> 'anti-sun'
<i>pédagogie</i> 'pedagogy'	<i>pédagogique</i> 'educational'	<i>anti-pédagogique</i> 'anti-pedagogy'
<i>coagulation</i> 'coagulation'	<i>coagulant</i> 'coagulating'	<i>anti-coagulant</i> 'anti-coagulation'

## 2. Morphophonological constraints

# Morphophonological constraints


- McCarthy 1986; McCarthy & Prince 1993; Prince & Smolensky, 2004; Lignon & Plénat 2009; Plénat 2011
- The optimal stem size of a base is 2 syllables;
  - *Canada* ~ *canadien* ‘canadian’  
/kanada/ ~ /**kanadj**ẽ/
  - *Kafka* ~ *kafkaïen* ‘kafkaesque’  
/kafka/ ~ /**kafkaj**ẽ/
- In an optimal word, all syllables have an onset;
  - *thèse* ‘thesis’ ~ *thésard* ‘PhD student’  
/tɛz/ ~ /te**z**ar/

# Dissimilation

- An optimal constructed form fulfills the Obligatory Contour Principle

	optimal form	faulty form
<i>Molière</i>	<i>moliéresque</i> /moljerɛsk/ 'moliere-ian'	<i>moliérien</i> /moljerjɛ̃/
<i>rhinocéros</i> 'rhinoceros'	<i>rhinocéresque</i> /rinoserɛsk/ 'rhinoceros-esque'	<i>rhinocérosesque</i> /rinoserɔsɛsk/
<i>goutte</i> 'drop'	<i>gouttelette</i> /gutɛlɛt/ 'droplet'	<i>gouttette</i> /gutɛt/

### 3. Interaction of morphophonological and paradigmatic constraints



Toponym	adjective	
<i>Italie</i> 'Italy'	<i>italien</i> 'italian'	<b><i>italianité</i></b> 'italianity'
<i>Allemagne</i> 'Germany'	<i>germanique</i> 'germanic'	<b><i>germanicité</i></b> 'germanicity'
<i>Cuba</i> 'Cuba'	<i>cubain</i> 'cuban'	<b><i>cubaniser</i></b> 'cubanize'
<i>Japon</i> 'Japan'	<i>nippon</i> 'japanese'	<b><i>nipponiser</i></b> 'japaneseise'
<i>France</i> 'France'	<i>français</i> 'french'	
<i>Irlande</i> 'Ireland'	<i>irlandais</i> 'irish'	
<i>Estonie</i> 'Estonia'	<i>estonien</i> 'estonian'	
<i>Ghana</i> 'Ghana'	<i>ghanéen</i> 'ghanaian'	
<i>Congo</i> 'Congo'	<i>congolais</i> 'congolese'	Dal et Namer, 2010

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## 4. Case study: nouns of political personalities

## 4.1. Corpus constitution

- 90 French PPN: names of persons that have occupied a political function in France from 1981 to present
  - 25 women: Ségolène Royal, Marine Le Pen, Christine Lagarde, etc.
  - 65 men: Nicolas Sarkozy, Valéry Giscard d'Estaing, Dominique Strauss Kahn, etc.
- Candidate forms were automatically generated and checked in the Web with the support of the company Data-Observer:  
*ségolèneroyalitude, DSKphilie, lagardesque, sarkoziste, giscardien, etc.*
  - 5125 types
  - 55 262 tokens



## 4.2. The different free forms of PPN

- PPN  $\neq$  common names  $\Rightarrow$  3 forms at least

First name + last name	First name	Last name
<i>Nicolas Sarkozy</i>	<i>Nicolas</i>	<i>Sarkozy</i>

- Who can go up to 6 for PPN whose surname is composed

First name + last name	First Name	Last name 1	Last name 2	Last name	Acronym
<i>Dominique Strauss Kahn</i>	<i>Dominique</i>	<i>Strauss</i>	<i>Khan</i>	<i>Strauss-Kahn</i>	<i>DSK</i>

## Examples of PPN derivatives: *Nadine Morano*

**First name:** *Top 10 des reconversions pour Nadine Morano, courage Nadinette !*

Top 10 conversions for Nadine Morano, courage Nadin-ette!

**Last name:** *Moranette, [...], sa vulgarité constitue à elle seule son habit.*

'Moran-ette, [...], her vulgarity alone constitutes her dress.'

**FN + LN:** *Elle fait simplement de l'humour Nadinemoranién.*

'She is just making Nadinemorani-ian jokes.'

# Examples of PPN derivatives: *Najat Vallaud-Belkacem*

**Last name 2:** *Je reste Ségoléniste et Belkacemien !*  
'I remain Ségolén-ist and Belkacem-ian!'

**Last name 1:** *En Taubiristan et en Vallaudistan, ça paraît un abus pur et simple.*  
'In Taubir-istan and Vallaud-istan, it seems an outright abuse.'

**Acronym:** *Ils énervent la bien-pensance « progressiste » NVBiste.*  
'They annoy the “progressive” right-thinking NVB-ist.'



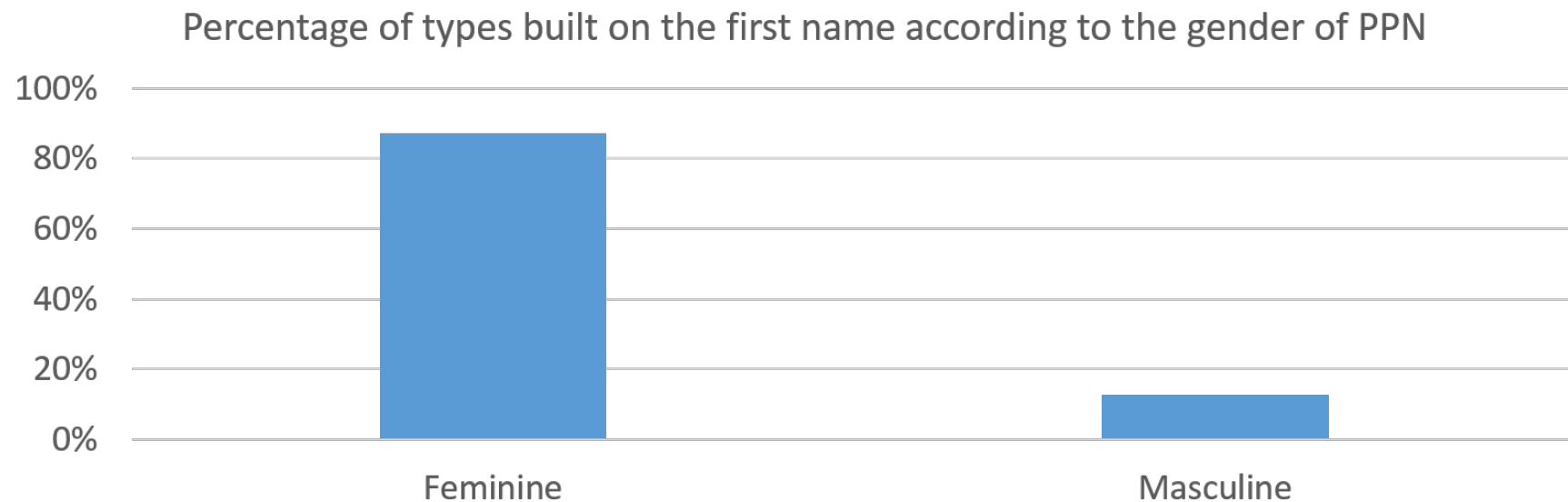
PPN	First name	Last name	First name + last name	Last name 1	Last name 2	Acronym
	5,68%	<b>82,45%</b>	5,50%	2,49%	2,49%	1,37%
Nadine Morano	<i>Nadinette</i>	<i>Moranette</i>	<i>Nadinemoranién</i>			
Najat Vallaud Belkacem				<i>Belkacemien</i>	<i>Vallaudista</i>	<i>NVBiste</i>
Ségolène Royal			<i>ségolèneroyalitude</i>			
Dominique Strauss Kahn						<i>DSKphilie</i>
Christine Lagarde		<i>lagardesque</i>				
Nicolas Sarkozy		<i>sarkoziste</i>				
Valéry Giscard d'Estaing				<i>Giscardien</i>		

## 4.3. Informativeness constraint

- The form of the derivative must allow the speakers to identify the base lexeme
- Morphophonological constraint enforces a fidelity constraint
- In the case of proper names
  - The last name is more informative than the first name: it is easier to identify *Nicolas Sarkozy* from *Sarkozy* than from *Nicolas*

# Motivations

- Feminine first names: *Sékolène, Marine, Nadine, Najat, Rachida, Arlette, Christine, Roselyne*



- Distinctiveness :

- Rarity: *Ségolène, Najat, Arlette, Roselyne, Rama, Rachida...*

- Infrequent first names in French, particularly among PPNs

- The first name instead of the last name (*Marine Le Pen, Ségolène Royal*)

- The last name *Royal* is homonymous with the adjective *royal*

- *Le Pen* is the last name of *Jean-Marie et Marine*, two french politic personalities

- Informativeness constraint : the most distinctive form.

## 4.4. Alliance of morphophonological and paradigmatic constraints

# Size constraint

PPN	Rama Yade	Jack Lang	General average
Sub-names			
Last name	15,8%	47,7%	<b>82,5%</b>
First name	26,3%	0%	5,7%
First name + Last name	<b>57,9%</b>	<b>52,3%</b>	5,5%

*Bon vent, Madame Mendras,  
et surtout ne vous laissez  
pas ramayadiser...*

‘have a good trip, Mrs.  
Mendras, and don't let  
yourself ramayad-ize...’

*Hollande veut taxer taxer taxer à plus soif,  
tellement jacklanguiser encore les pauvres gens que l'on  
regretta Sarkozy.*

‘Hollande wants to tax tax until they can't take any more,  
to jacklangu-ize even more the poor people that we  
regretted Sarkozy.’

# Size constraint

Sub-names	PPN	Dominique De Villepin	Jean-Marie Le Pen	Stephane Le Foll	General average
Last name		5,9%	<b>73,2%</b>	<b>75%</b>	82,5%
First name		0%	19,6%	0%	5,7%
First name + Last name		1%	5,4%	7,7%	5,5%
Last name 2		<b>93,1%</b>	0%	25 %	2,5%

*l'incompréhension villepinesque mobilise jusqu'au bout du monde*  
*'Villepin-esque misunderstanding mobilizes to the ends of the earth'*

*Olivier a accusé Fabius de s'être « lepenisé »*  
*'Olivier accused Fabius of "lepen-ize" himself'*

*dire stop à l'agriculture « Lefollienne »*  
*say stop to « Lefoll-ian » agriculture'*

# Size constraint

Sub-names	PPN	Najat Vallaud-Belkacem	General average
Last name	18,4%	<i>vallaud- belkacemesque</i>	82,5%
First name	<b>40,8%</b>	<b><i>najatien</i></b>	5,7%
First name + Last name	8,2%	<i>najat-vallaud- belkacemien.</i>	5,5%
Last name 1	0%		2,5%
Last name 2	<b>26,5%</b>	<b><i>belkacemerie</i></b>	2,5%
Acronym	6,1%	<i>Nvbiste</i>	1,4%



## 4.5. Conflicts between paradigmatic and morphophonological constraints

# Nicolas Sarkozy

- *En meeting à Nice, dans le département le plus sarkoziste /sarkozist/ de France*  
'At a meeting in Nice, in the most sarkozist department of France'
- *Si elle pouvait se "sarkoziser" /sarkozize/ jusqu'à être élue un jour, ça m'irait très bien.*  
'If she could "sarkoz-ize" herself until one day being elected, that would suit me very well.'
- *Il faut sortir de la confusion et du brouillonisme sarkozesque /sarkozesk/ dans ce domaine.*  
'It is necessary to get out of the confusion and the sarkozesque brouillonism in this field.'

# Manuel Valls

- « *Hollande devrait se “vallsiser” /valsize/», s’exclame le quotidien d’opposition. »  
“Hollande should “valls-ize,” exclaims the opposition daily.’*
- *Ceux qui crachent maintenant dans la soupe adoreront au printemps la bonne soupe vallssiste /valsist/*  
‘Those who now spit in the soup (bite the hand that feeds them) will love in spring the good soup vallss-iste’
- *La formule Vallsesque /valsɛsk/ a fini par percer*  
‘The Valls-esque formula finally broke through’

## 4.6. Conflict between several paradigmatic constraints

# Hypocoristics

- Paradigmatic constraint for PPN: use of the last name
- Exception :
  - Use the first name when it is more distinctive than the last name
  - Use first name when the referent is a woman
- Paradigmatic constraint: words ending in *-inette* are hypocoristics

<i>chipie</i> 'minx'	<i>chipinette</i> 'little minx'
<i>blonde</i> 'blonde'	<i>blondinette</i> 'little blonde'
<i>botte</i> 'boot'	<i>bottinette</i> 'little boot'
<i>bombe</i> 'bomb'	<i>bombinette</i> 'little bomb'

# Hypocoristics

	Général	feminine PPN	feminine PPN final /in/
Last name	<b>90%</b>	<b>53%</b>	17%
First name	6%	43%	<b>83%</b>
Fist name + last name	2%	4%	0%
Sigle	1%	1%	0%

# Hypocoristics

- Use of first names in the construction of hypocoristics
  - *“je partage les mêmes valeurs que les électeurs du FN. Je n’ai aucun état d’âme à en appeler aux électeurs du Front National”. BAM BAM! Nadinou, je te dis bravo. Être à ce point prête à tout, sans vergogne : ça force le respect.*  
“I share the same values as the FN voters. I have no mood to appeal to the voters of the National Front”. BAM BAM! Nadine-ou, I say bravo. To be so ready for anything, without shame: it forces respect. ’
  - *c’est vrai qu’elle est tellement distinguée Nadinette avec ses perlouses...*  
‘It is true that she is so distinguished Nadine-ette with her pearls...’

# Hypocoristics

PPN	First name	Last name	First name last name
Roselyne Bachelot	<b>100%</b>	0%	0%
Marine Le Pen	<b>95,70%</b>	4,30%	0%
Nadine Morano	<b>76,70%</b>	20,90%	2,30%
Christine Boutin	37,50%	<b>62,50%</b>	0%



# Conclusion

- Existence of specific paradigmatic constraints for PPNs
- The constraints interact: paradigmatic versus morphophonological
- The constraints form alliances to win.
- Difficulties
  - Identification of all the constraints
  - Identification of all the levels (phonological, paradigmatic, pragmatic, etc.)
  - Coarse-grained constraints (general lexicon) vs fine-grained constraints (PPN)