ANTHROPONYMS AND PARADIGMATIC DERIVATION IN FRENCH

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ABSTRACT: In this paper, we address the issue of deonomastics, i.e. morphologically complex words based on proper names, and their paradigmatic organisation. More specifically, we examine 55,263 French deonomastics based on a set of 90 French Politicians Proper Names (PPNs). The derivational families into which these complex words can be gathered show apparent asymetries, both formal and semantic: they may be characterized by affix competition (e.g. both *sarkozien* 'sarkoz-ian' and *sarkoziste* 'sarkoz-ist' name followers of Nicolas Sarkozy), lexical gap (uncomplete families), polysemy (e.g. *sarkozisme* 'sarkoz-ism' is a doctrine and an action) and what apparently qualifies as suppletion (e.g. *nicolasiste* 'nicolas-ist', *sarkoziste*). These irregularities disappear when a paradigmatic approach is adopted: namely, we show that PPNs can be seen as the core of formal and semantico-referential networks which do not overlap, and that the paradigmatic organization of deonomastics is highlighted by an approach distinguishing the formal and semantic levels in Word Formation.

KEYWORDS: anthroponym, deonomastic, derivational family, paradigm.

1. INTRODUCTION[1]

Deonomastics, i.e. words built on proper names, are often used as examples in morphological literature (e.g. Bauer 1997: 245; Lignon et al. 2014). However, no study in synchronic morphology proposes an exhaustive analysis of this type of complex word. The purpose of this study is to fill this gap. We analyze French words constructed from 90 French Politicians' Proper Names (PPNs). In example (1) the verb form *hollandisé* is derived from François Hollande (the French Republic President from 2012 to 2017).

(1) *J'ai trouvé que Manuel Valls s'était hollandisé.*

[1] We would like to thank the reviewers whose constructive comments have allowed us to significantly improve this research.

'I found that Manuel Valls had holland-ized.'[2]

The structure of the paper is as follow. Section 2 presents the methodology we applied to build our corpus. Section 3 provides an overview of the relevant literature and exposes our theoretical framework. The results of our analysis are given in sections 4 and 5. The lexicon of deonomastics is structured in three networks: a network of semantic categories, a network of formal patterns and a network connecting the different names denoting the PPN referent. We will see that for each PPN derivational family,[3] the three networks do not overlap, and that for each level of description a paradigmatic organization can be highlighted.

2. THE WEB AS A RESOURCE

2.1 Methodology

To build our own corpus, we used a methodological approach described in Dal & Namer (2015). A set of candidate forms, i.e. of complex words based on PPNs, was generated and then we have verified their existence on the Web. In order to do so, we have used two input lists.[4] The first list includes 90 PPNs which refer to political figures who have had a leading political role in France since 1981 (e.g. President). The second list contains suffixes (e.g. *-iste*), suffixoïd forms (e.g. *-oïa*) and neoclassical components (e.g. *-pathe*) found while searching the *frWaC* corpus cf. Baroni et al. (2008): for instance, *-iste* and *-phage* have been obtained through the search query using the sequence *sarko*[5] and returning among others, the words *sarkoziste* ('sarkoz-ist') and *sarkophage* ('sarko-phage'). Applied to each of the 90 PPNs, this collection method allowed us to gather a set of 103 exponents.

We then combined the content of these two lists to generate potential derived forms. To that end, we produce the graphic counterparts of morpho-phonological constraints operating in French between a stem and an exponent (see Plénat & Roché 2014 for an overview in French). For example, 8 candidate forms are generated from the PPN Emmanuel Macron (the current French President) and the French exponent *-logue* ('-log'), cf. (2).

(2) macronlogue, macronologue, macrologue, emmanuelologue, emmanuelogue,

[2] Deonomastics are underlined in translations; base-affix boundaries are marked by a dash.
[3] Throughout the text, we call *derivational family* or *PPN family* the set of complex words based on a given PPN, be it directly or indirectly.
[4] These lists are available online at https://apps.atilf.fr/homepages/mhuguin/these/documents/.
[5] The size sequence used in search queries are large enough to avoid ambiguity.

2.2 Database

110,658 candidate forms have been generated. They are used as queries on the Web via the Bing Search API, and, when attested, they are recorded along with their context of use.[6] Such positive results concern less that than 5% of candidate forms: 55,263 occurrences were collected (verbs, adverbs, adjectives and nouns). These occurrences are recorded in a lexical database which contains for each entry the result of the analysis of the deonomastic with respect to its construction base. An entry consists in several fields containing phonological (e.g. stem used), syntactic (e.g. syntactic category) and semantic information, the latter being made up of two subtypes of information.

(A) The first is the semantic class that is the ontological type of the deonomastic form; its value is ACTION, PROPERTY or OBJECT (cf. Croft 1991: 62).

(B) The existence of a second semantic information makes it possible to specify certain constructed words that resist the ontological classification (e.g. nouns describing DISEASES as *hollandose* 'holland-osis', according to Tribout et al. 2014: 1887 cf. (3)). Its value belongs to a set of 22 semantico-referential categories, noted in uppercase (e.g. FOLLOWER, PLACE). They are relational categories, defined by the Word Formation link between the PPN base and the deonomastic: for instance, a *sarkoziste* ('sarkoz-ist') is a FOLLOWER of Nicolas Sarkozy. The identification and definition of these categories come the scientific literature on abstract/concrete, intension/extension and mass/count oppositions, etc. cf. Flaux et Van de Velde (2000), and on methodological principles inherited from distributional analysis cf. Lignon & Namer (to appear). For instance, a deonomastic value X can be labelled with the category DISEASE, when it recurrently occurs in syntactic structures as: *X aiguë* 'acute X', *crise de X* 'X attack', *souffrir de X* 'to suffer from X'. See *hollandose* in (3):

(3) *Je souffre de Hollandose, maladie incurable.*
'I suffer from Holland-osis, an incurable disease.'

[6] This data collection task has been achieved between 2016 and 2017 in partnership with the firm Data Observer (www.data-observer.com), startup specialized in collecting and analyzing web-based text data.

3. THEORETICAL BACKGROUND AND OBSERVATIONS

We have just seen that deonomastics have a meaning that allows two words belonging to the same Word Formation pattern to be distinguished from each other, e.g. a *hollandose* is not the same disease as a *sarkozose* ('sark-osis'). This meaning is inherited from the PPN base. That is why a discussion on the meaning of proper names in the literature is provided in section 3.1. We then show in 3.2 that the PPN families are characterized by irregularities often mentioned by authors that defend a paradigmatic approach to morphology as presented in 3.3.

3.1 Anthroponyms and their meaning

Proper names, and *a fortiori* anthroponyms, refer to unique individuals. Mill (1882: 43) thus considers that proper names are meaningless because they denote (i.e. refer to individuals) but do not connote (i.e. "they do not indicate or imply any attributes"). Following Mill, Kripke (1982) argues that proper names refer *directly* to individuals. This theory is labelled *direct reference* because, in the logico-philosophical tradition, the extension (reference) of a term is determined by the intension (meaning). In that, Kripke goes against descriptivist theories like Frege's (1971). Namely Frege (1971: 100), who initially aimed to solve identity statements, proposes that the meaning of proper names be a set of definite descriptions. The reason why the statement *Hesperus is Phosphorus* is not tautological, unlike *Hesperus is Hesperus*, is because the two expressions *Hesperus* and *Phosphorus* although sharing the same referent (*Venus*) do not have the same meaning (cf. Reboul 2001: 26). In response, Kripke argues that proper names are rigid designators. They refer to the same individual in all possible worlds. One can imagine a world where *Emmanuel Macron* is not *the President of the Republic* but not a world where *Emmanuel Macron* is not *Emmanuel Macron*. The definite descriptions, which constitute the meaning of proper names according to Frege (like *the President of the Republic*), are contingent and therefore inappropriate for Kripke.

Kripke's thesis is convincing but cannot explain cases when a new meaning is created from an anthroponym. For its part, Frege's is relevant to our analysis. However it argues that denotation is determined by meaning which seems incomplete. Actually, if we follow Putnam (1975: 165), reference is not directly induced by meaning; it is a complex operation, produced in a situation of communication and related to sociolinguistics.

Through his *theory of stereotypes*, Putnam (1975: 191) thus abandons the too ambiguous notions of *meaning* and *intension*, and proposes that a term be defined instead by a "normal form description" containing "semantic

markers" and "stereotypes", among others. Semantic markers are very general semantic categories (e.g. "animal"). Stereotypes are a body of knowledge that describe normal class members, but that can be denied for specific individuals of this class. Stereotypes must be learned by speakers so as to use words (cf. Fradin & Marandin 1979: 62-65). Stereotypical content can be highlighted by certain formulas, called "hedges" in Lakoff (1973), as *x est un vrai y* ('x is a true y'). If a French speaker says: *Louis est un vrai Nicolas Sarkozy* ('Louis is a true Nicolas Sarkozy'), he can mean that *Louis* is small, that he is right-wing, that he is virulent, etc. Putnam's (1975) proposal seems fit to describe the semantic content of anthroponyms. Moreover, it beneficially leaves aside the problem of how the reference operation is carried out.

3.2 PPN families and discrepancies

The examination of deonomastics reveals several types of discrepancies: affix competition, lexical gap, polysemy, and what can be analyzed at first sight as suppletion. Let us look at Table 1, with partial families built around Nicolas Sarkozy and Arlette Laguiller that realize the semantico-referential categories of FOLLOWER, OPPONENT, DOCTRINE and ACTION (cf. (B) 2.2).

PPN	FOLLOWER	OPPONENT	DOCTRINE	ACTION
Nicolas Sarkozy	*nicolasiste* *sarkozien* *sarkoziste*	*sarkozophobe* *nicolassar-kozyphobe*	*nicolasisme* *sarkozisme*	*sarkozisme* *nicolasarkozification*
Arlette Laguiller	*arlettiste* *laguilleriste*		*arlettisme* *laguillerisme*	*arlettisation* *laguillerisation* *arlettelaguillerisation*

TABLE 1. PPN FAMILIES : NICOLAS SARKOZY & ARLETTE LAGUILLER[7]

Affix competition (cf. Plag 1999: 227) is frequent within PPN families, where at least two members belong to different formal patterns but share the same semantico-referential category, and are therefore synonyms, like *sarkozien* and *sarkoziste* in Table 1. But there is another kind of competition which concerns the way PPNs are realized in their derived words: deonomastics built from the same formal pattern (e.g. *-isation*) can be synonymous because they are based on the same PPN (e.g. Arlette Laguiller), and one is

[7] Possible glosses, for each PPN, from left to right: 'nicolas-ist', 'sarkoz-ian', 'sarkoz-ist', 'sarkozo-phobe', 'nicolassarkozy-phobe', 'nicolas-ism', 'sarkoz-ism', 'sarkoz-ism', 'nicolasarkoz-ification', 'arlett-ist', 'laguiller-ist', 'arlett-ism', 'laguiller-ism', 'arlett-ization', 'laguiller-ization', 'arlettelaguiller-ization'.

derived from the PPN first name (*arlettisation*), another from the last name (*laguillerisation*), and a third one, from the first name last name combination (*arlettelaguillerisation*). These cases of base variation present similarities with stem suppletion, which will be discussed in 4.1. In Table 1 we can also observe a case of lexical gap, a frequent phenomenon in derivational families: here the family of PPN Arlette Laguiller contains no OPPONENT noun, even though such a noun would be expected, given the presence of FOLLOWER nouns in the family (see discussion in 5.2). Finally, we see in Table 1 that *sarkozisme* corresponds either to a DOCTRINE or to an ACTION cf. (4), and could therefore be qualified as polysemous.

(4) *J'ai fait un Sarkozisme. J'ai parlé parlé avant de réfléchir !*
'I did a Sarkoz-ism. I spoke before I thought!'

In Table 1, and more generally in our corpus, these four kinds of irregularities combine with each others. Early paradigm-based theoretical models of morphology have been developed precisely to allow a uniform analysis of similar irregularities and their combinations in the field of inflection.

3.3 Paradigmatic morphology

Paradigmatic approaches of morphology have become a standard for describing inflectional systems of the world's languages. In derivation, since van Marle (1984), according to Bonami & Strnadová (2018: 1), many authors defend the notion of paradigm, in particular Bauer (1997) and Stump (2005). However, the situation is more complex than with inflection, for various reasons summarized in Štekauer (2014: 357). The consequence is that there is no real consensus about the definition of what a *paradigm* is in derivation. For example, it can be a derivational family (e.g. *national, nationalize, nationalist, nationalistic* cf. Bauer 1997: 245) or the relation between a lexeme, a lexicosemantic category and its realization (e.g. <*pass*, personal noun> → *passer* in Stump 2005: 67). Despite their divergences, the common point of these works is to exclude that a morphological construction is simply the result of a binary and oriented rule.

One aspect of the debate is therefore the possibility or not of reproducing in derivation the properties of paradigms defined for inflection. According to Dressler (1989: 8), for example, there is no possible reuse of the definition of inflectional paradigms (e.g. that of Carstairs-McCarthy 1987) in derivation because the paradigmatic organization of derivational morphology would be "much weaker" than in inflection (cf. Štekauer 2014: 354).

Bonami & Strnadová (2018:5) on the other hand, show that it is possible to give a definition of the notion of paradigm operational in both inflection

and derivation: they define "paradigmatic systems" as the superposition of a set of morphological families whose members are either inflected or constructed words. In a superposition of families, members of the same rank are aligned and share the same "content relation". This non-restrictive definition makes it possible to provide a uniform analysis to asymmetric families, as in Table 2, inspired by Bonami & Strnadová (2018: 9-12) where we observe affix competition with *rançonnage / rançonnement* (a, ii), a case of lexical gap (b, i) and the use of the suppletive stem /lokat/ which replaces the inflectional stem /lu/ (c, ii). Bonami & Strnadová (2018) show that affix competition and lexical gap in derivation are similar, respectively, to overabundance (cf. Thornton 2012) and defectiveness in inflection.

	(i) PRED VERB	(ii) ACTION NOUN	(iii) AGENT NOUN
(a)	*rançonner* 'ransom'	*rançonnage, rançonnement* 'ransoming'	*rançonneur* 'ransom man'
(b)		*prédation* 'predation'	*prédateur* 'predator'
(c)	*louer* 'rent'	*location* 'rental'	*loueur* 'renter'

TABLE 2. ($PRED_V$, $ACTION_N$, $AGENT_N$) PARADIGM

Paradigmatic systems are based on a content relation that allows to standardize the analysis of words belonging to different formal patterns (e.g. *-age*, *-ment*, *-ion*, column (ii)). Table 2 actually contains a simplified version of the irregularities presented in Table 1 for PPN families (cf. 3.2). In the following we adopt the principle of family stacking proposed in Bonami & Strnadová (2018). But in addition, we will see that it is also necessary to make a fine separation between the levels of analysis in order to bring out a multidimensional paradigmatic organization specific to the deonomastic lexicon: we show that deonomastics obey in fact a combination of two formal paradigmatic structures (cf. 5.1), and a semantico-referential paradigmatic structure (cf. 5.2).

4. DEONOMASTICS ANALYSIS

We first look (4.1) at the various forms (e.g. the first name or the last name) a PPN can take in Word Formation, and at the specificities of these forms that we call sub-names. We then examine the meaning of deonomastics (4.2), and finally, the influence of linguistic and extra-linguistic constraints over deonomastics form and semantic content (4.3).

4.1 Many names

PPN bases occur under different shapes in deonomastics. Examples below

are based on the PPN Nadine Morano: one is built on the first name (5), another one, on the last name (6), and the last one, on the first name last name combination (7).

(5) *Top 10 des reconversions pour Nadine Morano, courage Nadinette !*
'Top 10 conversions for Nadine Morano, courage Nadin-ette!'

(6) *Moranette,* […], *sa vulgarité constitue à elle seule son habit.*
'Moran-ette, […], is vulgarity alone constitutes his outfit.'

(7) *Elle fait simplement de l'humour Nadinemoranien.*
'She is just making Nadinemoran-ian jokes.'

For PPNs with a compound last name, e.g. Najat Vallaud-Belkacem, each last name component (last name 1 or 2) can be used in Word Formation patterns: (8), (9). The same is observed for attested acronyms, as NVB (10).

(8) *En Taubiristan et en Vallaudistan, ça parait un abus pur et simple.*
'In Taubir-istan and Vallaud-istan, it seems an outright abuse.'

(9) *Je reste Ségoléniste et Belkacemien !*
'I remain Ségolén-ist and Belkacem-ian!'

(10) *Ils énervent la bien-pensance « progressiste » NVBiste.*
'They annoy the "progressive" right-thinking NVB-ist.'

In all, Najat Vallaud-Belkacem can be named in six different ways, cf. Table 3, and each name can be used as a Word Formation base.

First name	Last name	First name + Last name	Last name 1	Last name 2	Acronym
Najat	*Vallaud-Belkacem*	*Najat Vallaud-Belkacem*	*Vallaud*	*Belkacem*	*NVB*

TABLE 3. NAJAT VALLAUD-BELKACEM SUB-NAMES

A PPN consists thus in a set of names that we call sub-names. In Word Formation, all the sub-names that define a PPN can be found in the same morphological pattern (see Table 1 second line, the ACTION noun pattern in *-isation*), although this co-occurrence is not systematic.

Among sub-names, last names are privileged as word formation bases in our corpus (87%), even in hypocoristic patterns (mainly the suffixation in *-ette* in French), where all the sub-names can be used (cf. (5) and (6)), although we would expect the *-ette* pattern to prefer the first name, because of the high frequency of first name-based diminutives in the French attested lexicon (e.g. *Paulette*, *Georgette*). Actually, the choice of the sub-name in diminutive derivation (and probably more generally in all Word Formation patterns) is motivated by the proximity and the appreciation (good or bad) of the speaker towards the referent (compare the negative connotation in (6),

where the derivative is based on the last name and the positive one in (5), where the first name is used instead). In 4.3 we look at other extra-linguistic constraints that condition the use of one or another of these sub-names.

Sub-names are syntactically autonomous, unlike suppletive stems, with which they should not be confused (e.g. the bound stem *locat-* of *location* in Table 2). They are not equivalent: acronyms are coined after the referent's baptismal certificate. They are neither interchangeable in all contexts: for instance in French, first names are reserved for a familiar use, and last names cannot be used alone in standard writing.

Anthroponyms are therefore singular language units that contain in general from 3 to 6 sub-names whose uses are not totally equivalent in syntax as in derivation. We will see in 5.1 that sub-names contribute to the paradigmatic organization of the deonomastic lexicon.

4.2 Semantic content

When deonomastics are interpreted in context their semantic content can be computed in two possible ways. In (11), the pattern applies on the meaning 'human named PPN', and the derived word *bayrouiste* is understood as 'follower of François Bayrou'.

(11) *Voilà, aucun bayrouiste ne répond à ma question : pourquoi ce soutien ?*
'So, no bayrou-ist answers my question: why this support?'

In (12), it is necessary to convene stereotypes with respect to the referent to interpret the deonomastic as the 'property of being conservative'. Indeed, Nadine Morano is a right-wing French politician, known for her reactionary and conservative remarks.

(12) *Quand on défend la « pureté » de la langue française contre les importations de mots étrangers,* […], *on est, en un sens, moraniste.*
'When one defends the "purity" of French language against the foreign imports, […], we are, in a sense, moran-ist.'

The semantic content of PPNs can thus be considered according to the proposals from Putnam's theory of stereotypes (cf. 3.1). The two components that serve to identify the meaning of a proper name, that is a denominative meaning (which would be the "semantic marker") and a set of stereotypes, are compartmentalized under the so-called "normal form description of the meaning".

4.3 Linguistic and extra-linguistic constraints

We have seen (cf. Table 1) that a semantico-referential category may corre-

spond to many possible formal patterns, that, on the other hand, a given morphologically complex form can belong to several semantico-referential categories, and that expected members may be absent from a PPN family. Finally, according to the PPN, the sub-name which formal patterns apply to may be different in nature.

These differences stem from linguistic (e.g. Plénat & Roché 2014) but also extra-linguistic constraints. For example, in our corpus, when a PPN refers to a woman, the first name is 32 times more likely to be chosen when compared to PPNs whose referent is a man. This characteristic should not be considered in isolation. Indeed, some referents have very common first names (this is the case of the men in our corpus) and others much less (some women in our corpus). Thus, the rarer a sub-name is, the easier it is to identify the referent, and the more this sub-name will be used in construction. In addition, some last names have homonymous forms in the French lexicon. This is the case of Ségolène Royal (*royal* is an adjective) or of Jean-Marie Le Pen and Marine Le Pen who share the same last name. Table 4 compares the use of the different sub-names for these three personalities with respect to the general average use of the sub-names. We notice that the first name is at least 7 times more used for Marine Le Pen and Ségolène Royal (in bold) than for the other PPNs of the corpus (in grey). The selection of a PPN preferred sub-name in Word Formation is thus motivated by the gender of the referent but also by the content of the attested lexicon.

PPN / Sub-names	Jean-Marie Le Pen	Marine Le Pen	Ségolène Royal	General average
Last name	93,28%	46,06%	38,77%	89,78%
First name	5,52%	**53,02%**	**56,98%**	6,98%

TABLE 4. PERCENTAGE OF FIRST NAMES AND LAST NAMES IN DEONOMASTICS

Extra-linguistic constraints also weigh on the semantico-referential categories of deonomastics. Let us compare the semantico-referential categories of the members of the PPN family of François Hollande, with those involved in the family of Nadine Morano. As a former President of the French Republic, François Hollande has had a marked impact on French political history. This is reflected in the derivational family, which contains 22 complex words belonging to the class of FOLLOWER (e.g. *hollandaise* 'holland-ese', *françoisien* 'françois-ian', *hollandeux* 'holland-ous'). On the other hand, Nadine Morano's lack of political action, combined with her provocative behaviour, is expressed in the semantico-referential categories of the PPN's family members by the quasi absence of nouns denoting FOLLOWERS and the abundance of nouns referring to DISEASES: e.g. *nadinite* 'nadin-itis', *moranopathie* 'morano-pathy', *moranophrénie* 'morano-phrenia', *na-*

dinemoranite ‘nadinemoran-itis’ (only 3 of them are based on François Hollande). The actions of the referent therefore condition the realization of this or that type of semantico-referential unit within the PPN family.

In sum, both form (chosen sub-name), and meaning (semantico-referential category) of deonomastics in the derivational family of a given PPN, not to mention its family size, depend on linguistic grounds but also on the personality of the political figure the PPN refers to. Following the proposition in Hathout & Namer (to appear), we examine now families of deonomastics from a formal and a semantic point of view separately, in order to identify regularities.

5. PARADIGMATIC ORGANIZATIONS

In this section, we examine the PPN families from both a formal and a semantic points of view: we will show that family superposition take the shape of formal (5.1) and semantic (5.2) abstract networks that do not overlap.

5.1 Formal network

Formally, there are two types of differences between families. First, affix competition is generally at play in the realization of semantico-referential categories (e.g. *sarkozien* and *arlettiste* in Table 1 belong to the class of FOLLOWERS). Second, for a given PPN there may be several deonomastics formed by means of the same pattern but using different sub-names (e.g. *arlettiste* and *laguilleriste* in Table 1). Neutralizing the semantic parameter enables us to represent in a single network of formal patterns the whole set of formal relationships involved in all PPN families of our corpus. Figure 1 is a sample from this formal network.

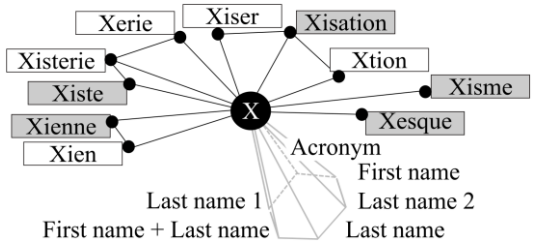

FIGURE 1. SAMPLE OF FORMAL NETWORK

X symbolizes the shape of the PPN, that is, any of the PPN’s sub-names described in 4.1. Labels on vertices are formal patterns applied to form X’s family. In Figure 2 Xesque applies on X = Najat Vallaud Belkacem’s set of

sub-names (given in Table 3), resulting in *nvbesque*, *najatesque*, *belkacemesque*, *vallaudbelkacemesque* and *najatvallaudbelkacemesque*. Symbol Ø stands for the absence, in our corpus, of the *-esque* word that would derive from last name 1 (Vallaud).

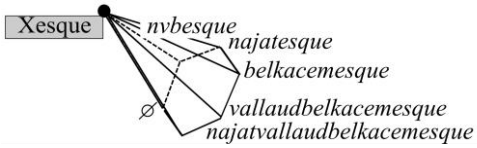

FIGURE 2. XESQUE PATTERN APPLIED ON NAJAT VALLAUD-BELKACEM

In Figure 1, edges formally connect X to each derivational pattern, but also formal patterns with each others. Moreover, edges may directly join non-immediately related patterns, like X to Xisation, corresponding to Booij (2010: 7) "schema unification". It is a way to analyze defection, as in Clémentine Autain's family that includes the action noun *autainisation* ('autain-ization') but not its verb base *autainiser* ('autain-ize').

Formal networks are actually made up of two distinct levels of formal paradigms, exemplified in Table 5a-b, depending on whether the X value – that is, the sub-name value– (Table 5a), or the formal pattern (Table 5b) is fixed. Thus, PPN-based formal paradigms are two-dimensional structures. The first layout is the network connecting the formal patterns used to build deonomastics in our corpus. For each pattern, e.g. Xiser ('Xize') in Table 5a, there is an additional paradigmatic organization allowing the pattern to be realized by any sub-name value X can take for a given PPN.

(a) FORMAL PATTERN PARADIGM			(b) SUB-NAMES PARADIGM		
X	Xiser 'Xize'	Xisation 'Xization'	First name-*iser*	Last name-*iser*	First name + Last name-*iser*
Nadine Morano	*moranoiser*	*moranoisation*	*nadiniser*	*moranoiser*	*nadinemoraniser*
Marine Le Pen	*mariniser*	*marinisation*	*mariniser*	*lepeniser*	*marinelepeniser*

TABLE 5. TWO-DIMENSIONAL FORMAL PARADIGM STRUCTURE

Of course, there are paradigmatic links stronger than others: they are more regular, because more frequent. In Figure 1, the five patterns highlighted in grey are applied in more than 60% of PPN families. Conversely, the less regular the link, the more original and unexpected it is.

5.2 Semantico-referential network

As shown in Table 6, semantic relations motivate the size and the content of

PPN families, which are shaped into semantico-referential networks. Indeed, Table 6 connects |PPN|,[8] AVERSION nouns and OPPONENT nouns. AVERSION labels the negative feeling OPPONENTS perceive towards the PPN referent (see (13)). The constructed words that realize the partial semantic network (|PPN|, AVERSION, OPPONENT) do not necessarily belong to the same formal pattern (e.g. *taubiranoïa* ends in *-noïa* by analogy with *paranoïa* 'paranoia', *juppéophobie* 'juppéo-phobia' ends in *–phobie*) and do not always use the same sub-name (e.g. *christinophobie* 'christino-phobia' is built on the first name, *christineboutinophobe* 'christineboutino-phobe', on the first name last name combination).

|PPN|	AVERSION	OPPONENT
Alain Juppé	*juppéophobie*	*juppéophobe*
Christiane Taubira	*taubiranoïa*	*taubiraphobe*
Christine Boutin	*christinophobie*	*christineboutinophobe*

TABLE 6. (|PPN|, AVERSION, OPPONENT) PARADIGM

The semantico-referential network corresponding to the PPN families of our corpus is sampled in Figure 3. Each vertex is a semantico-referential category (see 2.2). Relations between vertices are of morpho-semantic nature and the five arcs noted in bold correspond to the relations most frequently observed in the corpus (more than 40% of families).

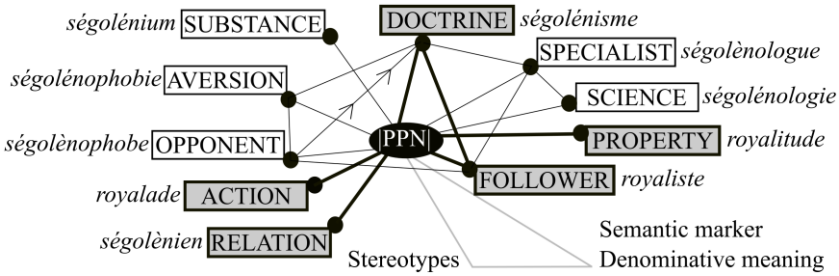

FIGURE 3. SAMPLE OF SEMANTICO-REFERENTIAL NETWORK

Semantico-referential categories are grouped around |PPN| into sub-networks of variable size, and resulting from predictable cognitive relations between these categories. For example, if the PPN referent causes AVERSION, he/she leads to the existence of a group of OPPONENTS. These OPPONENTS can be against the political DOCTRINE of the PPN referent but also against his/her FOLLOWERS. Morpho-semantic relations are established either directly with |PPN| (|PPN|/DOCTRINE) or between categories themselves (DOCTRINE/FOLLOWER) and they can be oriented or not, cf.

[8] The notation |PPN| stands for the bipartite semantic content assigned to PPNs (see 4.2).

Figure 4.

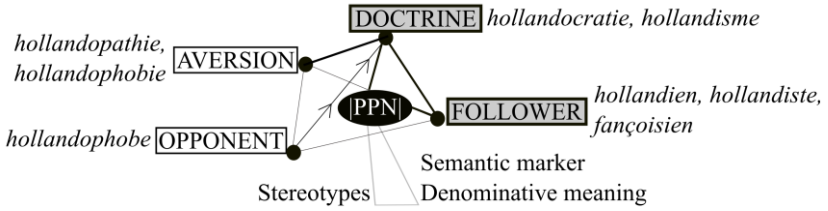

FIGURE 4. SEMANTICO-REFERENTIAL NETWORK: ORIENTED VS UNORIENTED LINKS

The multiple relations that the OPPONENT category has with DOCTRINE, FOLLOWER, and AVERSION, in addition to |PPN|, causes derivatives classified in this category to have several interpretations, cf. (13).

(13) *Un holandophobe est un opposant de François Hollande / un opposant au hollandisme / un opposant aux hollandistes / un adepte de hollandophobie.*
'A hollando-phobe is an opponent of François Hollande / an opponent of holland-ism /an opponent of holland-ists / a follower of hollando-phobia.'

The opposite is not always true: we cannot interpret *hollandisme* (DOCTRINE) from the meaning of *hollandophobe* (OPPONENT). The morpho-semantic link between DOCTRINE and OPPONENT is thus oriented unlike most other relations such as DOCTRINE/FOLLOWER. Indeed, a *hollandiste* may be a 'follower of holland-ism' just as *hollandisme* may be the 'doctrine of holland-ists'. The unoriented link DOCTRINE/FOLLOWER is a case of "double motivation" in Roché (2011: 97).

6. CONCLUSION

In this study, we have examined the application of the notion of paradigm in derivational morphology. To do so, we have analyzed deonomastics morphologically constructed from PPNs, which have previously been poorly studied. We have shown that PPNs have a two-face meaning that we find in deonomastics, and that these two interpretations can be accounted by Putnam's theory. On the other hand, PPNs can be formally defined by a set of subnames. We have analyzed 55,263 deonomastics and compared ninety morphological families of our corpus. We have shown that linguistic but also extra-linguistic constraints block the realization of some patterns while favoring others, and that separating the dimensions of analysis makes it possible to overcome this apparent lack of cohesion. PPN families have therefore be examined distinctly, from a formal and a semantico-referential point of view. Consequently, family superposition defines networks that structure the de-

onomastic lexicon into a double paradigmatic organization: one is semantically driven, the other one is a two-dimensional formal organization, combining a network of formal patterns and, for each pattern, a network of subnames.

Finally, the results of this analysis show that the part-of-speech PPNs belong to is singularized by two types of properties: a set of sub-names and a bipartite semantic content. These properties raise issues about the nature of PPNs as lexical units manipulated in Word Formation. This is why future research will aim to question the lexematic identity of the anthroponym.

REFERENCES

Baroni, M., S. Bernardini, A. Ferraresi & E. Zanchetta (2009). The WaCky Wide Web: A collection of very large linguistically processed Web crawled corpora. *Language Resources and Evaluation* 43(3). 209-226.

Bauer, L. (1997). Derivational paradigms. In G. Booij & J. van Marle (eds.), *Yearbook of Morphology 1996*, 243-256. Dordrecht: Kluwer.

Bonami, O. & J. Strnadová (2018). Paradigm structure and predictability in derivational morphology. *Morphology:* https://doi.org/10.1007/s11525-018-9322-6.

Booij, G. (2010). Construction morphology. *Language and Linguistics Compass* 3(1). 1-13.

Carstairs-McCarthy, A. (1987). *Allomorphy in inflexion*. London: Crom Helm.

Croft, W. (1991). *Syntactic Categories and Grammatical Relations: The Cognitive Organization of Information*. Chicago & London: University of Chicago Press.

Dal, G. & F. Namer (2015). Internet. In P.O. Müller, I. Ohnheiser, S. Olsen & F. Rainer (eds.), *Word-Formation - An International Handbook of the Languages of Europe* 3, 2372-2386. Berlin & New York: De Gruyter.

Dressler, W. (1989). Prototypical differences between inflection and derivation. *Zeitschrift für Sprachwissenschaft und Kommunikationsforschung* 42(1). 3-10.

Flaux N. & D. Van de Velde (2000). *Les Noms en français : esquisse de classement*. Paris & Gap : Ophrys.

Fradin, B. & J.-M. Marandin (1979). Autour de la definition. *Langue Française* 43(1). 60-83.

Frege, G. (1971). *Ecrits logiques et philosophiques*. Paris : Seuil.

Hathout, N. & F. Namer (to appear). La parasynthèse à travers les modèles : des RCL au ParaDis. In O. Bonami, G. Boyé, G. Dal, H. Giraudo & F. Namer (eds.), *The lexeme in descriptive and theroretical morphology*. Berlin: Language Science Press.

Kripke, S. (1982). *La logique des noms propres*. Paris : Editions de Minuit.

Lakoff, G. (1973). Hedges: A Study in Meaning Criteria and the Logic of Fuzzy Concepts. *Journal of Philosophical Logics* 2(4). 458-508.

Lignon, S. & F. Namer (to appear). Catégories d'humains entre dictionnaire et usage : le wagnérien est-il un partisan ou un spécialiste ? In C. Schnedecker et W.

Mihatsh (eds.), *Les noms d'humains.* Berlin & New York : De Gruyter.
Lignon, S., F. Namer & F. Villoing (2014). De l'agglutination à la triangulation ou comment expliquer certaines séries morphologiques. *4ème Congrès Mondial de Linguistique Française (CMLF)*. 1813-1835.
Mill, J. S. (1882). *A System of Logic, Ratiocinative and Inductive, Being a connected view of the Principles of Evidence, and the Methods of Scientific Investigation*. New York: Harper & Brothers.
Plag, I. (1999). *Morphological productivity. Structural constraints in English derivation*. Berlin & New York: De Gruyter.
Plénat, M. & M. Roché (2014). Le jeu des contraintes dans la sélection du thème présuffixal. *4ème Congrès Mondial de Linguistique Française (CMLF)*. 1863-1878.
Putnam, H. (1975). The Meaning of "Meaning". In K. Gunderson (ed.), *Language, Mind, and Knowledge*, 131-93. Minneapolis: University of Minnesota Press.
Reboul, A. (2001). Foundations of reference and predication. In M. Haspelmath, E. König, W. Oesterreicher & W. Raible (eds.), *Language Typology and Language Universals: an International Handbook 1*, 509-522. Berlin & New York: De Gruyter.
Roché, M. (2011). Quel traitement unifié pour les suffixations en *-isme* et en *-iste* ? In M. Roché, G. Boyé, N. Hathout, S. Lignon & M. Plénat (eds.), *Des unités morphologiques au lexique*, 69-139. Paris : Lavoisier.
Štekauer, P. (2014). Derivational Paradigms. In R. Lieber & P. Štekauer (eds.), *The Oxford Handbook of Derivational Morphology*, 354-369. Oxford: Oxford University Press.
Stump, G. (2005). Word-formation and inflectional morphology. In P. Štekauer & R. Lieber (eds.), *Handbook of Word-Formation*, 49-72. Dordrecht: Springer.
Thornton, A. M. (2012). Reduction and maintenance of overabundance. A case study on italian verb paradigms. *Word Structure* 5(2). 183-207.
Tribout, D., L. Barque, P. Haas & R. Huyghe (2014). De la simplicité en morphologie. *4ème Congrès Mondial de Linguistique Française (CMLF)*. 1879-1890.
van Marle, J. (1984). *On the paradigmatic dimension of morphological creativity*. Dordrecht: Foris.

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