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# What can Verbal Derivation Tell us about Proper Names?

Aurélie Héois

# Introduction

- Proper names have long been defined in comparison to common nouns and noun 1 phrases. For instance, Huddleston & Pullum [2002: 515-523] place their section on proper names inside the chapter entitled "Nouns and noun phrases". Gary-Prieur [2016: 53] also gives a relative definition of proper names: "[l]e N[om propre] a donc un statut syntaxique spécifique: il fonctionne tantôt comme un N[om commun], en position de tête de G[roupe Nominal], tantôt comme un GN, à la manière d'un pronom"<sup>1</sup>. Similarly, Philippe [2020] defines proper nominals as an intermediate category between nouns and noun phrases. Despite their differences, these analyses illustrate at least two fundamental facts on proper names ("PNs" from now on): first, the definition of PNs is not straightforward; and second, PNs seem to take an intermediary place between language and discourse, as Gary-Prieur [2016: 48] points out: "la formulation de son sens dans la langue comporte nécessairement un renvoi au discours"<sup>2</sup>. In other words, according to Gary-Prieur, the semantic content of a PN is highly dependent on the shared knowledge of the participants to the discourse, but PNs still exist - have a content - outside of discourse, that is to say in language.
- <sup>2</sup> The aim of the present study is to compare denominal verbs whose base is either a PN or a common noun ("CN" from now on) and see whether the analyses of their behavior in derivation can shed light on the difference(s) (and similarities) between the two categories: does the verbal derivation of PNs involve different processes from the verbal derivation of CNs? In other words, the present study explores the significance of the PN/CN variable on verbal derivation.
- <sup>3</sup> The study relies on the decomposition of verbal derivation into relevant steps so as to reverse-engineer the path which leads from the nominal base to the meaning of the verb. Examples (1) and (2) illustrate the type of analysis undertaken for the study:

(1a) Verb - Bogart: "to force, coerce; to bully, intimidate". [*OED*<sup>3</sup> 2021]
(1b) Morphology - Formed by conversion, from the PN Bogart.
(1c) Base - Humphrey Bogart (1899–1957), U.S. film actor who sometimes played "tough characters". [*OED* 2021]
(1d) Metonymic patterns - AGENT FOR EVENT + EVENT FOR CHARACTERISTIC + CHARACTERISTIC FOR ACTION<sup>4</sup>.

In example (1), the EVENT <play the role of bullies> is selected from the life of Humphrey Bogart. The CHARACTERISTIC <bully> is in turn selected within the EVENT to become, through the process of conversion, a verb denoting the ACTION involving this characteristic (see Section 3.2. for further details about metonymic patterns and their selection).

(2a) Verb - chef: "to cook professionally". [OED 2022]<sup>5</sup>
(2b) Morphology - Formed by conversion of the CN chef.
(2c) Base - chef: "a professional cook, esp. the head cook in a restaurant".
[OED 2022]
(2d) Metonymic patterns - AGENT FOR ACTION.

Example (2) is more straightforward as the verbal derivation only includes one metonymic pattern in which the main semantic feature of the CN is converted into an action.

As there are multiple ways to analyze the morphosemantic component of a denominal 4 verb<sup>6</sup>, the present study focuses on a cognitive perspective as developed by Janda [2011] and investigates the metonymic patterns at stake in denominal verbal derivation. Section 1 presents this cognitive theoretical background along with an overview of PNs. Section 2 gives further details on the data selected for this study, namely two samples from the English denominal verb data (VdenomEN) I have collected as part of a broader denominal verb project (Vdenom) (Héois ongoing): the first sample gathers all the verbs in the data which originate from a PN whose referent is either a person (Stalinize<sup>7</sup> <- Stalin) or an anthropomorphic animal (scoob<sup>8</sup> << Scooby Doo) - 100 entries; the second sample gathers - through random selection - an equivalent number of verbs originating from CNs which denote an animate entity (human or animal), such as cockneyize<sup>9</sup> << cockney or sunfish<sup>10</sup> << sunfish – 94 entries. Section 3 defines the analytical tools used to encode the data with a close focus on metonymic terminology. Section 4 offers a quantitative and qualitative description and analysis of the data according to two variables: morphology and metonymy. Finally, section 5 discusses the added value of the study of verbal derivation in the definition of PNs.

# 1. Theoretical background

<sup>5</sup> In order to compare PN verbal derivation to CN verbal derivation, I first describe how PNs are understood in this study, inherently and relatively to CNs (Section 1.1.). I then present the morphological processes at work in the data under scrutiny (Section 1.2.1.) before moving on to the core approach, based on Janda [2011], which postulates that metonymy accompanies word-formation processes (Section 1.2.2.).

#### 1.1. What is a proper name?

- <sup>6</sup> There are many linguistic theories on PNs, some of which take their roots in other disciplines, such as philosophy. The purpose of this article is not to present a description of the many theories about PNs but to offer an overview of their definition. Some major theoretical trends as well as terminological choices are presented in this first section.
- First, the choice of the term proper names over proper nouns needs to be clarified. 7 According to Huddleston & Pullum [2002: 515-516], "[p]roper nouns [...] are word-level units belonging to the category noun" while "proper names are expressions which have been conventionally adopted as the name of a particular entity". According to this definition, Socrates can be analyzed as a proper noun or a proper name but Annie Oakley can only be analyzed as a proper name containing two proper nouns. By contrast, Gary-Prieur [2016] would consider Annie Oakley to be a compound. According to her, the choice between the two expressions, proper noun and proper name, lies in the importance given respectively to the PN as a grammatical entity, or to its referential function (Gary-Prieur [2016: 50]). Proper name is the chosen terminology in this article as it has a wider scope than proper noun. As a result, this study includes both simple PNs, such as Socrates (>> Socratize<sup>11</sup>) - "proper nouns" for Huddleston & Pullum - and complex types of PN bases, such as Annie Oakley<sup>12</sup> (>> Annie Oakley<sup>13</sup>). Moreover, the present study is interested in verbal semantics. Hence, what matters most is not so much to consider proper names as grammatical units but rather to understand their roles in the semantics of denominal verbs.
- <sup>8</sup> Discussing the semantics of PNs, Nyström [2016: 40] distinguishes between two main theses: the 'meaninglessness thesis' (Mill [1882]; Kripke [1972]; Donnellan [1972, 1974], among others) and the 'maximum meaningfulness thesis' (Jespersen [1924]; Kuryłowicz [1980], among others). The present analysis is founded on the assumption that the meaningfulness thesis is relevant and agrees with Štekauer [1997: 31] when he states that "[t]he existence of converted proper names [...] is the best evidence of the existence of a meaning of proper names" and adds: "[o]ur knowledge of a language is **always** conditioned by the knowledge of 'facts'''. In other words, PNs are like CNs in the sense that they have a semantic content<sup>14</sup>. Therefore, the difference between verbs based on proper names (PN-verbs) and verbs based on common nouns (CN-verbs) does not rest upon the meaningful / meaningless dichotomy. Štekauer [1997: 28] proposes instead that the meaning of CN-verbs is the result of the selection of general features of the noun, while the meaning of PN-verbs is the result of the selection of idiosyncrasies of the PN.
- 9 Following Štekauer [1997], Gary-Prieur [2016] and, more recently, Philippe [2020], I consider that both CNs and PNs have a semantic content, which derives from both encyclopedic knowledge and semantic features. As a result, the existence of semantic features or the reference to encyclopedic knowledge are not defining criteria to discriminate between CNs and PNs. Philippe [2020: 449] interestingly concludes that PNs and CNs can be distinguished based on their opposed categorial dynamism:

Le nominal propre, dont le nom commun est le modèle (morphosyntaxique mais aussi sémantique), va progressivement se doter d'un potentiel de catégorisation, mais **toujours en sens inverse du nom commun**: issu de la connaissance d'un référent extralinguistique, c'est par le référent initial du [nom propre] que se construit progressivement une classe, une catégorie discursive, et parfois une catégorie en langue associée au nom propre.  $^{\rm 15}$ 

- For instance, in (1), the whole derivation process stems from *Bogart*'s initial referent, an American actor (AGENT). Because Humphrey Bogart played roles of bullies (EVENT), the PN *Bogart* can gain a classificatory scope to denote not only the unique actor, but also a type of person, namely a bully (CHARACTERISTIC)<sup>16</sup>. On the other hand, to refer to someone as "a chef", one starts from the broad category and sees if the prototypical semantic features associated to this category match the person in question.
- To sum up, the present study tends towards the meaningfulness thesis on PNs but avoids the controversy around the issue of meaning by simply considering that both CNs and PNs have semantic content. Their differences lie in their dynamics. As a process, verbal derivation is by nature dynamic. As a result, the comparison between PNs and CNs in verbal derivation should allow to test Philippe's conclusion above.

#### 1.2. Perspective(s) on denominal verbal derivation

12 Before delving into two elements of verbal derivation, namely morphology and metonymy, it is worth noting that the present study fits into a cognitive linguistic framework and adopts an onomasiological perspective. Štekauer [2005: 207] opposes the onomasiological approach of word-formation to the semasiological approach:

The semasiological [...] method, proceeding from form to meaning/concept, concentrates on the analysis of the already existing word-stock. The onomasiological [...] method, which takes the opposite direction and studies the naming act, has long been relegated to the periphery of research in works on English word-formation.

Thus, the intended meaning is considered the base for derivation. As a result, the speaker is viewed as "a linguistic innovator" and "the naming act is a *cognitive phenomenon* relying on the intellectual capacities of a coiner" (Štekauer [2005: 212-213]).

The aim of the study is to compare verbs according to their base and explore the following hypothesis: the categorial distinction between PN and CN is significant when considering the cognitive processes at stake in denominal verbal derivation in English. As a result, and following Janda [2011], two variables need to be specified here: verbal morphology and metonymic patterns. I briefly present the two in the following sections and give more details on their encoding in Section 3.

#### 1.2.1. The morphology of denominal verbs

- 14 The example of *chef* and *Bogart* given in the introduction are examples of conversion. Other word-formation processes exist in English although only a few allow a change of category. Regarding the case of verbalization, Dixon [2008: 32-33] lists three processes in English: conversion (*chef*), suffixation (*pasteurize*<sup>17</sup>), and prefixation (*unmate*<sup>18</sup>).
- 15 Koontz-Garboden [2014: 258] defines conversion as "[a case] where a word has one meaning when used as a word of one lexical category and another related meaning when used with a different lexical category, but with no overt morphological exponent of the derivation"<sup>19</sup>. Examples of conversion are abundant in English, just to name a few (examples from Plag [2003: 134-135], and from VdenomEN for (3a))<sup>20</sup>:

- (3a) from N to V: a prime minister >> to prime minister<sup>21</sup>
  (3b) from V to N: to call >> a call
  (3c) from A to V: better >> to better
  (3d) from A to N: poor >> the poor<sup>22</sup>
- <sup>16</sup> Suffixation is a type of derivation that consists in adding a bound morpheme to the right of a stem. According to Plag [2003: 116-117], there are four verb-forming suffixes in English, illustrated in the examples below (from VdenomEN):

(4a) funambule >> funambulate<sup>23</sup>
(4b) Aladdin >> Aladdinize<sup>24</sup>
(4c) prince >> princify<sup>25</sup>
(4d) piece >> piecen<sup>26</sup>

- All these suffixes do not show the same productivity, as Plag [1999: 117-118] underlines: In comparison to *-ize*, the suffixes *-ify* and *-ate* seem to be more severely restricted, in that *-ate* has a high global productivity, but the probability of encountering new forms is rather low. Conversely, *-ify* has a higher chance of occurring in new formations, but the sheer number of these instances is rather low.
- 17 Although productivity is outside the scope of the present study, for the sake of statistical analysis, only major morphological trends will be selected here (see Section 4). The suffix -er, which used to be an English verbalization suffix, is also present in my data, but it only concerns one entry, namely moisher<sup>27</sup> (<< Moishe).</p>
- Prefixation, as opposed to suffixation, is a type of derivation that consists in adding a bound morpheme to the left of a stem. In English, prefixation rarely modifies the class of the base. Bauer [1983: 217] lists a few class-changing prefixes most of which are verbalization prefixes as illustrated in (5) (from VdenomEN). As a result, prefixation is relevant in denominal verbal derivation:

```
(5a) tail >> betail<sup>28</sup>
(5b) shade > enshade<sup>29</sup>; bus >> embus<sup>30</sup>
(5c) clutch >> declutch<sup>31</sup>
(5d) embargo >> disembargo<sup>32</sup>
(5e) mute >> unmute<sup>33</sup>
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Bauer [1983] also adds *non-* to this list (as in *non-stick*) although it is not present in my data.

<sup>19</sup> We should also add to Dixon [2008]'s list of verbalization processes backformation as defined by Bauer [2003: 39]: "cases where the element subtracted is (or looks like) a morph with an independent existence elsewhere in the language, and especially where the process is a derivational one". Example (6) (from VdenomEN) illustrates cases in which the end of a noun, here *-er*, is reanalyzed within the *-er* suffixal paradigm and removed to form the verb.

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(6) butler >> buttle<sup>34</sup>
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Here, I consider backformation a type of derivation because I take the perspective of the "coiner" who takes a noun and turns it into a verb.

20 Finally, one last process which is considered here is clipping as it can also involve one base-noun. Clipping refers to the process by which phonological or morphological material is removed from a lexeme. Bauer's definition [1983: 233] is however problematic considering the data under scrutiny: "process whereby a lexeme (simplex

or complex) is shortened, while still retaining the same meaning and still being a member of the same form class". Before delving into the issue, I give in (7) some examples of clipping (from Bauer [1983: 233]):

> (7a) bi << bisexual (7b) jumbo << jumbo jet (7c) 'Fro << Afro (7d) Cong << Viet Cong

- Bauer's definition and examples entail class-stability, from N to N or V to V, making it 21 hard to define clipping as a potential verb-forming process. However, the denominal data collected here includes the examples in (8):

(8a) fizz: "to be an informer" << fizgig: "a police informer" [GDS<sup>35</sup> 2022] (8b) scoob: "to eat, usu. to eat snacks" << Scooby Doo: "TV cartoon character [...] and his Scooby Snacks" [GDS 2022]

In both cases, no attestation of an intermediary noun is recorded (#a fizz, #a scoob). Considering the definition of backformation above, these two entries cannot be analyzed as such as neither -qiq nor -y Doo are attested suffixes<sup>36</sup>. As a result, and for empirical reasons, I consider these examples cases of clipping, and backformation and clipping as part of the same continuum. This does not fully contradict Bauer [1983] as he considers backformation "a special case of clipping" [1983: 232]; the definition of clipping is then broadened accordingly and becomes a potential class-changing process.

22 The data under scrutiny mostly includes cases of conversion and -ize-suffixation and marginally other types of suffixation, prefixation, backformation and clipping. My data analysis (Section 4) will focus on the main processes only with a particular attention paid to the metonymic patterns at work.

#### 1.2.2. Metonymy: a cognitive approach to word-formation

<sup>23</sup> The study of metonymy takes its roots in the classical rhetorical tradition in which it was considered one of the major figures of speech (Panther & Thornburg [2007: 237]). It was then defined as a "stand for relation in which the name of one thing (henceforth, the source or vehicle) is used to refer to another thing (henceforth, the target) with which it is associated or to which it is contiguous" (Panther & Thornburg [2007: 237]). More recently, metonymy took a more significant part in linguistic research, especially within the framework of cognitive linguistics. In the present study, metonymy is understood as defined by Kövecses & Radden [1998: 39]:

Metonymy is a cognitive process in which one conceptual entity, the vehicle, provides mental access to another conceptual entity, the target, within the same domain, or ICM [Idealized Cognitive Model].

24 Within the field of cognitive linguistics, apart from the notion of *ICM*, other defining strategies have emerged, such as contiguity (Peirsman & Geeraerts [2006]) or domain (Croft [1993]). The differences between the approaches are not crucial for the present study. Metonymy is considered here a cognitive process and analyzed within the widely shared model of SOURCE FOR TARGET (Janda [2011: 363]). In this model a SOURCE is used to express a TARGET, and both SOURCE and TARGET are part of the same ICM or relate to each other through contiguity. For instance, the concept of the object HAMMER can be defined within an event involving at least a person holding the hammer, the instrument itself, the action of hammering, and the object being hammered. All these elements, which can be denoted by different parts of speech and lexically unrelated words, are included within the same action ICM or are conceptualized as contiguous. As a result, it is widely accepted that the noun *hammer* undergoes a metonymic process of the type INSTRUMENT FOR ACTION when it becomes a verb. The understanding of conversion as a metonymic process is widely accepted (Kövecses & Radden [1998]; Janda [2011]; Brdar & Brdar-Szabo [2013]; Bauer [2018], among others). However, the generalization of metonymy to other word-formation processes is not widespread yet<sup>37</sup>, although Kövecses & Radden [1998: 55] briefly mention the issue: "it is an open question to what extent such

25 One convincing example of a study of metonymy as a word-formation process is proposed by Janda [2011]. It presents a view in which "the semantic relationship between base and derivative [is] ruled by metonymy" (Bauer [2018: 10]). Her study has raised some criticism (Brdar & Brdar-Szabo [2013, 2014]); Bauer [2018: 10] summarizes the debate as follows:

morphologically derived forms are still to be treated as metonymies".

Either we accept that conversion is a matter of metonymy, and then allow suffixation also to be a matter of metonymy, parallel with conversion. Or we deny that conversion is metonymy at all, because derivational affixation is not metonymy and conversion is parallel to derivational affixation.

Following Janda [2011] and Bauer [2018], I consider metonymy as fundamental in derivation and use it for the decomposition of verb meaning as exemplified in (1d) and (2d). As a result, the analysis I implement for cases of conversion, *chef* and *Bogart*, is applied to all other derivation cases (see Section 1.2.1.): suffixation (*Morganize*), prefixation (*unmate*), backformation (*motherfuck*), or clipping (*scoob*)<sup>38</sup>.

# 2. Methodology: data collection

27 The present study is based on the data collected for an ongoing project on denominal verbs (Vdenom<sup>39</sup>). This section presents the methodology used to collect the VdenomEN data from which the present data is extracted. The first section defends the use of lexicographic resources as the basis for the extraction of denominal verb data. Then, I briefly explain how the data was extracted and the reasons for sampling animate bases for this study.

#### 2.1. Using lexicographic resources (instead of corpora)

- <sup>28</sup> When choosing linguistic data as the basis for analysis, researchers have lately been drawn towards broad corpora. There are numerous advantages to using corpora, among others: quantity, or variety. As Desagulier [2017: 7] points out "the goal of corpus-linguistics techniques is to better understand the rules governing a language as a whole, or at least some aspect of that language". This suggests that a corpus could be an appropriate resource for modelling denominal verbs. Indeed, this approach would certainly result in the extraction of verbs which are not institutionalized in dictionaries (slang words, hapax, regional varieties, etc.).
- 29 However, methodological choices need to be based on and compatible with research objectives. The aim of Vdenom is to build predictive models of the morphological,

semantic, and syntactic structures of denominal verbs relatively to their nominal base. The nature of the data, namely English denominal verbs whose first attestation is from 1800 onwards<sup>40</sup>, implies many challenges when it comes to corpus collection. The main challenge consists in identifying denominal verbs from 1800 onwards. Indeed, this involves meeting three conditions: (1) part-of-speech tagging; (2) identification of denominal verbs; (3) exclusion of all verbs pre-1800. Filling these three conditions may not be impossible but requires the use of lexicographic data, which can be timeconsuming when the data is not recorded in historical resources. This argues towards the use of lexicographic resources for the collection of data on denominal verbs for predictive purposes<sup>41</sup>. The use of lexicographic resources presents some issues related to both their methodology and content. For instance, the information offered by the OED on the verbs bully and Bogart are deprived of some relevant facts that could help a speaker properly use the latter. Indeed, while both roughly mean the same, the entry for Bogart only indicates that it is a slang term mostly used by African-American speakers. Nothing is said, however, on the potential connotations the use of this verb might entail (humorous, derogatory, etc.). Moreover, it is not clear from this definition whether other features of Humphrey Bogart might enrich the content of the verb in discourse: how is Bogart different from other slang verbs with the same meaning, such as beef, bullock, hard-ass, or pee on (see GDS for definitions)? This limit of lexicographic resources is one among many but is not a substantial issue for this study as the motivations behind denominal verb coinages or behind paradigmatic selection in discourse are not tackled here.

#### 2.2. Extracting and sampling the data

- <sup>30</sup> The extraction of English denominal verbs was carried out manually in two online dictionaries, namely the *Oxford English Dictionary (OED)* and the *Green's Dictionary of Slang (GDS)*. The objectives of the project and the nature of the data I wanted to collect guided the choice. The resources were evaluated according to the following criteria: date of first attestation (after 1800<sup>42</sup>); etymology (denominal verbs); historical data (first attested meaning).
- <sup>31</sup> Data collection resulted in a set of 5 932 denominal verbs attested from 1800 onwards, among which 165 originate from a PN. In the case of polysemous verbs, only the first attested meaning was selected. In the dataset, what is considered a PN is based on the two dictionaries and includes: names of persons (*Stalin*) or anthropomorphic animals (*Scooby Doo*), placenames (*Manhattan*), proprietary names (*Zoom*), names of groups or organizations (*Taliban*), and the title of one movie (*Gaslight*).
- While the PN status of proprietary names, for instance, can be questionable (Héois [2020: 29]), a consensus seems to exist on the relevance of a "person" subcategory within PNs (Gary-Prieur [2016: 58]). This category includes real or fictitious persons as well as anthropomorphic animals, as a result this "person" subcategory can be generalized to animate entities. I used the WordNet categorization [WordNet 2010] to code the nominal bases in the dataset. As a result, two WordNet categories are of interest for the study, namely "person" and "animal". Consequently, I originally selected all the 104 PN-verbs coded as "person" or "animal" in my dataset and selected a random sample of an equivalent number of verbs whose base is a CN coded as either "person" or "animal" 97 entries<sup>43</sup>. Further work on these two samples showed some

errors in the encoding along with the inclusion of entries which needed to be excluded from Vdenom as they are built on unpredictable processes such as puns or euphemism, as in the cases of *elvis* or *Edgar Wallace* [GDS 2022]. As a result of this correction, 7 entries were removed from the samples which respectively count 100 PN-verbs and 94 CN-verbs.

The methodological choice of selecting a random sample of equivalent size for comparison with PN-verbs warrants further details. Considering the size of VdenomEN (5 932 entries), I carried out analyses on a sample of the data. I used basic R functions to randomize the entries. Then, I began the encoding of the variables while monitoring the structure of the sample with respect to the morphological variable. Table 1 gives a comparison of the sample for two different steps in the encoding, namely after the encoding of the first 100 entries, and after the encoding of the first 500.

Morphology	Sample 100		Sample 500	
Complex <sup>44</sup>	3	3%	23	4,6%
Backformation	16	16%	63	12,6%
Clipping	0	0%	7	1,4%
Conversion	59	59%	294	58,8%
Prefixation	2	2%	17	3,4%
Suffixation	16	16%	66	13,2%
Exclusion <sup>45</sup>	4	4%	30	6%
Total	100	100%	500	100%

Table 1. Sample structure comparison of VdenomEN (sample 100 VS sample 500)

- As Table 1 shows, the overall structure of the data does not massively evolve from sample 100 to sample 500. I proceeded with this test every 100 entries. The structure, even though it becomes more refined the more entries are included, appears to remain stable according to the morphological variable.
- <sup>35</sup> The choice of the variable as well as the choice of the granularity of the variable highly influence the results of this test. For instance, if I consider a finer-grained morphological classification, I obtain as many as 47 different morphological patterns (*ize*, -ate, de-+-ize, etc.) instead of the 6 above. As a result, other choices could have been made considering the monitored variable and the granularity of the variable. My choice was driven by access and efficiency: the morphological variable is more easily accessible than semantic variable(s); and taking 6 categories into account instead of 47 makes it easier to draw generalizations.
- <sup>36</sup> Finally, the table suggests structural stability in the data even at sample 100. I assume that the morphological variable is not the reason for this stability but merely exemplifies the stability, or even distribution, of the data. As a result, I consider that

any other variable<sup>46</sup> will be evenly distributed in the randomized data and that any large enough sample can serve as a base for analysis, no matter which variable is analyzed. Consequently, I chose to select around 100 entries of CN-verbs by working on the assumption that they may be evenly distributed through the randomized data. The number of verbs is irrelevant as long as it is high enough for statistical analysis.

## 3. Methodology: data encoding

<sup>37</sup> The Vdenom project involves the encoding of many variables which details prosody, phonology, morphology, semantics and argument selection of both input and output. The present study only focuses on the role of metonymy in verbal meaning. As a result, this section only deals with two variables: morphological processes and metonymic patterns.

#### 3.1. Encoding morphological processes

- The reason for encoding morphological processes is twofold: (1) describing the formal structure of the data; and (2) identifying whether the morphological variable can account for differences between PNs and CNs. As pointed out in previous research (Héois [2020: 67]), PN-verbs appear to involve the same types of word-formation processes as any denominal verb in English, with the overwhelming domination of conversion and *ize*-suffixation. Indeed, in this previous data which includes verbs originating from any type of PN 53% of the verbs are formed by conversion, and 42% by suffixation, 95% of which are cases of *ize*-suffixation. Compared to the structure of VdenomEN presented in Table 1 above, there seems to be a significant difference between PN-verbs and denominal verbs in general: suffixation appears to be overrepresented in the PN data. I argue in section 4 that while this difference is significant, its interpretation has more to do with lexicographic practice<sup>47</sup> than it does with the definition of PNs.
- <sup>39</sup> The value of encoding morphological processes is hence mostly descriptive and allows to identify if correlations can be drawn between morphological processes – which are usually mapped with certain meanings – and metonymic patterns, whose aim is to encode the semantic shift from base to verb. Plag [2003: 231] explains that the meanings associated with conversion and suffixation usually overlap: "conversion is the most general case in that the meanings of the derivatives with overt suffixes are a subset of the possible meanings of converted verbs". However, I previously showed (Héois [2020: 104]) that some meanings tend to attract one type of morphology over the other, so that the morphological and semantic variables may partially be redundant.
- 40 For this set of data, I encoded the morphological processes through two types of granularities: coarse- and fine-grained. Table 2 below shows these two types of encoding of the data.

#### Table 2. Morphological encoding of denominal verbs

Morphological process Code (coarse-gra	ined) Code (fine-grained) Examples
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Complex	СРХ	PREF-dis+SUFF-ize	disinsectize
		PREF-de+SUFF-ize	de-Stalinize <sup>48</sup>
		BF-s+SUFF-fy	Osirify
		BF-us+SUFF-ize	Plotinize
		BF-es+SUFF-ize	mithridatize
Backformation	BF	BF-er	childmind
		BF-ian	kevork
		BF-ing	bant
		BF-is	amanuense
		BF-or	prosect
Clipping	CLIP	CLIP	scoob
Conversion	CONV	CONV	chef
Prefixation	PREF	PREF-de	delouse
		PREF-un	unmate
		PREF-be	betail
Suffixation	SUFF	SUFF-ate	funambulate
		SUFF-er	moisher
		SUFF-fy	princify
		SUFF-ize	pedestrianize

<sup>41</sup> Most of the processes in Table 2 are defined in Section 1.2.1. The "Complex" category includes cases in which two (or theoretically more) morphological processes co-occur, for instance backformation and suffixation. As a result of this encoding, two morphological variables are coded, containing respectively 6 and 19 modalities.

#### 3.2. Encoding metonymies

42 As explained above and as can be inferred from Plag [1999] and Héois [2020], the same formal constraints – phonological, prosodic and morphological – appear to guide denominal verbal derivation, regardless of the nature of the base. As a result, these formal variables are not relevant to account for the difference(s) between PN- and CNverbs. Hence, the present study explores metonymic patterns as a potential explicative variable. In order to prioritize comparisons with other works on metonymies and word-formation, I borrowed most of the source and target terminology from Janda [2011], who herself based her classification on Peirsman & Geeraerts [2006]. Table 3 partially reproduces Janda [2011: 372] but only retains the terminology which is useful here. The nature of the present data is restricted to animate entities, as a result, the sources and targets involved are less diverse than in Janda [2011].

Relating to Actions:	ACTION, STATE, CHANGE STATE, EVENT, MANNER
Relation to <b>Participants:</b>	AGENT, PRODUCT, PATIENT, THEME*, RESULT*
Relating to Entities:	ENTITY, CHARACTERISTIC, LEADER
Relating to PART FOR WHOLE:	LOCATED, LOCATION

#### Table 3. Terminology for sources and targets, based on Janda [2011: 372]

- <sup>43</sup> When possible, source/target terms are defined following Janda [2011]. Janda [2011] focuses her attention on "suffixal word-formation" only without "stacking of multiple suffixes or chaining of metonymic relationships" [2011: 367-368]. As she includes conversion in suffixal word-formation processes, the nature of the data is fundamentally similar, though the present data also includes suffixal word-formation whose base is an apparent compound, as illustrated by *to prime minister* ("To govern. Also *intransitive*: to act as prime minister" [*OED* 2022]) which is formed by conversion of the noun *prime minister*. I also included cases of backformation, as in *globe-trot* ("To engage in globetrotting" [*OED* 2022]) which can be analyzed as the backformation of the noun *globetrotter*<sup>49</sup>. These two types of data are excluded in Janda [2011: 368].
- <sup>44</sup> The most crucial difference with Janda [2011] lies in her exclusion of chained metonymies. This choice fits her objectives but here, the aim is to compare the metonymic chains at work in the denominal verbal derivation of animate entities. The inclusion of verbs built on metonymic chains is thus essential. Consequently, the metonymic patterns under scrutiny are not only grammatical in nature, but also lexical<sup>50</sup>. The analysis must then include the whole continuum of metonymic patterns and the definitions of sources and targets must be compatible with the full range of metonymies.
- 45 For instance, Janda [2011: 373] briefly defines EVENT as "some result from a verb". Such a definition directly suggests a deverbal process which would be incompatible with my denominal data. The EVENT class, however, appears useful to the analysis of the source/ target of a number of entries in the data, as illustrated in (9):

(9a) Verb – *Morganize:* "To assassinate or murder (a person) so as to prevent or punish disclosures". [*OED* 2022]

(9b) Morphology – Formed by *ize*-suffixation on the PN-base *Morgan*.

(9c) Base – William Morgan is believed to "have been secretly assassinated by the Freemasons in 1826" [*OED* 2022]. The definition of the verb implies two possible motives for this murder ("prevent or punish disclosures").
(9d) Metonymic patterns – PATIENT FOR EVENT + EVENT FOR ACTION.

In (9), the EVENT <assassinate> is selected from the life of William Morgan<sup>51</sup> so as to create the core meaning of the verb. As (9c) shows, Morgan is considered the PATIENT of this event. The notion of PATIENT is borrowed from argument structure analysis and defined in (10). This EVENT is turned into an ACTION accompanying the *ize*-suffixation.

(10) PATIENT: "Undergoer in an event that experiences a change of state, location or condition, that is causally involved or directly affected by other participants, and exists independently of the event". [VerbNet]

<sup>46</sup> The notion of EVENT is less restricted here than in Janda's definition [2011: 372], as shown in (11):

(11) EVENT: something that happens whether voluntarily or not.

However, considering some of her examples (*holiday, festival*), her own understanding of EVENT may also be broader. An EVENT is spatial and temporal, as is an ACTION (Peirsman & Geeraerts [2006]), but I suggest that it does not necessarily involve an instigator, as is the case of natural events such as tsunamis, earthquakes or heatwaves for instance.

47 The source/target ACTION is also defined relatively to time and space, as are STATE and CHANGE STATE. Janda [2011: 373] defines them as follows and in opposition to one another:

(12) CHANGE STATE for verbs that describe changes of state (as opposed to static states or actions [...]); [...] ACTION (for verbal actions not classed as STATE or CHANGE STATE [...])

- These three classes cover verbal derivation and are always placed as final targets of the metonymy accompanying verbal derivation. Their implementation to the data may need some clarification. For instance, in (9), while *assassinate* is in partial synonymy with *Morganize* and is usually classified as a change of state (Levin & Rappaport Hovav [2005: 73]), the metonymic pattern paired with verbal derivation does not include CHANGE STATE as a target but ACTION instead. In this analysis, the change of state (from alive to dead) is already included in the first metonymy and is part of the core meaning of the EVENT. As this EVENT acts as the source of the verbal metonymy, its core meaning is retained in the derivation while the metonymy describes the action of carrying out the event.
- 49 The last relevant type of source/target relating to actions is MANNER. It is illustrated in (13). No definition of the notion is given in Janda [2011] or in Peirsman & Geeraerts [2006] from whom she borrows the category. As it is grouped with actions but does not involve verbal derivation, I define it in opposition to EVENT. Indeed, this notion can be understood as a type of EVENT in which the semantic focus lies on the way the EVENT happens rather than on the event itself.

(13a) Verb - spider: "To catch or entrap after the manner of the spider". [OED 2019]
(13b) Morphology - Formed by conversion of the CN-base spider.
(13c) Base - spider: "One or other of the arachnids belonging to the insectivorous order Araneidæ, many species of which possess the power of spinning webs in which their prey is caught". [OED 2022]
(13d) Metonymic patterns - AGENT FOR MANNER + MANNER FOR ACTION.

In this example, a specific action carried out by spiders, namely <manner to catch a prey> is selected from the noun in order to serve as the core meaning of the verb. As the spider is an animate entity which instigates the action, it is analyzed as the AGENT. Similarly to PATIENT, AGENT is a notion borrowed from argument analysis and can be defined as follows:

(14) AGENT: "Actor in an event who initiates and carries out the event intentionally or consciously<sup>52</sup>, and who exists independently of the event". [VerbNet]

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50 While it could be considered a type of EVENT, the MANNER class is relevant because it gives information on the core meaning of the verb. As a result, I propose the following definition for the sake of this study:

(15) MANNER: the way in which something happens or is done.

51 Among the classes relating to participants, I have already given a definition of AGENT and PATIENT. PRODUCT is also a common thematic role as defined in argument structure studies and often defined as a "[r]esult that is a concrete object" [VerbNet]. However, Janda gives a slightly different definition [2011: 373]:

PRODUCTS are created in the context of the metonymy relationship described. Thus Czech *sbírka* 'collection' has a PRODUCT as target since the collection did not exist prior to the collecting.

In her short definition, she does not give details on the "concrete" nature of the object. The example she gives above (Czech for *collection*) along with an example of lexical metonymy she borrows from Peirsman & Geeraerts ([2006: 298], *in* Janda [2011: 382]), namely the French *coucou*<sup>53</sup> ('cuckoo') as an instance of PRODUCT FOR AGENT, suggests that the concrete nature of the PRODUCT is not necessary. As a result, the definition in (16) is retained:

(16) PRODUCT: result of an action or process whose existence is dependent on these actions or processes.

- 52 Consequently, scientific processes such as the ones invented by Pasteur (pasteurize: "To subject (milk, wine, food, etc.) to pasteurization" [OED 2022]) or McAdam (macadamize: "to make or repair (a road) according to McAdam's method" [OED 2022]), among others, are coded as PRODUCT, as well as other cognitive processes related to politics (de-Stalinize: "To counteract the excesses of Stalinism or the influence of Stalin" [OED 2018]), psychology (Pelmanize: "To practise Pelmanism" [OED 2022]) or philosophy (plotinize: "To philosophize in the manner of or according to the principles of Plotinus [OED 2019]).
- <sup>53</sup> This class of participant raises the issue of subjectivity<sup>54</sup>. Indeed, deciding between PRODUCT and MANNER, for instance, is not always straightforward and requires both encyclopedic knowledge and judgement from the researcher. This is illustrated in the following examples:

(17) *Pattinsonize*: "To remove silver from (lead) by Pattinson's process" [*OED* 2022] >> AGENT FOR PRODUCT.

(18) *Grimthorpe*: "To restore (an ancient building) with lavish expenditure rather than skill and fine taste" [*OED* 2018] >> AGENT FOR MANNER.

(19) *Mithridatize*: "To render immune to or tolerant of a poison, esp. by the administration of gradually increasing doses" [*OED* 2022] >> AGENT FOR PRODUCT.

<sup>54</sup> The example in (17) illustrates a relatively straightforward case of AGENT FOR PRODUCT<sup>55</sup> in which a scientist gives their name to the process they invented, which is probably documented and involves specific steps. The case is less clear for (19) even though the pattern is the same. In this example, the base refers to Mithridates VI Eupator who was the king of Pontus in Anatolia between 120 and 63 BC [Wikipedia 2022] and is "said to have rendered himself proof against poisons by the constant use of antidotes" [*OED*  2022]. The PRODUCT is selected here because of the regularity of the action which, even though it is not carried out by a scientist, is considered here as a succession of various steps which can be reproduced. Conversely, example (18) does not suggest a step-by-step process which was carefully thought of by Lord Grimthorpe and reiterated. Indeed, this verb refers to the restoration of St. Albans Cathedral which "aroused fierce criticism and controversy" [*OED* 2018]. Hence, this is a one-time event. The pattern AGENT FOR MANNER is preferred here to the simpler target EVENT because of the focus of the definition on the way the action is carried out (<with lavish expenditure>) rather than on the event itself (<restoration>).

<sup>55</sup> In all the examples above, the source category is either AGENT or PATIENT. This encodes a specific relationship with the target of the metonymy. For instance, the PRODUCT target needs an AGENT who created the PRODUCT as its source. However, the link between source and target can be different, especially when an inherent characteristic of the source is selected. Because a characteristic is considered to be part of the animate entity (either physical or psychological characteristic), the relationship between source and target is a specific case of contiguity, namely PART/WHOLE. As a result, the source can also be an ENTITY from which an inherent CHARACTERISTIC is selected. Physical and psychological characteristics are often considered inherent to the entity however, a part of subjectivity is unavoidable to decide whether the semantic element is a CHARACTERISTIC or an EVENT.

(20a) Verb - *Poodle*: "To clip or shave so as to resemble a poodle". [*OED* 2022]
(20b) Morphology - Formed by conversion of the CN *poodle*.
(20c) Base - *Poodle*: "A breed of dog, of which there are several varieties, with tightly curling hair, usually black or white and often ornamentally clipped or shaved". [*OED* 2022]
(20d) Metonymic patterns - ENTITY FOR CHARACTERISTIC + CHARACTERISTIC FOR CHANGE STATE.

- Example (20) illustrates three source/target elements which have not yet been exemplified. First, the final target is CHANGE STATE. In (9), I explained that in *Morganize* the feature <change of state> is already included in the event. The case is different in (20) as the specific characteristic of the base which is selected can be paraphrased as <ornamentally clipped or shaved> or more simply rototypical poodle appearance>. This feature does not involve any preliminary process which would result in this appearance, as is expected for inherent characteristics. As a result, when the characteristic is turned into a verb through the second metonymic pattern, the notion of change of state which is present in the verb definition needs to appear in the target.
- 57 Neither Janda [2011] nor Peirsman & Geeraerts [2006] define what ENTITY means. From various examples in Janda [2011: 374, 379], such as *Kafka*, *olive tree*, *steamboat* or *tough guy*, I inferred that a general definition of the term was suitable:

(21) ENTITY: "concrete. Something that has a real existence <sup>56</sup> [...] as distinguished from a mere function, attribute, relation, etc.". [OED 2020]

The issue is similar for CHARACTERISTIC as the definition is missing. Once again, judging from the examples in Janda [2011: 379-380], such as *horned*, *tough*, *tasty*, I selected the *OED* definition:

(22) CHARACTERISTIC: "A distinctive mark, trait, or feature that may serve for identification; a distinguishing or essential peculiarity or quality". [*OED* 2022]

<sup>59</sup> Classes (21) and (22) are examples of categories relating to entities. The last of these categories, which is relevant for this study, is LEADER. Janda [2011: 373] defines it as follows:

(23) LEADER: "specific type of ENTITY".

This short definition is made clearer through the example she gives: "Czech *hitlerovec*, 'follower of Hitler' derived from *Hitler* is an example of LEADER FOR ENTITY" (Janda [2011: 373]). This illustrates the usefulness of subcategorizing ENTITY in this case: here, the LEADER terminology makes it possible to signify the asymmetrical relationship between source and target, while ENTITY1 FOR ENTITY2 would not be as clear.

60 The last category in Table 3, namely classes relating to PART FOR WHOLE, is quite different from the previous classes, as they function as pairs and exist because we often conceptualize entities in their relation to other contiguous elements through a PART FOR WHOLE or WHOLE FOR PART relationship. The LOCATED/LOCATION pair is a subtype of this PART/ WHOLE relationship as explained by Peirsman & Geeraerts [2006: 280-281]:

[A] container is conceptualized as a (functional, almost experiential) whole, on the basis of the containment relation with its content, its part. [...] The precise relation between PART & WHOLE and CONTAINER & CONTAINED seems to be that of a continuum that can be described in terms of "strength of contact". [...] If we now allow this "strength of contact" to become a bit looser still, we arrive at a third metonymical pattern from our inventory: LOCATION & LOCATED. In these metonymies, an entity is referred to by its location or vice versa.

In other words, the LOCATED FOR LOCATION pattern is conceptualized as a PART FOR WHOLE pattern because a location can be conceptualized as a container. The advantage of taking these patterns into account is similar to the argumentation for LEADER above: while both LOCATED and LOCATION are subtypes of ENTITIES, the PART/WHOLE relationship they share is lost in the pattern ENTITY1 FOR ENTITY2. (24) gives a definition of the two classes:

(24) LOCATED/LOCATION: an ENTITY is conceptualized through its spatial relationship to the place (LOCATION) in which it is situated (LOCATED).

61 In order to better accommodate my data, I chose to add two classes to Janda's classification: THEME and RESULT. Both are types of participants and borrowed from syntactic theory:

(25) THEME: "Undergoer that is central to an event or state that does not have control over the way the event occurs, is not structurally changed by the event". [VerbNet]

Contrary to the PATIENT, the THEME is not affected by the action. Example (26) illustrates it:

(26a) Verb - *Idiot*: "To call (a person) 'idiot". [*OED* 2019]
(26b) Morphology - Formed by the conversion of CN *idiot*.
(26c) Base - *Idiot*: "A person without learning; an ignorant, uneducated person". [*OED* 2022]

(26d) Metonymic pattern – THEME FOR ACTION.

<sup>62</sup> The notion of RESULT is close to PRODUCT and can be conceptualized as a subtype. Similarly, it is borrowed from syntactic analysis and can be defined as follows:

(27) RESULT: "Goal that comes into existence through the event". [VerbNet]

The notion of "event" here is understood broadly as example (28) illustrates:

(28a) Verb - Roentgenize: "To reveal as though by subjecting to X-ray analysis". [OED 2022]
(28b) Morphology - Formed by ize-suffixation on the PN-base Röntgen.
(28c) Base - Wilhelm Conrad Röntgen (1845–1923), German physicist, who discovered X-rays in 1895. [OED 2022]
(28d) Metonymic patterns - AGENT FOR PRODUCT + PRODUCT FOR RESULT + RESULT FOR ACTION.

In (28), the invention (PRODUCT) is selected from the scientist's name but, contrary to *Pattinsonize* in (17), the subsequent action is not only the application of the PRODUCT (<subject to X-ray>) but more specifically the result of said PRODUCT (<reveal>).

63 As mentioned above, there is always a part of subjectivity in any classification and other categorizations might yield other results. The definitions above make it possible to reproduce the present analysis.

# 4. Data description and analysis

#### 4.1. Structure of the data

64 Out of 194 entries, 100 (51.5%) originate from a PN and 94 (48.5%) originate from a CN. Figure 1 shows that animal referents are few and far between, and almost inexistent for PN-verbs (*scoob* is the only PN-entry).

Figure 1. Overall structure of the data according to the base type57



65 As explained in Section 3, the morphological variable is relevant to describe the data and compare it to other data – namely the broad denominal verb database as introduced in Section 2. Figure 2 presents the structure of the data according to the coarse-grained morphology of the verb. The figure is divided according to the type of the base and the colored columns make it possible to visualize the finer-grained morphology.



Figure 2. Overall structure of the data according to morphological processes

- 66 As previously mentioned, Figure 2 confirms that PN-verbs and CN-verbs are morphologically similar. Indeed, they both involve the same types of morphological processes, apart from prefixation which is not attested alone for PN-verbs and only appears with *-ize* suffixation. Moreover, *-er* backformation aside<sup>58</sup>, the same two processes stand out for both PNs and CNs, namely conversion and *-ize* suffixation.
- 67 On the other hand, the two figures also present a major difference between PN- and CNverbs: the over-representation of *-ize* suffixations in PN-verbs<sup>59</sup>. A closer look at the data shows that *-ize* suffixations are often linked to the metonymic pattern AGENT FOR PRODUCT, as is clear in Figure 3. This metonymic pattern is often linked to the names of scientists (see Section 3.2.).



#### Figure 3. *ize*-suffixations of PN-verbs

Consequently, I argue that the difference in the morphological structure between PN-verbs and CN-verbs, namely the over-representation of *ize*-suffixations in the PN data, is not linked to a fundamental difference between PNs and CNs, but to the over-representation of scientific jargon in lexicographic resources. The argument is as follows: person PNs are spatially and temporally situated. As a result, most coinages on this base are hapaxes or occasionalisms and very few become institutionalized. However, verbs built on names of scientists are usually coined within their specialty field and used to denote the action of performing a new process, or using a new invention (*pasteurize*, for instance). Consequently, their use tend to be institutionalized more easily and they generally become obsolete or evolve only when the process or invention is outdated. So I consider this difference as a methodological limit linked to the choice I made to extract the data from lexicographic resources, and not the symptom of a fundamental difference between PNs and CNs.

#### 4.2. Proper name-to-verb derivation: a two-step cognitive process

- 69 In order to explore the hypothesis that PNs and CNs differ in verbal derivation through cognitive processes, I first focus on the three main types of verbs in order to homogenize the data: -er backformation, conversion and -ize suffixation (see Figure 2). This selection results in a dataset of 174 verbs structured as follows: 61.5% of conversions, 33.3% of suffixations, and 5.2% of backformations<sup>60</sup>.
- The encoding of metonymic patterns shows three types of verbs. Some verbs only involve a single pattern, some involve two patterns, and a last group involves three subsequent patterns. When the derivation only involves one metonymic pattern, the metonymy directly leads from the base to the verb. In the case of two or more patterns, I hypothesize unknown categories X and Y which can, but need not, be nominal. As an illustration, I reuse example (1) which is reproduced in (29):

(29a) Verb - Bogart: "to force, coerce; to bully, intimidate". [OED 2021]
(29b) Morphology - Formed by conversion of the PN Bogart.
(29c) Base - Humphrey Bogart (1899–1957), U.S. film actor who sometimes played "tough characters". [OED 2021]
(29d) Metonymic patterns - AGENT FOR EVENT + EVENT FOR CHARACTERISTIC + CHARACTERISTIC FOR ACTION.

This example involves a three-step metonymic process in which the intermediary categories – for EVENT and CHARACTERISTIC – are not specified.

71 Figure 4 presents a visualization of the data according to the number of metonymic patterns involved in the derivation:



#### Figure 4. Are metonymic patterns dependent on the nature of the base?







What is the link between the base type and the number of processes in verbal derivation?

73 It is generally considered that this test yields significant results when the residuals are bigger than |2|<sup>63</sup>. When the residuals are positive, as in the following combinations: PN+2 or 3 processes, CN+1 process, it means that the link between the variables is positive. For instance, when the base is a PN, the derivation is most likely to include at least 2 metonymic processes. A negative residual means that the influence is reversed between the two variables. For instance, when the base is a PN, it is unlikely the derivation will only involve 1 metonymic process.

# 5. Discussion: what verbal derivation brings to the definition of proper names

The data under scrutiny and its analysis confirm the hypothesis that the nature of the base, whether it is a PN or a CN, determines the number of metonymic processes at work in verbal derivation. The question whether the reason behind this difference lies in the definition of PNs is far from being resolved, however. A closer look at Figure 4 above may be relevant as it shows that a sub-group of converted CN-verbs also undergoes 2 metonymic processes during verbal derivation. This sub-group appears to gather most of CNs which denote animals. A Chi<sup>2</sup> test and a residual test show that the "animal" variable is significantly linked to the number of metonymic processes involved in derivation, as shown in Figure 6 below.



#### Figure 6. Is the animal/person variable relevant?

The difference between animal and person referents for CNs is thus significant in understanding their verbal derivation. Person-CNs undergo a single metonymic process while animal-CNs tend to undergo a double process.

75 Considering the data is restricted to very few types of nominals, other subcategories in both CNs and PNs may show one or the other derivational profile and further research is needed. The common denominator between animal-CNs and PNs appears to lie in the underspecification of the referent. In other words, verbal derivation only builds on specificity. As a result, when the core meaning of a base is too broad, specific elements need to be selected to coin the new verb. Indeed, when a coiner considers the nominals spider or Bogart as candidates for verbal derivation, they can choose among a wide variety of elements to build the meaning of the verb. Many of these features could be considered salient: a spider can be noticed for its hunting capacities and techniques, but also for its shape (CHARACTERISTIC), its diet (CHARACTERISTIC), its habitat (LOCATION), the way it moves (MANNER), the feelings it provokes in humans (EVENT), etc. Similarly, Humphrey Bogart can be remembered for many elements of his life such as his looks (CHARACTERISTIC), the way he behaved with other people (CHARACTERISTIC), famous anecdotes from his life (EVENT), etc. Conversely, person-CNs do not show such a wide array of potential features. For instance, a chef is defined by its core function and only subfeatures of this already specific feature can be selected for derivation, the same goes for instance for bigmouth ("to brag (about)" [GDS 2022]), or childmind ("To look after (a child) as a childminder" [OED 2022]).

- 76 As a result, PNs, as well as animal-CNs, involve at least a two-step cognitive process when they are derived as verbs because of their semantic underspecification. Both types of nominals denote complex multifaceted entities. Further research is needed and planned - to explore the types of metonymies involved in derivation and discuss the notion of saliency which is probably relevant in feature selection.
- The comparison of the metonymic patterns involved in verbal derivation for denominal 77 verbs originating from PNs and CNs denoting animate entities shows that the type of the base determines the number of cognitive processes at stake during derivation. CNverbs generally involve a single cognitive process while PN-verbs require at least two steps in the derivation process. When considering Philippe's claim [2020: 445] that "le nom propre n'est pas un nom, il tend seulement vers le nom et s'inspire de sa logique sémantique, morphologique et syntaxique"64, the present study would suggest that, when it comes to verbal derivation, PNs show a different behavior than CNs as idiosyncrasies are selected from PNs (Štekauer [1997: 28]) in order for them to gain semantic specificity. This two-step cognitive process allows them to become more like CNs during the derivation process. Indeed, the two-dimensional analysis presented in Figures 4 and 5 tend to confirm this idea and Philippe's claim.
- 78 However, a closer look at CN-verbs shows that animal-CNs behave more like PNs than person-CNs in verbal derivation as they appear to "need" a two-step cognitive process as well. Indeed, specific features of animal-CNs are necessarily selected before the verbal derivation is possible. This questions the nature of the difference between CNs and PNs in verbal derivation as some CNs appear to behave differently. As a result, while Philippe's claim may apply here to explain, at least partially, the difference between CNs and PNs in that PNs "are not nouns, [but] only move toward the noun and draw their inspiration from the semantics, morphology and syntax of nouns", it is doubtful that the same claim would apply to animal-CNs. The type of the base is thus relevant in verbal derivation but the distinction between PNs and CNs is insufficient, and a finer-grained categorization is needed to account for verbal derivation. Beyond nominal definitions, this study suggests that denominal verbal derivation involves semantic constraints: only specific semantic features can serve as a base for derivation.

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#### NOTES

**1.** "Hence, PNs have a specific syntactic status: they can either work like common nouns, as the head of a Noun Phrase, or they can work like NPs, similarly to a pronoun", my translation.

**2.** "the formulation of its *meaning in language* necessarily includes a reference to *discourse*", my translation.

**3.** Oxford English Dictionary online, see Section 2.

**4.** I consider here that the derivation process involves both AGENT FOR EVENT and EVENT FOR CHARACTERISTIC – and not only AGENT FOR CHARACTERISTIC as proposed by an anonymous reviewer – because the CHARACTERISTIC <br/>shully> is not directly selected from Humphrey Bogart as a person, but from characters he played in movies, hence EVENT.

**5.** The full definition of the *OED* is as follows: "to cook professionally; to work as a chef; to preside over the kitchen of a restaurant, hotel, etc." [*OED* 2022]. As a result, I work under the assumption that the use of *chef* is restricted to professional cooking. A broadening of this use to other situations, such as "to cook to professional standards" [anonymous reviewer's suggestion], would be treated as a semantic shift and modify the verb paraphrase from "to cook as a chef" to "to cook like a chef", this would not however modify the metonymic patterns involved. While this study only focuses on metonymic patterns, the wider Vdenom project takes these types of paraphrases into account. Nonetheless, at this stage, only the first attested definition is selected for each denominal verb as the analysis of polysemy would require a distinct approach.

**6.** Compare for instance Clark & Clark [1979], for a pragmatic approach, to Kiparsky [1997] or Hale & Keyser [1992], for a generative approach.

7. Stalinize: "To transform, etc., in accordance with Stalin's policies and practices" [OED 2018].

8. Scoob: "to eat, usu.to eat snacks" [GDS 2022].

**9.** *Cockneyize:* "To behave like a Cockney; to use or imitate the Cockney dialect or accent" [*OED* 2022].

**10.** *Sunfish*: "Of a horse or steer: to buck violently with a twisting motion, esp. by twisting its body into a crescent shape at the top of its jump" [*OED* 2022].

11. Socratize: "To philosophize or live after the manner of Socrates" [OED 2018].

12. According to the GDS [2022], Annie Oakley (1860-1926) was a markswoman.

13. Annie Oakley: "to punch an admission ticket, thus rendering it free" [GDS 2022].

**14.** I prefer here the expression "semantic content" in place of "meaning" as it encompasses both encyclopedic knowledge and semantic features.

**15.** "Proper nominals, which are modelled after common nouns (morpho-syntactically but also semantically), gradually gain a classification potential, but **always conversely to common nouns**: originating in the extralinguistic knowledge of a referent, proper names progressively

develop from the initial referent into a class, a discourse category and, sometimes, a category in language which is associated to proper names", my translation, my emphasis.

**16.** As the CHARACTERISTIC step implies, the antonomasia *a Bogart*, meaning "a bully", could be expected, although it is not recorded in the *OED*. This nominal intermediary step, whether attested or not, appears to be characteristic of PN-verbs (see Section 4.2.).

17. Pasteurize: "To subject (milk, wine, food, etc.) to pasteurization" [OED 2022].

**18.** *Unmate*: "To cause to be no longer mated; to deprive of a mate; (also) to reject as a mate. Also *intransitive*: to become no longer mated" [*OED* 2022].

**19.** This definition applies to conversion in language, a more complex definition would be needed for discourse as flexional morphology complicates the matter.

**20.** It is outside the scope of this article to discuss conversion further and whether it should be considered zero-derivation, relisting or something else. Here, I do not take any position in this debate, and I follow the most common trend which is to consider conversion as a type of derivation (Valera [2014: 157]).

21. Prime minister: "To govern. Also intransitive: to act as prime minister" [OED 2022].

**22.** In the case of *poor / the poor*, the conversion is only partial as the syntax and semantics of the substantive is restricted: The poor live in the city center / \*Poor live in the city center / \*The poors live in the city center.

**23.** *Funambulate*: "To walk or perform on a rope stretched between two points at some height above the ground; to walk on, or as if on, a tightrope" [*OED* 2022].

24. Aladdinize: "To transport or transform as if by magic" [OED 2021].

25. Princify: "To make into a prince; to make princely" [OED 2019].

**26.** *Piecen*: "To join or piece together; to repair; *spec.* to rejoin (broken threads or ends) in spinning" [*OED* 2022].

**27.** *Moisher*: "to wander" [*GDS* 2022].

28. Betail: "To deprive of the tail" [OED 2019].

29. Enshade: "To envelop in shade" [OED 2018].

**30.** *Embus*: "To mount a bus or transport vehicle" [*OED* 2022].

31. Declutch: "To disengage the clutch of a motor vehicle" [OED 2018].

**32.** *Disembargo*: "To release from embargo" [*OED* 2022].

**33.** *Unmute*: "*Music.* To cause (a musical instrument) not to be muted. Also *intransitive*: (of a musical instrument) to cease to be muted" [*OED* 2022].

**34.** Buttle: "To pour out (a drink)" [OED 2021].

**35.** *Green's Dictionary of Slang*, see Section 2.

**36.** An alternative analysis of *scoob* could be backformation if one considers its base as being *Scooby* and not the full PN *Scooby Doo*. However, this analysis cannot apply to *fizz*.

**37.** Pepper & Arnaud [2020] also follow Janda [2011] in their analysis of N+N compounding, I would like to thank an anonymous reviewer for the reference.

**38.** It is not within the scope of the study to discuss the nature of what triggers the metonymies in these types of derivations.

**39.** The ongoing project Vdenom is currently structured in two distinct sets of data: VdenomEN gathers English denominal verbs attested from 1800 onwards; and VdenomFR groups French denominal verbs for the same period.

**40.** See Section 2.2.

**41.** Confronting the models thus obtained to data extracted from corpora will be a step in the project.

**42.** I follow Romaine [1998] to select the period starting from 1800 and consider only Late Modern English coinages.

**43.** I stopped at 97 CN entries because this number can be considered equivalent to PN entries and because it was achieved after coding more than 600 entries from VdenomEN.

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**44.** "Complex" (see Section 3.) is coded for cases where two morphological processes co-exist as in *de-Stalinize* (prefixation + suffixation).

**45.** "Exclusion" refers to entries which were excluded after careful analysis. The reasons for exclusion are diverse: unclear etymology, human error, rhyming slang (out of scope), euphemism (out of scope), etc.

**46.** The Vdenom project includes many variables related either to the denominal verb or its base. They include prosodic, phonological, morphological, semantic and syntactic elements.

**47.** Here, "lexicographic practice" encompasses methodological choices made by lexicographers when recording new entries.

48. The issue around the conservation of a capital letter in PN-verbs is not tackled here.

**49.** The *OED* considers that globe-trot is a compound of the noun glob and the verb trot with the paradigmatic influence of globetrotter n., globetrotting n., and globetrotting adj. [*OED* 2022]. However, the definition of this verb directly refers to the members of this paradigm and postdates them. As a result, these examples are analyzed as backformations. This methodological choice also relies on the existence of similar lexemes listed as backformations in the *OED*, such as *lech* ("To behave lustfully" [*OED* 2022]) from the noun *lecher* or *slave-drive* ("To exploit slave labour" [*OED* 2019]) from the noun *slave-driver*.

**50.** Janda [2011] distinguishes between grammatical and lexical metonymies: the former involves a categorial change between the input and the output while the latter only involves a semantic shift.

**51.** The reasons for choosing one event or another in the life of a person are believed to be linked to saliency at the time of coinage. This aspect of denominal verbal derivation is not explored in the present study, nor is the currency of some of the data in present-day English. I would like to thank an anonymous reviewer for pointing out these issues which would require further research. See Clark & Clark [1979] for a pragmatic perspective on the matter.

**52.** The notions of agency, consciousness, and intentionality are understood broadly. As a result, even though a more suited terminology could be found, they can be applied to animals as well as humans.

**53.** In French, the noun *coucou* can refer to a bird (the cuckoo, here the AGENT) whose name comes from its singular song, by imitation (the PRODUCT).

**54.** This issue is always at stake when a classification task in undertaken. The definitions and methodology aim to prevent the researcher from being too subjective.

**55.** The metonymic pattern PRODUCER FOR PRODUCT could also have been used here. For the sake of economy, it is included in the broader category of AGENT which is considered relevant enough for this study.

**56.** As pointed out by an anonymous reviewer, the adjective "real" is problematic here as fictitious objects should be categorized as entities. The most important part of the definition is however the distinction made between "entity", "function", "attribute" and "relation".

**57.** All figures and calculations are carried out with R Studio. The packages used for the analyses are listed in the reference section.

58. This type of backformation stands out for CN-verbs to the same extent as -ize suffixation.

**59.** An anonymous reviewer pointed out that the over-representation of *-ize* suffixation in the PN data is equivalent to considering that *-ize* suffixation is under-represented in the CN data or that conversion is over-represented in the CN data. Considering that PN-verbs and CN-verbs are both types of denominal verbs, I would argue that the notions of *over-* and *under-representation* of the data only have meaning when compared to the overall structure of denominal verbal data. Table 1 (see Section 2.2.) presents the overall structure of VdenomEN for a sample of 500 entries. The structure is as follows: 58.8% are conversions and 13.2% are suffixation. As a result, the most striking difference in structure between VdenomEN and Figure 2 concerns *-ize* suffixation for PN-verbs.

**60.** Unless stated otherwise, "suffixation" now only encompasses *-ize* suffixations and "backformation" only *-er* backformations.

**61.** From the CN *skunk*: "A dishonest, mean, or contemptible person" [*OED* 2022]. I analyze this derivation as follows: ENTITY FOR CHARACTERISTIC (<mean, dishonest>) + CHARACTERISTIC FOR EVENT (<dishonest people fail>) + EVENT FOR ACTION.

**62.** Independence hypothesis: the two variables (type of base and number of metonymic patterns) are independent.

63. Chi<sup>2</sup> residual test results: CN (1: 5.85; 2: -4.03; 3: -2.01); PN (1: -5.72; 2: 3.94; 3: 1.96).

**64.** "Proper names are not nouns, they only move toward the noun and draw their inspiration from the semantics, morphology and syntax of nouns", my translation.

#### ABSTRACTS

Proper names are always defined in relation to common nouns. No agreement on their definition has yet been reached. Following Philippe [2020: 445], the study explores the hypothesis that proper names are not nouns but borrow from the semantics, morphology and syntax of nouns, through a contrastive analysis of denominal verbs originating from proper names and verbs originating from common nouns. Because morphological or phonological variables cannot account for the difference between these two categories, the focus is on the correlation between the type of the base and the metonymic processes involved in verbal derivation, following Janda [2011]. The analysis finds that the number of metonymic processes at stake during denominal verbal derivation depends on the type of the base, and that verbs originating from proper names need an extra cognitive step during verbal derivation. However, this difference between proper names and common nouns may rather be linked to derivational semantic constraints than to a definitional difference between proper names and common nouns.

Le nom propre a toujours été défini relativement au nom commun. Cependant, aucun consensus n'a encore été trouvé sur sa définition. La présente étude explore l'hypothèse, développée par Philippe [2020:445], selon laquelle le nom propre n'est pas un nom mais s'en inspire sémantiquement, morphologiquement et syntaxiquement. Ainsi, à travers l'analyse comparée des verbes dénominaux issus de noms propres et de ceux issus de noms communs, l'auteure se propose d'évaluer la corrélation entre type de base et variable cognitive (la métonymie). Elle part du constat que les variables morphologiques ou phonologiques ne permettent pas de mettre en valeur la différence entre noms propres et communs, mais que le nombre de procédés métonymiques en jeu dans la dérivation verbale pourrait apporter un éclairage sur cette différence. L'analyse des métonymies s'appuie sur le travail de Janda [2011] et confirme que le nombre de procédés métonymiques dépend du type de la base. D'après les résultats, les verbes issus de noms propres nécessitent au moins une étape cognitive supplémentaire lors de la dérivation verbale. Cependant, cette différence entre noms propres et noms communs pourrait être liée à des contraintes sémantiques propres à la dérivation plutôt qu'à une différence intrinsèque entre noms propres et noms communs.

#### INDEX

**Mots-clés:** nom propre, nom commun, dérivation, verbe dénominal, métonymie **Keywords:** proper name, common noun, derivation, denominal verb, metonymy

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