



MORPHOLOGICAL PRODUCTIVITY OF NOUN-FORMING SUFFIXES IN ENGLISH AT THE LEVEL OF WORD-FORMATION RULES

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Abstract:

This paper studies the morphological productivity of noun-forming suffixes at the level of word-formation rules in a corpus comprised of news, literary, academic, and TV registers. The productivity at the aforementioned level is the union of the productivity at the level of word-formation types and morphological types, which implies showcasing the productivity rates of semantic and morphological interactions leading to conceptual categories. Presenting the productivity rates of these interactions is the main aim of the paper. After finding examples of complex nouns with various noun-forming suffixes, we then analyzed 1077 examples and categorized them into 6 different clusters (Action, Agent, State, Result, Instrument, and Object) using analytic, descriptive and statistical methods. The analysis of word-formation types shows that the highest productivity rates are achieved with word-formation types where the conceptual category of the stem was changed due to the semantic input the attached suffixes brought into the word structure, thus determining which clusters the formed nouns would fall into. The exceptions we found were [agent – agent] in Agent, [state – state] in State and [object – object] in Object where the interaction showed how conceptual categories of the stem were not changed but refined by the suffix. Morphological analysis shows the interaction of 37 different suffixes with simple or complex nouns, adjectives, and simple verbs. The only morphological type was stem + suffix, because we were primarily interested in the interaction of suffixes and stems and not in the analysis of the stem structure itself. The conclusions stemming from these analyses are the following: suffixes occur in one or multiple clusters, heavily influence the conceptual category of the stem, and can have the same or different meanings, confirming why they are effective mechanisms for inserting additional pieces of semantic information into the word structure, which was the initial hypothesis of the research.

Keywords: morphological productivity, word-formation rules, word-formation types, morphological types, noun-forming suffixes in English

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1. Introduction

Various discussions on morphological productivity pointed to many different layers of this phenomenon with definitions presenting it as the frequency of the output words (Rainer 1987, as cited in Bauer 2004: 25), the number of available bases (Lieber 1981), the proportion of words actually used to the number of words potentially created by a particular process (Aronoff 1976), the possibility of forming new words (Rainer 1987, as cited in Bauer 2004: 25), the probability of new forms occurring (Harris 1951; Aronoff 1983), the number of new forms occurring in a specified period of time (Rainer 1987, as cited in Bauer 2004: 25) and the property of human language which allows language users to use their acquired linguistic knowledge to name something new when needed (Yule 1996: 22–23). Some of these definitions fit the narrative of various contemporary qualitative and quantitative discussions on morphological productivity, all of which use Baayen's corpus-based and affix-driven model (1992, 1993). Although almost unavoidable in contemporary research (Baayen 1994; Baayen and Renouf 1996; Baayen and Neijt 1997; Plag, Dalton-Puffer and Baayen 1999; Hay and Baayen 2002; Hay and Baayen 2003; Plag 2003; Fernandez-Dominguez, Diaz-Negrillo, and Štekauer 2007; Žarković 2017, 2019a, 2019b), Baayen's model has proved to be suitable only for derivation and absolutely unusable for any other word-formation processes (Žarković Mccray 2022; Žarković Mccray and Kujundžić 2022).

The observations that word-formation is about naming acts and processes that are active and forming set the word-formation as an onomasiologically and cognitively significant topic, which offered new models for understanding morphological productivity (Grzega 2002). This paper examines the morphological productivity of noun-forming suffixes at the level of word-formation rules, which presents the union of word-formation types and morphological types presented by Pavol Štekauer (1998, 2005a, b) in his semantic and cognitive model to word-formation and morphological productivity.

1.1. Pavol Štekauer's Onomasiological Approach to Morphological Productivity

Onomasiological theory was marked by pioneering theories of word-formation by Miloš Dokulil (1962, as cited in Štekauer 2005a) and Ján Horecký (1983, 1989, as cited in Štekauer 2005a). While Dokuli focused on the idea of onomasiological categories defining them as basic conceptual structures enabling the act of naming to happen, Ján Horecký made a highly significant step in the development of onomasiological theory of word-formation by his multi-level model of word-formation, including an object of extra-linguistic reality, the pre-semantic (conceptual), semantic, and formal levels. The elaborate semantic level that he develops itemizes semantic distinctive features, offers an analysis of their relations, and proposes their hierarchical organization.

Being greatly influenced by Dokulil's and Horecký's ideas, Pavol Štekauer establishes the unity of the form-meaning as the fundamental principle of his onomasiological approach:

“Word-formation deals with productive and rule-governed patterns (word-formation types and rules, and morphological types) used to generate motivated naming units in response to the specific

naming needs of a particular speech community by making use of word-formation bases of bilateral naming units and affixes stored in the Lexical Component.” (2005a, 212)

He emphasizes the importance of the active role of language users in the act of naming to bypass an affix-driven system of rules, which he sees as impersonal and detached from naming units and language users. The act of naming cannot be seen as detached from human knowledge, experience, imagination, etc. (Štekauer 2005a, 2005b). The assumption is that each act of naming is first lexically scanned by the speech community, which predetermines all the ensuing steps within the act of naming.

The onomasiological theory states that all naming units are formed by productive word-formation and morphological types/rules (Štekauer 2005a, 2005b; Štekauer et al. 2005). Each act of naming starts at the conceptual level where the object to be named is identified within the conceptual category. When the concept of the object is identified, the naming process identifies the semantic and morphemic components in the naming structure of the resulting word. Different naming structures can be analyzed from different angles, leading to different productivity rates (PR). The onomasiological approach distinguishes four different levels of naming structures, i.e., four levels of productivity:

- 1) the productivity at the level of onomasiological types.
- 2) the productivity at the level of word-formation types
- 3) the productivity at the level of morphological types;
- 4) the productivity at the level of word-formation rules.

The productivity of onomasiological types starts from the needs of the speech community and distinguishes five onomasiological types and consists of three main elements (determining constituent, determined constituent of the onomasiological mark that stands for the concept and onomasiological base of the onomasiological mark that is like a head of a complex word).

The productivity at the level of word-formation types is also related to conceptual categories. This enables the researchers to study different word-formation types within the same concept. For instance, the concept of Agent can have different word-formation types: Object – Action – Agent (*woodcutter*); Instrument – Agent (*oarsman*), etc. The different types of word-formation used to form new words within the same concept represent a single type cluster. Every cluster is 100% productive, and every single word-formation type can be computed internally, within the cluster.

The productivity at the level of morphological types shows that any word-formation type may have various morphological representations (*wood-cutter* (N+V+er), *bodyguard* (N+N), etc.). They represent various morphological types used to form new complex words within one and the same conceptual category, leading to a single morphological type cluster. The cluster is 100% productive, and individual morphological types may be computed internally, within the particular cluster.

The productivity at the level of word-formation rules represents word-formation types and morphological types and therefore, the concept of Agent looks like this (Štekauer, 2005a, 2005b; Štekauer et al., 2005):

- Action – Agent Verb -er (*driver*)
- Instrument – Agent Noun (s) man (*oarsman*)
- Object – Action – Agent Noun Verb -er (*wood-cutter*)

2. Methodology and corpus

The initial hypothesis we start the research with is that noun-forming suffixes are highly effective mechanisms for inserting additional pieces of semantic information into the word structure. Analyzing the word structure from the conceptual level through different word-formation types and morphologically through different morphological types sets the main aim of the research: showing productivity rates (PR) for these two important elements that constitute the meaning of the word.

The corpus we used to identify complex nouns with various noun-forming suffixes is comprised of texts from news, literary, academic and TV registers:

Table 1: The corpus

Registers ⁱⁱ	Sources	Number of words
News	<i>The Guardian, The Telegraph, The Sun</i> (2013)	100 590
Literary	Groff, Lauren. (2009). <i>Delicate Birds and Other Stories</i> , Hayes, Sadie. (2011). <i>The Start-Up. The Anti-Social Network</i> , Casey, Ryan. (2012). <i>What We Saw</i> , Keplinger, Kody. (2013). <i>Secrets and Lies</i>	187 040
Academic	<i>Moral Judgement and Decision Making</i> (2009), <i>The Handbook of Evolutionary Economic Geography</i> (2010), <i>NETWORK GEEKS: How They Built the Internet</i> (2013)	99 228
Television	<i>House</i> (2012), <i>The Vampire Diaries</i> (2010-2011), <i>Two and a Half Men</i> (2009), <i>The Big Bang Theory</i> (2011)	121 376
Total number of words		508 234

Identifying complex nouns in the corpus was the first step in our research and it was conducted with the help of a computer software *AntConc 3.2.4*.ⁱⁱⁱ (Anthony 2014). Every example is then identified as a certain semantic concept, i.e. falling into a certain cluster. All found clusters offer two pieces of information on the nouns in them: information regarding the interaction of different semantic concepts (word-formation types) and morphological elements (morphological types). Every cluster is 100% productive and thus every cluster offers productivity rates for different word-formation types and morphological types.

We are well aware of the fact that there are various large corpora currently available for various research, but we did not use them for our research because the analyses were performed manually, which in the case of large corpora would require a group of people due to numerous

ⁱⁱ See Literature for abbreviations and details regarding stories selected for the literary register, papers in academic register and selected transcripts for television register.

ⁱⁱⁱ We downloaded the software at the following website: <http://www.laurenceanthony.net/software/antconcl/>

examples they would lead to. By using our corpus, we wanted to include formal registers, but also less formal ones in order to generate as many different examples as possible and present different paths pursued in different registers when coining words. We used analytic, descriptive and statistical methods in our analyses.

3. Results and analysis

After analyzing the corpus, we found 1077 examples^{iv} of complex nouns with various noun-forming suffixes which fall into 6 different semantic concepts, i.e. clusters: Action (351 examples), Agent (320), State (301), Result (62), Instrument (30) and Object (13).

We start our analysis with complex nouns falling into the conceptual category of Action by presenting productivity rates for word-formation types and morphological types for this cluster in the table below:

Table 2: Morphological productivity of Action at the level of word-formation rules

Word-formation types:	Examples:	Total number of examples (351)	PR (100%)
action – action	<i>refusal</i> (ICS 197) <i>maintenance</i> (NG 32) <i>prevention</i> (TG 27/4) <i>harassment</i> (LPM 106) <i>discussion</i> (AAS 7)	319	90.88%
agent – action	<i>piracy</i> (NG 42)	12	3.41%
quality – action	<i>liberalism</i> (DT 27/4)	9	2.56%
Morphological types:	Examples:	Total number of examples (351)	PR (100%)
stem + suffix		351	100%
verb + <i>-ade</i>	<i>blockade</i> (DT 29/4)	1	
verb + <i>-age</i>	<i>linkage</i> (FRI 299)	7	
verb + <i>-al</i>	<i>denial</i> (TG 27/4)	13	
verb + <i>-ance</i>	<i>performance</i> (EEG 142)	34	
verb + <i>-ation</i>	<i>exploration</i> (AAS 6)	84	
noun + <i>-cy</i>	<i>piracy</i> (NG 42)	1	
verb + <i>-ery</i>	<i>cookery</i> (DT 27/4)	1	
verb + <i>-ion</i>	<i>promotion</i> (BBT S5 E1)	144	
noun + <i>-ism</i>	<i>racism</i> (LPM 111)	23	
adjective + <i>-ism</i>	<i>favouritism</i> (LID 461)	12	
verb + <i>-ment</i>	<i>assessment</i> (FRI 282)	29	
verb + <i>-ure</i>	<i>departure</i> (TG 25/4)	2	

We found 9 different word-formation types and one morphological type, which is going to be the case with all the other clusters because we were interested in the interaction of stems and noun-forming suffixes not going into morphological analysis of the stem structure itself. The highest productivity rate is achieved by [action – action] with 90.88% followed by [agent – action] (3.41%) and [quality – action] (2.56%). All the other word-formation types scored less

^{iv} The number of examples refers to the type frequency, i.e. the number of different words with the same prefix in our analysis (More on the type frequency versus token frequency at Plag 2003; Du and Zhang 2010).

than the aforementioned ones. The only morphological type presents the interaction of stems (simple verbs, adjectives or nouns) with noun-forming suffixes (11 in total). All suffixes insert the meaning of Action thus forming nouns of action when added to verbal bases (*blockade, linkage, denial, performance, exploration, etc.*) or nouns denoting completed action, practice resulting from adjectival or nominal bases (*racism, piracy, liberalism, etc.*).

We continue our analysis by showing the productivity rates of different word-formation types and morphological types for the concept of Agent in Table 3:

Table 3: Morphological productivity of Agent at the level of word-formation rules

Word-formation types*:	Examples:	Total number of examples (320)	PR (100%)
action – agent	<i>builders</i> (EEG 143) <i>correspondent</i> (DT 27/4) <i>beggar</i> (DBLCF 12) <i>negotiator</i> (ASN 38) <i>magician</i> (H S8 E 18)	215	67.18%
agent – agent	<i>heiress</i> (TS 29/4) <i>gangster</i> (DT 29/4)	49	15.31%
quality – agent	<i>realist</i> (H S8 E18)	18	5.62%
Morphological types:	Examples:	Total number of examples (320)	PR (100%)
stem + suffix		320	100%
verb + <i>-ant</i>	<i>attendant</i> (H S8 E19)	11	
verb + <i>-ar</i>	<i>beggar</i> (DBLCF 12)	1	
verb + <i>-ee</i>	<i>employee</i> (DT 13/6)	9	
verb + <i>-ent</i>	<i>president</i> (DBB 45)	3	
verb + <i>-er</i>	<i>cleaners</i> (NG 33)	119	
verb + <i>-ess</i>	<i>seductress</i> (WWS 63)	9	
noun + <i>-ess</i>	<i>princess</i> (DT 29/4)	13	
noun + <i>-ette</i>	<i>bachelorette</i> (BBT S5 E8)	3	
noun + <i>-ian</i>	<i>musician</i> (NG 34)	4	
noun + <i>-ie</i>	<i>girlie</i> (DT 19/8)	7	
adjective + <i>-ie</i>	<i>bestie</i> (BBT S5 E8)	5	
noun + <i>-ist</i>	<i>columnist</i> (TG 25/4)	43	
[noun + <i>-al</i>] + <i>-ist</i>	<i>instrumentalist</i> (LPM 121)	13	
adjective + <i>-ist</i>	<i>extremist</i> (TS 29/4)	13	
[adjective + <i>-ion</i>] + <i>-ist</i>	<i>perfectionist</i> (DT 27/4)	1	
verb + <i>-ist</i>	<i>cyclist</i> (TG 25/4)	4	
verb + <i>-or</i>	<i>inventor</i> (NG 10)	55	
noun + <i>-ster</i>	<i>prankster</i> (BBT S5 E7)	4	
noun + <i>-y</i>	<i>wifey</i> (DBM 37)	3	

This cluster shows 9 different word-formation types. The productivity rate of [action – agent] is the highest with 67.28% followed by [agent – agent] (15.31%) and [quality – agent] (5.62%). All the other word-formation types scored much lower than the aforementioned ones. The morphological type shows the interaction of various noun-forming suffixes (14 in total) with

*We are not going to present all the word-formation types that we found but only the most productive ones in all word-formation type clusters keeping the paper within the given guidelines.

nouns (simple or complex), adjectives (simple or complex), and simple verbs. All the suffixes insert the meaning of Agent whether it is denoting a person who performs the action in the base (*attendant, beggar, cleaners, inventor, extremist, cyclist, etc.*), a person who is skilled in the art or science (*musician*), a female person (*bachelorette*) or diminutive and hypocoristic nouns (*bestie, wifey*). All the suffixes changed the conceptual category of the base they were attached to except for the suffixes *-ie/-y* (when added to nouns) and *-ette* and *-ess* (when added to nouns), which is not surprising given the fact that they are added to bases that already fall into the conceptual category of Agent.

The productivity rates for word-formation types and morphological types for complex nouns falling into the conceptual category of State are presented in the table below:

Table 4: Morphological productivity of State at the level of word-formation rules

Word-formation types:	Examples:	Total number of examples (301)	PR (100%)
quality – state	<i>transparency</i> (TG 27/4) <i>rigidity</i> (ICS 193) <i>safety</i> (NG 35)	192	63.78%
agent – state	<i>partnership</i> (AAS 21) <i>childhood</i> (ASN 8)	47	15.61%
state – state	<i>pregnancy</i> (DBLDA 29) <i>blindness</i> (ASN 8)	42	13.95%
action – state	<i>existence</i> (AAS 12)	17	5.64%
Morphological types:	Examples:	Total number of examples (301)	PR (100%)
stem + suffix		301	100%
adjective + <i>-ce</i>	<i>silence</i> (NG 16)	10	
verb + <i>-ce</i>	<i>offence</i> (TG 27/4)	1	
adjective + <i>-cy</i>	<i>immediacy</i> (FRI 283)	22	
adjective + <i>-dom</i>	<i>freedom</i> (DBB 47)	2	
noun + <i>-dom</i>	<i>studentdom</i> (NG 5)	10	
verb + <i>-ence</i>	<i>existence</i> (AAS 12)	13	
adjective + <i>-ence</i>	<i>affluence</i> (DT 27/4)	1	
noun + <i>-hood</i>	<i>boyhood</i> (H S8 E20)	12	
adjective + <i>-hood</i>	<i>falsehood</i> (NG 20)	2	
verb + <i>-ion</i>	<i>constipation</i> (H S8 E18)	2	
adjective + <i>-ity</i>	<i>tranquility</i> (TG 25/4)	90	
verb + <i>-ity</i>	<i>prosperity</i> (AAS 10)	1	
adjective + <i>-ness</i>	<i>deafness</i> (WWS 5)	79	
[verb + <i>-ive</i>] + <i>-ness</i>	<i>competitiveness</i> (AAS 2)	5	
[adjective + <i>-ly</i>] + <i>-ness</i>	<i>loneliness</i> (BBT S5 E4)	1	
[noun + <i>-less</i>] + <i>-ness</i>	<i>helplessness</i> (DBF 102)	6	
[noun + <i>-ous</i>] + <i>-ness</i>	<i>nervousness</i> (ASN 9)	6	
noun + <i>-osis</i>	<i>thrombosis</i> (H S8 E20)	3	
noun + <i>-ry</i>	<i>slavery</i> (TG 29/4)	6	
noun + <i>-ship</i>	<i>partnership</i> (AAS 21)	19	
adjective + <i>-ship</i>	<i>hardship</i> (TS 29/4)	1	
adjective + <i>-ty</i>	<i>safety</i> (NG 35)	4	
adjective + <i>-th</i>	<i>warmth</i> (WWS 6)	5	

There are 6 different word-formation types in the cluster where the highest productivity rate was achieved by [quality – state] with 63.78% followed by [agent – state] (15.61%), [state – state] (13.95%) and [action – state] (5.64%). All the other word-formation types scored much lower than the aforementioned ones. The morphological type where we find the interaction of a stem and suffixes presents the interaction of 13 different noun-forming suffixes with simple nouns and verbs as well as with simple or complex adjectives. All suffixes insert the meaning of State denoting nouns of state (*immediacy, boyhood, nervousness, deafness, etc.*), abstract nouns of state (*freedom, existence*), or the state of being what is expressed by a base (*partnership, hardship, safety, warmth, etc.*). Suffixes mostly changed the conceptual category of the bases they were interacting with; the exceptions being adjectival bases that already denoted State (*affluence, tranquility, loneliness, etc.*).

Complex nouns falling into the conceptual category of Result with their productivity rates for word-formation types and morphological types are presented in the following table:

Table 5: Morphological productivity of Result at the level of word-formation rules

Word-formation types:	Examples:	Total number of examples (62)	PR (100 %)
action – result	<i>commentary</i> (BBT S5E3) <i>arrangement</i> (NG 77)	62	100%
Morphological types:	Examples:	Total number of examples (62)	PR (100%)
stem + suffix		62	100%
verb + -ary	<i>summary</i> (EEG 151)	2	
verb + -ment	<i>statement</i> (AAS 2)	48	
verb + -ure	<i>pressure</i> (EEG 146)	12	

This cluster presents only one word-formation type, i.e. [action – result]. The only morphological type shows the interaction between a stem (simple verbs) and 3 different noun-forming suffixes, which among many other meanings, insert the meaning the result of the action of the verbal base (*summary – a brief statement on account of the main points; statement – a clear expression of something in speech or writing, etc.*).

Our analysis continues with complex nouns that fall into the conceptual category of Instrument:

Table 6: Morphological: productivity of Instrument at the level of word-formation rules

Word-formation types:	Examples:	Total number of examples (30)	PR (100 %)
action – instrument	<i>beeper</i> (H S8 E18)	28	93.33%
agent – instrument	<i>pesticide</i> (TG 29/4)	2	6.66%
Morphological types:	Examples:	Total number of examples (30)	PR (100%)
stem + suffix		30	100%
noun + -cide	<i>insecticide</i> (TG 29/4)	2	
verb + -er	<i>printer</i> (NG 51)	16	
verb + -or	<i>sensor</i> (H S8 E21)	12	

The cluster presents 2 different word-formation types: [action – instrument] shows the highest productivity rate with 93.33% followed only by [agent – instrument] with 6.66%. The

morphological type shows the interaction of simple nouns and mostly verbs with 3 different suffixes, all semantically leading to devices performing the action of the verbal bases (*beeper, printer, sensor, etc.*). The suffix *-cide* combines with nominal bases and inserts the meaning of killing or destroying of sorts (Jovanović 2008: 160), which in our particular examples (*insecticide* and *pesticide*) implies the instrument that kills what is implied by the base, i.e., insects or pests. Complex nouns that fall into the conceptual category of Object are shown in Table 7:

Table 7: Morphological productivity of Object at the level of word-formation rules

Word-formation types:	Examples:	Total number of examples (6)	PR (100%)
object – object	<i>baggie</i> (TAHM S7 E2)	3	50%
Morphological types:	Examples:	Total number of examples (6)	PR (100%)
stem + suffix		6	
verb + <i>-ation</i>	<i>plantation</i> (DBF 95)	1	
adjective + <i>-ery</i>	<i>greenery</i> (DBW 75)	1	
noun + <i>-ette</i>	<i>statuette</i> (TG 27/4)	1	
noun + <i>-ie</i>	<i>hoodie</i> (DT 27/4)	3	

This cluster presents 4 different word-formation types. The highest productivity rate is realized by [object – object] with 50%. All the other word-formation types scored much lower than the aforementioned one. The only morphological type shows the interaction of simple verbs, nouns and adjectives as stems with 4 different noun-forming suffixes. We find only two of these suffixes (*-ation, -ery*) in the position where they change the conceptual category of the base they were attached to, thus inserting the meaning class of objects to verbal and adjectival bases (*plantation* or *greenery*). This does not happen with the remaining two suffixes (*-ette, -ie*) due to the fact that, when added to nominal bases, form diminutive nouns that, in our case, were already objects (*statuette* or *hoodie*).

4. Concluding remarks

The analyses included 1077 examples of different complex nouns containing different noun-forming suffixes. After identifying the semantic concepts for every noun, we categorized them into 6 clusters (Action, Agent, State, Result, Instrument and Object), where we presented two pieces of information: the number of word-formation types and morphological types. All clusters recorded only one morphological type (stem + suffix), which is not surprising given that the analyses were focused on the interaction of stems and suffixes not going into the stem structure analysis.

It can be said, after the analysis of word-formation types, that there is not a clear link between the number of examples that were found and the number of word-formation types. The comparison between more productive clusters in terms of examples and less productive ones illustrates the conclusion. For example, State (301 examples) and Result (62) are definitely more productive in terms of examples than Instrument (30 examples) and Object (6). Nevertheless, Object records 4 different word-formation types, which is much higher than Result, which records only one, and definitely closer to 6 word-formation types recorded by State, a cluster

with more than 30 times more examples. The highest productivity rates of different word-formation types in different word-formation type clusters showed that in the majority of examples, the conceptual category of the stem was heavily influenced by suffixes to the point that the semantic input the suffixes provided determined which clusters the complex nouns would fall into. The only exceptions were [agent – agent] in Agent, [state – state] in State and [object – object] in Object where the interaction showed how conceptual categories of the stem were not changed but refined by the suffix.

The morphological analysis included 37 noun-forming suffixes that occur in one or multiple clusters. We cannot say that there is a link between the number of suffixes and the number of word-formation types. The best example would be Result with 3 suffixes and one word-formation type recorded whereas Instrument (3 suffixes) and Object (4) recorded 3 and 4 word-formation types respectively. Stems were realized by simple or complex nouns and adjectives and simple verbs.

The initial hypothesis that suffixes in English are effective mechanisms for inserting additional pieces of semantic information into the word structure was proved by presenting the major characteristics of noun-forming suffixes when interacting with various stems: suffixes heavily influence the conceptual category of the stem thus determining which clusters the nouns containing them would fall into (*blockade, negotiator, offence, summary, pesticide*, etc.); suffixes do not change the conceptual category, but just refine it with their semantic input (*bachelorette, wifey, hoodie*, etc.); suffixes can express the same or different meanings with various conceptual categories resulting in their presence in various clusters (*cleaner, printer, instructor, sensor, exploration, plantation*, etc.). All these characteristics serve the aim of the research, presenting the PR for semantic interactions (word-formation types) and morphological by analyzing characteristics of noun-forming suffixes in English.

Conflict of Interest Statement

The author declares no conflicts of interest.

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