

MORPHOLOGICAL COMPETITION, BLOCKING AND RESISTANCE: EVIDENCE FROM THE ENGLISH -ITY/-NESS AND THE FRENCH -AGE/-MENT

Samuel Tuesday OWOEYE

Department of French

Federal University Lokoja

<https://orcid.org/0000-0003-4435-0654>

&

Oluwatosin Favour OLUWANIYI

Department of Languages and General Studies

Covenant University, Ota, Nigeria

<https://orcid.org/0009-0005-4624-5761>

DOI: <https://dx.doi.org/10.4314/jolls.v15i3.26>

Abstract

The Morphological Module of the generative grammar focuses on the innate ability of an ideal speaker of a language to produce infinite words. In this sense, an ideal user of any language, such as English or French, has a mental linguistic capacity to produce new words that are grammatical, even if the word is not yet in popular usage. This study is rooted in the I-language dimension of the Chomskyan generative grammar. Using the constructional morphology model of the lexeme-based morphological analysis, the study selected a pair each of English and French suffixes, that are prone to rivalry. The suffixal pairs are the English nominal suffixes -ity and -ness and those of French -age and -ment. For the purpose of analysis, data was sourced from *British National Corpus* for the English pair and *French Web 2023* for that of French. Twenty competing words are randomly selected from the raw data for each of the languages and both qualitative and quantitative analysis was done on them to study three morphological variables of competition, blocking and resistance. Qualitatively, Findings show that the selected English and French suffixes are in a morphological competition because they are available to similar lexical bases in each of the two languages. Quantitatively, it was discovered that -ity and -ness in English and -age and -ment in French are in a comfortable competition where blocking is to some extent resisted. In the final analysis, this paper shows that the concepts of morphological competition and morphological blocking are real and that of morphological resistance, innovatively argued in this paper is equally scientifically sustainable

Keywords: Morphological Competition, Morphological Blocking, Morphological Resistance, Lexeme-Based Morphology, Constructional Morphology

Introduction

This paper is rooted in the morphological module of Generative Grammar (GG). From a linguistic perspective, and particularly from a lexeme-based point of view, Aronoff and Fudeman (2010) describe morphology as the cognition that is involved with word formation and a sub-discipline of linguistics that examines words, their internal structure and their processes. From the foregoing, morphology is a core of the grammar of the human language. There are three broad approaches to the study of morphology in linguistics. It is studied from a morpheme-based perspective, a lexeme-based perspective and from a combination of morpheme-based and lexeme-based approaches.

In morpheme-based morphology, the morpheme is the smallest meaningful unit of the grammar of a language, which serves as a unit of word creation (Crystal, 1996). The morpheme-based approach is a biunique system – form and meaning. This means that a morpheme must have a form and also contains a meaning. For instance, the word ‘boys’ can be divided into two morphemes: the free morpheme ‘boy’ and the bound morpheme ‘s’. This word is easily analysable using the morpheme-based theory. However, nouns like ‘deer’ and ‘sheep’ are both singular and plural and so may be difficult to analyse morphemically except by invoking a zero-morpheme asset. The discovery of troubles with

morphemes led to the consideration of a lexeme-based approach to the study of morphology.

In the lexeme-based morphology, morphemes are not considered as the smallest unit of morphological operations. Lexeme-based morphology is a multidimensional morphological operation that brings to the table an interplay of phonological, syntactic and semantic properties in the construction of words. In the lexeme-based morphology, emphasis is placed on word construction rather than on word derivation. To define the lexeme, the distinction between it and the term 'word form' established by Matthews (1974 p.62) will suffice here. According to Matthews, the word-form is an independent unit containing the morpho-syntactic properties functioning as the atom of syntax, i.e. the units found in texts. As for the lexeme, it is the abstract correlate of the word-form, the morphological unit that has no inflectional marks. For instance, there is the abstract 'BOY' in the mental lexicon (the morphological module of the I-language) of an English speaker and from this abstraction, words such as 'boy', 'boys', 'boyish' can be grammatically constructed, taking into account the interplay of phonological, syntactic and semantic properties in the English language. The same argument is valid for the construction of 'garçon', 'garçons' and 'garçonnette' from the abstract lexeme 'GARÇON'. The lexeme-based morphology is a grammar of Item and Process or of Word and Paradigm (Hockett 1954; Diewald, 2020). Under this approach word construction is taken to be a process through which formed lexemes are selected according to phonological, syntactic and semantic characteristics of the abstract lexeme. This selection, which is a process of input and output, utilizes the phonological, syntactic and semantic properties of the abstract lexeme to produce another lexeme, itself possessing its own phonological, syntactic and semantic properties.

A crucial aspect of generative grammar is the idea that humans have implicit knowledge of the languages they speak. Implicit in the sense that grammar is more of a mental and cognitive property than it is structural. Right from the onset, generative linguistics describes grammar as

having four main principles (Chomsky, 1957), which are generativity, explicitness, universality and modularity. Grammar is generative because it has a finite set of rules that can account for an infinite number of forms. It is explicit because its rules and principles are unambiguous; universal because the rules are substantially applicable to all human languages. Finally, grammar is modular because it can be studied from various modules such as phonology, morphology, syntax and semantics. Arising from these four principles, Chomsky (1965) also distinguished between competence and performance. According to Chomsky, competence represents the ability of an ideal user of a language to construct an unlimited number of grammatical and meaningful expressions following a limited set of rules, principles and patterns. He points out that the limited set of rules, principles and patterns is substantially universal. In the case of performance, Chomsky argues that it is the idiosyncratic version of competence. It is the aspect of language use that is individualized and which is open to misproductions, grammatical distortions, slip of tongues and many other forms of deviations from grammar. Competence and performance were later to be changed to I-language (internalised language) and E-language (externalized language) in Chomsky (1986). As far as generative grammar is concerned, the grammar of a language is the I-language component of the dichotomy. It is understood that language is used mainly for communication and communication is in the realm of the E-language because every individual communicates taking into consideration his or her individualised use of language. In prioritizing I-language over E-language, Chomsky (1980) argues that the concern of a grammarian should be the grammar that emanates from the mechanism of the human brain, which is common to all human languages. He further posits that while the I-language is grammar, the E-language is language.

Arising from the I-language angle of linguistics, this paper chooses to study three morphological variables of competition, blocking and resistance. Using the construction morphology model of the lexeme-based morphological analysis, the study selected a pair each of English

and French suffixes, that are prone to rivalry. The suffixes are the English nominal *-ity* and *-ness* and the French nominal *-age* and *-ment*. For the purpose of analysis, data was sourced from British National Corpus (BNC) for the English pair and French Web 2023 for that of French. Twenty competing words are randomly selected from the raw data for each of the languages and both qualitative and quantitative analysis was done on them to study the three morphological variables of competition, blocking and resistance

Morphological Competition, Blocking and Resistance

Morphological competition (also referred to as morphological rivalry) is a phenomenon whereby two morphological exponents, such as suffixes or prefixes share similar syntactic and morphological properties and are therefore prone to compete in the production of synonymous words. Kjellmer (1984 & 2001) attributes this particular phenomenon to a multifaceted conditioning, which involves various factors such as phonological, structural, semantic, and etymological influences. These factors interact in a complex manner, making it difficult to determine which one takes precedence and ultimately determines the possibility of derivation by a certain process. In the case of morphological blocking, Aronoff (1976 p.43) describes it as “the nonoccurrence of one form due to the simple existence of another”. Accordingly, the concept of blocking is a result of morphological rivalry among processes (see Aronoff, 1976; Rainer, 1988; Plag, 1999; 2004; Bauer, 2001). Owoeye (2011 p.77) clarifies the relationship between the two morphological notions of competition and blocking in his argument that:

La notion de blocage morphologique et celle de la concurrence morphologique vont de pair parce que l'étude de l'un provoque la mention de l'autre. Quand deux affixes sont synonymes du point de vue de leurs caractéristiques syntaxiques et sémantiques, ils entrent en concurrence et font intervenir le blocage affixal.

The two notions of morphological competition and blocking go hand in

hand because the study of one brings about the mention of the other. When two suffixes are synonymous from the stand point of their syntactic and semantic characteristics, they enter into a competition that can lead to possible affixal blocking. (Our own translation)

It has been argued that there are suffixes in many languages, that compete in word formation market and as a result of the competition, the phenomenon of blocking results. There are two types of morphological blocking- token blocking and type blocking. In token blocking, an existing word blocks the construction of a derivable word, such as in the case in English where the existence of *thief*, whose popularity blocks the derivability of *stealer*. Owoeye (2011 p.80) also cites the example in French where the mere popularity of the word *bavard* blocks the possibility of the construction of *bavadeur*. Type blocking occurs when a morphologically derived word blocks the derivability of another word, such as in the case of *happiness* blocking *happity* in English and *gouvernement* blocking the possibility of *gouvernage*. In the I-language, *-ness* and *-ity* are grammatically synonymous as they are both added to adjectives to form corresponding nouns. Similarly, the French *-age* and *-ment* are grammatically synonymous as they both add to verbs to construct nouns of action. Blocking is primarily a product of the high frequency of a given word. This is attested to by Plag (2003 p.81). He posits that:

The higher frequency of a given word, the more likely it was that the word blocked a rival formation. Both idiosyncratic words and regular complex words are able to block other forms, provided that the blocking word is stored.

Also, it has been argued that usage-based mechanism of particular words would automatically predict the productivity of such words over individual behavior (De Smet, 2020). This means that a word is as productive as it is frequently used.

Having expatiated on the two morphological notions of competition and blocking, there's the possibility of considering

another concomitant morphological concept, which we refer to in this paper as morphological resistance. For instance, if we argue that *happiness* blocks *happy* in English, and *gouvernement* blocks *gouvernage* in French, we have to relatively argue that *productivity* could not block *productiveness* because both constructions are acceptable in the E-language of English without any reservation. They are both frequently and interchangeably used. In the same vein, *empilage* has failed to block *empilement* and vice versa in French. This is where the notion of morphological resistance finds its sustainability. So, we posit that there are cases where morphological rivalry can produce blocking and there are other cases where resistance to blocking can be argued. It must be noted here that to the best of our knowledge, the concept of morphological resistance has received limited explicit treatment from morphologists as we are not aware of any morphological study where the notion has been scientifically studied

At this juncture, it is noteworthy to say that not all nominal, verbal, adjectival affixes are in rivalry against one another. In English, for instance, there is the suffix *-cy* that plays a similar morphological role as *-ity* and *-ness*, but which cannot be said to be synonymous and should not be seen as being in rivalry with them. Aronoff (1976) argues that *-cy* operates only where the base adjectives end with *-ate*, *-ent* or *-ant* such as in ‘illiteracy’, ‘potency’ and ‘militancy’. So, it is not grammatically possible for the adjectives *illiterate*, *potent* and *militant* to operate as base for *-ity* and *-ness*. Similarly, the French suffixes *-ature* and *-ance*, though are added to verbs to construct nouns, they cannot be in rivalry to *-age* and *-ment*. This is because while *-age* and *-ment* form nouns that describe the action of the verbs they are added to, *-ature* and *-ance* describe the result of the actions embedded in the verbs they are added to. For instance, *créature* is what results from the French verb *créer* and not what represents the action to create. The competitive nature of these *-ity* and *-ness* has attracted the attention of many scholars in the linguistic discipline of morphology. Prominent among these scholars are Marchand (1969), Aronoff (1976), Anshen & Aronoff (1981), Aronoff (1983), Plag (2003), Säily (2011) and

Bauer & Renouf (2001) and Arndt-Lappe (2014) just to mention a few.

Aronoff, (1976) argues that while *-ness* is less restrictive, most of the words found to have been constructed with it are also possible to be constructed with *-ity*. He cited examples such as *connectableness/* and *connectability*, *prescriptiveness* and *prescriptivity*, *commutativeness* and *commutativity*, and many others as examples of *-ness* and *-ity* pairs with synonymous morphological constructions. However, Marchand (1969) earlier posits that for some bases that both *-ness* and *-ity* can freely attach to, *-ity* seems to be the most preferred nominalizing suffix. This simply would mean that *-ity* is more productive than *-ness*, morphologically speaking. Säily (2011) and Plag (2003) study the competitive nature of these two suffixes from a diachronic point of view. The central argument of these morphologists is that since the 14th century, both suffixes have been used competitively, productively and interchangeably. According to Bauer & Renouf (2001), however, while *-ness* looks comfortable with Germanic bases, *-ity* behaves to be more at home with Romance bases. In that light, they categorize *-ness* as a Germanic suffix and *-ity*, a Romance suffix.

Another angle from which the two suffixes *-ness* and *-ity* has been studied is from the angle of morphological productivity. Scholars who have worked in this domain include but not limited to Bermúdez-Otero (2012), Arndt-Lappe & Bell (2012) and Chandler (2017). While Bermúdez-Otero (2012) and Chandler (2017) posit that *-ness* is generally more productive than *-ity*, Arndt-Lappe & Bell (2012) have found out that *-ness* is more open to more bases than *-ity*, thereby making *-ness* more morphologically productive than *-ity*. It can therefore be assumed that the debate on which of the nominals *-ity* and *-ness* is more productive is still open to further robust investigations. It must be pointed out that most of the works done on the rivalry between *-ity* and *-ness* have relied on qualitative analysis of data. The best way to study morphological productivity would be to gather a very big data, which is to be analysed quantitatively. In this regard, the work of Arndt-Lappe (2014) comes to the fore. This author

relies on a statistical analysis and a computational simulation with an analogical model (using the AM algorithm, Skousen & Stanford, (2007) of the distribution of *-ity* and *-ness* in a corpus comprising some 2,700 neologisms from the Oxford English Dictionary from three different centuries (the 18th, 19th, and 20th century). The quantitative analysis done by this author reveals that *-ity* preference for pertinent bases is far more widespread than hitherto though. It was then suggested that both *-ness* and *-ity* are mutually productive. This means that both suffixes are in a very lively competition.

In the case of the French *-age* and *-ment* deverbial suffixes, there have been several studies on them. While Bally (1965), Kelling (2003), Uth (2012), Fradin (2014), Meinschaffer (2016) and Lapraye (2017) study the three rivals *-tion*, *-age* and *-ment* from just a qualitative point of view, using known constructed examples, Hathout (2009), Roché & Plénat (2014), Dal et al (2018), Missud and Villoing (2020) and Villoing and Gueye (2024) study the same deverbial suffixes from a quantitative approach. The general argument of these authors is that these suffixes, share similar input argument structure and their outputs are nouns naming the action and the result of the action embedded in their verb bases. Fradin (2014) specifically posits that the three suffixes can form identical triplets that are synonymous. Lapraye (2017) argues that while *-age* conveniently selects first group verbs, *-ment* prefers second and third group verbs. On the contrary, authors who rely on data from large corpus argue that qualitative approach to the study of these deverbial suffixes is insufficient to properly come to a generalized conclusion about the types of verbs they select and the types of nominal inputs they generate. For instance, Dal et al (2018) comes to a conclusion that evidence from large corpus does not support variations in the argument structure of the verb bases that *-age* and *-ment* select and the variation in the nouns that

they construct. Although *-ment* tends to select verbs that are themselves derived, evidence from a large corpus has shown that this selection is rivaled by *-age* and to some extent *-ion* (Villoing and Gurye, 2024).

As can be deduced from the literature review done above on the English *-ity/-ness* and the French *-age/-ment*, it can be stated that the deverbial suffixes have received extensive attention from morphology experts in both languages. constraints

Methodology

The methodology relied on for this study is rooted in corpus linguistics, which is a process of collecting a very large language-related data for a linguistic analysis and discussion (Kotowski,2020). Data for this study is sourced from the *British National Corpus* (BNC henceforth), for the English tokens in *-ity* and *-ness* and from the French Web 2023, for the French tokens in *-age* and *-ment*, through the online Sketch Engine. While BNC is an online corpus of over one hundred million words gathered from the British written and spoken English, the *French Web 2023* (FW 2023 henceforth) is an online French corpus that contains twenty-three billion, one hundred and ninety-one million, seven hundred and eighty-nine thousand, four hundred and sixty-nine (23,191,789,469) words. In English, the BNC has 68,981 type tokens of nouns formed with the suffix *-ity* and 33,773 formed from the *-ness* suffix. In the case of French Web 2023 has 25,101 type tokens formed with *-age* suffix and 21,226 using the *-ment* suffix. For the purpose of analysis and discussion in this work, twenty competing word-forms, representing an approximate of ratio 1:2,669 for English and an approximate of ratio 1:1,158 in French, are randomly selected for each of the pair of suffixes involved in the study. We consider these ratios to be adequate because this study is more of a qualitative research and not typically a quantitative one. The randomly selected data for our study is as presented in Table1 and Table 2 below:

Table 1: Selected Competing Word Forms in the English Nominal –ity and –ness

Word Form in -ity	BNC Freq.-ity	Word Form in -ness	BNC Freq. -ness
aggressivity	994	Aggressiveness	44,647
Availability	1,633,983	Availableness	154
Legibility	22,292	Legibleness	0
Capability	3,052,561	capableness	148
Competitivity	665	competitiveness	259,664
Complexity	1,340,035	complexness	260
Curiosity	559,860	curiousness	21,363
consciousity	0	consciousness	1,281,974
expressivity	7,775	expressiveness	21,363
hoplessness	0	hopelessness	64,844
inclusivity	56,833	inclusiveness	45,206
Intensity	1,061,264	Intensness	0
productivity	1,259,946	productiveness	335
probability	1,633,983	probableness	0
recklessness	0	recklessness	31,933
responsibility	4,550,003	responsibleness	244
Seriosity	0	seriousness	182,176
variability	352,411	variableness	886
vulnerability	896,665	vulnerableness	0
Wholity	0	Wholeness	63,757

Table 2: Selected Competing Word Forms in the French Nominal –age and –ment

Word Form in -age	FW 2023.-age	Word Form in -ment	FW 2023. -ment
assemblage	381,910	assemblément	879
actionnage	16	actionnement	4,939
brunissage	1,713	brunissement	3,381
bouleversage	0	bouleversement	68,272
blanchissage	4,336	blanchissement	5,028
Cuvelage	3,629	cuvèlement	0
Creusage	3,015	creusement	23,888
Déroulage	40	déroulement	3,526
Emballage	444,476	emballement	20,949
Enrobage	22,083	enrobement	127
Flambage	2,380	flambement	1,063
Groupage	8,063	groupement	221,325
Glissage	925	glissement	100,151
Jaunissage	10,325	jaunissement	9
Lotissage	10	lotissement	71,820
mordillage	416	mordillement	960
papillotage	96	papillotement	407
Ramassage	69,573	ramassement	91
Rancissage	0	rancissement	1,317
Verdissage	141	verdissement	11,769

Theoretical Framework

Constructional morphology under the auspices of Lexeme-based morphological analysis provides the theoretical framework and analytical approach of analysis in this study. Recent developments in Constructional morphology provide the theoretical framework and analytical approach for the analysis of morphologically derived words. Constructional morphology is a theoretical framework that supports the fact that the mind of an ideal speaker of a language stores an extensive number of formable words from the generalized abstract patterns (Jackendoff and Audring, 2020; Audring, 2022; Hoffmann, 2022; Audring and Jakendoff, 2025) The most critical argument against morpheme-based analysis as pointed out by the adherents of lexeme-based morphology is the linguistic status of sign accorded affixes and inflectional endings by the morpheme-based morphology, whereby each of the signs is seen as an arbitrary union of sound and meaning. From the

point of view of lexeme-based morphology, inflectional endings and affixes do not have any place in the physical lexicon, hence, they are not listed in dictionaries and therefore cannot constitute the smallest lexical signs.

Consequently, in order to abandon the notion of morpheme, the term lexeme was introduced as the smallest lexical sign visible to morphology. By this approach, the morphologically segmentable and non-segmentable elements – affixes, inflectional endings, stem modifications, reduplication, revowelling, metathesis, subtraction etc. are mere exponents of phonological, syntactic and semantic regularity to which ideal speakers have recourse when forming intuitively complex lexemes from base lexemes through the subconscious mental operations. The Owoeye (2013 p. 50)'s version of constructional morphological analysis will be adopted in this study. It is as schematised below:

INPUT		OUTPUT	
F	BL F /.../	CL /.../	
SX	Cat: Role:	Cat: Role:	
S	+ -	+ -	

From the above morphological construction formula, it is believed that the construction of every complex word is an interplay of input and output. The input is the base lexeme and the output is the constructed lexeme. For a complex word to be constructed, there are phonological constraints represented in the diagram by F. There are syntactic exigencies as well, represented by SX and finally, there are semantic properties that must be taken into account, represented by S in the formula. So, constructional morphology relies on a multidimensional approach to word formation.

Findings and Discussions

Using the lexeme-based morphological framework, we will now study the extent to which there is morphological competition, morphological blocking and morphological resistance between the *-ity* and *-ness* of English and *-age* and *-ment* of French, beginning with morphological competition.

Morphological Competition

As earlier stated, morphological competition arises where two or more prefixes or suffixes are in word formation rivalry. Arising from the extracted raw data and the randomly selected pairs of constructed words, it is shown that there is morphological competition between the nominal suffixes *-ity* and *-ness* of English. This arises as a result of the morphological bases they attach to. Both the nominal suffixes *-ity* and *-ness* attach primarily to adjectival bases. It simply goes to show that there could be a grammatical competition between them qualitatively speaking. The same argument is valid for the French *-age* and *-ment*. The two are nominal suffixes and they attach to verbal bases respectively as well.

The mere fact of having *aggressivity*, with 994 occurrences and *aggressiveness*, with 44,647

occurrences, as attested English word forms sourced from the *BNC* as can be seen in Table 1 is enough to qualitatively prove that there is a grammatical competition between the pair of the English suffixes. Both *aggressivity* and *aggressiveness* are attested in various English dictionary and with similar definitions:

Aggressivity: the state or quality of being combative or ready to attack. It describes a behavioral disposition – often seen in humans and animals – to behave forcefully or violently as a reaction to provocation or proactively to achieve a goal. – *Collins Dictionary*

Aggressiveness: a behavioral trait characterized by the use of forceful, bold, or combative action – *Cambridge Dictionary*

There are other examples from the data to show that morphological competition is real between the English –ity and –ness as can be seen below:

<i>availability</i> (1,633,983)	<i>availableness</i> (154)
<i>capability</i> (3,052,561)	<i>capableness</i> (148)
<i>competitivity</i> (665)	<i>competitiveness</i> (259,664)
<i>complexity</i> (1,340,035)	<i>complexness</i> (260)
<i>curiosity</i> (559,860)	<i>curiousness</i> (21,363)
<i>expressivity</i> (7,775)	<i>expressiveness</i> (21,363)
<i>inclusivity</i> (56,833)	<i>inclusiveness</i> (45,206)
<i>productivity</i> (1,259,946)	<i>productiveness</i> (353)
<i>responsibility</i> (4,550,003)	<i>responsibleness</i> (244)
<i>variability</i> (352,411)	<i>variableness</i> (886)

While the pairs above prove the qualitative morphological competitiveness/competitiveness between the suffixing pairs of –ity and –ness, it must be pointed out that the competition is not quantitatively identical. For instance, while *aggressiveness* appears in 44,647 times in the selected corpus, *aggressivity* appears only in 994 times. The same scenario is observable in the case of *competitiveness* with as much as 259,664 occurrences as against *competitiveness* with a meagre 665 occurrences; *complexity* with 1,340,035 occurrences as against only 260 occurrences for *complexness*; *productivity* with a very large number of occurrences of 1,259,946 occurrences compared to as little as 353 occurrences for *productiveness*; *responsibility* with 4,550,003 occurrences versus *responsibleness* with a paltry of just 244 occurrences and *variability* having 352,411 occurrences compared with only 886 occurrences for *variableness*.

Similar scenario plays out in the case of the French –age and –ment. Our data, as shown in Table 2, presents evidence of morphological competition between the deverbal suffixes –age and –ment. In French, both *assemblage* with 381,910 occurrences and *assemblément* with 879 occurrences are attested with the same meaning. The French Dictionary *Larousse* defines each as follows:

Assemblage: *l'action de réunir plusieurs éléments pour former un tout, ou le résultat de cette action.*

Assemblément: *l'action d'assembler, de réunir plusieurs éléments pour former un tout, ou le résultat de cette action*

Going by the above, it is qualitatively evident that both *assemblage* and *assemblément* are semantically identical. Given that both –age and –ment are added to verbs to form nouns, it can be linguistically argued that the two suffixes compete morphologically. There are other examples from our data that concretise the observed competition between the two French suffixes as follows:

<i>actionnage</i> (16)	<i>actionnement</i> (4,939)
<i>brunissage</i> (1,713)	<i>brunissement</i> (3,381)
<i>blanchissage</i> (4,336)	<i>blanchissement</i> (5,028)
<i>creussage</i> (3,015)	<i>creusement</i> (23,888)
<i>déroulage</i> (40)	<i>déroulement</i> (3,526)
<i>emballage</i> (444,476)	<i>emballement</i> (20,949)

<i>enrobage</i> (22,083)	<i>enrobement</i> (127)
<i>flambage</i> (2,380)	<i>flambement</i> (1,063)
<i>groupage</i> (8,063)	<i>groupement</i> (221,325)
<i>glissage</i> (925)	<i>glissement</i> (100,151)
<i>jaunissage</i> (10,325)	<i>jaunissement</i> (9)
<i>lotissage</i> (10)	<i>lotissement</i> (71,820)
<i>mordillage</i> (416)	<i>mordillement</i> (960)
<i>papillotage</i> (96)	<i>papillotement</i> (407)
<i>ramassage</i> (69,573)	<i>ramassement</i> (91)
<i>verdisage</i> (141)	<i>verdissement</i> (11,769)

Just as in the case of the English *-ity* and *-ness*, it can be argued that there is morphological competition between the French *-age* and *-ment*, qualitatively speaking, though not quantitatively identical. Where *acctionnage* has only 16 occurrences in the selected corpus, *acctionnement* has 4,939 occurrences in the same corpus. In a similar vein, *dérroulement* has a whopping 3, 526 occurrences and *dérroulage* has just 40 occurrences; *enrobage* with 22,083 occurrences and *enrobement* with as little as 127 occurrences; *glissement* with 100,150 occurrences and *glissage* with just 925 occurrences; *jaunissage* with as large as 10,325 occurrences and *jaunissement* with as little as 9 occurrences; *lotissement* with 71,820 occurrences, leaving *lotissage* with just 10 occurrences; *ramassage* with occurrences as large as 69,573 and *ramassement* with occurrences as low as 90 and *verdissement* with 11,769 occurrences and *verdisage* with just a few occurrences of 141. However, for *brunissage* and *brunissement*, the former has 1,713 occurrences and the latter with 3,381 occurrences. The quantitative behavior of the latest pair is similar as both have over a thousand occurrences respectively. Other pairs with relatively similar quantitative behaviour are *balchissage* (4,336) and *lanchissement* (5,028), *creusage* (3,015) and *creusement* (23,888), *emballage* (444,476) and *emballement* (20,949), *flambage* (2,380) and *flambement* (1,063), *groupage* (8,063) and *groupement* (221,325), *mordillage* (416) and *mordillement* (960) and *papillotage* (96) and *papillotement* (407).

From the foregoing, it could safely be argued that the nature of morphological competition between the English nominal suffixes *-ity* and *-ness* and the French nominal suffixes *-age* and *-ment* has been established. The mental grammars of both English and French recognize the possibility of a competition between similar grammatical and semantic suffixes. However, what could be argued here is that the e-language (language use in context) has the capacity to influence the behaviour of mental grammar. This is in line with the argument of Chomsky (1981) that with time, the e-language communicates with the brain of the ideal user of a given language, resulting in influence in the I-language (the mental grammar). It is the nature of the influence of the e-language over the I-language that results in the notion of morphological blocking.

Morphological Blocking

As earlier defined, the concept of morphological blocking is the non-occurrence of a morphologically derived word due to the existence of another morphologically derived word. This study is also interested in discussing the probability of morphological blocking between the English nominal suffixes *-ity* and *-ness* and the French nominal suffixes *-age* and *-ment*. While the English pairs, *legibility* and *legibleness* are morphologically and grammatically acceptable, only *legibility* is productive and found in the BNC as seen in Tables 1. Equally, while it can be argued that the French pair *rancissage* and *ranssissement* are morphologically and grammatically defensible, only *rancissement* is found in FW 23, the source of our data, and attested in the traditional French dictionaries. The scenario just painted is linguistically sufficient to prove that morphological blocking is real, both in English and in French.

There are other instances from our data where morphologically possible derived words in English and in French have been blocked. This can be seen as follows:

English

<i>legibility</i>	* <i>legibleness</i>
<i>intensity</i>	* <i>intenseness</i>
<i>probability</i>	* <i>probableness</i>
<i>vulnerability</i>	* <i>vulnerableness</i>
* <i>consciousity</i>	<i>consciousness</i>
* <i>hopelessness</i>	<i>hopelessness</i>
* <i>recklessness</i>	<i>recklessness</i>
* <i>seriousity</i>	<i>seriousness</i>
* <i>wholity</i>	<i>wholeness</i>

French

* <i>bouleversage</i>	<i>bouleversement</i>
<i>cuvelage</i>	* <i>cuvellement</i>
* <i>rancissage</i>	<i>rancissement</i>

Apart from *legibility* which seems to have been totally blocked the construction of *legibleness*, going by the source of our data. Our data also shows that *intensity* has blocked *intenseness*; *probability* has blocked *probableness*; and *vulnerability* has blocked *vulnerableness*. Similarly, *consciousness* has blocked the construction of *consciousity*; *helplessness* has blocked *helplessness*; *recklessness* has blocked *recklessness*; *seriousness* has blocked *seriousity* and *wholeness* has blocked *wholity*. Also in French, it is shown that *bouleversement* has completely blocked the formation of *bouleversage* and *rancissement* has blocked *rancissage*, just as *cuvelage* has successfully blocked *cuvellement*. All of the blocked formations have zero occurrences in both the BNC, for English, and FW 23, for French. It can be argued that the grammatically potential constructions that have been blocked is as a result of the popularity of the constructions that have blocked them. For instance, *helplessness* is so popular in the e-language that it has made it impossible for an ideal speaker of English to contemplate forming *helplessness* in the I-language. The same argument is valid for the French *bouleversement*. It has become so popular in the French e-language to an extent that it has prevented the I-language capacity of an ideal speaker of French from forming *bouleversage*.

Morphological Resistance

We posit that morphological resistance occurs when a potentially derivable word by a given affix refuses to be completely blocked by the popular existence of a derived word formed by a synonymous affix. Owoeye (2011), in passing, mentioned this morphological concept in his work on the French agentive *-eur* and its rivals *-ant* and *-iste*. Undoubtedly, the possibility of morphological competition between the nominal English suffixes *-ity* and *-ness* and those of the French *-age* and *-ment* is enough catalyst for the interplay of morphological resistance between each of the pairs.

Drawing from the selected data, while *consciousity*, *helplessness*, *recklessness*, *seriousity*, and *wholity* seem to have been permanently blocked from being constructed as a result of the popularity of *consciousness*, *helplessness*, *recklessness*, *seriousness*, and *wholeness*, just as *legibleness*, *intenseness*, *possibleness*, and *vulnerableness* seem to have blocked arising from the morphological popularity of *legibility*, *intensity*, *possibility* and *vulnerability*, evidence from few English dictionaries shows that the supposed blocked formations are actually attested. All of *legibleness*, *intenseness*, *probableness*, *vulnerableness*, and *seriousity* have zero occurrences in the BNC, the source of our data, but they are found attested in a few dictionaries as indicated below:

Legibleness: (often used interchangeable with *legibility*) refers to the quality of being easy to read or decipher, typically regarding handwriting or typography.
- Collins Dictionary

Intenseness: The quality or the state of being extreme, forceful, or deeply felt in degree, energy or emotion, often used interchangeably with intensity. – *Meriam Webster Dictionary*

Probableness: The state or quality, or condition of being probable. – *Wiktionary, the free Dictionary*

Vulnerableness: The quality or state of being exposed to the possibility of being harmed, either physically or emotionally. – *Collins Dictionary*

Seriosity: Quality of being serious. *Oxford Dictionary*

Though not as prominent as can be deduced from the English *-ity* and *-ness*, the case of morphological resistance can also be argued as it relates to the French pair of *-age* and *-ment*. As shown in the data, *bouleversage*, *rancissage* and *covellement* all have zero occurrences in the *FW 2023*, the source of our data. Out of these three, only *cuvellement* is found to have been attested in *Le Grand Robert* French dictionary. Other French dictionaries such as *Larousse* and even the *Trésor de la Langue Française informatisé* do not have it in them. *Le Grand Robert* defines *cuvellement* as *un revêtement destiné à rendre étanche ou à consolider un puits*, the same definition given to *covelage*. Nevertheless, the attestation of both *cuvelage* and *cuvellement* is enough to predict that morphological resistance is also possible with French morphology. Dal (2003) already posited that the discovery of just one derived word in a dictionary is enough to predict the possibility of having ideal speakers to produce similar derivations.

Conclusion

In this paper, three morphological variables of competition (rivalry), blocking and resistance were studied, using the English *-ity* and *-ness* and the French *-age* and *-ment* as morphological case study. The constructional morphology model of the lexeme-based morphological theory was used as framework. It was our conviction that the lexeme-based theory of morphology is in line with the argument of generative grammar. Raw data was sourced from the *BNC* for English and from *FW 2013* for French. While the *BNC* is a large corpus containing over 100 million words, the *FW 2023* is a larger corpus of precisely twenty-three billion, one hundred and ninety-one million, seven hundred and eighty-nine thousand, four hundred and sixty-nine (23,191,789,469) words. Twenty word pairs for each suffixal pair of constructed

words from *-ity/-ness* of English and another twenty of *-age/-ment* of French were randomly selected and subjected to occurrence check in the raw data.

Our findings show that morphological competition and blocking are real morphological concepts, as already established by other authors. Our findings also reveal morphological resistance between the selected pairs of English and French suffixes and, therefore, merit the attention of experts in the study of morphology, especially in the field of generative grammar. As far as we know, this is the first time the notion of morphological resistance has been studied using a large corpus dataset. We therefore suggest further studies in different languages so as to conveniently establish the concept of morphological resistance.

References

- Audring, J. (2022). Advances in morphological theory: Construction morphology and relational morphology. *Annual Review of Linguistics*, 8(1), 39–58
- Audring J. and Jackendoff, R. S (2025) *Construction Morphology and Relational Morphology*. Cambridge University Press.
- Anshen, F. and Aronoff, M.. (1981). Morphological productivity and phonological transparency. *Canadian Journal of Linguistics/Revue Canadienne de Linguistique* 26, 63–72.
<https://doi.org/10.1017/S0008413100023525>
- Arndt-Lappe, S. (2014). Analogy in suffix rivalry: The case of English *-ity* and *-ness*. *English Language and Linguistics*. 36 -51

- <https://doi.org/10.23668/psycharchives.5083>
- Arndt-Lappe and Bell (2012). Explaining English compound stress analogically. *15th International Morphology Meeting Vienna, February 9-12*
- Aronoff, M., (1976). Word formation in generative grammar. *Linguistic Inquiry*. Monograph One, The MIT Press.
- Aronoff, Mark. 1983. Potential words, actual words, productivity and frequency." *Preprints of the Plenary Session Papers of the XIIIth International Congress of Linguists*. Tokyo, 163–170.
- Aronoff, M., & Fudeman, K. (2010). *What is Morphology?* Blackwell Publishing
- Arndt-Lappe, S. (2014). Synchronic and diachronic analogy in suffix rivalry : The case of -ity and -ness. *English Language and Linguistics*, 18(03), 497-548.
<https://doi.org/10.3366/word.2023.0220>
- Bally, C. (1965). *Linguistique Générale et Linguistique française*. Francke. Talk held at the *15th International Morphology Meeting*, Vienna
- Bermúdez-Otero R. (2012). The architecture of grammar and the division of labour in exponence. *The Morphology and Phonology of Exponence*, 8-83
- Bauer, L., (2001). *Morphological Productivity*. Cambridge University Press.
- Bauer, L. and Renouf A. (2001) A corpus-based study of compounding in English. *Journal of English Linguistics* 29, 101–123.
<https://doi.org/10.58885/ijllis.v15i2.33er>
- Cambridge Dictionary. <https://dictionary.cambridge.org>
- Chandler S. (2017). The analogical modeling of linguistic categories. *Language and Cognition*, 9(1), 52–87. <https://doi.org/10.1017/langcog.2015.24>
- Chomsky A.N. (1957). *Syntactic Structures*. Mouton de Gruyter.
- Chomsky A.N. (1965). *Aspects of the Theory of Syntax*, MIT Press.
- Chomsky A. N. (1980). Rules and representations. *Behavioural and Brain Sciences* 3 (127), 1-61.
- Chomsky A.N. (1986). *Knowledge of Language*. Praeger.
- Collins Dictionary. www.collinsdictionary.com
- Crystal D. (1996). *Discover Grammar*. Longman
- Dal, G. (2003). Productivité morphologique : définitions et notions connexes. *Langue Française*, 140. 3-25.
- Dal, G., Hathout N., Lignon S., Namer F. & Tanguy L. (2018). Toile versus dictionnaires : Les nominalisations du français en -age et en -ment. In F. Neveu, B. Harmegnies, L. Hriba & S. Prévost (dir.), *Actes du 6^{ème} Congrès Mondial de Linguistique Française (CMLF)*, Mons, 9-13 juillet 2018. SHS Web of Conferences, vol. 46 (2018), EDP Sciences
- De Smet, H. (2020). What predicts productivity? Theory meets individuals. *Cognitive Linguistics*, 31(2), 251–278
<https://doi.org/10.1515/cog-2019-0026>
- Diewald, G. (2020). Paradigms lost – paradigms regained: Paradigms as hyper-constructions. In Sommerer, L. & Smirnova, E., eds., *Nodes and Networks in Diachronic Construction Grammar*. Amsterdam & Philadelphia: John Benjamins, pp. 278–315
<https://doi.org/10.1075/cal.27.08die>
- Fradin, B. (2014). Deverbal nominalization and the ‘means’ interpretation. Paper read at *International Morphology Meeting (IMM16)*, Budapest, May 29-June
- Hathout, N. (2009). *Contributions à la description de la structure morphologique du lexique et à l’approche extensive en morphologie*. Mémoire d’Habilitation à diriger des recherches. Université de Toulouse le Mirail.
- Hockett, C.F., (1954), Two models of grammatical description, *Word* 10, 210-234.
- Hoffmann, T. (2022). *Construction Grammar: The Structure of English*. Cambridge: Cambridge University Press.

- Kelling, C. (2003). The role of agentivity for suffix selection. In G. Booij, J. De Cesaris, A. Ralli & S. Scalise (Eds.), *Topics in Morphology. Selected Papers from MMM3*, (pp. 197-210). IULA_Universitat Pompeu Fabra.
- Kjellmer, G. (1984). Why great/greatly but not big/*bigly? On the formation of English adverbs in -ly. *StudiaLinguistica*, 38, 1–19.
- Kjellmer, G.. (2001). Why weaken but not *strongen? On deadjectival verbs. *English Studies*, 2, 154–171. <https://doi.org/10.1076/enst.82.2.154.9600>
- Kotowski, S. (2020). The semantics of English out-prefixation: A corpus-based investigation. *English Language and Linguistics*, 25(1), 61–89
- Lapraye, A. (2017). *Une approche statistique de la concurrence entre procédés constructionnels : la dérivation en -age et en -ment en français*. Master's thesis, Université Paris-Diderot.
- Larousse French Disctionary. <https://www.larousse.com/>
- Marchard, H. (1969). *The Categories and Types of English Formation*. Verlag C. H. Beck. Second edition
- Matthews, P.H., (1974), *Morphology. An Introduction to the Theory of Word-Structure*, Cambridge University Press
- Meinschäfer, J. (2016). Nominalization. In S. Fischer & C. Gabriel (Eds.), *Manual of Grammatical Interfaces in Romance Linguistics* (pp. 391-517). de Gruyter.
- Missud A. and Villoing F. (2020). The morphology of rival –ion, -age and –ment selected verbal bases. *Revue en Science du Langage*, 26, 29-52 <https://doi.org/10.54563/lexique.755>
- Owoeye S.T. (2011). La suffixation agentive et le blocage affixal : le cas du suffixe –eur et ses concurrents morphologiques. *Synegies: Afrique Central de L'Ouest* (4), 77 -85
- Owoeye S. T. 2013). La structure profonde et la modélisation des règles de construction de lexèmes: l'exemple de cinq suffixes agentifs du français. *Linguistik Online*, 60.
- Oxford English Dictionary. <https://www.oed.com/>
- Plag I. (1999). *Morphological Productivity. Structural Constraints in English Derivation*. Mouton de Gruyter.
- Plag, I., (2003). *Word-Formation in English*. Cambridge University Press.
- Plag I. (2004). Syntactic category information and the semantics of derivational morphological rule. *Folia Linguistica*, 38, 193-226
- Rainer, F., (1988). Towards a theory of locking: the case of Italian and German quality nouns. In G. Booij, & J. van Marle (Eds), *Yearbook of Morphology* (pp. 155 – 186). De Gruyter Mouton,
- Roché, M & Plénat, M. (2014). Le jeu des contraintes dans la sélection du thème présuffixal. In F. Neveu, P. Blumenthal, L. Hriba, A. Gerstenberg, J. Meinschaefer & S. Prévost (eds), *Actes du 4^{ème} Congrès Mondial de Linguistique Française*. Berlin, Allemagne, 19-23 juillet 2014, (pp. 1863–1878). SHS Web of Conferences, vol. 8 (2014), EDP Sciences.
- Säily, T. (2011). *Productivity of the suffixes -ness and -ity in 17th-century english letters: a sociolinguistic approach*. <https://core.ac.uk/download/pdf/14914879.pdf>
- Skousen, R., & Stanford, T. (2007). Am: Parallel. Provo, UT: Brigham Young University.
- Uth, M. (2012). L'évolution diachronique des suffixes -ment et -(ai)son et la question de la correspondance vernaculaire de -(a)tion. In F. Neveu, V. Muni Toke, P. Blumenthal, T. Klingler, P. Ligas, S. Prévost and S. Teston-Bonnard (eds.) *Actes du 3^{ème} Congrès Mondial de Linguistique Française (CMLF)*, Lyon, 4-7 juillet 2012 (pp. 1407-1423). SHS Web of Conferences, vol. 1 (2012), EDP Sciences.
- Villoing F and Gueye A. (2024). La nominalisation néologique en -ment du français : structures morphologiques des bases verbales, *SHS Web of Conferences* 191(3), 1-16 <https://doi.org/10.1051/shsconf/202419108005>
- Webster Dictionary. Merriam-Webster: America's Most Trusted Dictionary
- Wiktionary the free Dictionary. <https://en.wiktionary.org/>