Review of *English nouns: The ecology of nominalization* Rochelle Lieber. Cambridge: Cambridge University Press, 2018. 207 pp. ISBN: 9871316613870

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Despite its title, *English nouns*: *The ecology of nominalization* bears no connection to the branch of linguistics called *ecolinguistics*[1]. Lieber speaks of *derivational ecosystem* metaphorically as the vehicle that allows seeing the potential of nominalizations. In the introduction, she clarifies that the focus of her discussion is on the intricacies of polysemy displayed in nominalizations, together with the tangled interrelationships among their types and the malleability of their readings. Theoretically speaking, Lieber's proposal models within the *Lexical Semantic Framework* (LSF).

In Part I ("Preliminaries": 1-2) Lieber puts the reader into perspective of the mainstream approaches to the treatment of English nominalisations among morphologists and syntacticians and the current state of affairs. In Chapter I ("Introduction": 3-14), Lieber acknowledges that English nominalizations have been an issue of extensive discussion for syntacticians and morphologists within the generative tradition (cf. Lees, 1960; Chomsky, 1970; Grimshaw, 1990; Booij & Lieber, 2004; Melloni, 2011; Borer, 2013). In spite of their interest, both syntacticians and morphologists have always focused on the same issues concerning the relationships between the sentence and the noun phrase in which nominalization occurs; or the form of the derived noun, respectively. In addition, there has been no work taking the full range of nominalizations in consideration until Bauer, Lieber & Plag (2013), although its largely descriptive character does not provide a new theoretical approach. For that reason, the main goal of the monograph is to contribute to the current state of affairs. Lieber (2016) focuses on the potential polysemy of the full range of nominalizations, and provides an explanation supported by a theoretical basis and empirical data.

In chapter II ("Terminology and Methodology"; 15-25) section 2.1 accounts for the distinction required to name not only the forms of nouns and their verbal bases, but also the syntactic contexts and the types of compounds in which we find nominalizations. Lieber also considers the terminology used elsewhere and how it aligns with the one in her current work. Regarding the presence or absence of derivation as mark of nominalizations, nouns can be divided into *complex* and *simplex*.

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[1] That is, the branch of linguistics based on the observation that "[...] searching for truth and critical consciousness, is a value of scientific behaviour", and that "[s]earching for truth is the only morally acceptable behaviour for a scientist" (Finke, 2013).

With respect to the formal operation by which nouns have been derived, Lieber focuses on E/R nominalizers and redefines them. In other words, nominalizations which allow the so-called *eventive* and *result* readings and her redefinition as *eventive* and *referential* explained below. Following Borer (2013), she distinguishes between *-ing* nominalizations and *ATK* affixes, that is, affixes other than *-ing*, such as *-ation, -ment, -al, -ure, -ty*, and *-ance*. She also focuses on derivation without overt affixation, referred to as conversion.

Lieber's next categorisation of nominalizations depends on semantics, for which she uses the term *readings*. However, the presumption that they can be classified in fixed general rubrics is a recognised matter of disagreement. She acknowledges that

> the rough semantic rubrics that I have set out earlier are only a first approximation of the lexical semantic behaviour of nominal forms. One of the goals of this book is to show that most nominalizations can have a number of different readings or interpretations depending on the syntactic configuration in which they are found, so it will be useful to have terms to use for various readings that nominal can take on (p. 17).

For the sake of convenience, she assigns the cover terms *E* and *R* to *eventive* and *referential* readings. *E readings* encompass events, processes and states regardless the notions *complex* and *simple* (Grimshaw 1990). However, following Bauer *et al.* (2013), Lieber uses the term *R reading* for the non-eventive ones. As for the terminology used to name the elements in the syntactic configuration of nominalizations, the notion of *argument* is employed as basis to designate the conceptually needed participants. Her distinction between *external* and *internal* arguments refers to subject and object. Both arguments can be operationalized by possessives (Subj- Poss/ Obj-Poss) with *-ing* nominalisations or by Prepositional phrases (by-PP/of-PP). Moreover, she considers the active and passive configurations, leaving aside movement within the DP; and the inclusion of diagnostics, for their categorisation see Grimshaw (1990: 50-59). Regarding the terminology for verbs, Lieber outlines the common dichotomies transitive/ intransitive and unaccusative/ unergative; she also mentions the classification of aspectual verbs[2] Vendler (1967).

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[2] The classification of aspectual verbs in E/R nominals into *states, activities, achievements* and *accomplishments* used by Vendler (1967) will be furtherly discussed in chapter 5.

Lieber's last proposal is to resolve the ongoing disagreement concerning the classification of English compounds into *argumental* and *non-argumental*[3] compounds Bauer *et al.*, (2013).

Section 2.2 focuses on the methodology used for the selection of sources of data, extraction process and system of citation. This methodology constitutes one of the groundbreaking aspects of this volume and Lieber's work. She clarifies her logic as follows

> My policy in this work has therefore been the one justified in Bauer et al. 2013, chapter 3) to be as non-judgmental and non-prescriptive as possible. Specifically, I have chosen not to rely on intuition, either positive or negative, but to take attestation in a corpus as a marker of acceptability (p. 28).

Lieber's basic source of data is COCA (Davies, 2008-), with occasional use of COHA[4] and Google.

In part II ("Data": 3-4) Lieber examines the previous claims made of *E/R nominalizations* and introduces her new metaphorical concept of 'derivational ecosystem'. In chapter 3 ("Event/Result nominalizations": 31-55) she examines two seminal works in the literature of English nominalizations, *Remarks on Nominalizations* (Chomsky, 1970), and *Argument Structure* (Grimshaw, 1990). The issues concerning the ungrammaticality of nominalizations from Grimshaw (1990) are the basis for Lieber's review of previous literature of *E/R nominalizations*.

Lieber poses nineteen questions to explore the controversial areas concerning the form and interpretation of *E/R nominalizations* based on corpora attestation. In the light of the results, the need of new theoretical proposals is evident. Many of the previous claims are contradicted by corpus evidence. Regarding available readings, although simplex nouns are generally *referential*, in some cases they can express *eventive readings*. Furthermore, all types of nominalizations she accounts for *-ing*, *ATK*, and conversion can express both readings. The malleability of affixation is also extended to its syntactic context. Complex nominali-

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[3] *Argumental* compounds comprise the traditional synthetic compounds (*truck driver*) plus non-affixal (de)verbal compounds (NDVCs) (*dog attack*), already introduced in previous work (Lieber 2010, 2016) Non-argumental compounds correspond to root and coordinative compounds (*dog bed*, *writer-producer*).

[4] The *Corpus of Historical American English*, a 450 million words corpus of American English of written text from 1810 to 2000 and balanced for genre.

zations allow active and passive configurations and event diagnostics, with full argument structure. By contrast, possessive or prepositional phrases are not compulsory. As to verb types, some claims also need to be revisited. Corpus attestation argues for the occurrence of complex nominals with all four of Vendler's classes *unaccusatives*, *unergative*, and *causative/inchoative*, but against restrictions on the thematic interpretation of the possessor in DPs containing nominalizations. In addition, pluralizations, indefinite articles and predicative contexts are perfectly possible.

Chapter 4 ("Nominalizations as a Derivational Ecosystem": 56-89) begins with Lieber's central conviction that the correlation between form and interpretation is far from one-to-one. Rooted in this notion of malleability in interpretation, Lieber proposes the metaphor of *derivational ecosystem*, which precursors such as the notion of "value" (de Saussure, 1916), and *Semantic Field Theory*. She establishes a parallelism between *morphological types* and *organisms*; and between *readings* and *habitats*. Considering morphological types interdependent, that productive affixes may exploit more than one *semantic niche* is a matter of fact. As a way of illustration, Lieber selects the affix *-ism*, which is itself polysemous. However, it is the primary and only means of expressing the reading *systems of belief*. Consequently, overlapping between readings is possible.

Lieber makes a brief digression to the study of *-er* nominalizations leaving aside the *eventive reading*. In order to support this claim, Lieber partly follows Alexandiou and Schäfer (2010) in the distinction they made between dispositional and episodic readings, of *-er* nominalizations with a complement (*a teacher of history*). They argue that eventivity is not involved in this dichotomy. By contrast, Lieber expresses uncertainty about the correlation they establish between (non)dispositional readings and the syntactic context of the nominalization. In terms of meaning, section 4.3 concentrates on *inanimate patient nouns*. In spite of the lack of primary means of derivation for this reading, there is a wide range of morphological types that can express this nuance of meaning, such as conversion or productive affixes *-ation*, *-ing*. Lieber provides the reader with a full set of data of the affixes with potentiality for the expression of *inanimate patient reading* and she arrives at the following conclusions.

Firstly, morphological types usually attached to *E/R nominalizations* can express an inanimate patient noun, depending to a certain extent on the nature of the verbal base.

Secondly, she argues that the *inanimate patient reading* is also available for not recognized morphological types such as the affixes *-ives* and *-ables*. However, some claims consider them as cases of what adjective-to-noun conversion Bauer *et al.* (2013). Lieber abandons this conviction after the examination of data from COCA. Surprisingly, both affixes do not show the same behaviour, *-ables* is not found in a full range of nominal environments. Moreover, the calculation of Bayen's measure of productivity, P based on the ratio of hapaxes in COHA gives evidence of its high productivity. Therefore, Lieber suggests that *-ables* is becoming an English nominalizing affix with a modal nuance of potentiality.

Part III ("Nominalization in LSF" 5-8) is Lieber's attempt to give a theoretical framework for semantic lability. Chapter 5 ("A Lexical Semantic Approach to Nominalization. The Basics": 93-104) paves the way to a closer analysis of *E/R nominalizations* by a recapitulation and modification of Lieber's *Lexical Semantic Framework* (Lieber, 2004, 2006, 2009, 2010, 2016). Broadly speaking, *LSF* is a system of lexical semantic representation of simple lexemes, affixes and their mechanisms of integration. It is composed by the semantic/grammatical skeleton and the semantic/pragmatic body. The former comprises the semantic features syntactically relevant[5], that is defining functions that can take arguments. Both are components of the affixes and lexical bases skeletons. Lieber modifies her original analysis of the personal/participants suffix *-ee* by adding the feature [+animate] to account for the animacy of the referents. The latter encompasses unsystematic encyclopedic information of a morpheme, and more systematic, syntactically relevant features such as *volitional* or *sentient.* Moreover, Lieber sketches the analysis of nominalisations that will allow us to distinguish between *E/R readings*. The basic schemes for *E/R readings* are the following [α material, β dynamic (<base>)], [α material, β dynamic ([R]<base>)]. Two main differences with respect to Lieber (2004) can be already perceived. Firstly, the insertion of the Greek letters variables α and β as indications of lexical underspecification. Lieber proposes its

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[5] For an outline of those semantic features see Lieber (2009: 80).

resolution by *Feature Value Matching*, that is, copying the unspecified value to the outer feature if it occurs in one of its arguments (Lieber, 2016: 102). Secondly, the sketch analysis of *E readings* provided above is partly based on Melloni (2011). However, Lieber rejects completely the use of Davidsonian event argument. Instead, she advocates for the lack of R argument entirely in E readings.

In chapter 6 ("The Eventive Reading": 105-116) Lieber focuses on the *E* interpretation of *-ing*, *ATK*, conversion nominalizers, and *simplex* nouns. Her aim is to demonstrate how the *LSF* can account for all the syntactic contexts in which *eventive readings* can arise. *ATK* and *-ing* nominalizations show the same pattern of behaviour. In DPs such as *the neighbor's contruction of the garage*; or *the General's killing of the prisoner*, the *LSF* accounts for their *eventive reading* in active or passive configurations without structural changes. Movement of affixes is not required. Lieber argues that there are no contextual limitations for the *LSF* resolution of the skeletal underspecifications to arrive at an eventive reading. Both *-ing* and *ATK* nominalizations allow *Feature Value Matching* to act with or without full argument structure, or event diagnostics. There are no restrictions either in number or selection of determiner. However, conversion due to its traditional parallelism to zero affixation, requires a clarification. According to Lieber, the idea of zero affixation should not be considered for *E* interpretations because conversion nouns are not tied to that structural analysis. The semantics of the converted noun are dependent on the one of the verbs, but without structural changes involved. By contrast, *simplex* nouns are regarded as weakly eventive. They show a different pattern of behaviour, examples cannot be found in active configurations. Moreover, simplex nouns do not have embedded verbal skeletons or participant arguments to become indexed. The main claim of the chapter is the capability of *LSF* to arrive at different semantic interpretations, including eventive ones, without recourse to distinct syntactic and movement rules.

In chapter 7 ("Referential readings": 117-152), Lieber examines the full range of referential readings *result, product, agent, instrument, experiencer, patient, locatives, collectives, abstracts*, and miscellaneous nominalizations. Lieber analyses the above reading expressed by *-ing*, *ATK* and conversion as an interdependent whole. In that way, she accounts for their degree of polysemy and overlapping already explained in chapter 3. Lieber begins her chapter by providing a sketch of the

basic skeleton all referential readings will provide no matter their morphological type, [α material, (β dynamic) ([R], <base>)]. As for *Eventive readings*, *Feature Value Matching*, *Contextual Coercion* and the *Principle of Coindexication* also resolve lexical underspecifications in their skeletons. By contrast, referential readings also need to meet the selectional requirements the [R] imposes. After examining *-ing*, *ATK* and conversion nominalizations, four macro referential readings may arise in context: *result*, *product/inanimate patient*, *agent/instrument* and *location*. Although all referential readings have the same skeleton as their starting point, *LSF* resolves underspecification. Readings are fixed by context and encyclopedic knowledge. In case of semantic incompatibility between the arguments of the verb and the affix, elaboration of the verbal base is required. Lieber introduces what she calls 'semantic doubling' to compensate for the absence of an explicit referent in context. By creating a doubling of the verbal object, that is *nonanimate*, in cases such as *construction* or *administration* indexing can take place. *ATK* non-lexicalised nominalizations with of phrases may also take a referential reading. She also adds the feature [LOC] to the skeleton of verbal bases to ease indexing in locational readings.

However, the construal of *personal/participant* nouns is much more straightforward because they show the basic skeleton for referential readings with lesser degree of underspecification. Lieber makes some remarks about the potential polysemy of some nominalizers expressing fewer common readings. For instance, she focuses on the nominalizers *-er* and *-ist* and their uses as inhabitant affixes (*Londoner*, *saloonist*); or *inanimate patients*. Lieber rejects the idea of paradigmatic pressure to justify affixal polysemy, and argues once more in favour of the resolution of lexical underspecification. With respect to abstract nouns, Lieber contemplates the possibility of two semantically equivalent sets of affixes, *-ness/ -ity* and *-dom/ -hood/ -ship* on the basis of corpus evidence. This assumption contradicts previous work (Riddle, 1985; Trips, 2009; Baeskow, 2010), which regard semantic doublets and triplets as impossible, even if for Lieber they are the norm.

By contrast, collective nominalizations such as *-ery* and *-age* require a review of her own proposal and a modification of their skeleton. As a result of the addition of two quantity features, the skeleton for collectives is the following [α material, (β dynamic), +B, +CI ([ ], <base>)]. B stands for "limited spatially and temporarily" and CI "the referent

can be separated in similar units". Lieber argues that although both af-
fixes tend to have behaviour or E/R readings, location readings can also
appear. This last point leads her discussion towards the rejection of lo-
cation readings as an extension of collectives. Bearing in mind the core
metaphor or the book, she designates location readings as an *underpop-
ulated habitat* with no primary means of derivation. In that way, Lieber
advocates that location reading arises through constructional polysemy
and resolution of spatial inferences if the affix is noun forming and the
base allows the inference required. Chapter 7 ends with the clarification
of an area of derivational semantics that is not covered by the *LSF*,
modality. The analysis Lieber carries out reveals a great extent of af-
fixal variability expressing some kind of modal nuance. Consequently,
modality cannot be expressed by ontological features. Therefore, she
assumes that modality should be treated as part of meaning or encyclo-
pedic knowledge and left out of the skeleton.

   Chapter 8 ("Nominalization and Compounding in LSF": 153-178)
focuses on the behaviour of complex nouns in *argumental compounds*
Bauer *et al.* (2013). This term encompasses traditional synthetic com-
pounds and the ones involving conversion (NDVC). Lieber begins with
an examination of the main claims made about synthetic compounds.
After a revision of their patters of acceptability and on the basis of cor-
pora attestation, Lieber contradicts most of them. Data from COCA
gives extensive proof of how subject interpretations are possible except
from the ones derived by the personal suffix *-er*. Consequently, the *First
Sister Principle* should be rejected. In addition, *argumental compounds*
do not present any restriction or event diagnostics and pluralization.
All kinds of verbs can be found in compounds, and (non)dispositional
readings can occur with *-er* nominals. Lieber also demonstrates how the
LSF is able to account for the above generalizations over a wide range
of synthetic and *NDVCs*. The basis of their lexical semantic representa-
tion is the concatenation of bases by the *Principle of Coindexication*. As
predicted, their interpretation is completed by encyclopedic knowledge
and context. It is also important to bear in mind the distinction between
argumental and *non-argumental* compounds. The former has been al-
ready clarified above, and the latter refers to the traditional *coordinative*
and *attributive* compounds. Lieber argues that referential integration
and interpretation of *non-argumental* compounds are more straightfor-
ward because of their unified referent. More specifically, she asserts

that *argumental* compounds whose heads are personal in *-er, -ee, -ing* or *ATK* nominalizations can express *E* and *R* readings. Lieber uses unproblematic cases such as *truck driver* to exemplify the general pattern of referential integration in compounds. The argument of the affix is primarily coindexed with the first argument of the verb base. Later left base incorporation involves coindexing with the second argument of the verb base. As a result, the following basic semantic representation for *argumental* compounds such as *truck driver* arises

[+ material, ([R- nonanimated, <artifact>-j)])], [+ material, +dynamic ([R- anim-i)], [dynamic ([anim-i],])])].

As the skeleton shows, the *Principle of Coindexication* gives preference to indexing to an unindexed argument. However, Lieber's proposal also proposes an alternative or sort of doubling, for semantic incompatibilities of ATK synthetic compounds to express *E* and *R* readings with object and subject interpretations. For the sake of indexing examples such as or *airport construction*, which suggest result reading should be represented as follows: *airport construction* [+ material ([nonanimated-i])], [+ material, +dynamic ([i], [dynamic ([anim], [nonaminate-i])])].

Lieber also treats the extent to which conversion nouns in *argumental* compounds behave the same way as compounds derived by means of an overt affix. However, their analysis poses no questions for the *LSF*. The skeletons of *NDVCs* such as *Israeli claim* or *sovereignty claim* are sketched as the one of synthetic compounds. Even if the first element of the compound is (de)verbal, the same mechanisms are followed together with addition of operational features such as <orginator> or <sentient> for *coindexication* to take place. In spite of the wide scope of compounding covered by Lieber, she ends chapter 8 by recognising a couple of loose ends that still need further research. Firstly, after the rejection of the First Sister Principle, she does not clarify if putatively ungrammatical examples such as **tree-eating of pasta* should be expected and their potential analysis. Secondly, the reasons for the tendency of synthetic compounds towards dispositional readings even if *E reading* is also possible.

English nouns. The Ecology of nominalization concludes with chapter 9 ("Nouns in the Wild": 179-185), a recapitulation of its main claims. As its title reveals, Lieber asserts that we can only be aware of the complexity of nominal meaning within context. Therefore, corpora should

be used as methodological tool. Bearing in mind her notion of meaning as "meaning potential" (Hanks, 2013), Lieber proposes *LSF* as filler of the lexically underspecified skeletons. In other words, the "coming into being of meaning" (Lieber, 2016: 183) of affixes and bases requires its resolution. Lieber asserts that the ultimate goal of her work is modelling how nominal polysemy arises in a many-to-many relationship between form and meaning using the ecological metaphor and the *LSF* as basis.

The monograph shows a perfect balance between theoretical basis and empirical data as support. In that respect, corpora attestation is the fundamental source for reliability and replicability. This approach also demonstrates the author's critical point of view towards previous treatment of nominalizations within generativism. Through a question-and-answer format, Lieber revisits and counteracts to previous claims using corpora attestation. This method is pioneering among generativists. In addition, the volume is consistent with her previous work and continues with her theoretical proposal of *LSF*. Lieber widens her theory and includes new functions such as *Feature Value Matching* or *Contextual Coercion*. This modification on her own proposal definitely deepens and gathers up the loose ends that may have appeared either in her previous analyses, or in the audience complete comprehension of her approach. This groundbreaking book is free of typographical errors. In addition to an extensive list of references, it includes an index and separate lists of figures and tables to ease and enrich the reading.

Lieber's standpoint should not only be reduced to the pioneer character of her approach and methodology, as the systematicity and precision of her discussions are remarkably expository. The inclusion of descriptive chapters at the beginning, e.g. the one on terminology and methodology, helps the reader with the first steps of their reading and offers a global idea of the aim and the scope of the book. Regarding prospective readers, this monograph is recommended for both advanced researchers and for postgraduate students still defining their fields of research. The former will benefit from the highly specialized, systematic and in-depth analysis of nominalizations within the framework of lexical semantics. The latter will find value not only in the introductory chapters, reviews on previous literature on nominalizations, and Lieber's discussions of her proposal, but also in how previously ambiguous aspects of nominalizations are highlighted and clarified. Lieber poses potential research questions into this dawning approach. In spite of its highly-structured

presentation, this may not be the most methodologically appropriate reference to use as a textbook for undergraduates due to its degree of specificity and lack of practical activities. Even so, the monograph includes a subject index, and therefore it may be suitably included as a recommended further reading in undergraduate courses.

In view of the above, *The Ecology of Nominalization* can definitely shed new light on an undiscovered territory for researchers interested in new perspectives of English derivational morphology and semantics.

References

Alexiadou, Artemis & Schäfer, Florian. 2010. On the syntax of episodic vs. dispositional -er nominals. In Alexiadou, Artemis & Rathert, Monika (ed.) *Syntax of Nominalizations Across Languages and Frameworks*. Berlin: Walter de Gruyter, 9-38.

Baeskow, Heike. 2010. His Lordship's -*ship* and the King of Golfom. Against a purely functional analysis of suffixhood. *Word Structure* 3(1): 11-30.

Bauer, Laurie; Lieber, Rochelle & Plag, Ingo. 2013. *The Oxford Reference Guide to English Morphology*. Oxford: Oxford University Press. doi: 10.1093/acprof:oso/9780198747062.001.0001

Booij, Geert E. & Lieber, Rochelle. 2004. On the paradigmatic nature of affixal semantics in English and Dutch. *Linguistics* 42(2): 327-353.

Borer, Hagit. 2013. *Taking Form*. Oxford: Oxford University Press. doi: https:/ doi.org/10.1017/S002222671400010

Chomsky, Noam. 1970. Remarks on nominalization. In Jacobs, Roderick A. & Rosenbaum, Peter S. (ed.) *Readings in English Transformational Grammar*. Waltham: Ginn, 184-221.

Davies, Mark. 2008. *The Corpus of Contemporary American English*. http:// corpus.byu.edu/coca. doi: http://dx.doi.org/10.5788/23-1-1233

De Saussure, Ferdinand. 1916. *Cours de linguistique générale*. Lausanne / Paris: Payot.

Finke, Peter. 2013. The ecology of science and its consequences for the ecology of language science. *Language Sciences* 41: 71-82.

Grimshaw, Jane. 1990. *Argument Structure*. Cambridge: MIT Press.

Hanks, Patrick. 2013. *Lexical Analysis*. Cambridge: MIT Press.

Lees, Robert. 1960. *The Grammar of English Nominalizations*. Bloomington: Indiana University Press.

Lieber, Rochelle. 2004. *Morphology and Lexical Semantics*. Cambridge: Cambridge University Press.

Lieber, Rochelle. 2006. The category of roots and the roots of categories. *Morphology* 16(2): 247-272.

Lieber, Rochelle. 2009. A lexical semantic approach to compounding. In Lieber, Rochelle & Štekauer, Pavol (ed.) *The Oxford Handbook of Compounding*. Oxford: Oxford University Press, 74-104.

Lieber, Rochelle. 2010. Toward an OT morphosemantics; The case of -*hood*, -*dom*, and -*ship*. In Olsen, S. (ed.) *New Impulses in Word Formation*. Linguistische Berichte *Sonderheft* 17: 61-80.

Lieber, Rochelle. 2016. The lexical semantic approach to compounding. In ten Hacken, Pius (ed.) *The Semantics of Compounding*. Cambridge: Cambridge University Press, 38-53. doi: https://doi.org/10.1093/oxfordhb/9780199695720.013.0005

Melloni, Chiara. 2011. *Event and Result Nominals: A Morpho-Semantic Approach*. Bern: Peter Lang. doi: 10.3726/987-3-0351-0335-9

Riddle, Elisabeth. 1985. A historical perspective on the productivity of the suffixes -*ness* and -*ity*. In Fisiak, Jacek (ed.) *Historical Semantics. Historical Word-formation.* New York: Mouton de Gruyter, 435-461.

Steffensen, Sune V. & Fill, Alwin. 2014. Ecolinguistics: The state of the art and future horizons. *Language Sciences* 41: 6-25. doi: 10.1016/j.langsci.2013.08.003

Trips, Carola. 2009. *Lexical Semantics and Diachronic Morphology: The Development of* -hood*, *-dom*, and *-ship *in the History of English*. Tübingen: Niemeyer.

Vendler, Zeno. 1967. *Linguistics in Philosophy*. Ithaca: Cornell University Press.