

Morphological and syntactic processes of Noun to Adjective change: the case of Dutch *luxe*

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Outline

- ▶ Introduction
- ▶ Data description: case study Dutch *luxe* 'luxury; luxurious'
- ▶ Data discussion: conversion or syntactic transposition?
- ▶ Conclusions

1. Introduction

Introduction (1)

- ❑ Word classes (or lexical categories) -traditionally called 'parts of speech'- have been the matter of discussion for many centuries (among others, Vogel & Comrie 2000, Baker 2003, Panagiotidis 2014, Simone & Masini 2014).
- ❑ However, there are three problems regarding word classes (Ramat 1999, Haspelmath 2001):
 - Word classes tend to be rather heterogeneous, if not problematic, categories, and sometimes intersect (Denison 2001, Aarts 2007).
 - The different classes do not have equal weight; for example, while most languages have hundreds of verbs and thousands of nouns, there are far fewer pronouns and conjunctions.
 - Some scholars cast doubt on the view that cross-linguistic categories exist and argue that categories represent language-particular generalizations.
- ❑ In this paper, we focus on the first problem, i.e. division of word classes, and possible shifts from one class to another in the diachrony of languages.

Introduction (2)

- ❑ We examine the shift from the category of nouns (N) to the category of adjectives (A) by focusing on the Dutch lexical item *luxe* 'luxury; luxurious'.
- ❑ The close grammatical relation between these two classes has been already observed in the recent literature (see Nikolaeva 2008, Lauwers 2014 and the references therein).
- ❑ The second problem that we are trying to answer is how we can account for this type of change.
 - A number of accounts have been proposed in the literature.
 - We examine the relation between (syntactic) transposition, conversion and compare these processes with (classic) derivation by affixation.

Recategorization processes

□ Terminology:

- Conversion: ‘the process in which we make a word into another part of speech without any modification or addition, except of course the necessary change of inflection’ (Sweet 1960: 38)
 - For Dutch, it has been claimed that there is no conversion of nouns or verbs into adjectives and “that there is only conversion into verbs and nouns” (Booij 2002: 137).
- Transposition: ‘the use of a word in another than its normal function’ (Marchand 1967: 325-326), such as *government* in *government job*.

Conversion vs Transposition

Conversion	Syntactic transposition
Irreversible	Reversible
Full re-categorization: the new element adopts the grammatical characteristics of the new category (inflection, sub/categorization framework etc.)- context does not play a role	Functional change depending on the context
Syntactic behavior of the new category	Partial adoption of the new syntactic behavior
The new element is to be found in the syntactic contexts typical of the new category.	The new element is to be found in some of the syntactic contexts typical of the new category.
Restrictions on the process	Very productive (almost without restrictions?)
Instantaneous	Instantaneous but could lead to gradual context expansion

2. Data description

Case study: Dutch *luxe* 'luxury; luxurious'

2.1 State of the art

De Vries (1920)

“Abstractie uit verbindingen die slechts in sommige kringen is doorgedrongen heb ik in de stad Groningen kunnen constateren bij *luxe*. Wellicht openbaart ze zich reeds in de **spelling** – ook in advertenties – **luxe artikelen, luxe buitenverblijven** (in een artikel over een oeconomisch onderwerp) en dgl., maar in elk geval in het door mij uit den mond van personen uit geringen stand opgevangen **luukser** ‘luxueuser’.” (De Vries s.d., 11)

Van Dale (2015)

lux /lyks/ bn., -er, meest - • 'luxe
lux /lyks/ de $\text{\textcircled{v}}$ m onv. • eenheid van verlichtingssterkte (afk. lx): een oppervlakte heeft een verlichtingssterkte van 1 lux, als er per m² een lichtstroom van 1 lumen op valt • 1658, Lat. [licht] ~ Du. leuchten
Lux. Luxemburg
LUX in BE Luxemburg (provincie)
lux aeterna /lyksetgrna/ de $\text{\textcircled{v}}$ m g.mv. • rel. eeuwig licht • Lat.
luxaflex^{MERK} de $\text{\textcircled{m}}$ g.mv. • zonwering binnenshuis met lamellen
luxatie de $\text{\textcircled{v}}$ 1 anat. ontwrichting; – ook als tweede lid in samenst. als de volgende, waarin het eerste lid een gewricht of een lichaamsdeel in de nabijheid daarvan noemt: *heupluxatie, kaakluxatie, kuitluxatie* 2 verplaatsing van de oog lens uit haar kapsel • 1720 ◁ Lat. *luxatio*, van *luxare* [ontwrichten]
lux bn., -r, meest - • luxueus, weelderig, var. *lux*: *lux*e dingen kopen, *luxer* gaan leven; een *lux(e)* leventje leiden; – ook als eerste lid in samenst. als de volgende, ter aanduiding dat het in het tweede lid genoemde (niet zo zeer nuttig als wel) luxueus is: *luxebakkerij, luxeboot, luxebus, luxedoos, luxehond, luxehotel, luxehut, luxejacht, luxeschip, luxetrein, luxe-uitgave, luxe-uitvoering, luxevilla, luxevoorwerp*
luxe de $\text{\textcircled{m}}$ g.mv. 1 weelde, overvloed: *luxe en comfort; zich de luxe van iets niet kunnen veroorloven; zich de luxe permitteren niet meer fulltime te werken*; uitdr.; litot. *dat is geen luxe*, ook enigszins pleonastisch *dat is geen overbodige luxe* dat is dringend gewenst, hard nodig 2 weelderige inrichting, geheel van weelderige installaties • 1785, Fr.

2.2 Method

► Synchronic corpus study:

- NLCOW2014AX (Schäfer & Bildhauer 2012; Schäfer 2015)
 - 4,7 gigatoken Dutch webcorpus
 - primarily Netherlandic Dutch
- 600 random hits of *lux**: noun, adjective, adverb, compounds
- Distinction between attributive use and compound based on spelling
- Spelling variants *lux* and *luuks* not taken into account (very infrequent)

<i>lux</i>	n
N (free)	196 [32,67%]
N (compound)	38 [6,33%]
Adj	337 [56,17%]
Adv	24 [4,00%]
Ambiguous	5 [0,83%]
Totals	600

2.3 The categorial status of *luxē*

- ▶ Complete N>A category change?
 - Does *luxē* display all the *syntactic properties* of an adjective?
 - Does the adjectival use of *luxē* conform to the *morphological profile* of an adjective?
 - Is its *distributional profile* (combinatorial properties, productivity and syntactic distribution) similar to the one displayed by its synonym *luxueus*?

2.3.1 Syntactic profile

▶ **Attributive use:**

- *Hihi ... maar het is wel een **luxe probleem** geweest toch?*
- *Welkom bij ons **luxe 6 - persoons vakantie huis** met 3 bad en 3 slaapkamers (...)*
- *(...) Royale woning - Inpandige garage - **Zeer luxe en vernieuwd sanitair** – (...)*
- *We hebben ook een vier uur onbeperkt arrangement met alleen consumpties en 2 maal een warm hapje en 2 maal een **luxe koud hapje** .*

▶ **Predicative use:**

- *De onderkomens zijn **stijlvol en luxe***
- *Daarentegen mogen de woningen ook weer niet **te luxe** zijn (...)*

▶ **Adverbial use:**

- *Ze is **luxe afgewerkt** en van alle gemakken voorzien , zo beschikken alle slaapkamers over airconditioning .*
- *Vanochtend heerlijk **luxe ontbeten** in dit prachtige resort (...)*

2.3.2 Morphological profile (1)

► Degrees of comparison:

- Synthetic comparative form:
 - *Voornamelijk (net als de dessertvork) in **de luxere besteksets** terug te vinden .*
- Analytic superlative form:
 - *Aan boord van **de meest luxe cruiseschepen** beleefde Arno Raymakers als cruisedirector ongelooflijke avonturen (...)*

► Inflection:

	Masculine/feminine (de)		Neuter (het)	
	Indefinite	Definite	Indefinite	Definite
Singular	-e	-e	∅	-e
Plural	-e	-e	-e	-e

2.3.2 Morphological profile (2)

- ▶ In **written** language, the common form is invariable *lux*e:

“In **geschreven taal** wordt in alle gevallen de **vorm met e aan het eind** gebruikt. Alleen Van Dale (2005) neemt behalve *lux*e (als bijvoeglijk naamwoord) ook de vorm *lux* op, en bovendien als apart lemma. Daarmee lijkt gesuggereerd te worden dat van het daarbij gegeven voorbeeld *hij leidt een lux(e) leventje* twee geschreven varianten mogelijk zijn. Met deze opvatting van Van Dale zijn wij het niet eens” (<http://taaladvies.net/taal/advies/vraag/508>)

- ▶ In **spoken** language:

“(…) Sommige uit het Frans afkomstige bijvoeglijke naamwoorden die op een toonloze e (...) eindigen, worden, althans in Nederland, normaliter **zonder slotklinker uitgesproken**. Dat geldt voor die gevallen waarin oorspronkelijk Nederlandse bijvoeglijke naamwoorden een onverbogen vorm hebben. Het gaat in de praktijk om *bête* (...), *frêle* (bijvoorbeeld een *frêle* [frèl] jongetje, net als een *teer* jongetje), *louche* (...).

Luxe, dat in het Frans geen bijvoeglijk, maar een zelfstandig naamwoord is, sluit zich bij deze reeks aan: **een luxe** [luuks] **hotel** (net als een goed hotel), *Dat is wel erg luxe* [luuks] (net als *Dat is wel erg fraai*).

In **België** daarentegen worden deze bijvoeglijke naamwoorden gewoonlijk wel met een toonloze e aan het eind uitgesproken. (...)” (<http://taaladvies.net/taal/advies/vraag/508>)

2.3.2 Morphological profile (3)

- ▶ *Corpus Gesproken Nederlands*:
 - ▶ Generally confirms that *luxe* is regularly inflected in Netherlandic Dutch
 - ▶ Variation in pronunciation?
 - **een *luxe* hotel** waarin ze later nog vaak zou komen voor cliënten. [pronounced /luuks/]
 - 't landgoed moet voor ongeveer honderd vijftig miljoen gulden **een luxe *hotel*** met golfbaan worden. [pronounced /luuksə/]
 - ▶ But: distinctive stress pattern (phrase vs compound)

2.3.3 Comparison with luxueus (1)

- Combinatorial properties and productivity

	luxueus _{attr} + N	lux _{attr} + N
R1	hotel: 17 villa: 8 appartement: 5 interieur: 3 uitstraling: 3 afwerking: 2 inrichting: 2 jacht: 2 karakter: 2 leven: 2 manier: 2 paleis: 2 stof: 2 uitvoering: 2 hapax legomena: 99	hotel(s): 13 badkamer(s): 8 villa('s): 7 bus(sen): 6 appartement(en): 5 kamer(s): 4 positie: 4 broodjes / editie / keuken / leventje / probleem/ safaritent(en) / uitstraling / uitvoering / vakantie: 3 19 tokens: 2 hapax legomena: 146
Tokens	153	258
Types	113	181
Type/token ratio	0.74	0.70
Potential productivity (HI/t)	0.65	0.57

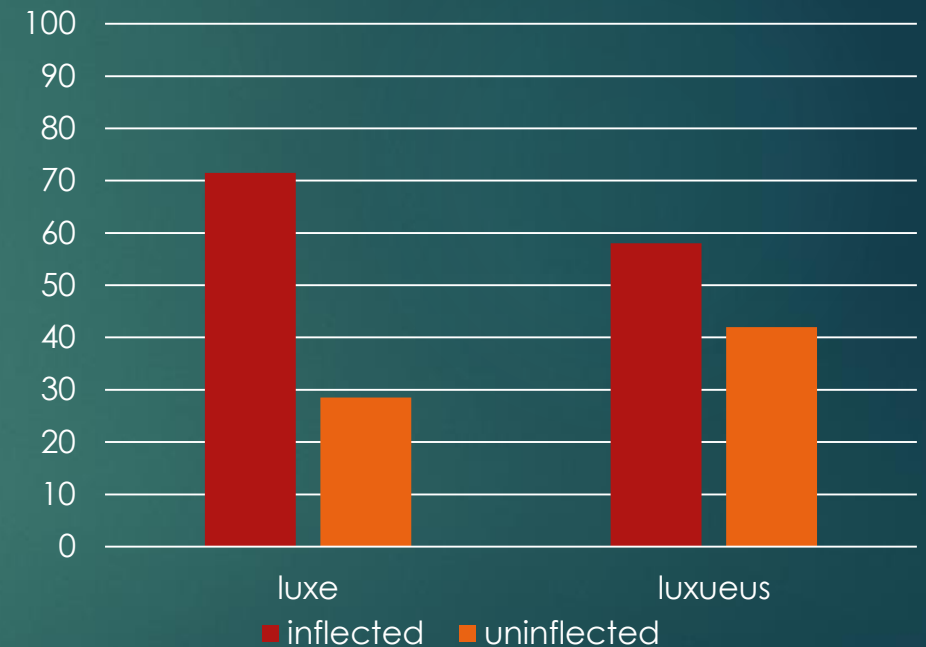
2.3.3 Comparison with luxueus (2)

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➤ Syntactic distribution

<i>Luxueus</i>		<i>Luxe</i>	
Attributive -e	116 [58.00%]	Attributive -e	258 [71.47%]
Attributive ∅	37 [18.50%]	Attributive ∅	55 [15.24%]
Predicative ∅	25 [12.50%]	Predicative ∅	24 [6.65%]
Nominalized ∅	2 [1.00%]	Nominalized ∅	/
Adverb ∅	20 [10.00%]	Adverb ∅	24 [6.65%]
n	200	n	361

Luxe vs luxueus



Compared to *luxueus*, *luxe* is significantly more attracted to syntactic positions that require -e inflection
($\chi^2 (1) = 10.5052, p = .00119$)

2.3.3 Comparison with *luxueus* (3)

- ▶ Language users show a tendency to avoid a conflict between the phonological/orthographical shape of *luxe* and the expected shape of an inflected adjective:
 - *The Grand Resort is **een mooi luxe en echt authentiek hotel** , dat gebouwd is in Moorse stijl .*
- ▶ This conflict disappears in the comparative form (*luxer*):
 - *Zoek even **een iets luxer hotel** en loop daar even naar binnen (...)*

2.4 Netherlandic vs Belgian Dutch (1)

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► *Corpus Gesproken Nederlands*

CGN	Netherlandic Dutch	Belgian Dutch
Noun	24 [26.67%]	10 [43.48%]
[/uxe-N]_N compound	16 [17.78%]	12 [52.17%]
Adjective	43 [47.48%]	1 [4.35%]
- Attributive	(29)	(1)
- Predicative	(14)	(0)
Adverb	7 [7.78%]	0
Totals	90	23

2.4 Netherlandic vs Belgian Dutch (2)

▶ Netherlandic Dutch:

- (Almost) full category change (syntactic and morphological properties)
- Invariable form in written language; inflectional rules generally apply in spoken language
- Phonological/orthographical shape still impacts on the distribution of *luxe*

▶ Belgian Dutch:

- Use of *luxe* as an adjective is uncommon
- Attributive use is possible (*Corpus Hedendaags Nederlands*):
 - ... zijn nu gebundeld in **een luxe dvd-box** met 22 dvd's (De Standaard, 2005)
 - (...) toch een straat met **relatief luxe kledingzaken** (2004)
- Predicative and adverbial use are very uncommon
- No regular adjectival inflection (invariable form in written and spoken language)

→ As shown by the data, *luxe* displays 'Intersective gradience': in ND it is closer to the category of the adjective, while in BD it is closer to the category of the noun

3. Data discussion

Conversion or syntactic transposition?

3.1 Bridging context (1)

- ▶ Van Dale (2015): [*lux* N]_N compounds (*luxebakkerij*, *luxebrook*, *luxehotel*, etc.) classified under the entry of the adjective *lux*:

lux bn.; -r, meest - • luxueus, weelderig, var. *lux*: *lux* dingen kopen; *luxer* gaan leven; een *lux(e)* leventje leiden; – ook als eerste lid in samenst. als de volgende, ter aanduiding dat het in het tweede lid genoemde (niet zozeer nuttig als wel) luxueus is: *luxebakkerij*, *luxebrook*, *luxebus*, *luxedoos*, *luxehond*, *luxehotel*, *luxehut*, *luxejacht*, *luxeschip*, *luxetrein*, *lux*-uitgave, *lux*-uitvoering, *luxevilla*, *luxevoorwerp*

- Attributive compounds, qualifying meaning ('luxurious')
- Suggests that N>A change took place before the emergence of the compounds

3.1 Bridging context (2)

▶ Counterevidence: diachronic data provided by WNT (2007, s.v. *luxe, luxe^{II}*):



(1) **Noun** borrowed from French (1785)

(2) Borrowing of French **collocations** (beginning 19th c.) / **compounds** (end 19th c.)

- *Meubilaire of andere artikelen van luxe* [1807]
- *"Zulke menschen staan zeer hoog maar beteekenen weinig in den gang der wereld. Het zijn luxe-artikelen, (...) [1889]*

(3) **Attributive adjectival use** (beginning 20th c.)

- *Elk oogenblik kwam ze met wat aardigs voor hem aan, met kleine luxe dingen voor zijn kamertje [1914]*

(4) **Predicative adjectival use** (60s)

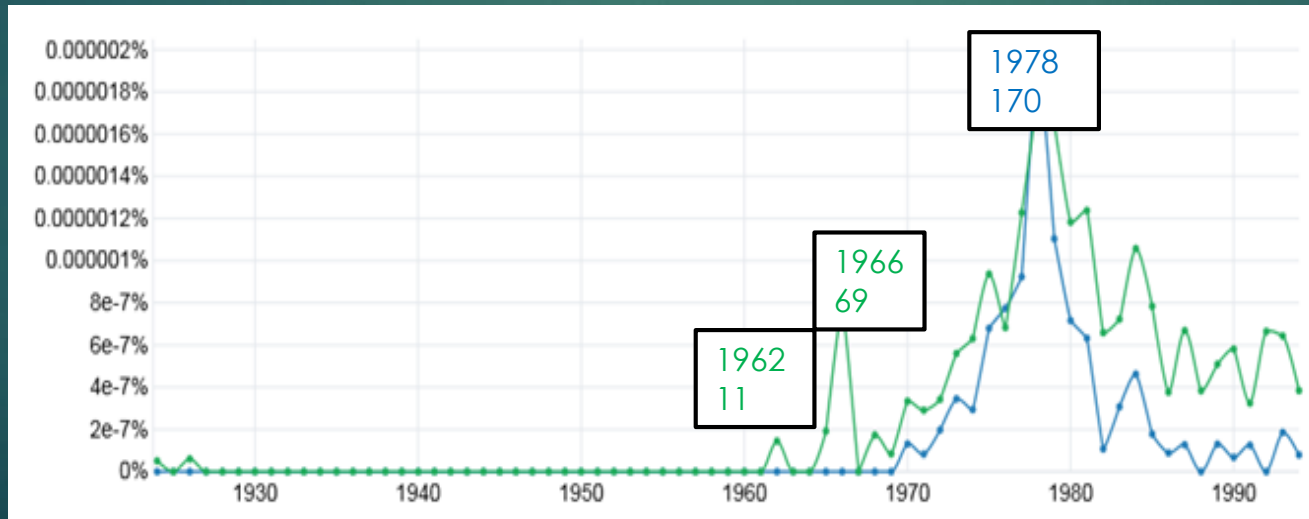
- *Tassen worden luxer* [1964]

(5) **Adverbial use** (60s)

- *Dat de NSU-PRINZ een modieuze en elegante auto is ... dat hij zeer lux is uitgerust en fraai afgewerkt, [196.]*

3.1 Bridging context (3)

- ▶ Diachronic cline: $luxe_N > [luxe-N]_N > luxe_{A[Attr]} > luxe_{A[Pred]} > luxe_{Adv}$
- ▶ Additional evidence
 - Ngram viewer, KB collection digitized Dutch newspapers, 1840-1995
 - Comparison “**een zeer luxe**” (attributive) vs “**is zeer luxe**” (predicative)



3.1 Bridging context (4)

▶ **Debonding** (Norde 2009)

- Semantic trigger: qualifying meaning of *luxe* in the compound
- Formal trigger: phonological/orthographical shape of *luxe*
 - cf. *reuze, bere, klasse* (Norde & Van Goethem 2014; Van Goethem & Hiligsmann 2014; Van Goethem & De Smet 2014; Van Goethem & Hüning 2015)

▶ **Paradox:**

- The shape of *luxe* favours N>A category change, but at the same time it is a major obstacle for complete change.

3.2 Conversion vs transposition (1)

Conversion	Syntactic transposition
Full re-categorization in ND	Functional change depending on the context
Syntactic behavior of the new category in ND	Partial adoption of the new syntactic behavior in BD
Restrictions on the process	Very productive (almost without restrictions?)
Instantaneous	Instantaneous but could lead to gradual context expansion

3.2 Conversion vs transposition (2)

- ▶ Data show that *luxe* can be considered neither a case of conversion nor a case of syntactic transposition.
- ▶ For similar cases, Sweet [1960 [1891] proposes the term “partial conversion” but this term can be problematic.
- ▶ We propose to treat similar cases as ‘**morphological transposition**’, since the attributive compound pattern coerces a qualifying meaning (synonymous to *luxueus*) and this semantic coercion is followed by a change in word class, probably favoured by the phonological shape of the item involved.
- ▶ This idea is in line with Booij & Audring (forthc.)
 - ‘The constructional meaning of a syntactic or morphological construction can override the lexical meaning of a word in that construction. Morphological schemas may therefore change the semantic class of the base word. (...). Semantic coercion may be accompanied by changes in word class, making use of existing morphological mechanisms such as conversion or nominalization by suffixation to achieve the resolution of clashes’

4. Conclusions

Conclusions

- ▶ *Luxe* is a case of ‘intersective gradience’ (in terms of Denison 2001) between the categories of N and A.
- ▶ Gradualness of the category change shown by the diachronic data is also corroborated by regional variation
 - Belgian Dutch: incipient category change
 - Netherlandic Dutch: advanced category change
- ▶ Neither conversion nor syntactic transposition -if seen separately- can account for the change in hand.
- ▶ We propose to treat similar phenomena as cases of ‘morphological transposition’ which is followed by gradual context expansion.

5. References

- Aarts, Bas (2007) *Syntactic Gradience. The Nature of Grammatical Indeterminacy*. Oxford: Oxford University Press.
- Alexiadou, Artemis (2015) Nominal derivation. In: Rochelle Lieber & Pavol Stekauer (Eds.), *The Oxford Handbook of Derivational Morphology*, 235-256. New York: Oxford University Press.
- Baayen, H. (2009) Corpus linguistics in morphology: Morphological productivity. *Corpus Linguistics. An international handbook*, ed. by Anke Luedeling, & Merja Kytö, 900-919. Berlin: De Gruyter.
- Baker, Mark C. (2003) *Lexical Categories: Verbs, Nouns, and Adjectives*. Cambridge: Cambridge University Press.
- Bally, Charles (1944) *Linguistique générale et linguistique française* (seconde édition entièrement refondue). Berne: S.A. Francke.
- Berman, Judith (2009) The predicative as a source of grammatical variation. *Describing and modeling variation in grammar*, ed. by Andreas Duffer, Jürg Fleischer, & Guido Seiler, 99-116. Berlin: de Gruyter.
- Booij, Geert. (2002) *The morphology of Dutch*. Oxford: Oxford University Press.
- Booij, Geert (2010) *Construction Morphology*. Oxford: Oxford University Press.
- Booij, Geert & Audring, Jenny (forthc.) Category change in Construction Morphology. *Category change from a constructional perspective*. Ed. by Muriel Norde, Kristel Van Goethem, Evie Coussé & Gudrun Vanderbauwhede. Oxford: Oxford University Press. 31 p.
- Borer, Hagit & Isabelle Roy (2010). The Name of the Adjective. In: Patricia Cabredo Hofherr & Ora Matushansky (Eds.), *Adjectives*, 85-114. Amsterdam/Philadelphia: John Benjamins.
- Denison, D. (2001). Gradience and linguistic change. In: L.J. Brinton (ed.), *Historical linguistics 1999*. Amsterdam: Benjamins, pp. 119-144.
- De Groot, A. W. (1948) Structural linguistics and word classes. *Word* 1.4: 427-500.
- De Vries, Wobbe (1920) *Iets over woordvorming. verhandeling behoorende bij het programma van het Gymnasium der Gemeente Groningen voor het jaar 1920-1921*. Groningen: De Waal. [Opnieuw uitgegeven door C. Kruyskamp, 1972, Zutphen: Thiemen & Cie].
- Haspelmath, Martin (2001) Word classes and parts of speech. In: Paul B. Baltes & Neil J. Smelser, (eds.), *International Encyclopedia of the Social and Behavioral Sciences*, 16538-16545. Amsterdam: Pergamon.

- Ježek Elisabetta & Paolo Ramat (2009) On parts-of-speech and transcategorization. *Folia Linguistica* 43/2: 391-416.
- Lauwers Pieter (2014) Between adjective and noun: category / function, mismatch, constructional overrides and coercion. In: Simone Raffaele & Francesca Masini (Eds.), *Word Classes. Nature, typology and representations*, 203-225. Amsterdam/Philadelphia: John Benjamins.
- Lieber Rochelle (2015) The semantics of transposition. *Morphology* 25/4: 353-369.
- Marchand, Hans (1967) Expansion, Transposition and derivation. *La Linguistique* 1: 13-26.
- Marchand, Hans (1969) *The categories and types of present-day English word formation. A synchronic-diachronic approach* [2nd edition]. München: C.H. Beck'sche Verlagsbuchhandlung.
- Nikolaeva Irina (2008) Between nouns and adjectives: a constructional view. *Lingua* 118: 969-996.
- Norde, Muriel and Kristel Van Goethem (2014) Bleaching, productivity and debonding of prefixoids. A corpus-based analysis of 'giant' in German and Swedish. *Linguisticae Investigationes* 37(2): 256-274.
- Panagiotidis, Phoevos (2011) *Categorial Features. A Generative Theory of Word Class Categories*. Cambridge: CUP.
- Paul, Hermann (1891) *Principles of the history of language* (translated from the second edition of the original by Herbert A. Strong). London: Longmans, Green, and co.
- Pittner, Karin & Judith Berman (2006). *Video ist echt schrott aber single ist hammer*-Jugendsprachliche Nomen-Adjektiv-Konversion in der Prädikativposition. *Deutsche Sprache* 3: 233-250.
- Ramat Paolo (1999). Linguistic categories and linguists' categorizations. *Linguistics* 37/1: 157-180.
- Scalise, Sergio & Antonietta Bisetto (2009). The Classification of Compounds. *The Oxford Handbook of Compounding*, ed. by Rochelle Lieber & Pavol Štekauer, 34-53. Oxford: Oxford University Press.
- Schäfer, Roland (2015). Processing and querying large web corpora with the COW14 architecture. *Proceedings of Challenges in the Management of Large Corpora (CMLC-3)*, July 2015, Lancaster.
- Schäfer, Roland, & Felix Bildhauer (2012) Building large corpora from the web using a new efficient tool chain. *Proceedings of the Seventh International Conference on Language Resources and Evaluation (LREC 2010)*, ed. by Nicoletta Calzolari et al., 486-493. Valletta: European language resources distribution agency.

- Simone Raffaele & Francesca Masini (Eds.) (2014) *Word Classes. Nature, typology and representations*. Amsterdam/Philadelphia: John Benjamins
- Sweet Henry (1960 [1891]) *A New English Grammar, Logical and Historical* (Part I, Introduction, Phonology, and Accidence). Oxford: Clarendon Press.
- Traugott, Elizabeth C. & Graeme Trousdale (2013). *Constructionalization and Constructional Changes*. Oxford: Oxford University Press.
- *Van Dale Groot woordenboek van de Nederlandse taal* (2015). 15th edition. Van Dale Lexicografie.
- Van Goethem, Kristel and Hendrik De Smet (2014) How nouns turn into adjectives. The emergence of new adjectives in French, English and Dutch through debonding processes. *Languages in Contrast* 14(2): 251-277.
- Van Goethem, Kristel and Philippe Hilgsmann (2014) When two paths converge: Debonding and clipping of Dutch reuze 'lit. giant; great'. *Journal of Germanic Linguistics* 26(1): 31-64.
- Van Goethem Kristel and Matthias Hüning (2015, in press) From noun to evaluative adjective: conversion or debonding? *Dutch top and its equivalents in German*. *Journal of Germanic Linguistics* 27(4).
- Vogel Petra & Bernard Comrie (eds.) (2000) *Approaches to the Typology of Word Classes (Empirical Approaches to Language Typology, Vol. 23.)* Berlin: De Gruyter.
- Quirk, Randolph, Greenbaum, Sidney, Leech, Geoffrey and Jan Svartvik (1985) *A Comprehensive Grammar of the English Language* (indexed by David Crystal). London/New York: Longman.
- Online data sources:
 - Corpus Gesproken Nederlands: <http://lands.let.ru.nl/cgn/>
 - Corpus Hedendaags Nederlands: <https://portal.clarin.inl.nl/search/page/search>
 - Ngram viewer, KB corpus: <http://lab.kbresearch.nl/find/Ngrams>
 - NLCOW14AX (COW-corpora): <https://webcorpora.org/>
 - WNT (via Geïntegreerde Taalbank): <http://gtb.inl.nl/>

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