(Un)resolved competition?

Empirical evidence for the resolution of competition in the paradigm of English verbs

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Background Definition

Competition as:

same base
same semantic category
two or more different affixes
no apparent semantic/distributional differences

e.g. fluidify vs fluidize 'make fluid' (Bauer et al. 2013: 272)

Cluster defined as 'sets of synonymous derivatives morphologically related by their bases but formed with a different affix that can be grouped into doublets, triplets, etc.' (Fernández-Alcaina 2017: 168)

Background

Competition between forms with the same base: Previous research

In reference manuals:

Bauer et al. (2013)

In references on verbal formation:

Plag (1999)

Gottfurcht (2008)

No information about resolution

In specialized papers:

Conversion vs -en suffixation: Bauer et al. (2010)

-ify vs -ize suffixation: Lindsay (2012)

Lindsay & Aronoff (2013)

Conversion vs -ize suffixation: Fernández-Alcaina (2017)

Fernández-Alcaina & Cermák (2018)

Focus on:

i. Specific patterns

ii. Competitors only

Background
Competition and derivational paradigms: Previous research

- Competition is '[...] at least partly dependent on relations holding between the complete set of lexemes related to the same base' (Pounder 2000: 83, based on studies on standardization by Mal'ceva 1966, Gawełko 1977 and Schupbach 1984)
- A factor to be considered in the competition of doublets (Fradin 2019) ii.
- Additional information for the resolution of the competition between conversion and -ize suffixation for causative verbs (Fernández-Alcaina & Čermák 2018)

Aims

- i. Profile of resolution of competition in verb formation, i.e. resolved, unresolved
- ii. Various profiles of unresolved competition based on:
 - i. lexicographic and corpus data
 - ii. derivational paradigms

Method

- i. Data collection
- ii. Data processing

Method

Data collection: The Oxford English Dictionary and competition

Previous research on competition (e.g. Bauer 2006; Gottfurcht 2008; Díaz-Negrillo 2017; Fernández-Alcaina 2017; Lara-Clares 2017; Smith 2020)

Reliable source for data collection:

- i. Extensive resource (600,000 words)
- ii. Information regarding:
 - a. etymological origin
 - b. use (e.g. obsolete, rare, archaic)
 - c. distribution (e.g. Mathematics, Medicine)
 - d. lifespan of the entries through attestation dates

Method
Data collection: OED2 vs OED3 I

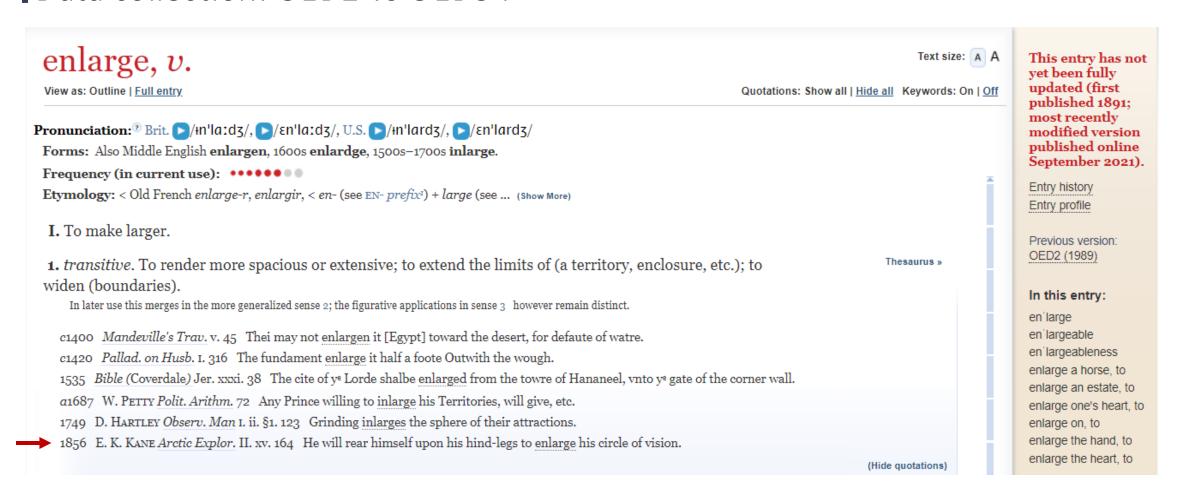


Figure 1. A screenshot of an OED2 entry (attestation dates not updated)

Method
Data collection: OED2 vs OED3 II

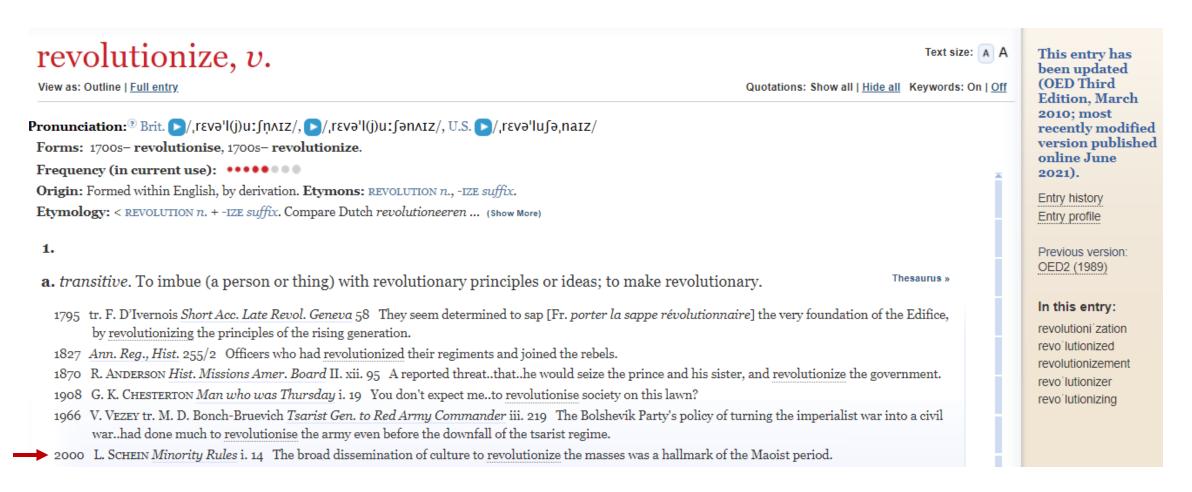


Figure 2. A screenshot of an OED3 entry (attestation dates updated)

Method Data processing

		Bas	se		Meaning				Se	enses				Time	eline
Lemma	Sense	Form	Word class	Semantic category	Definition	Trans./ Intr.	In use	Obs./ Rare	Arch.	Dial.	Reg./ Dom.	Total	Status	*	t
powder	4a	powder	N	ORNATIVE	apply cosmetic to skin	trans.	6	4	0	0	0	10	in use	1616	2002
powderize	1	powder	N		= powder 4a	trans.	1	1	0	0	0	2	obsolete	1800	1800
powder	8a	powder	N	RESULTATIVE	reduce to powder	trans.	6	4	0	0	0	10	in use	1400	1991
powderize	2	powder	N		reduce to powder	trans.	1	1	0	0	0	2	in use	1903	1998

Table 1. A template for the description of competing verbs based on the information provided by the OED and semantically classified according to Bauer et al. (2013: 282–286)

														Time	
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Table 1. A template for the description of competing verbs based on the information provided by the OED and semantically classified according to Bauer et al. (2013: 282-286)

Method

Data processing: Corpora

- Diachronic corpora
 English Historical Book Collection (EHBC) (1472–1820)
 Corpus of Historical American English (COHA) (1820s–2010s)
- ii. Synchronic corpus Corpus of Contemporary American English (COCA) (1990–2019)
- iii. Contemporary dictionaries

 Collins

 Merriam-Webster

Method Data processing: Derivational paradigms

Base	1 st Derivative	Word	Ti	meline	Mooning	2 nd Derivative	Word	Tim	eline	Meaning
Dase	1 Delivative	class	*	†	Meaning	2 Delivative	class	*	t	iviearing
	mongrel	V	1602	1662	make (mongrel)					
						mongrelized	Adj	1857	-	made (mongrel) action of
mongrel	mongrelize	V	1629	-	make (mongrel)	mongrelization	N	1868	-	making (mongrel) action of
						mongrelizing	N	1922	_	making (mongrel)

Table 2. A sample of the data file for the processing of derivational paradigms (adapted from Fernández-Alcaina & Čermák 2018)

Profile of competition: Number of competitors

Sample size: 351 clusters (i.e. 562 verbs) extracted from the OED3:

i. Two members: 320 clusters, i.e. 91.2%

ii. Three members: 30 clusters, i.e. 8.5%

iii. Four members: 1 cluster, i.e. 0.3%

Results Profile of competition: Patterns

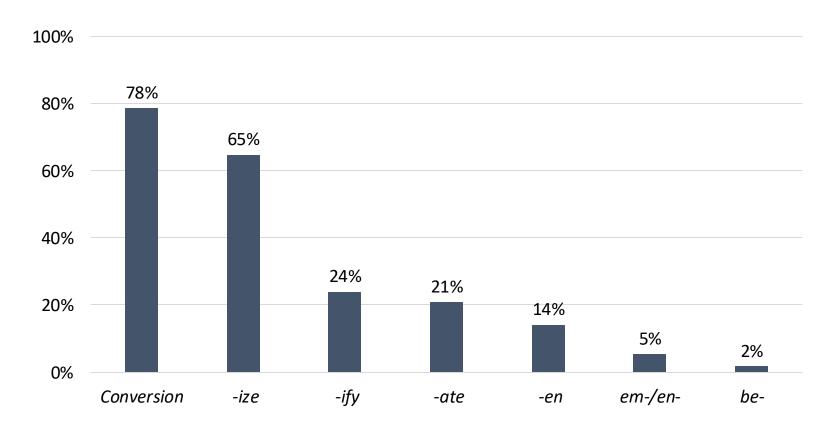


Figure 3. Patterns identified ordered by the number of clusters in which they appear

Results Resolution of competition

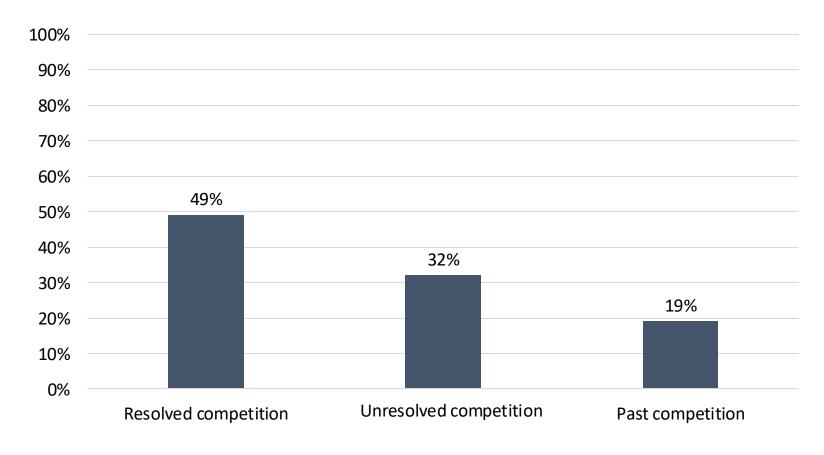


Figure 4. Clusters classified by the outcome of resolution

Results Resolution of competition

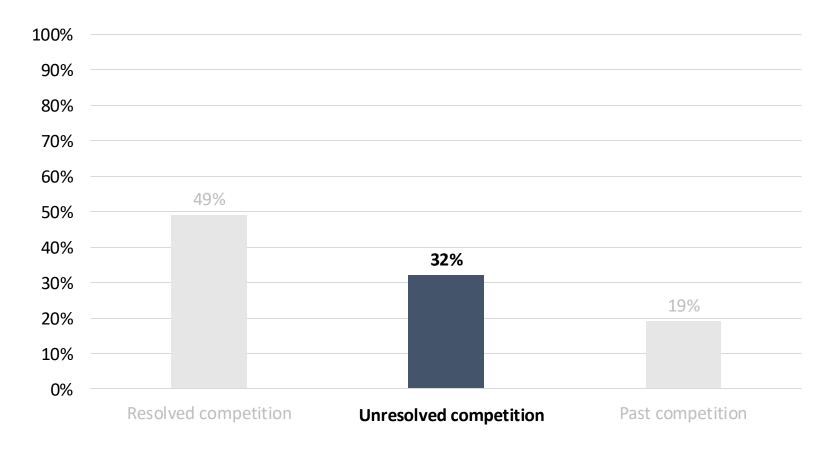


Figure 4. Clusters classified by the outcome of resolution

Results Unresolved competition

- i. Resolution (?):
 - i. Conversion prevails (e.g. pillory/pillorize)
 - ii. Affixation prevails (e.g. revolution/revolutionize)
- ii. Semantic specialization (?) (e.g. pressure/pressurize)
- iii. No resolution (?) (e.g. patine/patinate/patinize)

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Conversion prevails: pillory vs pillorize

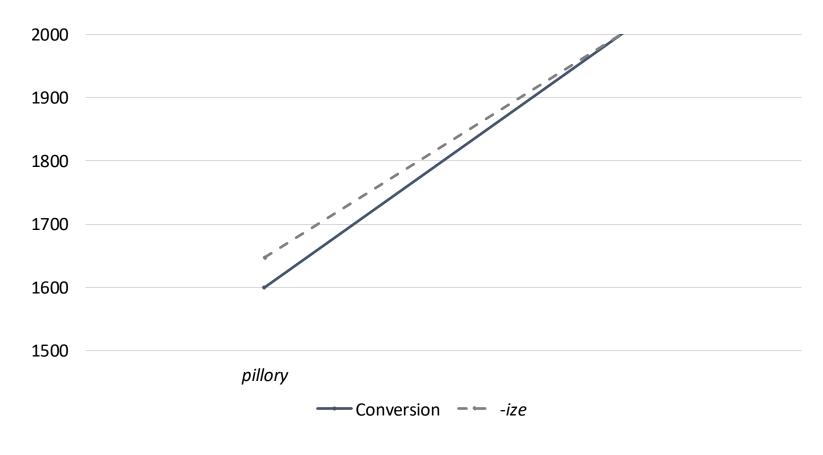


Figure 5. Timeline for *pillory/pillorize*

Results Conversion prevails: pillory vs pillorize

		ЕНСВ	cc	НА		COCA
pillory	64	0.06	140	0.35	376	0.38
pillorize	3	>0.01	-	1	-	-

Table 3. Corpus data for *pillory/pillorize*

	Collins Cobuild	Merriam-Webster
nillary	expose to public ridicule;	set in a pillory as punishment;
pillory	punish by putting in a pillory	expose to public ridicule
pillorize	archaic: to pillory	: pillory

Table 4. Lexicographic information for *pillory/pillorize*

Results Conversion prevails: pillory vs pillorize

1st Derivative	*	†	Definition	2nd Derivative	*	†	Definition
pillory1A	1600	1994	put a person in a pillory	pilloried	1671	-	placed in a pillory
				pillorying	1653	-	act of punishing a person in a pillory
pillory1B	1816	1863	constrict (a person) in a pillory				
pillory2	1699	-	ridicule a person or thing	pilloried	1671	-	subjected to public ridicule
				pillorying	1653	_	act of exposing a person to public abuse
pillorize	1647	-	= pillory (v)	pillorization	1688/	1668/	punishment in a pillory
					1998	1998	,
				pillorized	1656	1656	punished in a pillory
				pillorizing	1720	1891	= pillorying
				pillorizing	1890	1890	abusive, defamatory

Table 5. Paradigm for the cluster *pillory/pillorize*

Affixation prevails: revolution vs revolutionize

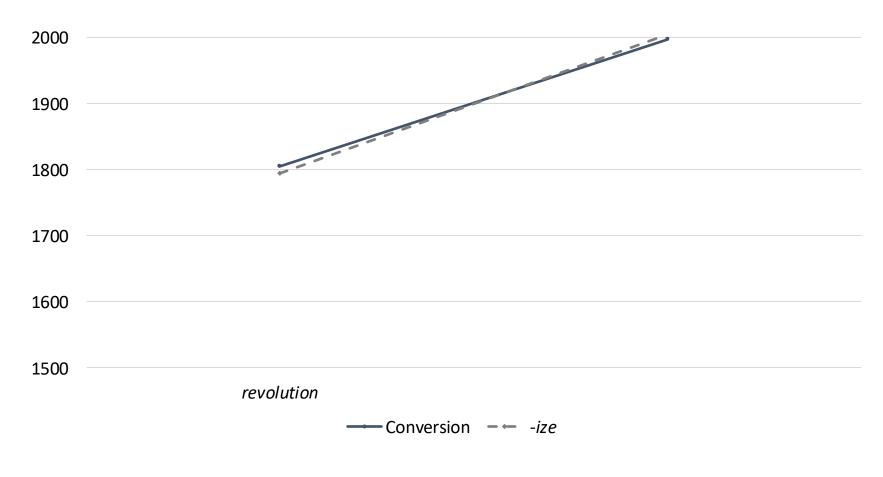


Figure 6. Timeline for *revolution/revolutionize*

Results Affixation prevails: revolution vs revolutionize

	EH	ІСВ	СО	НА	СО	CA	iWeb
revolution	_	-	-	-	-	-	-
revolutionize	44	0.04	968	2.39	2654	2.67	45980

Table 6. Corpus data for *revolution/revolutionize*

	Collins	Merriam-Webster
revolution	-	-
revolutionize	bring about a revolutionary change;	imbue with revolutionary doctrines;
revolutionize	inspire with revolutionary ideas	change fundamentally

Table 7. Lexicographic information for *revolution/revolutionize*

Affixation prevails: revolution vs revolutionize

1st Derivative	*	+	Definition	2nd Derivative	*	+	Definition
revolution	1805	-	= revolutionize				
revolutionize1A	1795	-	make revolutionary	re-revolutionize	1803	-	revolutionize again
				revolutionized	1798	-	-
				revolutionizing	1797	-	-
				revolutionizing	1797	-	-
				revolutionizement	1820	1820	-
				revolutionizer	1798	-	-
revolutionize1B	1796	-	bring a country under a revolutionary form of government				
revolutionize1C	1817	1874	engage in revolutionary activity				
revolutionize2	1798	-	change a thing completely	revolutionization	1871	-	-

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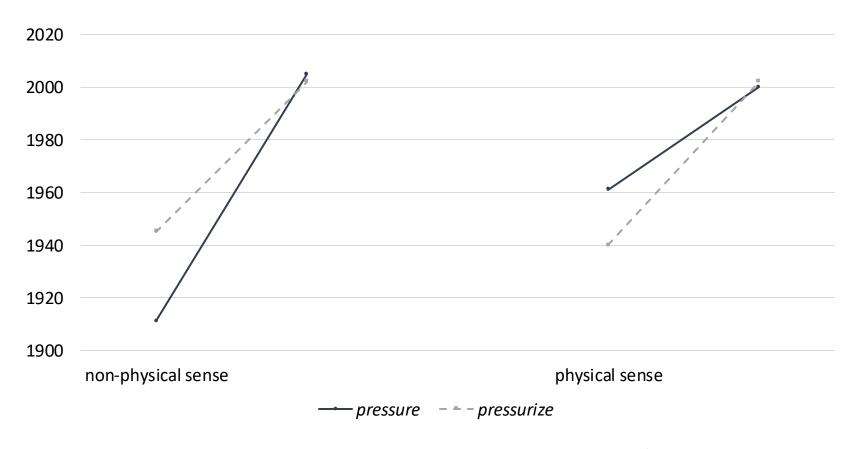


Figure 7. Timelines for the physical and non-physical sense of *pressure/pressurize* in the OED (minimum Y-axis value is set at 1900 for easier reading)

	Collins Cobuild	Merriam-Webster
pressure	8. to constrain by the application of moral force	1. to apply pressure to
	9. another word for <i>pressurize</i>	2. pressurize
pressurize	1. to increase the pressure in order to maintain atmospheric pressure	1. to confine the contents of under a pressure greater than that of the outside atmosphere
	3. to make insistent demands of (someone)	2. to apply pressure to

Table 9. The doublet *pressure* and *pressurize* in contemporary dictionaries

	Eł	НСВ	C	ОНА	COCA		
pressure	33	0.03	640	1.58	5846	5.89	
_pressurize	0	0	72	0.18	497	0.5	

Table 10. Corpus data for *pressure* and *pressurize*

Word	pressure	pressurize	pressure/pressurize	Score
FELT	170	0	340.0	28.9
PRESIDENT	147	0	294.0	25.0
ME	292	1	292.0	24.8
HIM	468	2	234.0	19.9
NEVER	85	0	170.0	14.5
CONGRESS	79	0	158.0	13.4
STATES	76	0	152.0	12.9
SHOULD	73	0	146.0	12.4
STOP	70	0	140.0	11.9
ISRAEL	68	0	136.0	11.6
SEX	66	0	132.0	11.2
PARENTS	65	0	130.0	11.1
FEELING	64	0	128.0	10.9
COMPANIES	62	0	124.0	10.5
CHANGE	61	0	122.0	10.4
U.S.	61	0	122.0	10.4
ADMINISTRATION	60	0	120.0	10.2

Table 11. Comparison of the collocates in the COCA for *pressure* and *pressurize*

Word	pressurize	pressure	pressurize/pressure	Score
GAS	19	0	38.0	447.0
FUEL	17	0	34.0	399.9
WATER	32	1	32.0	376.4
CABIN	21	1	21.0	247.0
TANKS	21	1	21.0	247.0
SUIT	18	1	18.0	211.7
CAPSULE	8	0	16.0	188.2
HEATED	8	0	16.0	188.2
POUNDS	8	0	16.0	188.2
PSI	8	0	16.0	188.2
PUMP	14	1	14.0	164.7
GASES	7	0	14.0	164.7
LIQUID	7	0	14.0	164.7
FLUID	6	0	12.0	141.2
TUNNEL	6	0	12.0	141.2
TANK	11	1	11.0	129.4
REACTOR	5	0	10.0	117.6

Table 12. Comparison of the collocates in the COCA for *pressurize* and *pressure*

Unresolved competition

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- iii. No resolution (?) (e.g. patine/patinate/patinize)

Results
No resolution: patine/patinate/patinize

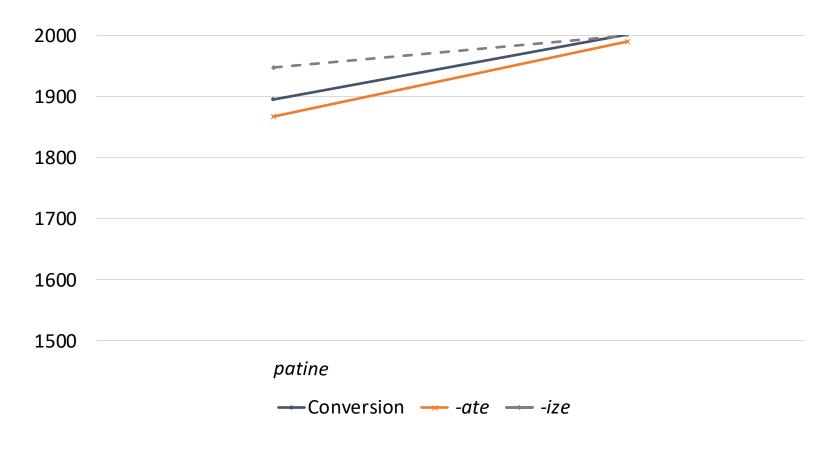


Figure 8. Timeline for *patine/patinate/patinize*

Results No resolution: patine/patinate/patinize

	ЕНСВ		СО	НА	COCA		
patine	-	-	-	-	-	-	
patinate	-	-	2	0	8	0.01	
patinize	na	-	-	-	-	-	

Table 13. Corpus data for *patine/patinate/patinize*

	Collins	Merriam-Webster
patine	-	cover with a patina
patinate	coat the surface (of a metal)	give a patina to
patinize	coat with a patina	= patinate

Table 14. Lexicographic information for *patine/patinate/patinize*

Results
No resolution: patine/patinate/patinize

1st Derivative	*	†	Definition	2nd Derivative	*	†	Definition
patine	1896	ı	= patinate	patining	1939	ı	= patinating
patinate	1867	-	cover with a patina	patinated	1893	ı	covered with a patina
				patinating	1914	ı	process of covering with a patina
patination	1888	-	the condition of having a patina				
patinize	1948	-	cover with a patina; = patinate	patinizing	1904	-	= patinating

Table 15. Derivational paradigm for the triplet *patine/patinate/patinize*

Conclusion

- i. The assessment at the level of senses is crucial because of:
 - a. Different semantic classification
 - b. Different stages of resolution
- ii. The study of competition demands the combination of various resources
- iii. Various profiles → demand individual analysis
- iv. Real competition or overrepresentation in the OED?

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Appendix I

	Conversion	-ize	-ate	-ify	-en	en-	be-
ORNATIVE	+	+	+	+	+	+	+
RESULTATIVE	+	+	+	+	+	+	
INSTRUMENT	+	+	+		+	+	
PERFORMATIVE	+	+	+	+			
SIMILATIVE	+	+	+	+		+	
CAUSATIVE	+	+	+	+			
INCHOATIVE	+	+	+	+	+		
STATIVE	+	+				+	+
LOCATIVE	+					+	
PRIVATIVE	+						

Semantic categories classified by pattern in denominal clusters (Fernández-Alcaina forthcoming)

Appendix II

	Conversion	-ate	-en	-ify	-ize	be-	en-
CAUSATIVE	+	+	+	+	+	+	+
INCHOATIVE	+		+	+	+		+
INSTRUMENT	+	+			+		
ORNATIVE	+		+	+	+		
SIMILATIVE	+				+		
STATIVE	+		+				

Semantic categories classified by pattern in deadjectival clusters (Fernández-Alcaina forthcoming)