From old-English grubbers to cheeky blighters?

Variation in the productivity of *-er* in the history of English

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We are interested in...

- The historical sociolinguistics of derivation and neologisms
 - Who are the innovators and why?

- Syntheticity in morphology
 - Hypothesis: cline between derivation and inflection, both contribute to syntheticity
 - Evidence for cline: similar variation & change

Nominal suffixes -er and -or

- Typically derive agentive or instrumental nouns from verbs: driver, governor, filler
 - Also: person 'concerned with N' / 'living in N'
 - Here: division into animate vs. inanimate
- -or: Latinate variant of -er
 - Pronounced identically (adviser/advisor)
 - → treated as a single suffix here (Plag 2003: 89; Bauer 2001: 199–203)

Productivity of -er and -or

- Sociolinguistic variation?
 - "Default" suffix (Bauer et al. 2013: 232) → no?
 - Säily (2011): women use -ity less productively than men; lower-class women: also -ness
 - Gendered styles?
- Productivity ≈ type frequency
 - Number of different words containing the suffix
 - Baayen (2009), Säily & Suomela (2009)

Material

- BNC = British National Corpus, early 1990s
 - Demographically sampled spoken component,
 both gender & social class known:
 358 speakers, 2.6 Mw
- CEEC = Corpora of Early English
 Correspondence, C18 section (1680–1800)
 - Speech-like genre, social metadata
 - 315 writers, 2.2 Mw

Methods

 Types cross-checked with MorphoQuantics (Laws & Ryder 2014a, b)

 CEEC: FiCa interface for classifying data (developed by Eetu Mäkelä)

Analysis of productivity: types2
 (Suomela 2015, 2016)

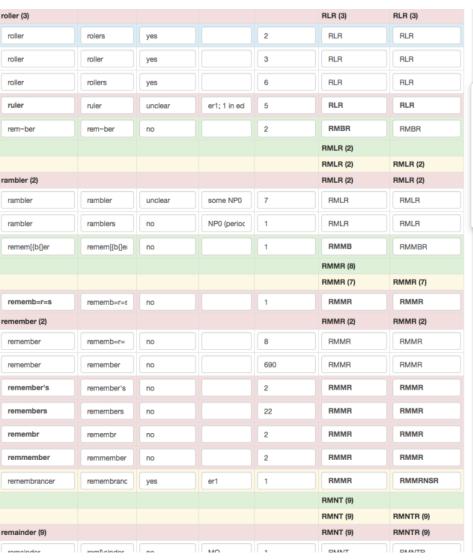
MorphoQuantics

-er³ (Forms Ns from Adjs, Vs & Ns); Language of Origin = Germanic / Latin; Etymon = -ârjoz / -ārius; Meaning = an entity that performs the action specified by the verb; Type = Suffix

Export

| Headword | PoS | Confirmed PoS | Tokens | Summed | Comment | Types | |
|----------------|-------|---------------|--------|--------|---------|-------|---|
| REDUCERS | ININZ | n | 2 | | | Ī | Ţ |
| REFRESHER | NN1 | n | 8 | 8 | | 1 | |
| REINFORCER | NN1 | n | 2 | 3 | | 1 | |
| REMINDER | NN1 | n | 54 | 62 | | 1 | 1 |
| RETAINER | NN1 | n | 5 | 5 | | 1 | 1 |
| REVIVER | NN1 | n | 1 | 1 | | 1 | 1 |
| REVOLVER | NN1 | n | 34 | 35 | | 1 | 1 |
| RINGER | NN1 | n | 3 | 3 | | 1 | 1 |
| ROASTER | NN1 | n | 1 | 2 | | 1 | 1 |
| ROCKER | NN1 | n | 4 | 4 | | 1 | 1 |
| ROLLER | NN1 | n | 88 | 112 | | 1 | 1 |
| ROLLER-COASTER | NN1 | n | 1 | 1 | | 1 | 1 |
| RUBBER | NN1 | n | 26 | 93 | | 1 | 1 |
| RULER | NN1 | n | 26 | 30 | | 1 | 1 |
| RUNNER | NN1 | n | 4 | 17 | | 1 | 1 |
| SANDER | NN1 | n | 8 | 10 | | 1 | 1 |
| SAVER | NN1 | n | 12 | 22 | | 1 | 1 |
| SCANNER | NN1 | n | 18 | 24 | | 1 | 1 |
| SCOOTER | NN1 | n | 29 | 33 | | 1 | 1 |
| SCORCHER | NN1 | n | 1 | 1 | | 1 | 1 |
| SCOURERS | NN2 | n | 1 | 1 | | 1 | 1 |
| SCRAPER | NN1 | n | 6 | 10 | | 1 | 1 |
| SCRAPPER | NN1 | n | 8 | 8 | | 1 | 1 |
| SCREWDRIVER | NN1 | n | 36 | 43 | | 1 | 1 |
| SCRUBBER | NN1 | n | 2 | 4 | | 1 | 1 |
| SEALER | NN1 | n | 7 | 8 | | 1 | 1 |
| SERVER | NN1 | n | 129 | 140 | | 1 | 1 |
| SERVERS | NN2 | n | 0 | 0 | | 0 | 1 |
| SHAKER | NN1 | n | 2 | 3 | | 1 | 1 |
| SHARPENER | NN1 | n | 12 | 17 | | 1 | 1 |
| SHAVER | NN1 | n | 5 | 7 | | 1 | 1 |

FiCa



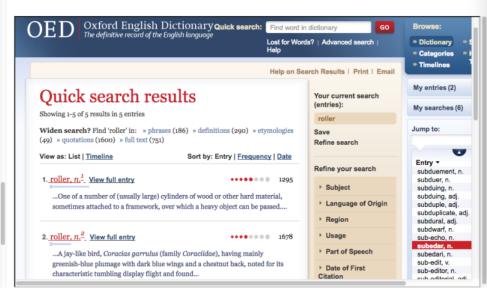
of small diameter which the seed is to be subjected to before it is exposed to the pressure of the great stone rolers:

this he says is a late invention; but as it requires more workmanship than is easy to be had here I think cast iron rol

odel he has brought with him from England there is an apparatus for bruising the seed by making it pass between two iron

of small diameter which the seed is to be subjected to before it is exposed to the pressure of the great stone

<Q A 1783 FN SBENTHAM> <X SAMUEL BENTHAM> <P III,209> [] [\(^{1}\) [\(^{1}\) GP FROM SAMUEL BENTHAM\) [\(^{1}\) [\(^{1}\) DIERBMY BENTHAM\) [\(^{1}\) [\(^{1}\) DIERBMY BENTHAM\) [\(^{1}\) [\(^{1}\) DIERBMY SEDY:]\(^{1}\) Jere=\(^{1}\) metham Esq=\(^{-1}\) = (\(^{1}\) Lincoln's Inn / London Petersbourg Septr. 13th O.S. 1783. I am at length taken into the service of this country. The rank given me is that of (\(^{1}\) Conseiller de la Cour\), which is only equal to that of Lieutenant Colonel in the army. Considering that I had had no Military rank in any other country to found my pretentions on, \(^{1}\) to bruise the seed in oil mills, and what objections he sees to such a substitute. In many places I imagine the rollers of stone may be cheaper; but that would not be the case here. Capper is returned and his having seen you all has attatched me to him. It is probable we may be concerned together in the erection of an oil mill which gave rise to the above question. In a model he has brought with him from England there is an apparatus for bruising the seed by making it pass between two iron rolers of small diameter which the seed is to be subjected to before it is exposed to the pressure of the great stone.



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Overview

Plot

Types

Samples

Help

Corpus

bnc-spoken-demo

bnc-spoken-demo-home

Dataset

er+or

er+or person

er+or thing

Group

all age

age + gender

gender

social class

social class + gender

none

Collection

none

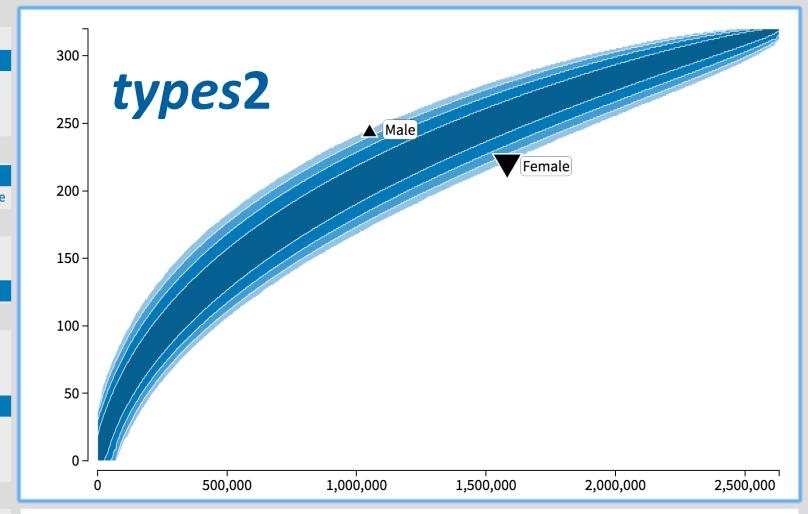
Female

Male

Statistics

types / running words

types / tokens



The corpus **bnc-spoken-demo** contains 358 samples and 2,632,512 running words.

The dataset er+or thing contains 111 hapaxes, 3,318 types, and 320 tokens.

The collection Female contains 1,582,116 running words and 218 types.

Only 0.0016% of random collections with 1,582,116 running words contain at most 218 types.

This finding is probably interesting: the false discovery rate is **0.0063**.

Case 1: BNC

- Men use -er more productively than women
 - Focus on tools & occupations, playful namecalling: masculine identity-building?
- Especially older men, even at home
 - cf. Keune et al. (2006, 2012); Štekauer et al. (2005)

| sample | description | before | word | after |
|--------|-------------------------|---------------------------------|-----------|-------|
| PS09T | DE m 60- retired | poor old | blighter | |
| PS0HM | C1 m 35-44 draughtsman | Cheeky | blighter | |
| PS14C | AB m 45-59 charge nurse | Well these poor | blighters | who g |
| PS4YX | AB m -14 student | had a history with his toe poor | blighter | |

Case 2: CEEC

Corpora of Early English Correspondence, 1680–1800



Overview

Plot

Types Samples Help

Corpus

CEEC

Dataset

er+or

er+or person

er+or thing

Group

all gender

gender + relcode

period

rank .

relcode none

Collection

none

1680-1719

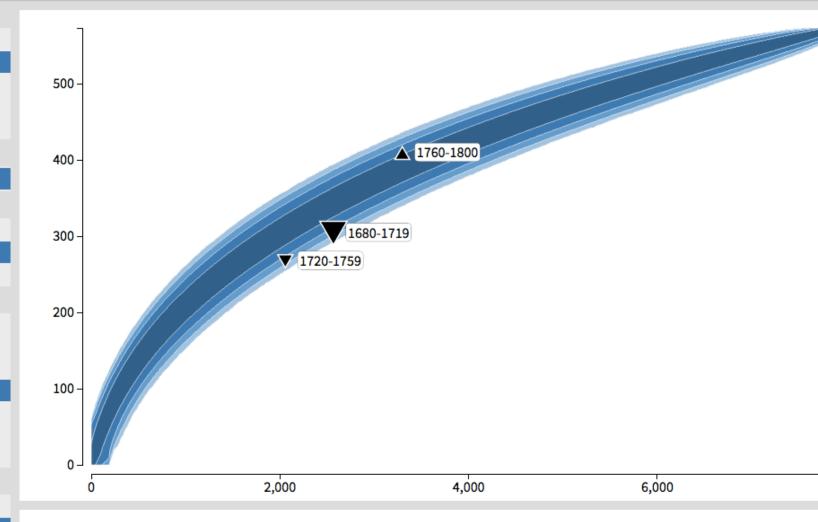
1720-1759

1760-1800

Statistics

types / running words

types / tokens



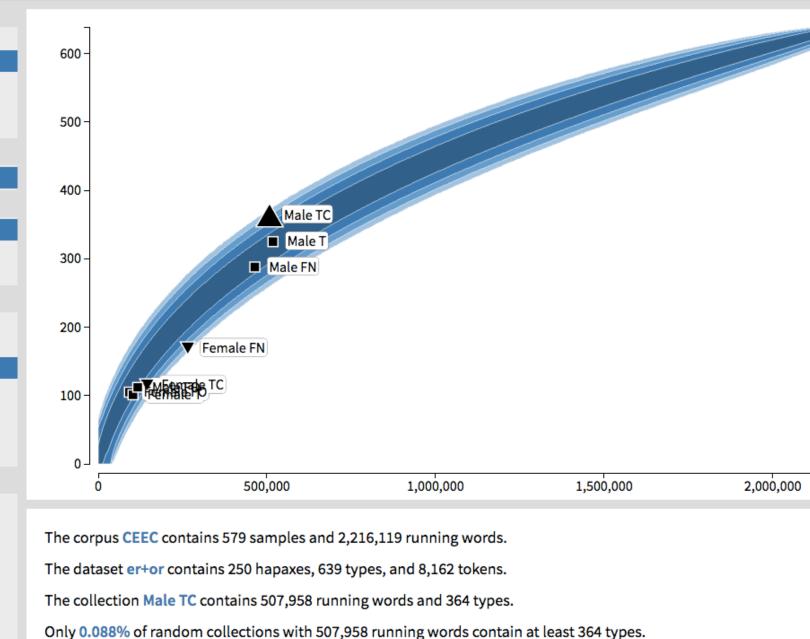
The corpus CEEC contains 579 samples and 2,216,119 running words.

The dataset er+or person contains 218 hapaxes, 573 types, and 7,921 tokens.

The collection 1680-1719 contains 2,567 tokens and 304 types.

Only 0.22% of random collections with 2,567 tokens contain at most 304 types.

This finding is probably interesting: the false discovery rate is 0.044.



none

types2

Plot Types Samples

Help

Corpus

Dataset

er+or

Group all

gender

period

rank relcode none

gender + relcode

er+or person

er+or thing

Overview

Female FN

Collection

Female FO Female T

Female TC

Male FN
Male FO Only

Male T This finding is probably interesting: the false discovery rate is 0.025.

Male TC

Statistics

Change and variation observed

- Productivity of -er increases over time
 - Stylistic change or continued semantic expansion?
 (Säily 2014, -ity; Dalton-Puffer 1994)
 - Inanimate -er very infrequent compared to BNC
 - Later technological developments?
- Men writing to their close friends overuse -er
 - Less stable relationship a trigger for productivity?
 (cf. Wolfson 1990; Säily 2014, -ity)
- Who are the overusers?

Most productive early users

 Robert Southwell, diplomat (1635–1702)
 And consequently the State will be owners and disposers of the Children begotten ...



(to William Petty, 1685; PETTY2_010)

• John Evelyn, writer & translator (1620–1706)

I make this Reflection on the Reflecter, that: he is now and then mistaken in his Politics ...



(to Samuel Pepys, 1687; EVELYN2_008)

Most productive male user (TC)

- Ignatius Sancho, author (1729?–1780)
 - 46 types, 58 tokens



Poor blundering M, I pity thee – Once more I tell thee, thou art a **bungler** in every thing – ask the girls else. – You know nothing of figures – you write a wretched hand – thou hast a non-sensical style – almost as disagreeable as thy heart ...

(to John Meheux, 1779; SANCHO_033)

What about neologisms?

- End of C18: -er highly productive what kinds of neologisms by whom?
 - Säily (forthcoming), -ity: words describing people, created by male professionals
- Working definition of neologism: corpus attestation max 100 years after OED first attestation date (cf. Säily forthcoming)

25 neologisms found, 1760–1800

- Describing people: absconder, blubberer (1782<1786), commemorator (1784<1856), completer, complimenter, dangler, outsider (1800=OED), schemer, seceder, spiter (1790<1847), swindler
 - Occupations: (shirt-)airer, gambler, hairdresser,
 (China-)piecer, smuggler
- Connected to places: Chiswicker, Madrasser, Norfolker, Turnham-Greener (none in OED)
- Things: cutter 'boat', ventilator
- Other: brightener, plumper 'lie' (1776=OED), winterer (1784<1795)

Who are the innovators?

- **Thomas Twining**, clergyman, classical scholar (c.1734–1804)
 - blubberer 1782, complimenter 1788, commemorator
 1784, plumper 1776
- **Hester Piozzi**, writer (1741–1821)
 - seceder, spiter 1790
- Jane Austen, novelist (1775–1817)
 - outsider 1800



- George Culley, agriculturist (c.1735–1813)
 - Norfolker, winterer 1784

How do they use the neologisms?

As to myself, *Cecilia* has done just what she pleas'd with me: I laughed, & cried (for I am one of the **blubberers**) when she bade me.

(Thomas Twining to Charles Burney, 1782; TWINING_033)

it makes me laugh when I think how the **Spiters** told us that *Siddons had lost all her Popularity* ... (Hester Piozzi to Charlotte Lewis, 1790; PIOZZI 027)

CEEC: Summary of results

- Most productive users (type frequency): men writing to close friends
 - e.g. Ignatius Sancho, author
- Innovators: men and women, mostly in their 40s–50s, professional / other non-gentry, writing to close friends or family
- Often words describing people, designed to amuse the recipient – linked to writing style
 - Playful abuse an element here as well (cf. BNC)

Conclusion

- Variation in the productivity of -er
 - Similar results obtained in 18th-century and Presentday English: masculine identity-building?
- Neologisms: goal to expand to the entire CEEC
- Similar variation and change observed within the productivity of both derivational and inflectional suffixes
 - -ity, -ness (Säily 2014), -er (this study), comparative -er
 (Säily et al. forthcoming)
 - Supports the hypothesis of a cline (see also Bauer 2004, Gaeta 2007) → derivation contributes to syntheticity alongside inflection (cf. Danchev 1992)

References

- Baayen, R.H. 2009. Corpus linguistics in morphology: Morphological productivity.
 A. Lüdeling & M. Kytö (eds.), Corpus Linguistics: An International Handbook, 899–919. Berlin: Mouton de Gruyter.
- Bauer, L. 2001. Morphological Productivity. Cambridge: CUP.
- Bauer, L. 2004. The function of word-formation and the inflection-derivation distinction. H. Aertsen, M. Hannay & R. Lyall (eds.), Words in Their Places: A Festschrift for J. Lachlan Mackenzie, 283–292. Amsterdam: Vrije Universiteit.
- Bauer, L., R. Lieber & I. Plag 2013. The Oxford Reference Guide to English Morphology. Oxford: OUP.
- BNC = The British National Corpus, version 3 (BNC XML edition). 2007. Distributed by Oxford University Computing Services on behalf of the BNC Consortium.
- CEEC = Corpora of Early English Correspondence. Compiled by T. Nevalainen, H. Raumolin-Brunberg et al. at the University of Helsinki. http://www.helsinki.fi/varieng/CoRD/corpora/CEEC/
- Dalton-Puffer, C. 1994. Are Shakespeare's agent nouns different from Chaucer's? –
 On the dynamics of a derivational sub-system. D. Kastovsky (ed.), Studies in Early
 Modern English, 45–58. Berlin: Mouton de Gruyter.
- Danchev, A. 1992. Analytic and synthetic developments in English. M. Rissanen et al. (eds.), *History of Englishes*, 25–41. Berlin: Mouton de Gruyter.

References

- Gaeta, L. 2007. On the double nature of productivity in inflectional morphology. Morphology 17(2): 181–205.
- Keune, K., R. van Hout & R.H. Baayen. 2006. Socio-geographic variation in morphological productivity in spoken Dutch: A comparison of statistical techniques. J-M. Viprey & Lexicometrica (eds.), Actes de JADT 2006: 8es journées internationales d'analyse statistique des données textuelles, 571–581. Besançon: Université de Franche-Comté.
- Keune, K., R. van Hout & R.H. Baayen 2012. Derivational and lexical productivity across written and spoken Dutch. Chapter 4 in K. Keune, Explaining Register and Sociolinguistic Variation in the Lexicon: Corpus Studies on Dutch. PhD dissertation, Radboud University Nijmegen.
- Laws, J.V. & C. Ryder 2014a. *MorphoQuantics*. http://morphoquantics.co.uk/
- Laws, J.V. & C. Ryder 2014b. Getting the measure of derivational morphology in adult speech: A corpus analysis using *MorphoQuantics*. *Language Studies Working Papers*: University of Reading, Vol. 6, 3–17.
- OED = Oxford English Dictionary. OED Online. Oxford University Press. http://www.oed.com
- Plag, I. 2003. Word-Formation in English. Cambridge: CUP.
- Säily, T. 2011. Variation in morphological productivity in the BNC: Sociolinguistic and methodological considerations. *Corpus Linguistics and Linguistic Theory* 7(1): 119–141.

References

- Säily, T. 2014. Sociolinguistic Variation in English Derivational Productivity: Studies and Methods in Diachronic Corpus Linguistics. Helsinki: Société Néophilologique.
- Säily, T. forthcoming. Neologisms in early English letters: The case of -ity. Lexicidion: Newsletter of the Helsinki Society for Historical Lexicography.
- Säily, T., V. González-Díaz & J. Suomela forthcoming. Variation in the productivity of adjective comparison. V. Brezina, R. Love & K. Aijmer (eds.), Corpus Approaches to Contemporary British Speech: Sociolinguistic Studies of the Spoken BNC2014. Routledge.
- Säily, T. & J. Suomela 2009. Comparing type counts: The case of women, men and
 -ity in early English letters. A. Renouf & A. Kehoe (eds.), Corpus Linguistics:
 Refinements and Reassessments, 87–109. Amsterdam: Rodopi.
- Štekauer, P., D. Chapman, S. Tomaščíková & Š. Franko. 2005. Word-formation as creativity within productivity constraints: Sociolinguistic evidence. *Onomasiology Online* 6: 1–55.
- Suomela, J. 2015. bnc-affix: Analysing productivity of affixes with BNC & MorphoQuantics data. https://github.com/suomela/bnc-affix
- Suomela, J. 2016. types2: Type and hapax accumulation curves. http://users.ics.aalto.fi/suomela/types2/
- Wolfson, N. 1990. The bulge: A theory of speech behavior and social distance.
 Penn Working Papers in Educational Linguistics 2(1): 55–83.