



“Words, words, words”: Discoveries from The Encyclopaedia of Shakespeare’s Language Project

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Why approach Shakespeare from linguistics and why now?

Jack Cade:

"It will be proved to thy face that thou hast men about thee that usually talk of a noun and a verb, and such abominable words as no Christian ear can endure to hear." 2H6 IV.vii

- Relatively little has been written on Shakespeare's language by linguists.
- Linguistics has moved on (it's more applied than ever).
- Linguistics has new technologies by which it can be pursued (e.g. the computer).
- Linguistics is increasingly combined with other disciplines, as it is in this project (+ literary studies, computer science, history, etc.)

The Encyclopedia of Shakespeare's Language Project

(<http://wp.lancs.ac.uk/shakespearelang>)

Main people: Jonathan Culpeper, Dawn Archer, Alison Findlay, Andrew Hardie, Paul Rayson, Jane Demmen, Sean Murphy, Amelia Joulain-Jay, Mathew Gillings ...

Funder: UK's Arts and Humanities Research Council (AHRC)

Timeframe: 2016-2019

Aim: Produce the first systematic and comprehensive account of Shakespeare's language using methods derived from *corpus linguistics* – an approach that uses computers in large-scale language analysis.

A distinctive feature: It's comparative.

Preliminaries: What is meant by “Shakespeare’s language”?

Shakespeare’s language = surviving written texts that constitute, for the most part, the language that we call Shakespeare’s works

Which “surviving written texts”?

- We need one stable body of texts – a corpus – at the heart of our project (partly for methodological reasons).
- Modern editions are a mish-mash of writings attributed to Shakespeare, and contain various modernizations.
- We do not have the resources to engage in author attribution work or (much) textual editing.

Preliminaries: What is meant by “Shakespeare’s language”?

Solution?

- Use an original spelling diplomatic transcription of the largest near-contemporary body of work attributed to Shakespeare, i.e. the First Folio (1623), plus *Pericles* and *The Two Noble Kinsmen*.
- But don’t ignore the Quartos. They constitute a secondary dataset.

Preliminaries: The problem with counting words

Our method relies on counting words in order to identify patterns

What is a word?

Two definitions:

(1) A unit of meaning

- *The plane landed* = 3 words?
- *The plane took off* = 3 words? (cf. phrasal verbs)
- *He kicked the bucket* = 2 words? (cf. idioms)

Well come, in deed, by cause, etc.

Hour glass, hour-glass, hourglass

Preliminaries: The problem with counting words

(2) A letter or letters bounded by spaces?

orthographic word = 'a string of uninterrupted non-punctuation characters with white space or punctuation at each end' (Leech et al. 2001: 13-14)

Problem solved?

Preliminaries: The problem with counting words

To my friend

I like you and I love you

Love from

Emily



Preliminaries: The problem with counting words

Historical issues:

Well come, in deed, by cause, etc.

Hour glass, hour-glass, hourglass

Preliminaries: The problem with counting words

Words and morphological variants:

- Dictionary headword:

do = **1**

- Modern (morphological) word-forms:

do, does, doing, did, done = **5**

- Early modern (morphological) word-forms:

do, does, do(e)st, doth, doing, did, didst, done = **8**

Preliminaries: The problem with counting words

Words and spelling variants:

Problem: You decide to study the use of the word *would* in a corpus. You type it into your search program ... and look at the result.

But you miss: *wold, wolde, woolde, wuld, wulde, wud, wald, vvould, vvold, etc., etc.*

One orthographic word today; many in EModE.

Solution: *Variant Detector* (VARD) program, primarily devised by generations of scholars at Lancaster, but most recently given a significant boost by Alistair Baron.

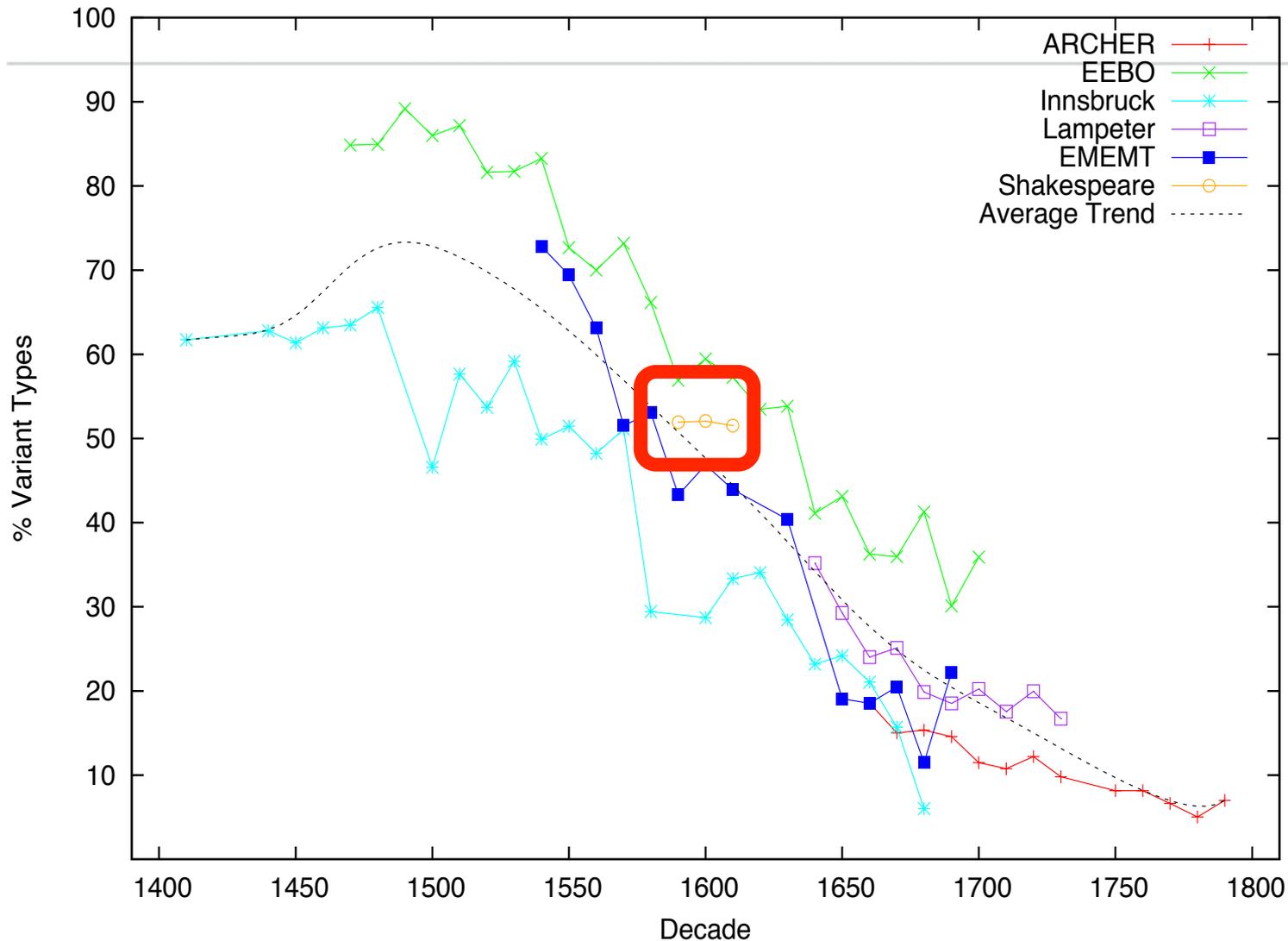
Preliminaries: The problem with counting words

Further problem: What do you regularize the spelling to? There is no standardised regular form in the way that there is today.

Solution: Our general policy was to

- Preserve the morphology, e.g. 2nd + 3rd person verb inflections (-(e)st, -(e)th), past tense forms (e.g. *holp*), past participle forms (e.g. *holpen*), plural forms (e.g. *shooen*), non-standard superlatives (e.g. *horrider*), and *you/thou*
- Use a spelling that had EModE currency
- Prioritize the most frequent spelling in Shakespeare

A glance at the First Folio and spelling variation in English (Baron, Rayson & Archer 2009)



Shakespeare's neologisms?

What can we 'learn' from the internet?

- “Shakespeare coined more words than other writers, around 1700 words ...”
- “The English language owes a great debt to Shakespeare. He invented over 1700 of our common words ...”
- “Shakespeare introduced nearly 3,000 words ...”
- “Shakespeare is credited by the Oxford English Dictionary with the introduction of nearly 3,000 words into the language”
- “Shakespeare invented a quarter of our language”
- “Shakespeare invented half the words in the English language”
- “Shakespeare *is* our language”

Shakespeare's neologisms?

Work on neologisms:

- 1,502 words recorded in the Oxford English Dictionary as first citations in Shakespeare
- We are checking these in *Early English Books Online* (EEBO-TCP): 125,000 titles of printed material, 1473-1700. About 1.2 billion words.

Preliminary findings:

- If the current pattern continues, less than a quarter of those 1,502 words can reasonably be attributed to Shakespeare.

Shakespeare's neologisms?

Issues

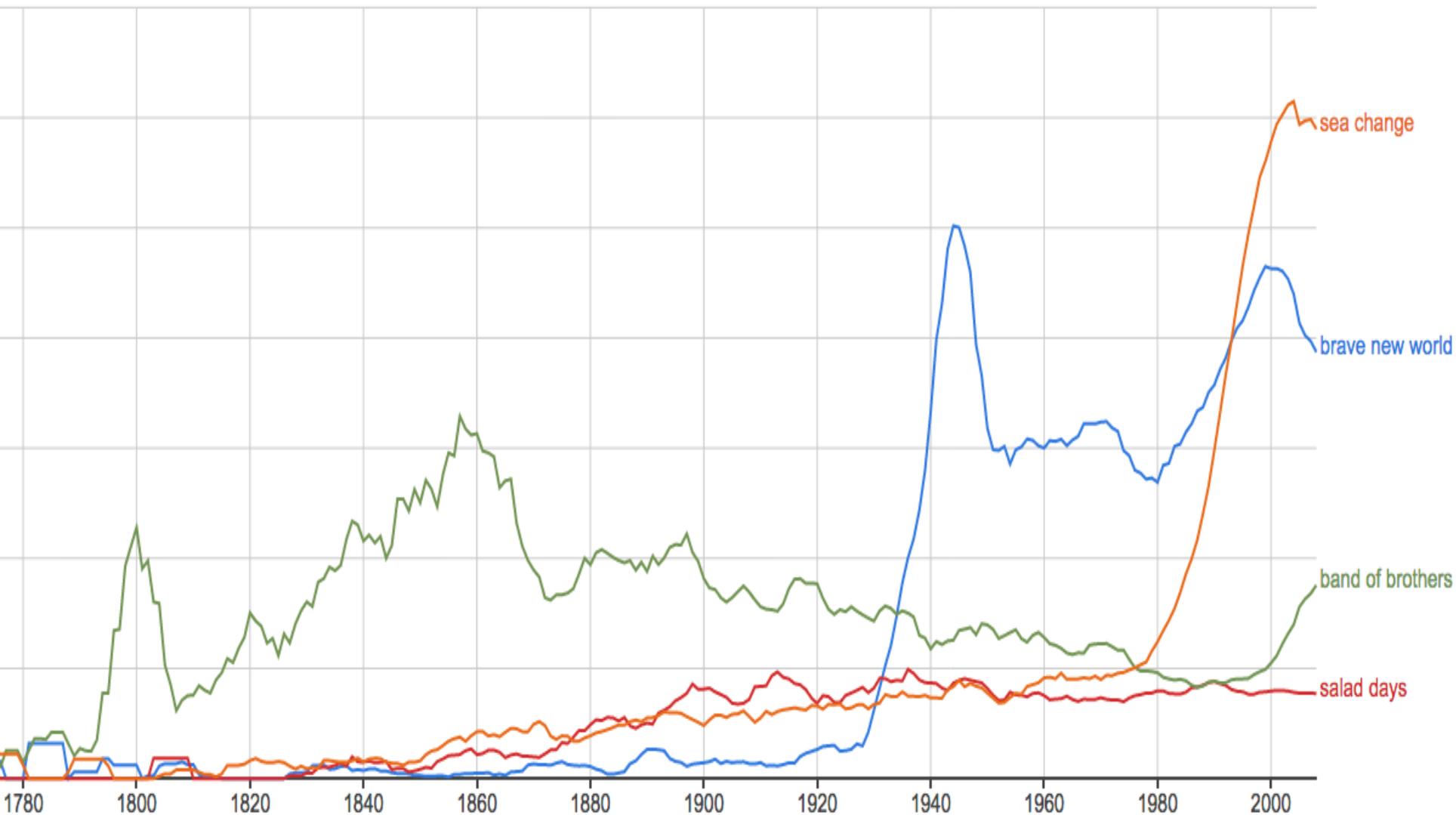
- How do we know that Shakespeare coined it as opposed to recorded it? Cf. *down staires* vs. *incarna[r]dine* (v.)
- What about borrowings, such as Latin *acerbic*, that appear in mixed Latin-English texts before Shakespeare?
- Is it actually just a nonce word rather than neologism? Cf. *dropsied* vs. *domineering*

Shakespeare's neologisms

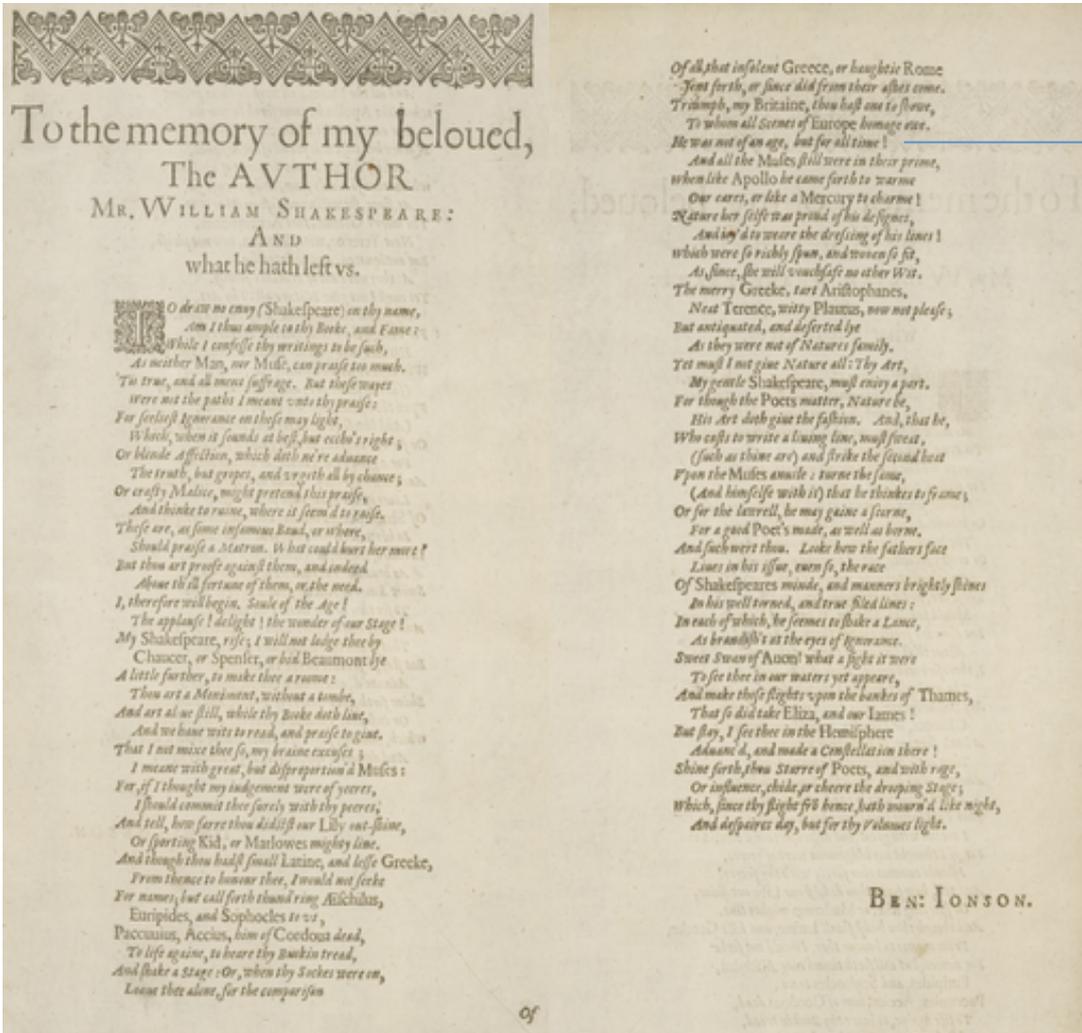
Do Shakespeare's "coinages" survive into today's English?

- A glimpse of phrases first recorded in Shakespeare and their more recent life.

Four phrases first recorded in Shakespeare and their use in printed material over the last 200 years (Google's N-Gram Viewer)



Shakespeare's language transcends time and space?



He was not of an age, but for all time!

Shakespeare's language transcends time and space?

- Universal characters, emotions, themes language??

“Shakespeare has given us a universal language medium in which are crystalized the battle hymns, the intellectual conceptions and the spiritual aspirations of the Anglo-Saxons.”

(Rutherford, N.J. and Bennett, E.H., 1918-1922, *English Speaking World*, Vol.2
(8): 14)

- No Shakespearean dictionary has treated Shakespeare's language as relative, i.e. put Shakespeare's usage in the context of that of his contemporaries.

Shakespeare's language transcends time and space?

- *good*

Crystal & Crystal (2004:201-202):

(1) [intensifying use] real, genuine ('love no man in good earnest'). (2) kind, benevolent, generous. (3) kind, friendly, sympathetic. (4) amenable, tractable, manageable. (5) honest, virtuous, honourable. (6) seasonable, appropriate, proper. (7) just, right, commendable. (8) intended, right, proper. (9) high-ranking, highborn, distinguished. (10) rich, wealthy, substantial.

+ phrases and compounds

good (*n.*) 1 goodwill, goodness **HE** IV.ii.60 [Griffith to Katherine, of the fall of Wolsey's foundation at Ipswich] Unwilling to survive the good that did it
2 good fellow **Per** II.Chorus.9 [Gower alone, of Pericles] The good in conversation ... / Is still at Taruis; **Tem** I.i.3, 15; **Tim** II.ii.75
3 interest, advantage, benefit **Cor** III.234 [Sicinius to Brutus, of Coriolanus] It shall be to live them as our good wills, / A sure distraction
good, do prosper, succeed, triumph **2H6** IV.iii.14 [Dick to Cade] If we mean to thrive and do good, break open the gaols
good, do one 1 make prosper, enable to succeed **MA** I.i.269 [Claudio to Don Pedro] your highness now may do me good; **2H6** I.ii.77; **2H6** III.ii.38
2 be of use to, provide assistance to **2H6** III.ii.219 [King to all, of Gloucester] myself ... / Look after him, and cannot do him good
good (*adj.*) 1 [intensifying use] real, genuine **W** I.ii.26 [Celia to Rosalind] love no man in good earnest; **Tim** II.ii.232
2 kind, benevolent, generous **Tim** I.ii.242 [Timon to Apemantus] if thou wert not stollen, I would be good to thee; **Tim** III.ii.24
3 kind, friendly, sympathetic **2H6** II.ii.274 [Rosaline to all] The King was welcome-ripe for a good word
4 amenable, tractable, manageable **TS** I.i.127 [Hortensio to Gremio, of a husband for Katherine] there he good follows in the world, as a man could fight on them
5 honest, virtuous, honourable **Cor** II.ii.58 [Menenius to Brutus and Sicinius, of their supporters] they lie deadlier than tell you have good faces
6 seasonable, appropriate, proper **CE** II.ii.70 [Antipholus of Syracuse to Dromio of Syracuse] learn to jest in good time
7 just, right, commendable **2H6** II.ii.28 [Suffolk to Gloucester, of malice] so sure than well because / So good a quarrel
8 intended, right, proper **R3** I.iv.46 [Mercutio to Romeo] Take our good meaning
9 high-ranking, highborn, distinguished **R3** I.i.40 [Bolingbroke to Mowbray] They are ... a miscreant, / Too good to be so **W** better (*adj.*)
10 rich, wealthy, substantial **Cor** I.ii.75 [First Citizen to all] We are accosted poor citizens, the partricks good; **2H4** IV.ii.15; **MV** I.ii.12
good, 'tis very well **Tit** I.ii.412 [Saturninus to Bassianus] 'Tis good, sir. You are very short with us
good (*adv.*) [intensifying use] really, genuinely **2H4** III.ii.44 [Falstaff to Bardolph] the sack that thou hast drunk we would have bought we might as good cheap at the dearest chandler's in Europe
good-conceited (*adj.*) cleverly devised, ingeniously composed **Cym** II.ii.16 [Cloten to musicians, of their playing to Imogen] a very excellent good-conceited thing
good deed (*adv.*) in truth, in reality **WT** I.ii.42 [Hermione to Leontes] yet, good deed, Leontes, / I love thee not a jar o'th' clock behind / What lady she her lord **W** DISCOURSE MARKERS, p.127
good-den / e'en / even / morrow **W** GREETINGS, p.206; FAREWELLS, p.170
good-faced (*adj.*) smooth-faced, pretty **WT** IV.ii.112 [Autolycus to Clown] good-faced sir ... sweet sir
good life comfortable position, respectable way of life **MV** III.ii.112 [Mistress Page to Mistress Ford] defend your reputation, or bid farewell to your good life for ever **W** song of good life

Shakespeare's language transcends time and space - *good*

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- (1) [intensifying use] real, genuine ('love no man in good earnest').
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- (5) honest, virtuous, honourable.
- (6) seasonable, appropriate, **proper**.
- (7) just, **right**, commendable.
- (8) intended, **right**, **proper**.
- (9) high-ranking, highborn, distinguished.
- (10) rich, wealthy, substantial.

Shakespeare's language transcends time and space - *good*

Encyclopaedia of Shakespeare's Language

Definition preview: definition [104](#) for entry [good_ADJ](#)

good**** *adj.* (good, better, best):

1. A polite address: '(my) good Lord/friend/Sir/Master/Lady/Madam/etc.'. Typically used when meeting or parting, thanking or making suggestions. *But (good my Lord) do it so cunningly* TGV, III. 1.
2. Honest, truthful, principled; of high moral standards. (This sense also shapes the discourse markers '(in) good faith/sooth/troth', which mean truly or honestly). *a man of good repute, carriage, bearing, & estimation* LLL, I. 1.
3. Positive rather than negative. Typically, contrasted with 'bad'. *Is thy news good or bad?* ROM, II. 5.
4. In one's favour, especially favourable wishes or blessings. *The Gods be good to us* COR, V. 4.
5. A welcoming, cheerful manner. *Therefore for Gods sake entertain good comfort, And cheer his Grace with quick and merry eyes* R3, I. 3.

good will As now.

good morrow Good morning.

good night As now.

Contemporary attitudes towards the Scottish, Irish and Welsh

(with Alison Findlay)

Henry V : Fluellen, Macmorris and Jamy



Globe Education

- How did contemporaries of Shakespeare view the Scots, Welsh and Irish?
- How did people write about them at the time?

Lexical items: *Scottish, Irish and Welsh*

Focus: words that frequently co-occur with Scottish, Irish or Welsh, i.e. collocates

- **Data:** *Early English Books Online* – approx. 1.2 billion words (?)
- **Period:** 1580-1599 – 82,180,304 words (around *Henry V*)
- **Tool:** CQPweb (Andrew Hardie)
- **Settings:** 5 words left and right of target item (within sentence boundaries). Mutual information. Minimum frequency is 10.

Lexical items: Frequencies

How often do they occur?

Scots/Scottish: **5,407** instances in 282 texts

Irish: **1,160** instances in 144 texts

Welsh: **802** instances in 115 texts

Lexical items: *Scots/Scottish*

Thematic groups (amongst the top 50 collocates)

Associated groups (*confederates, ioine*): *Picts, Irish, Britains, Frenchmen, Danes, etc.*

Scottish kings/queens and nobles: *Malcolm, Ferguse, Kenneth, Donald, Bruce, Galled, etc.*

Hostile: *iuadeth, discomfited, borders, invaded, chased*

Scottish histories: *chronicles, writers, yere*

Political power: *nation, nobility, ambassadors, etc.*

Religion: *communion, supper, etc.*

Lexical item: *Irish*

Strongest collocate: *Irish rug*

“Show me a fair scarlet, a vvelch frise, a good Irish rug” (Eliot, 1595)

Lexical item: *Irish*

Thematic groups (top 50 collocates)

Negative connotations:

Uncivilised: *savage, wild*

Hostile: *wars, enemies, against*

Ungovernable: *rebels*

[Insignificant????]: *mere** (Holinshed)]

Associated groups: *Scottish, Scots, English [rebels]*

Suppressed: *slue, hundred*

Political power: *nation, lords*

Language: *tongue, language, speak, called*

[MacMorris: “What ish my nation? Ish a villain and a bastard and a knave and a rascal?”]

Lexical item: *Welsh*

Thematic groups (top 50 collocates)

Associated groups (collaborators): *Englishmen*

Suppressed: *number, against, king, Danes*

Welsh language: *English, tongue, y, speaks, call, called, word*

William Allen, *A Conference About the Next Succession* (1595)

“... in the **welsh** also towards the English, who are a different people and of different language, and yet are they governed peaceably by the English, & the English again do account them for their country men ...”

Character profiles: *Romeo and Juliet*



Lily James
and Richard
Madden.

(Photo: Johan Perrson)

- What language characterizes Romeo and what language, Juliet?
- What are their linguistic styles, their style markers, their keywords?

Character profiles: *Romeo and Juliet*

Rank-ordered keywords for Romeo and Juliet (raw frequencies in brackets)

Romeo	Juliet
<p>beauty (10), love (46), blessed (5), eyes (14), more (26), mine (14), dear (13), rich (7), me (73), yonder (5), farewell (11), sick (6), lips (9), stars (5), fair (15), hand (11), thine (7), banished (9), goose (5), that (84)</p>	<p>if (31), be (59), or (25), I (138), sweet (16), my (92), news (9), thou (71), night (27), would (20), yet (18), that (82), nurse (20), name (11), words (5), Tybalt's (6), send (7), husband (7), swear (5), where (16), again (10)</p>

Character profiles: *Romeo and Juliet*

Romeo:

- She hath, and in that sparing makes huge waste; For **beauty**, starv'd with her severity, Cuts **beauty** off from all posterity. She is too **fair**, too wise, wisely too **fair**, To merit bliss by making **me** despair: She hath forsworn to **love**, and in that vow Do I live dead that live to tell it now. (I.i)
- If I profane with our unworthiest **hand** This holy shrine, the gentle sin is this; Our **lips**, two blushing pilgrims, ready stand To smooth that rough touch with a tender kiss. (I.v)

Character profiles: *Romeo and Juliet*

Juliet:

- **If** he **be** married, / Our grave is like to **be our** wedding-bed (I.v.)
- **If** they do see thee, they will murder thee (II.ii.)
- But **if** thou meanest not well (II.ii.)
- Is thy news good, **or** bad? answer to that; Say either, and I'll stay the circumstance: Let me be satisfied, is 't good **or** bad? (II.ii)
- 'Tis almost morning; I would have thee gone; And **yet** no further than a wanton's bird [...] (II.ii.)

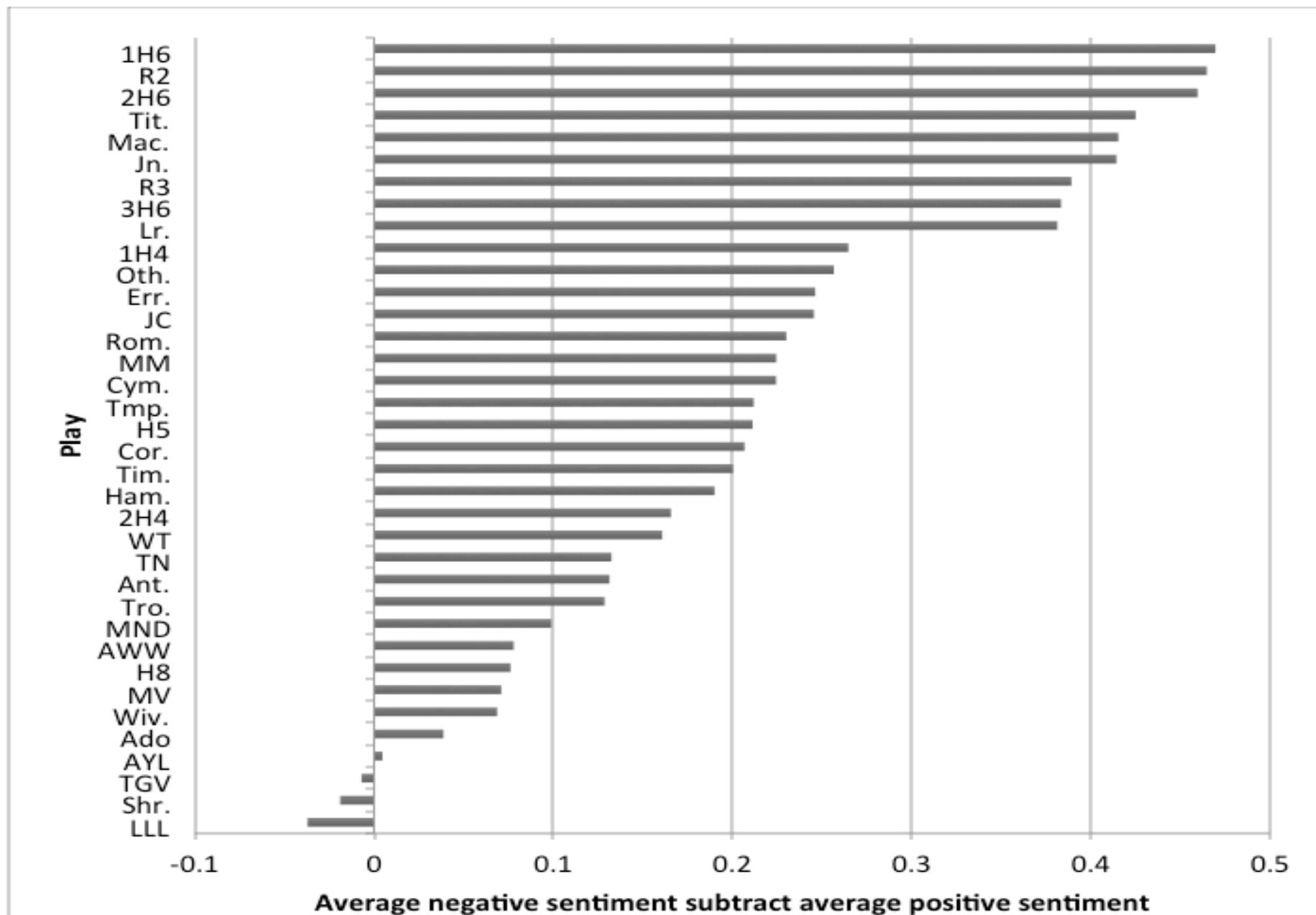
The language of emotion in Shakespeare's plays

(with Alison Findlay, Beth Cortese, Mike Thelwall and Dawn Archer)

“Sentiment analysis”

- Emotion words, whether they are positive or negative (valence), and their strength.
- *SentiStrength* (Thelwall; <http://sentistrength.wlv.ac.uk/>)
- Lexicon adjusted for EModE and Shakespeare in particular.
- Checked against a human rater.

Overall negative sentiment across Shakespeare's plays (average negative sentiment subtract average positive sentiment)



What will the project produce?

The encyclopedia

- An encyclopedia of two volumes, one a kind of dictionary, the other a compendium of word patterns relating to characters, character groups, plays, play-genres, themes, etc.
- To be published by Bloomsbury in paper and electronically.
- An app delivering a “lite” version of volume 1.

What will the project produce?

Electronic “editions”

- Shakespeare's work uniquely enriched with multiple annotation schemes;
- A matching corpus of contemporary playwrights enriched with multiple annotation schemes;
- 321 million words, drawn from Early English Books Online (TCP version), which we will enhance and use for comparisons with Shakespeare's language.

What will the project produce?

Outreach work

- Annual summer school
- A mini-MOOC
- Lectures, demonstrations, workshops, etc.
- Website, Twitter, etc.

BUT

How do we know what people need?

What do people find difficult when they encounter Shakespeare's language?

Some preliminary results from the Reading Shakespeare's Language study

(with Sean Murphy and Mathew Gillings)

Preliminary result of study carried out on 23rd Nov. 2017 among 91 third-year undergraduate students of a degree in English Studies at the University of Barcelona. N.B. They are speakers of English as a foreign language.

Task 1: Underlining of anything that is difficult to understand in 6 extracts of around 80 words each from various plays

Task 2: Rate on a scale how easy 20 sentences from various plays are to understand and say briefly what they mean (the sentences were chosen to capture a wide variety of possible difficulties)

Task 3: In focus groups, address questions regarding what they think is difficult to read in Shakespeare.

Some preliminary results from the Reading Shakespeare's Language study

(with Sean Murphy and Mathew Gillings)

Preliminary results from Tasks 1 & 2. What causes difficulty?

- Words trump unusual constructions (whether word or grammar), ambiguities, metaphors, etc.
- In most cases, because they are completely unknown. Top examples include: *yclept*, *Gramercy*, *trow*, *fain*, *woo't*, *mar*, *haggard*
- Occasionally, because their known sense does not seem to fit the context (e.g. *ripe*, *rebuked*, *bully*, *wench*).

British students

- Preliminary results from our study of British English students are the same, except their knowledge of specific words differs.

Some preliminary results from the Reading Shakespeare's Language study (with Sean Murphy and Mathew Gillings)

Preliminary results from Tasks 3. What is difficult?

- (Archaic) vocabulary
- (Long) sentence structure
- Metaphors (especially extended ones)
- Historical and cultural context

British students

- Preliminary results from our study of British English students are the same, except their knowledge of the historical and cultural context differs. (Some students at the University of Barcelona students claim an advantage if the context relates to Mediterranean cultures).

Concluding thought

No man is an *Iland*, intire of it selfe; every man is a peece of the *Continent*, a part of the *maine*; if a *Clod* bee washed away by the *Sea*, *Europe* is the lesse [...]

(John Donne 1624)

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