Shakespeare's language: Insights afforded by new developments in corpus linguistics

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Overview

- The project and the corpus-based approach
- Methodological challenges and solutions
- A glance at current Shakespeare dictionaries

- Case study (1): 'horrid'
- Case study (2): 'good'
- Case study (3): 'ah'

- Case study (4): Multi-word units

- Case study (5): Character profiles
- Case study (6): Play profiles

- Conclusions

What the project aims to do ….

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

COLLINS
COBUILD
ENGLISH
LANGUAGE
DICTIONARY

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WITH THIS UNIQUE NEW DICTIONARY

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of SPOKEN
and WRITTEN
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Early English
in the Computer Age
Explorations through the
Helsinki Corpus

Matti Rissanen, Merja Kytö,
Minna Palander-Collin
(Editors)

TiEL

Mouton de Gruyter

Corpus Stylistics
Speech, writing and thought
presentation in a corpus
of English writing

Elena Semino and
Mick Short

What will be in the encyclopedia?

Volume 1 (a kind of dictionary)

Focuses on the use and meanings of each of Shakespeare's words, both in the context of what he wrote and in the context in which he wrote. Every word is, for example, compared with a 321 million word corpus comprising the work of Shakespeare's contemporaries. The volume establishes both what is unique about Shakespeare's language and what Shakespeare's language meant to his contemporaries.

What will be in the encyclopedia?

Volume 2 (a compendium of semantic patterns)

Focuses on patterns of words in Shakespeare's writings. It describes how these patterns create the 'linguistic thumbprints' of characters, different genders, themes, plays and dramatic genres. It also considers clusters of words that relate to concepts (e.g. love, death).

Volume 3 (a kind of grammar)

Focuses on grammatical words and patterns.
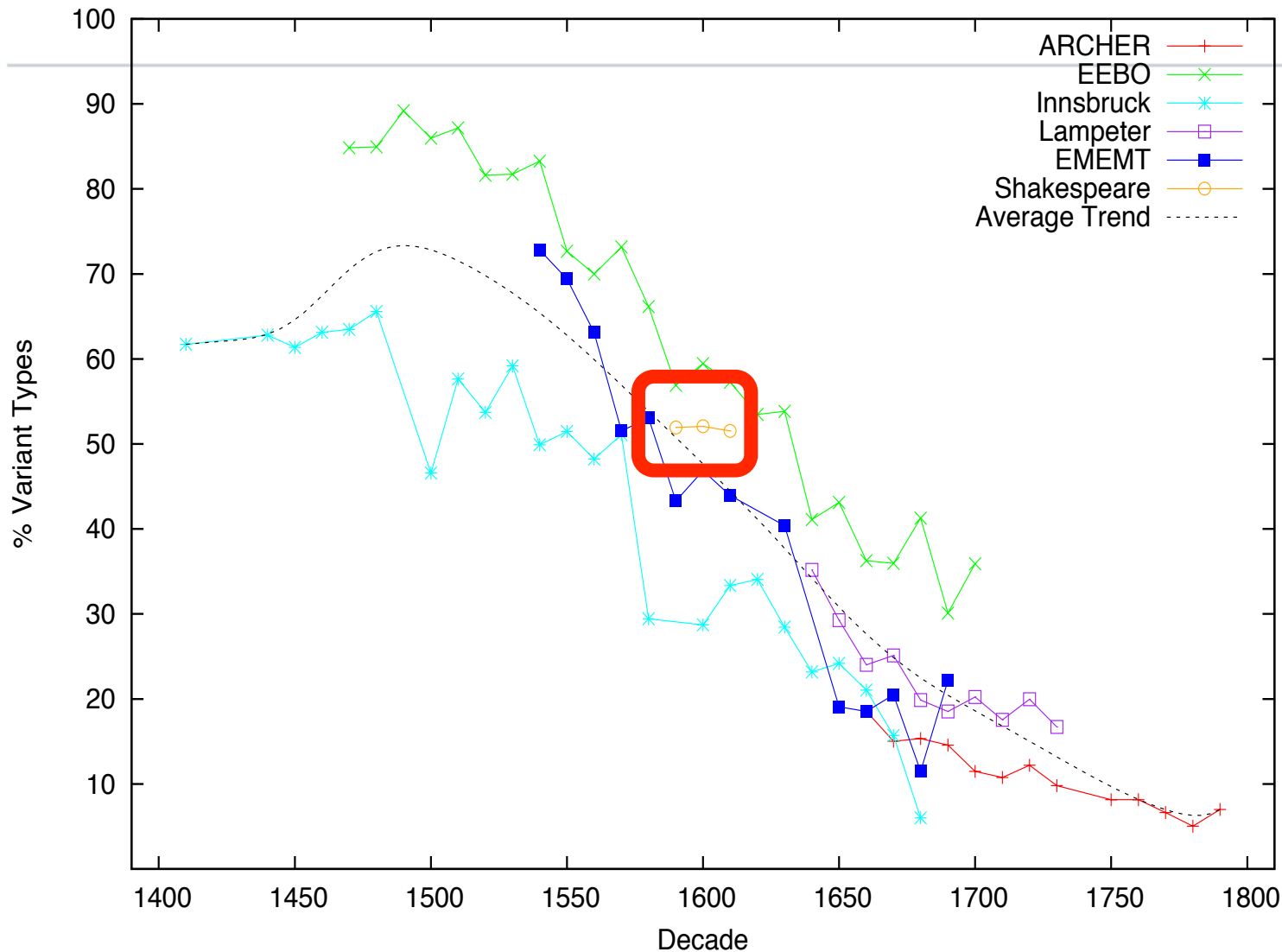
Methodological issues

Spelling variation:

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.

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

A glimpse at Shakespeare: The First Folio and spelling variation in English (Baron *et al*'s 2009)

Methodological issues (contd.)

The comparative corpus

Problem: Size matters

- Any pattern is a matter of frequency.

- Linguistics is centrally focussed on patterns in language.

- Historical linguistics work is often hampered by low frequencies, because the historical record is not complete.

- Corpus-based methods and concepts (e.g. collocates) are centrally driven by frequencies and statistical operations.

Solution: Various new corpora and electronic texts, but especially *Early English Books Online* (EEBO-TCP) – 1520-1679, and at least 723 million words.

Current Shakespearean 'dictionaries'

Foster (1908), Onions ([1911] 1986), Schmidt ([1902] 1971), Boyce (1996), Wells (1998), Crystal and Crystal (2002), etc.

Various labels:

- 'dictionary'
- 'glossary'
- 'lexicon'
- 'word-book'

- 'concordances' (Spevack 1968-70; Howard-Hill 1969-72)

Current Shakespearean 'dictionaries' (contd.)

With various contents:

Linguistic [e.g. Foster (1908), Onions ([1911] 1986), Schmidt ([1902] 1971), Crystal and Crystal (2002), etc.]

- Word
- Part-of-speech
- Brief definition
- Illustrative quotation(s)

Frequency information [e.g. Spevack 1968-70; Howard-Hill 1969-72]

- Index of all words (plus textual location)
- Frequency of word-form (absolute + relative)

Non-linguistic [e.g. Boyce (1996), Wells (1998)]

- Play summaries (largely plot)
- Character descriptions
- Cultural information
- Biographical information

A corpus-based approach to dictionaries

Integration of linguistic description, frequency information and non-linguistic information.

Starting point research questions:
- How often does X occur?
- How often do the particular meanings of X occur?
- What kind of words does X tend to co-occur with?
- What kinds of register does X co-occur with?
- What kinds of speaker/addressee does X co-occur with?
- Etc., etc.

- Contextualised definitions (cf. Collins COBUILD)

Shakespearean 'dictionaries' and present-day corpus-based dictionaries

Some typical differences in approach:

- Words for inclusion: 'hard' words vs. all words in the corpus
- Word-meanings: etymological meanings and etymological organization vs. meanings based on usage in context and organised according to frequency

Note:

No Shakespearean dictionary has treated Shakespeare's language as relative, i.e. Shakespeare's usage with that of his contemporaries.

Case study (1): 'horrid'

Philological approach:

Oxford English English Dictionary

horrid (ˈhɒrɪd), *a. (adv.)* Also 7 **horred**, **horride**.

[ad. L. *horrid-us* bristling, rough, shaggy; rude, savage, unpolished; terrible, frightful, f. *horrere*: see horre *v.* Cf. It. *orrido*.]

A. *adj.*

1. Bristling, shaggy, rough. (Chiefly *poetic*.)

1590 Spenser *F.Q.* i. vii. 31 His haughtie Helmet, horrid all with gold.

1621 Burton *Anat. Mel.* i. ii. iii. xiv. (1651) 125 A rugged attire, hirsute head, horrid beard.

Case study (1): 'horrid' (contd.)

2. Causing horror or aversion; revolting to sight, hearing, or contemplation; terrible, dreadful, frightful; abominable, detestable.

In earlier use nearly synonymous with *horrible*; in modern use somewhat less strong, and tending to pass into the weakened colloquial sense (3).

1601 Shakes. *Twel. N.* iii. iv. 220, I wil meditate the while vpon some horrid message for a Challenge.

3. *colloq.* in weakened sense. Offensive, disagreeable, detested; very bad or objectionable.

Noted in *N.E.D.* as especially frequent as a feminine term of strong aversion.

1666 J. Davies *Hist. Caribby Isls* 281 Making horrid complaints that treated them ill.

Case study (1): 'horrid' (contd.)

Examples from the BNC (random):

one day could take over from Morgan. A **horrid** man.

really glad to be on there to dispense with all those **horrid** people.

the **horrid** male instructor drills you as if you're in the Green Berets)

Smith being beaten by spotty, **horrid** little Nails tickled Nutty's imagination.

the tramp! He's **horrid**!" Shirley's cheeks had turned pale at the thought

will be giving the editor of New Scientist the full **horrid** details without delay.

recent research suggests that lead isn't as **horrid** in its effects as the

Top-40 rank-ordered most frequently occurring nouns within 5 words to the right of 'horrid' in the BNC:

things, man, thing, creature, stuff, truth, people, feeling, word, beast, phrase, teeth, girls, flat, day, child, place, state, time, blighters, imprecations, defilement, deodorants, cruelties, malady, apparitions, weasels, double-glazing, panoply, sunflowers, bungling, separateness, puns, premonition, shrieks, jingle, hairstyle, imaginations, blasphemy

Case study (1): 'horrid'- A glimpse at Shakespeare

Shakespearean dictionaries (in brief):

- *Foster* (1908): "(1) Awful, hideous, horrible. (2) Terrific. (3) Horrified, affrighted".
- *Onions* (1911): No entry.
- *Crystal & Crystal* (2004): "horrifying, frightful, terrifying".

Nasty = Foster (1)

Horrifying =all other definitions

Case study (1): 'horrid'- A glimpse at Shakespeare (contd.)

Appeare in <u>formes</u> more **horrid**) yet my Duty, As doth a Rocke
Vp Sword, and know thou a more **horrid** <u>hent</u> When he is drunke
And cleaue the generall eare with **horrid** <u>speech</u>: Make mad the guilty
heard and seene,   Recounts most **horrid** <u>sights</u> seene by the Watch.
shall breake his winde   With feare and **horrid** <u>flight</u>.   1.Sen. Noble,
To. I wil meditate the while vpon some **horrid** <u>message</u> for a Challenge.
armes.   Macd. Not in the Legions Of **horrid** <u>Hell</u>, can come a Diuell
<u>deformitie</u> seemes not in the Fiend So **horrid** as in woman.
all the sparkes of Nature To quit this **horrid** <u>acte</u>.   Reg. Out treacherous
Such sheets of Fire, such bursts of **horrid** <u>Thunder</u>, Such groanes of
Curriors of the Ayre, Shall blow the **horrid** <u>deed</u> in euery eye,
on is Of thy deere Husband. Then that **horrid** <u>Act</u> Of the diuorce,
to themselves   Beene deaths most **horrid** <u>Agents</u>, humaine grace
I yeeld to that suggestion,   Whose **horrid** <u>Image</u> doth vnfixe my Heire

Case study (1): 'horrid'- A glimpse at Shakespeare (contd.)

The beginnings of a contextualised dictionary entry:

Headword: HORRID. Adj..

Sense: Something that is *horrid* causes fear; typically, it refers to supernatural or unnatural acts, sights and sounds, and is associated with roughness, sharpness, and cruelty. E.G. 'Whose horrid Image doth vnfixe my Heire' (Mac.)

Contexts: *Horrid* has a much closer association with Shakespeare's tragedies than either histories or comedies, and is used slightly more frequently by male characters than female. Shakespeare used it considerably more than his contemporary playwrights did. Generally, it is most characteristic of Early Modern plays and, perhaps surprisingly, scholarly literature.

Distribution: All = 16 (1.8); T = 10 (3.9), C = 2 (0.6), H = 4 (1.5); M = 14 (1.9), F = 2 (1.4).

Comparisons: Pla = 187 (0.17), Fic = 0, Tr = 0, Ha = 0, Sc = 1 (0.14).

Contemp. views: 'prickie, horrid, sharpe', 'rough, horrid, cruell', 'gastly, or horrid in lookes' (Florio, 1611).

- Frequency limitations

Case study (2): 'good' (adj.)

Dictionaries (in brief):

- *Foster* (1908): "(1) Not bad, worthy of praise; (2) Fit, adapted; (3) Trustworthy, genuine; (4) Kind, benevolent; (5) Proper, right; (6) Substantial, safe, solvent, able to fulfil engagements, (7) Real, serious; (8) Favourable, propitious, (9) Abundant, rich, (10) Skilful, clever, (11) Adequate".

    + phrases and compounds.

- *Onions* (1911): "(1) Conventional epithet to titles of high rank, (2) comely, (3) Financially sound; (hence) wealthy, substantial.

    Notes quasi-adverbial usage, e.g. 'good easy man'."

    + phrases and compounds

Case study (2): 'good' (adj.)

- *Crystal & Crystal* (2004): "(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

Case study (2): 'good' (adj.)

Frequency: 2711

Pretend some alteration in **good** will? What's heere? I haue vpon
My selfe, and my **good** Cousin Buckingham,   Will to your Mother,
she is low voic'd.   Cleo. That's not so **good**: he cannot like her long.
Goodmorrow (**good** Lieutenant) I am sorrie   For your displeasure:
Father Frier. Duk. And you **good** Brother Father; what offence
an enuious emulator of euery mans **good** parts, a secret & villanous
she shall be there. Ro. And stay thou **good** Nurse behind the Abbey wall,
Mar. Patience deere Neece, **good** Titus drie thine   eyes. Ti. Ah Marcus,
Anthonio; that I had a title **good** enough to keepe his name company!
the singlenesse.   Mer. Come betweene vs **good** Benuolio, my wits faints.
Enter Count Rossillion. Par. **Good**, very good, it is so then: good, very
nightes meete him. 1.Knight. **Good** morrow to the good Simonides.
a troublous world. 1. No, no, by Gods **good** grace, his Son shall reigne.
signe of Feare. 1 Cit. The Gods bee **good** to vs: Come Masters let's home,

Case study (2): 'good' (contd.)

Top 14 collocates of 'good' (5 word span, left and right)

WORD	TOTAL	LEFT	RIGHT	L5	L4	L3	L2	L1	*	R1	R2	R3	R4	R5
I	600	253	347	63	62	62	56	10	0	7	110	89	74	67
AND	651	352	299	81	63	66	93	49	0	15	131	49	42	62
TO	569	276	293	65	76	78	49	8	0	45	94	43	57	54
THE	577	306	271	80	65	51	27	83	0	4	34	67	90	76
MY	612	351	261	43	43	28	26	211	0	107	33	38	40	43
LORD	313	57	256	15	18	10	6	8	0	137	82	18	10	9
YOU	543	289	254	55	62	65	56	51	0	9	24	83	61	77
A	565	387	178	49	39	38	40	221	0	23	23	39	40	53
IS	295	159	136	30	18	31	51	29	0	2	18	33	43	40
OF	357	225	132	40	33	35	60	57	0	6	43	16	35	32
FOR	252	122	130	22	21	20	48	11	0	17	37	29	22	25
SIR	170	46	124	11	9	10	13	3	0	61	27	9	16	11
YOUR	308	189	119	30	35	26	29	69	0	3	16	38	30	32
MORROW	137	25	112	5	5	6	5	4	0	100	0	1	5	6

Case study (2): 'good' (contd.)

No.	Word	Total no. in whole corpus	Expected collocate frequency	Observed collocate frequency	In no. of texts	Z-score
1	morrow	332	8.45	113	28	35.793
2	Lord	2,591	65.948	287	33	27.159
3	.	66,858	1701.727	2,703	36	24.26
4	night	785	19.981	88	24	15.105
5	good	2,756	70.148	184	30	13.534
6	cheere	56	1.425	17	14	12.627
7	my	12,103	308.056	526	36	12.389
8	Sooth	66	1.68	18	13	12.206
9	bad	157	3.996	28	18	11.758
10	newes	278	7.076	38	16	11.437

Case study (3): 'ah'

Dictionaries (in brief):

- *Foster* (1908): No entry.
- *Onions* (1911): No entry.
- Crystal & Crystal (2004): No entry.

Is it a word?

Case study (3): 'ah' (contd.)

Depends on your definition of a word.

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

Case study (3): 'ah' (contd.)

Does it have meaning?

Halliday (1978, 1985) functional components:

- Ideational (information; logical)

- Textual (informational structure)

- Interpersonal (pragmatic)

- Interactional (discoursal)

Case study (3): 'ah' (contd.)

- Speaker attitude/state: sorrow, emotional distress

Des. To whom my Lord? With whom? How am I false?

Oth.   **Ah** Desdemona, away, away, away.

Des. Alas the heauy day: why do you weepe? Am I the motiue of these teares my Lord?   (OTH)

- Speaker attitude/state: pity

Glou. Canst thou blame him? His Daughters seeke his death: **Ah**, that good Kent, He said it would be thus: poore banish'd man: Thou sayest the King growes mad, Ile tell thee Friend I am almost mad my selfe. (KIL)

Case study (3): 'ah' (contd.)

- Speaker attitude/state: Surprise, realisation

Enter Adriana and Luciana.

Adr. **Ah** Luciana, did he tempt thee so? (COM)

- Discourse marker: preface to the correction / rejection of the previous speaker's proposition(s), emotions or actions

Men. These three World-sharers, these Competitors Are in thy vessell. Let me cut the Cable, And when we are put off, fall to their throates: All there is thine.

Pom. **Ah**, this thou shouldst haue done, And not haue spoke on't. In me 'tis villanie, In thee, 't had bin good seruice: […] (ANT)

Case study (3): 'ah' (contd.)

- Discourse marker: reinforces elicitation

Leon.   All thy tediousnesse on me, **ah**?

Const.Dog. Yea, and 'twere a thousand times more than 'tis, for I heare as good exclamation on your Worship as of any man in the Citie, and though I bee but a poore man, I am glad to heare it. (MAN)

Case study (3): 'ah'

Distribution across play genres (Total = 108; distribution per 100,000; only plays in which they occur are included)

Tragedy	History	Comedy
Titus (13), Romeo (13), Antony (10), Timon (2), Hamlet (2), Othello (1), Lear (1), Coriolanus (1)	Richard III (17), Richard II (5), Henry IV (5), Henry VI (3), John (3), Henry VIII (3)	Loves Labours (5), Troilus (4), Twelfth (3), Much ado (3), Comedy (3), Misummer (2), Merry Wives (2), Cymbeline (2), Two Noblemen (1), Two Gentlemen (1), Taming (1), As You (1), Alls Well (1)
(43 / 205,970) = 20.9	**(36 / 151,780) = 23.7**	**(29 / 294,492) = 9.8**

Case study (4): Multi-word units

Shakespeare	EModE Plays	Present-day Plays
I pray you	it is a	I don't know
I will not	what do you	what do you
I know not	and I will	I don't want
I am a	it is not	do you think
I am not	I have a	do you want
my good lord	I will not	I don't think
there is no	in the world	to do with
I would not	I tell you	do you know
it is a	I know not	going to be
and I will	I warrant you	don't want to

Three-word lexical bundles in order of frequency (coloured items appear in another column)

Data in 2nd and 3rd columns draw from Culpeper and Kytö (2010)

Case study (4): Multi-word units

- In the Present-day Play-texts one can discern many fragments of questions; there is only one question fragment in the Early Modern data: WHAT DO YOU.

- Present-day questions orientate to beliefs, thoughts, wants and feelings. Note the high frequency of private verbs (*know, want, think*).

- Present-day Play-texts deploy the adjacency pair question as a central mechanism in not only creating the interaction but indirectly revealing information for the audience.

Theatrical context: The stage and staging

The adjacency pair in present-day drama

Frank <u>What I want to know</u> is what is it that's suddenly led you to this?

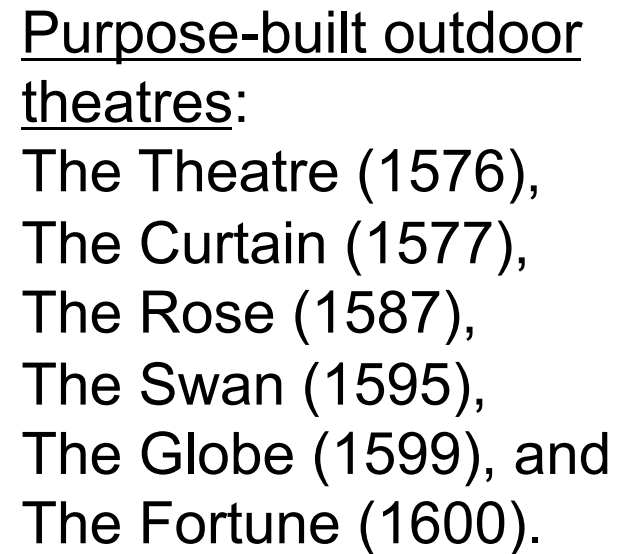Rita What? Comin' here?

Frank Yes.

Rita It's not sudden.

Frank Ah.

Rita I've been realizin' for ages that I was, y' know, slightly out of step. I'm twenty-six. I should have had a baby by now; everyone expects it. I'm sure me husband thinks I'm sterile. [...]

Willy Russell, Educating Rita, 1981, p.8

Theatrical context: The stage and staging

Purpose-built outdoor theatres:
The Theatre (1576),
The Curtain (1577),
The Rose (1587),
The Swan (1595),
The Globe (1599), and
The Fortune (1600).

Case study (4): Multi-word units

- A trend in the Early Modern data is for the lexical bundle to begin with a first person pronoun

- Especially notable trend for Shakespeare, where it combines with verbs relating to states, desires and knowledge. *I pray you* is most distinctive.

- Perhaps reflects a tendency for characters to present themselves (and others) relatively directly (including via soliloquies and asides).

Case study (5): Character profiles

(cf. Culpeper 2001, 2002, 2009)

Lily James and Richard Madden.

(Photo: Johan Perrson)

- What language characterizes Romeo and what language Juliet?
- What are their linguistic styles, their idiolects?

Case study (5): Character profiles

(cf. Culpeper 2001, 2002, 2009)

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

Romeo	Juliet
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)	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)

Case study (5): Character profiles (contd.)

<u>Romeo</u>:

- 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)

Case study (5): Character profiles (contd.)

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.)

Case study (6): Play profiles

(Cf. Archer, Culpeper & Rayson 2009)

- Thematic profile: Semantic categorization ('lexical fields')
- Each word assigned to a semantic category

A	B	C	E
general and abstract terms	the body and the individual	arts and crafts	emotion
F food and farming	**G** government and public	**H** architecture, housing and the home	**I** money and commerce in industry
K entertainment, sports and games	**L** life and living things	**M** movement, location, travel and transport	**N** numbers and measurement
O substances, materials, objects and equipment	**P** education	**Q** language and communication	**S** social actions, states and processes
T Time	**W** world and environment	**X** psychological actions, states and processes	**Y** science and technology
Z names and grammar			

Case study (7): Play profiles (contd.)

'Love' tragedies:

- *Othello, Anthony and Cleopatra* and *Romeo and Juliet*

'Love' comedies:

- *A Midsummer Night's Dream, The Two Gentlemen of Verona* and *As You Like It*

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Semantic tag/field

As You Like It and *Midsummer Night's Dream* are set in woods. Also, metaphor "sex is agriculture" – crop, reap, etc.

S3.2 = intimate/sexual relationship

E2+ = liking

L2 = living creatures

L3 = plants

S1.2.6- = (not) sensib

X3.1 = sensory: taste

T3- = age: young

Negative – bears, serpent, snail, monster, adder, snake, claws, chameleon, ... , monkey, ape, weasel, toad, rat
... le, horse, goats, creature, capon,

Posit... Sweet, sweetest, sweeter – representative of "sweet talk" used in courtship. Also, metaphor "food is love":
bitter, bitterness, sourest, sour & taste, tastes – often relate to the troubles of love (e.g. unrequited love)

Participants

Twoso...
Males – *lover, suitor*
Females – *virgin, wanton*

Processes …

Transitive with male or female agents - *loves*
Transitive with male agents – *kiss, kissing, kissed, kisses*
Transitive with female patients – *seduced, deflowered*
Intransitive with male or female agents – *fall in love, falling in love, fell in love*

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Semantic tag (field)	Co
	F
G3 = warfare, defence, & the army	
L1- = (lack of) life/living things	
Z2 = geographical names	3
E3- = (not) calm/violent/angry	34
M4 = movement (by sea/ through water)	9
S9 = religion and the supernatural	
S7.1- = (lack of) power/ organising	19

Captures the violent conflicts that characterise the tragedies …

'quarrel' – some relate to Abraham Quarrel; however, most refer to squabbles in *Romeo and Juliet* and *Othello*

'abused', 'abuse' – Othello reflecting on Desdemona's treatment of him; some examples also from *Anthony and Cleopatra*

"rage', 'fury' - fairly evenly distributed in 3 plays

Tend *Cleop*

Som Othe Desc fro

Suggests that the tragedies revolve around hierarchical power structures rather more than the comedies

'knave', 'sirrah', 'minion', etc. – tend to be used abusively

preserve this vessel for my lord From any other foul unlawful touch Be not to be a strumpet, I am non.

Conclusions

A corpus approach to Shakespeare's language means:

- All 'words' treated equally (e.g. not just 'hard' words).
- Meanings are not restricted to semantic or ideational meaning.
- Meanings based on usage in context (e.g. not etymology).
- The context includes linguistic aspects (e.g. collocations) and non-linguistic aspects (e.g. registers, social properties of the speaker/character).

A corpus approach to literary texts means:

- Makes "distant reading" possible.
- Avoids a narrow focus on what just the parts that the critic notices. John F. Burrows (1987: 1): 'It is a truth not generally acknowledged that, in most discussions of works of English fiction, we proceed as if a third, two-fifths, a half of our material were not really there.'

Conclusions (contd.)

Problems and limitations

- The methodology is not suitable for items below a certain frequency (?).

- Grammatical and semantic annotation need further development (manual correction), if they are to be deployed.

- It is never automatic – the human is needed to (1) devise/train the software, (2) select the data and prepare it; and (3) interpret the results.

https://cqpweb.lancs.ac.uk/