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Did *A Larum for London, or the Siedge of Antwerp* open the Globe in August 1599?

Abstract

August 1599 was a special date for London. That month, at the latest, the Globe, newly built in Southwark, opened for business, and the city's population was filled with anxiety over a feared invasion by the Spanish. It is very likely that the highly topical play *A Larum for London, or the Siedge of Antwerp* was one of the first, if not the first, to be performed by the Lord Chamberlain's Men. The general assumption is that it was the dramatic realization of the eyewitness account by George Gascoigne *The Spoyle of Antwerpe* from 1576, but research by Fagel shows that the anonymous pamphlet *An historical discourse or rather a tragicall historie of the citie of Antwerpe* from 1586 was also the basis of the dramatic representation. Stylometric studies, too, demonstrate, with the R Stylo suite of tools, the stylistic proximity of *A Larum* to Shakespeare's *Henry VI* of 1591. Correspondences are the heroic struggle of the Talbots in France against treachery in their own ranks and Stump's struggle in the betrayed city of Antwerp. The question is unavoidable whether Shakespeare could have written a dramatic pre-text on the eve of the attempted Armada invasion. This becomes more likely when looking at the frequency distribution of speeches, whose maxima in Shakespeare are all at eight or nine words before 1599, but at four words from 1599 onwards. *A Larum for London*, with two maxima at four and eight/nine words, springs from a mixed text with two distinct populations. Chambers also mentions a no more extant drama entitled *The Siege of London*, which may well be an early Shakespeare play.

Introduction

On 4 November 1576, Spanish troops began to sack Antwerp. That same year, George Gascoigne published his eyewitness account *The Spoyle of Antwerpe*. Many critics maintain that *A Larum for London*, performed by the Lord Chamberlains Men in 1599 was based on Gascoigne's account (Mackenzie 1982, McKeown 2009). In 2017, however, Raymond Fagel described Gascoigne's text as an Anglo-Dutch text, as Gascoigne had adapted a Dutch pamphlet to his own needs by translating the anonymous pamphlet into an autobiographical English text. Furthermore Fagel found that another anonymous pamphlet, called *An historical discourse or rather a tragicall historie of the citie of Antwerpe*, and dated 1586, was apparently used in the composition of *A Larum*. The year 1586 immediately follows the fall of Antwerp in 1585 which was a crucial episode in the Dutch War of Independence. The Siege of Antwerp began in 1584 when Spanish forces, under the command of Alessandro Farnese, Duke of Parma and Governor of the Spanish Netherlands, laid siege to the city. Antwerp had been a stronghold of the Dutch Revolt against Spanish rule, and its fall was strategically important for the Spanish. The siege lasted for over a year, and despite desperate attempts to break the encirclement and maintain control of the city, Antwerp ultimately fell to Spanish forces on August 17, 1585. The city's surrender was a significant blow to the Dutch rebels and marked a turning point in the Eighty Years' War. It effectively split the rebellious provinces of the Netherlands, with the northern provinces, now known as the Dutch Republic, continuing their fight for independence, while the southern provinces remained

under Spanish control. Why the Chamberlain's Men should have opted for a play dealing with the siege is just as interesting as the question of the author of the play.

So far, the author remains unknown, but names such as Thomas Lodge and Robert Wilson have been mentioned. Whoever, the effort to bring a realistic picture of the cruel events onto the stage is undoubted. In view of the fact that England was at war with Spain in 1599, the portrayal carried a strong political weight, even if the design did not convince everyone. Wikipedia reports that the historian William S. Maltby came out with the remark that "not all Elizabethan playwrights were touched with genius". A crucial moment of the play's effectiveness may have been that the smorgasbord of disjointed rapes, murders and extortions is not committed by the common soldiers, but by the top brass of the Spanish army, who steal and murder with their own hands.

In any case, the characterisations of the acting figures, which go beyond stereotyping approaches, are interesting. Otherwise, however, figures emerge that were not unknown to early Elizabethan theatre. There were villains, the hero, the traitor and suffering human beings. The play was not a success in print, although the title page of the 1602 edition assures us that the play was performed by the Lord Chamberlain's Men. The year of performance was 1599, as Early Modern English Drama lets us know. This naturally raises the question of the playwright or playwrights who came together to bring the horrors of war, with all its shocking facets, to the stage.

Roslyn L. Knutson, who has been theorising about the performance conditions and characteristics of Elizabethan theatre companies for some time, in 2003 examined in detail the Lord Chamberlain's Men's practice of combining topical themes and traditional forms in their repertoire. 1599 was a significant year not only for the Chamberlain's Men with the establishment of the Globe, but also for London as the country found itself in a situation of threat. Troops were tied up in Ireland, and on the Continent, there were reports of new and massive military preparations by the Spanish. A flood of news came from

merchant-mariners, escapees from Spanish prisons and galleys, fishermen in the English Channel, agents of the Crown abroad, and foreigners in port cities from Brest to Brill. A particularly credible piece of intelligence arrived in May from Thomas Hawkins, who sent word by way of letters smuggled out of Lisbon Castle that the Adelantado (Don Martin de Padilla) was "mackinge Reddye" a great fleet in Seville, with 24,000 soldiers and 500,000 of "biskets," to join twelve new galleons "called the 12 Aposteles" in the Groyne: "his Cuminge ys ffor IngLande"(Knutson, p. 57).

Local volunteer militias were formed in towns and villages along the south coast of England to provide a trained and armed citizenry ready to defend their communities in case of invasion. Turmoil spread as if the enemy were at the door. Londoners expected their city to be a target. On 5 August, by order of Queen Elizabeth, chains were drawn across the streets and alleys of the city and lanterns were hung on every front door. In the days that followed, new scare reports came in, leading to further defensive measures, but then the threat of an imminent attack faded and on 23 August the City Council of London dissolved the muster.

The Lord Chamberlain's Men also had to make important decisions between January and August 1599. They needed a strategy for marketing their theatre repertoire at a new location. After Richard and Cuthbert Burbage had the Theatre in Shoreditch demolished in the old year, the Globe was

immediately built in Maid Lane in Southwark. Knutson suggests that by August 1599 at the latest, the Chamberlain's men opened their new playhouse with a repertoire they had planned and prepared to minimise their expenditure and maximise their profits (pp. 58/59). Specifically, it was a matter of managing their current stock and acquisitions with financial advantage.

To reduce costs in the first few months after the move, the Chamberlain's Men could have extended performances of plays that had been newly performed the year before, such as *2 Henry IV*, *Every Man In His Humour* and *Much Ado About Nothing*. These plays could be continued at low cost as they did not require further expenditure on text, props or costumes. They also saved the actors' time as they did not require rehearsals (and this time could thus be used to prepare new plays). Moreover, one or two of these plays could be scheduled to offer the debut of a new part of a series. *2 Henry IV* was followed by the new *Henry V* and *Every Man In his Humour* was followed by the new *Every Man Out of his Humour*. Even though the Chamberlain's Men would have continued with some plays anyway, the move gave them an extra reason to do so, as according to Knutson last year's plays were new to audiences who were familiar with the South Bank theatres but had not attended those in Shoreditch as regularly (p. 59).

One of the new plays in the repertoire of the Chamberlain's Men of 1599 is *A Larum for London*. It was entered in the Stationers' Register on 29 May 1600 and the quarto edition appeared in 1602. The circumstances of the first performance are unknown, but it can be assumed that in these times of upheaval hectic activity and rapid transposition of texts were called for. The authors could be playwrights familiar with the Chamberlain's Men, but the reworking of an old text that had never been performed before is also conceivable. In view of the temporal breadth of the possible origins, the entire range of available reference texts was consulted when using Rolling Delta, Rolling Classify and the General Imposters method, all of which are part of the R Stylo suite of tools.

Stylometry

Rolling Delta was carried out with the initial and often tested parameters of character trigrams (mf3c), a window size of 5000 words, an overlap of 250 words and a culling value of 70. It was run with 193 reference texts, including many apocryphal and anonymous plays and it took the computer eight hours before any results could be seen. After all, the vocabulary of all the reference texts had to be converted into frequency lists and, considering the standard deviations, delta values were derived from the z-scores which were then compared with those of the text under study. Anon_alarum.txt (10890 words) was positioned in the second folder and had been taken from *EarlyEnglish.org* (<https://texts.earlyprint.org/works/A06270.xml>) in standard spelling. After filtering out the three lowest delta values of each 5000-word window the graph of Figure 1 emerged.

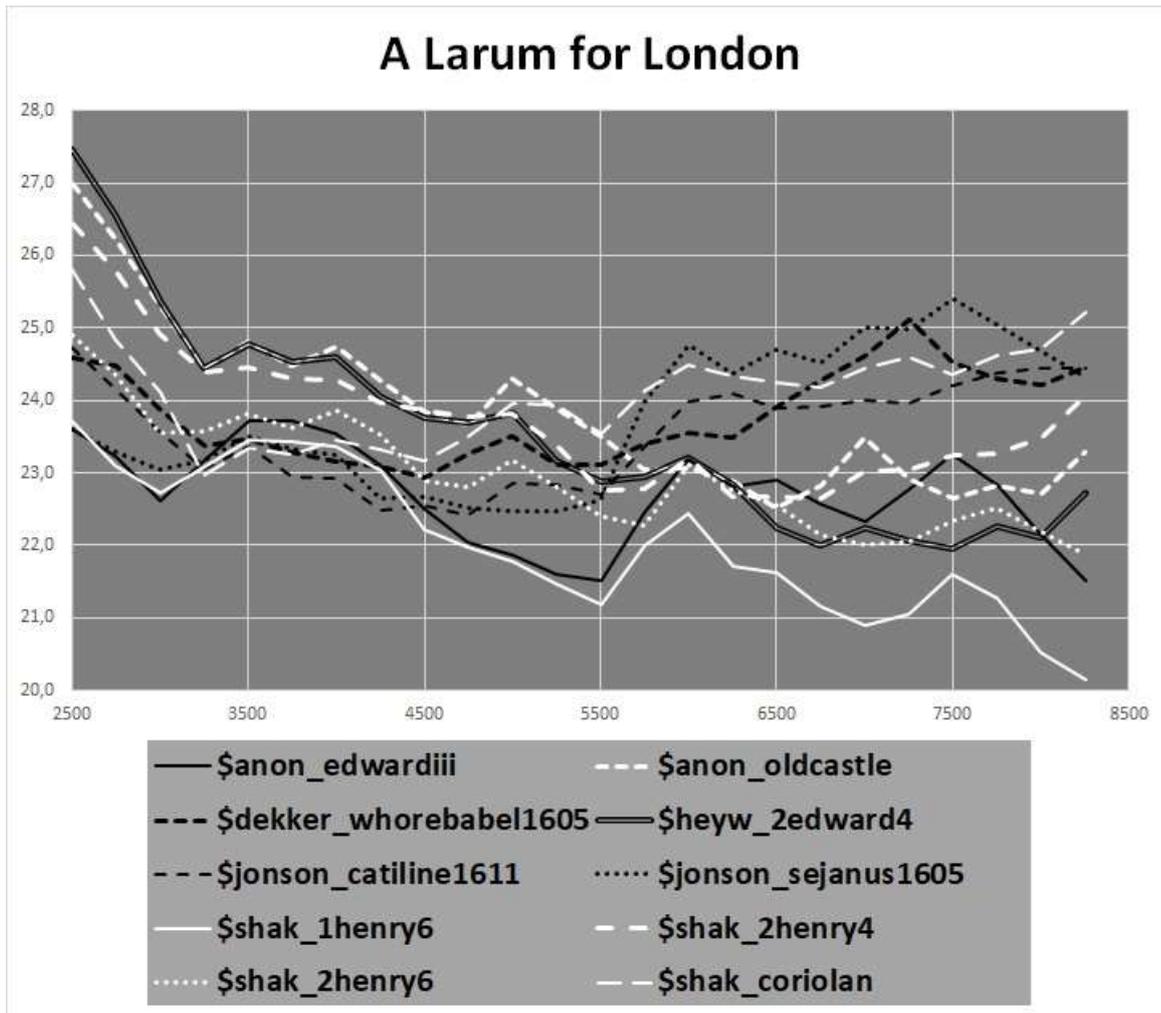


Figure 1 Rolling Delta attribution with mf3c, 5000 word windows and 196 reference texts

The surprise was very great when the stylistically most appropriate reference texts turned out to be those by Shakespeare, coupled with the suspicion that, drawing on the Senecan theatre of violence and shock, it might be an early play by Shakespeare, reissued in connection with the newly constructed Globe. This thesis gains weight when one considers Fagel's observation that *A Larum* begins with the betrayal of two characters who do not appear in Gascoigne, but do appear in the 1586 *Historicall Discourse*.

Spanish commander Sancho Dávila and a captain of the German forces called Cornelius Vaneind both have important roles in the play, as the villain and the traitor of the story respectively. Both protagonists are present in the *Discourse* but are completely absent in Gascoigne's text. Of course, it is possible that the author of *A Larum for London* took his historical information from still other texts, but the *Discourse* is undoubtedly as convincing as a source (Fagel, p. 109).

In the *Discourse* it says:

... and the Spaniards being assured of foure ensignes of Almaines and their capteine Cornelius Vaneind within the citie to hold most traiterouslie with them, entred the streets, ...(p. 52).

The quote is taken from Chapter IV of the *Historicall Discourse* which is entitled “The fourth chapter, describing the sacking of Antwerpe and diverse other good tovvnes, by the Spanish soldiers, for the like want of paie, after the death of the said Loys of Requesens, during the government of the kings concell of estate”

The sequence of events in *A Larum* follow exactly the course given in chapter four. The beginning of the play in particular draws on

... but this of all other stroke them to the heart, when they sawe their artillerie provided for the defence of their citie, carried into the castell, the greater ordinance planted and bent againste them, and a regiment of foure thousand souldiours which should have beene their garde to preserve the, but as they then coniectured, and it afterward proved, they became wolves to devoure them (*Historicall Discourse*, p. 36).

Could it be that Shakespeare composed an early play immediately after the publication of the *Discourse* in 1586, that is before the attempted invasion of the Spanish Armada in 1588? The fact that *I Henry VI* turned out to be the play with the smallest stylistic difference from *A Larum* might point into this direction, even though the text was certainly revised for the 1623 First Folio. There are some similarities that one should consider. The Talbots just like Stump fight heroically and in the end have to submit to treachery in their own ranks.

The relative brevity of the play allows for the additional presentation of the sequential order of assigned 250-word segments in Table 1 below.

Table 1 Rolling Delta attributions in *A Larum for London*

	A	B	C	D	E	F	G	H	I	J	K	
1	0	Rolling Delta attributions with mf3c										
2	250	Window size 5000 Words										
3	500	Step size 250 Words										
4	750	Culling value 70 %										
5	1000	Analysed with 193 reference texts										
6	1250											
7	1500											
8	1750											
9	2000											
10	2250											
11	2500	23,6	27,0	24,6	27,5	24,7	23,6	23,7	26,4	24,9	25,8	
12	2750	23,2	26,2	24,5	26,6	24,2	23,3	23,1	25,8	24,3	24,8	
13	3000	22,6	25,3	23,9	25,4	23,6	23,0	22,7	24,9	23,6	24,1	
14	3250	23,2	24,4	23,4	24,4	23,0	23,2	23,1	24,4	23,6	23,0	
15	3500	23,7	24,8	23,5	24,8	23,4	23,5	23,5	24,4	23,8	23,3	
16	3750	23,7	24,5	23,3	24,5	22,9	23,3	23,4	24,3	23,6	23,2	
17	4000	23,5	24,7	23,2	24,6	22,9	23,2	23,4	24,3	23,9	23,5	
18	4250	23,1	24,3	23,1	24,0	22,5	22,6	23,0	24,0	23,5	23,3	
19	4500	22,5	23,8	22,9	23,8	22,6	22,7	22,2	23,9	22,9	23,2	
20	4750	22,0	23,7	23,3	23,7	22,4	22,5	22,0	23,8	22,8	23,5	
21	5000	21,9	24,3	23,5	23,8	22,9	22,5	21,8	23,8	23,2	24,0	
22	5250	21,6	23,9	23,1	23,2	22,8	22,5	21,5	23,4	22,8	23,9	
23	5500	21,5	23,5	23,1	22,9	22,7	22,6	21,2	22,8	22,4	23,6	
24	5750	22,5	23,0	23,4	22,9	23,4	24,0	22,0	22,8	22,3	24,1	
25	6000	23,2	23,1	23,6	23,2	24,0	24,8	22,4	23,2	23,1	24,5	
26	6250	22,8	22,9	23,5	22,8	24,1	24,4	21,7	22,7	22,8	24,3	
27	6500	22,9	22,5	23,9	22,2	23,9	24,7	21,6	22,7	22,6	24,2	
28	6750	22,6	22,8	24,3	22,0	23,9	24,5	21,2	22,7	22,1	24,2	
29	7000	22,3	23,5	24,6	22,2	24,0	25,0	20,9	23,0	22,0	24,4	

30	7250	22,8	22,9	25,1	22,1	24,0	25,0	21,1	23,1	22,0	24,6
31	7500	23,3	22,7	24,5	21,9	24,2	25,4	21,6	23,2	22,3	24,4
32	7750	22,8	22,8	24,3	22,3	24,4	25,1	21,3	23,3	22,5	24,6
33	8000	22,2	22,7	24,2	22,1	24,4	24,7	20,5	23,5	22,2	24,7
34	8250	21,5	23,3	24,5	22,7	24,5	24,3	20,1	24,1	21,9	25,2
35	8500	B	C	D	E	F	G	H	I	J	K
36	8750	1				3	1	17			2
37	9000	8	1	2	5	2		1	1	3	1
38	9250	5	1	2	1	1	7	1		6	
39	9500									%	%
40	9750	B	=	anon_edwardiii				1		4,2	4,2
41	10000	C	=	anon_oldcastle							
42	10250	D	=	dekker_whorebabel							
43	10500	E	=	heyw_2edward4							
44	10750	F	=	jonson_catiline				3		12,5	
45	11000	G	=	jonson_sejanus				1		4,2	16,7
46		H	=	shak_1henry6				17		70,8	
47		I	=	shak_2henry4							
48		J	=	shak_2henry6							
49		K	=	shak_coriolan				2		8,3	79,2

Here too, the dominant reference text is Shakespeare's *1 Henry VI*, preceded by a sequence with Jonson's *Catiline*. But Heywood is also represented with second-lowest delta values. The spreadsheet program that recorded the R Stylo results is able to colour-code all values with conditional formatting between low and high, and not only the extracted three lowest as in Table 1.

Table 2 Colour coded conditional formatting of 193 reference texts

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y
1	mf3c,5000																								
2																									
3	anon_ardenpure	34,2	33,5	32,4	31,4	31,6	31,5	31,8	31,5	31,1	30,9	31,0	30,2	29,3	28,8	29,3	28,7	28,3	28,1	28,7	28,5	28,1	28,5	29,0	30,1
4	anon_ashrew	37,2	36,3	35,7	35,0	35,4	35,5	35,7	35,5	35,4	35,2	35,4	34,8	34,4	34,5	34,5	34,7	34,3	34,0	34,2	33,8	33,5	34,1	34,2	35,0
5	anon_contention1	32,9	32,3	31,6	31,0	31,4	31,3	31,4	31,2	30,7	30,7	31,4	31,2	31,0	31,0	31,6	31,7	31,3	30,6	30,2	29,9	30,0	30,2	30,1	30,0
6	anon_contention2	28,9	28,2	27,4	27,2	27,4	27,3	27,5	27,3	26,6	26,4	26,6	26,3	25,7	25,8	26,4	26,2	26,2	25,7	25,4	25,2	25,6	25,7	25,2	25,0
7	anon_cromwell1602	30,6	29,8	28,6	27,5	27,8	27,7	28,1	27,8	27,6	27,3	28,0	27,6	27,3	27,0	27,1	26,9	26,5	26,3	26,7	26,5	26,2	26,5	26,7	27,5
8	anon_dodypoll1600	37,1	36,5	36,0	35,0	35,1	34,9	34,9	34,6	34,3	34,2	34,4	34,2	34,0	34,2	34,1	33,9	33,6	33,6	33,8	33,5	33,3	33,6	33,4	33,9
9	anon_edwardiii	23,6	23,2	22,6	23,2	23,7	23,7	23,5	23,1	22,5	22,0	21,9	21,6	21,5	22,5	23,2	22,8	22,9	22,6	22,3	22,8	23,3	22,8	22,2	21,5
10	anon_fairem	33,4	32,7	31,8	31,3	31,5	31,6	31,6	30,9	30,3	29,8	29,7	29,3	28,8	29,3	29,1	29,0	28,5	28,2	28,2	27,6	27,4	27,9	27,6	28,2
11	anon_fvicth5	34,7	34,1	33,2	32,5	32,4	32,4	32,8	32,5	32,5	32,4	32,7	32,3	31,8	31,4	31,7	31,7	31,6	31,8	32,1	31,7	31,5	31,7	31,8	32,3
12	anon_georgegreene	34,7	34,0	32,9	31,8	31,8	31,8	31,9	31,8	31,1	30,8	31,0	30,2	29,4	28,6	28,7	28,6	28,2	28,0	28,4	28,3	28,0	28,7	29,2	29,9
13	anon_guywarwickms	30,5	29,8	29,0	28,7	29,2	29,2	29,6	29,5	28,9	28,7	29,0	28,3	27,6	27,6	27,7	27,2	26,6	26,2	25,9	26,0	26,0	26,2	26,0	26,3
14	anon_ironside	25,4	24,6	24,1	23,8	24,3	24,4	24,6	24,5	24,3	24,1	24,2	23,7	23,5	23,8	24,3	23,8	23,6	23,4	23,5	23,8	23,7	23,8	23,4	23,3
15	anon_jackestraw	33,5	33,4	33,3	33,1	33,4	33,1	33,1	32,7	32,8	32,7	32,8	32,8	33,1	33,3	33,9	33,9	34,2	33,9	34,0	33,9	34,1	33,9	33,9	33,8
16	anon_kingleir1594	29,4	28,5	27,3	26,7	27,2	27,4	27,5	27,2	26,7	26,5	26,7	26,4	25,8	25,7	26,0	25,6	24,8	24,7	25,2	25,2	25,1	25,1	25,2	25,1

17	anon_knaocknavems	31.0	30.2	28.9	28.3	28.4	28.5	28.8	28.3	28.3	28.3	28.5	27.9	27.6	27.3	27.8	27.3	27.0	26.7	27.2	27.1	26.8	27.4	27.6	28.3
18	anon_loocrine1594	26.7	26.5	26.3	26.4	27.0	26.8	26.7	26.6	26.1	25.9	25.8	25.7	25.3	25.6	26.1	25.6	25.7	25.4	24.6	25.0	25.3	24.5	23.7	23.3
19	anon_lonprodigal	38.2	37.4	36.2	35.0	35.1	35.2	35.2	35.1	34.7	34.7	35.2	34.5	33.6	32.8	32.4	31.9	31.5	31.5	31.8	31.5	31.0	31.5	32.1	33.5
20	anon_merlin	30.1	29.3	28.6	27.7	28.0	28.0	27.8	27.7	27.3	27.2	27.0	26.4	26.1	25.9	25.6	25.2	25.1	24.9	25.2	25.0	24.9	25.0	25.0	25.8
21	anon_merrydevil1604	30.1	29.6	28.6	27.8	28.0	27.7	28.0	28.1	27.6	27.6	28.1	27.3	26.5	25.9	26.1	25.5	25.7	25.7	26.2	26.0	25.8	25.8	26.0	26.7
22	anon_moregut	26.8	26.0	25.1	24.5	24.9	24.8	24.9	24.5	23.9	23.6	24.2	23.8	23.4	23.5	23.9	23.6	23.1	23.1	23.1	23.0	22.8	22.9	22.8	23.2
23	anon_mucedorus	33.7	32.6	31.7	30.8	31.1	31.2	31.2	31.3	30.4	30.3	30.8	30.2	29.3	28.5	28.7	28.8	28.0	28.0	28.0	28.1	27.8	28.8	28.8	29.6
24	anon_oldcastle	27.0	26.2	25.3	24.4	24.8	24.5	24.7	24.3	23.8	23.7	24.3	23.9	23.5	23.0	23.1	22.9	22.5	22.8	23.5	22.9	22.7	22.8	22.7	23.3
25	anon_parnassus	35.4	35.2	34.6	34.3	34.5	34.5	34.5	34.4	34.1	34.2	34.3	34.0	33.7	34.0	34.4	33.9	33.8	33.6	33.7	33.9	33.9	33.7	33.3	33.4
26	anon_thwoodstock	26.0	25.8	25.7	25.6	25.7	25.6	25.9	25.9	25.6	25.4	25.7	25.5	25.6	25.9	26.6	26.1	26.3	26.0	26.2	26.1	26.2	25.9	25.5	25.3
27	anon_truerichiii	28.1	27.1	26.2	25.6	25.9	26.1	26.3	25.8	25.6	25.3	25.9	25.7	25.2	25.6	26.1	26.2	25.7	25.1	25.1	25.1	25.2	25.6	25.4	25.1
28	anon_weakestwall	27.1	26.5	25.7	25.2	25.6	25.4	25.5	25.3	24.8	24.6	24.9	24.2	23.6	23.7	24.1	23.5	23.0	22.8	23.4	23.1	23.3	23.3	22.9	23.2
29	anon_woodstock	25.7	25.5	25.3	25.2	25.4	25.3	25.5	25.6	25.2	25.0	25.5	25.3	25.3	25.5	26.2	25.7	26.0	25.7	25.9	25.9	26.1	25.7	25.4	25.2
30	apo_troublejohn	24.2	23.9	23.6	23.8	24.3	24.3	24.1	23.7	23.4	23.0	22.8	23.0	23.0	24.0	24.9	24.5	24.5	24.3	24.0	23.9	24.5	24.0	23.0	22.2
31	armin_anestofinnies	38.4	38.7	38.7	39.0	39.3	39.5	39.3	39.2	39.5	39.7	40.0	39.9	39.4	39.2	40.2	40.2	40.1	39.5	39.7	39.8	40.2	40.2	39.9	39.7
32	'armin_foole	38.6	38.7	38.3	38.5	38.7	39.1	39.1	39.1	39.6	39.7	40.1	39.9	39.4	39.2	40.2	40.2	40.2	39.9	39.9	39.8	39.9	39.9	40.0	39.7
33	beau_pestle	32.6	31.9	31.0	30.1	30.1	30.1	30.3	30.0	29.8	29.5	29.8	28.9	28.2	27.6	27.5	26.9	26.4	26.2	26.4	26.4	26.4	26.8	26.9	27.9
34	brooke_romeus	32.8	32.6	32.4	32.9	33.3	33.0	33.1	32.5	31.7	31.6	31.4	30.8	30.1	30.7	31.3	31.2	30.9	30.0	29.5	29.4	29.5	29.3	29.0	28.7
35	chap_allfools	28.9	28.2	27.3	26.3	26.5	26.7	26.9	26.6	26.5	26.6	26.8	26.3	25.7	25.4	25.9	25.3	25.4	25.7	26.2	26.2	26.2	26.2	26.4	27.2
36	chap_blindbeggar	30.7	30.1	29.0	28.4	28.6	28.5	28.7	28.3	28.2	28.2	28.5	27.9	27.4	27.0	27.2	26.8	26.4	26.4	26.8	26.5	26.3	26.4	26.7	27.4
37	chap_bussydambois1607	28.3	28.0	27.3	27.3	27.6	27.4	27.4	27.2	26.6	26.4	26.4	25.9	25.9	26.4	26.6	26.1	25.8	25.2	25.0	25.2	25.5	25.5	25.4	25.5
38	chap_bussyrevengeli612	30.0	29.5	29.2	29.5	29.8	29.7	29.6	29.3	29.3	29.2	29.0	29.0	28.9	29.6	30.0	29.7	29.5	29.0	29.2	29.2	29.8	29.6	29.2	28.9
39	chap_daysmith1597	34.0	33.3	32.2	31.0	30.9	31.0	30.8	30.4	29.9	29.7	30.2	29.5	28.9	28.5	28.5	28.5	28.4	28.5	29.1	28.9	28.9	29.1	29.4	30.9
40	chap_gentlemanusher	33.0	32.3	31.6	30.8	30.9	31.0	30.9	30.4	29.7	29.6	29.9	29.4	29.0	29.1	28.9	28.3	28.3	28.7	29.1	28.7	28.6	28.7	28.7	29.5
41	chap_mayday	30.7	29.7	28.5	27.5	27.6	27.9	27.9	27.8	27.7	27.7	28.0	27.3	26.6	26.5	26.6	26.2	26.3	26.4	26.9	26.5	26.5	27.2	27.6	28.5
42	'chap_msdo'olive'	28.0	27.5	26.6	26.2	26.5	26.5	26.6	26.2	25.9	25.9	25.9	25.2	25.1	25.5	25.6	25.0	25.1	25.5	25.6	25.9	25.9	26.0	26.0	26.4
43	'chettle_kind-hartsdream'	34.4	33.9	33.4	33.6	33.6	33.9	33.9	33.6	33.8	33.9	34.1	34.1	34.3	35.2	35.7	35.9	35.9	35.5	35.6	35.7	36.0	35.7	35.4	34.9
44	chettle_mshoffman1599	28.4	27.6	27.1	26.3	26.5	26.6	27.0	26.9	26.2	25.9	26.0	25.4	24.8	24.8	25.3	24.8	24.6	24.4	24.3	24.2	24.5	24.5	24.3	24.6
45	daniels_cleop	35.8	35.3	34.8	35.0	35.6	35.4	35.1	34.6	34.1	33.9	33.6	33.6	33.7	34.1	34.7	34.8	34.1	33.3	33.3	33.6	33.7	33.6	33.4	33.0
46	day_bednalgreen	32.4	31.6	30.8	29.4	29.6	29.7	30.1	30.0	29.7	29.7	30.0	29.4	28.7	27.7	27.6	27.1	26.9	26.7	27.3	27.0	26.4	27.1	27.2	28.2
47	dekker_fortunatus1599	29.1	28.5	27.6	27.2	27.6	27.4	27.5	27.6	26.9	26.8	26.8	26.0	25.3	25.1	25.5	24.7	24.5	24.5	24.5	24.9	25.1	25.0	25.1	25.3
48	dekker_matchme1611	31.2	30.3	29.6	27.9	27.9	27.9	28.0	28.3	28.3	28.5	28.8	28.1	27.7	26.9	26.4	26.3	26.4	26.6	27.2	27.0	26.5	26.8	27.4	28.7
49	dekker_satiromastix1601	29.8	29.0	28.3	27.8	28.2	28.3	28.6	28.8	28.2	28.3	28.5	27.6	27.1	26.6	26.7	26.2	26.1	26.0	26.3	26.8	26.5	26.9	26.9	27.5
50	dekker_shomholi1600	39.9	39.1	38.2	36.9	37.1	37.1	37.0	36.9	36.3	36.1	36.4	36.0	35.4	34.9	34.8	34.6	34.0	33.9	34.1	34.1	33.5	34.1	34.4	35.6
51	dekker_spansold1634	27.7	27.2	26.3	26.1	26.5	26.5	26.6	26.8	26.2	26.1	25.9	25.2	25.1	25.0	25.2	24.8	24.6	24.5	24.5	24.7	24.8	24.5	24.6	25.1
52	dekker_whorebelle1605	24.6	24.5	23.9	23.4	23.5	23.3	23.2	23.1	22.9	23.3	23.5	23.1	23.1	23.4	23.6	23.5	23.9	24.3	24.6	25.1	24.5	24.3	24.2	24.1
53	dekker_whoreil1606	36.2	35.4	34.5	33.2	33.4	33.1	33.0	33.0	32.7	32.8	33.1	32.5	32.0	31.2	31.1	30.8	30.5	30.8	31.0	30.7	30.2	30.7	31.1	32.4
54	dekker_wyatt1607	31.2	30.9	30.7	30.0	30.2	30.0	29.9	29.7	29.2	29.3	29.6	29.5	29.7	30.2	30.7	30.5	30.6	30.7	30.6	30.6	30.7	30.3	29.8	30.0
55	dekmid_familylove1602	27.4	26.7	25.8	25.2	25.6	25.7	25.7	25.6	25.2	24.9	25.0	24.6	24.2	24.5	24.8	24.4	23.9	24.1	24.7	24.9	24.9	24.6	24.6	25.0
56	fletch_1619humliet	32.6	31.6	30.4	29.2	29.2	29.2	29.3	29.7	29.4	29.5	30.1	29.6	29.1	28.9	29.1	28.9	28.5	28.6	29.1	28.8	28.9	29.1	29.7	30.8
57	fletch_akingnoking1611	34.6	33.7	32.5	31.1	31.3	31.3	31.1	30.7	30.2	30.3	30.5	29.7	29.0	28.5	28.5	28.2	27.7	27.9	28.5	28.7	28.2	28.8	29.2	30.2
58	fletch_beggarsb1612	31.5	30.5	29.5	28.3	28.4	28.2	28.4	28.1	27.9	27.8	27.9	27.3	27.0	26.8	26.8	26.2	25.8	25.9	26.5	26.3	25.9	26.6	27.2	28.4
59	fletch_bonducal1613	30.5	29.9	29.4	28.6	29.0	28.9	29.1	29.5	29.4	29.4	29.9	29.6	29.4	29.3	29.8	29.4	29.4	29.2	29.8	30.0	30.2	30.4	30.6	30.9
60	fletch_customcountry1619	30.5	29.5	28.5	27.5	27.8	27.8	27.9	27.4	27.4	27.3	27.7	27.2	26.9	27.4	27.3	26.9	26.5	26.3	27.0	27.0	26.8	27.2	27.5	28.4
61	fletch_islandprincesse1620	32.9	32.5	31.8	31.0	31.3	31.0	31.1	30.9	30.8	30.8	31.2	30.9	30.9	31.5	31.5	31.1	31.0	30.8	31.5	31.4	31.3	31.4	31.7	32.5
62	'fletch_lawsocandy1619'	31.0	30.4	29.4	28.4	28.7	28.4	28.3	27.7	27.2	27.3	27.4	26.9	26.9	27.5	27.6	27.1	27.0	27.1	27.8	27.7	27.5	27.8	27.8	28.4
63	fletch_maidsrag1609	33.1	32.4	31.5	30.1	30.2	30.1	30.2	30.0	29.2	29.3	29.8	29.2	28.8	28.3	28.6	28.7	28.2	27.7	27.8	27.8	27.5	28.1	28.3	29.4
64	'fletch_monstthomas1610'	32.8	31.9	31.0	30.0	30.2	30.2	30.4	30.2	30.0	29.7	30.2	29.5	29.3	29.0	29.1	28.7	28.3	28.5	29.1	29.2	29.0	29.5	29.9	31.0
65	fletch_philaster1608	30.4	29.8	28.4	27.4	27.5	27.3	27.3	27.2	26.7	26.7	26.9	26.2	25.9	25.7	25.6	25.1	24.8	24.8	25.1	24.8	24.5	24.8	25.1	26.0
66	fletch_rulewife1624	34.8	33.9	32.7	31.8	31.7	31.9	32.2	32.2	32.2	32.2	32.5	31.7	31.4	30.9	30.8	30.7	30.4	30.6	31.4	31.3	30.9	31.4	32.1	33.5
67	fletch_shepherdess1609	30.7	30.0	29.0	29.2	29.3	29.1	29.3	29.2	28.7	28.3	28.5	27.8	27.4	27.6	27.9	27.5	27.0	26.5	26.4	27.1	27.3	27.5	27.6	27.6
68	fletch_valentinian	31.6	30.9	30.0	29.2	29.5	29.4	29.6	29.4	29.3															

97	janson_outhamour1599	29,6	28,9	27,8	26,9	27,1	27,2	27,4	27,2	27,0	27,2	27,4	27,0	26,4	26,6	26,6	26,2	26,1	26,4	27,0	27,0	26,8	27,2	27,5	28,3
98	janson_sejanus1605	23,6	23,3	23,0	23,2	23,5	23,3	23,2	22,6	22,7	22,5	22,5	22,5	22,6	24,0	24,8	24,4	24,7	24,5	25,0	25,0	25,4	25,1	24,7	24,3
99	janson_volpone1605	29,0	28,3	27,4	26,2	26,3	26,4	26,5	26,2	26,0	26,2	26,6	25,9	25,4	25,6	25,5	25,0	24,9	25,1	25,7	25,7	25,4	25,8	25,7	26,5
100	kjd_solliman	29,2	28,6	27,7	27,6	28,1	27,9	28,0	27,5	26,7	26,4	26,8	26,5	26,0	26,2	26,3	26,0	25,5	24,9	25,0	25,3	25,2	25,6	25,3	25,4
101	kjd_spanpore	29,2	28,7	28,0	28,1	28,4	28,2	28,1	27,8	27,1	26,6	26,7	26,0	25,7	26,2	26,8	26,4	26,0	25,5	25,0	24,9	25,3	25,3	24,5	24,4
102	lodge_lookingglass1589	28,1	27,4	26,4	26,1	26,4	26,1	26,3	26,3	25,7	25,5	25,7	25,4	25,0	25,2	25,7	25,4	24,8	24,4	23,9	23,8	24,0	24,1	23,7	23,7
103	lodge_mariusscilla1590	33,3	33,2	33,2	33,6	34,0	33,7	33,8	34,0	33,8	33,6	33,3	33,4	33,4	33,8	34,3	33,7	33,7	33,5	33,2	33,2	33,5	32,8	32,2	31,5
104	ljly_campaspe1583	36,5	35,8	34,8	34,2	34,8	34,8	34,6	34,2	33,8	34,1	34,2	33,8	33,3	33,3	33,6	33,6	32,9	32,3	32,6	32,9	32,7	33,1	33,3	34,0
105	ljly_endimion1588	29,8	29,1	28,1	28,0	28,5	28,4	28,2	27,8	27,2	27,0	27,0	26,6	26,2	26,5	26,8	26,6	26,1	25,7	26,0	26,6	26,7	26,5	26,3	26,6
106	ljly_gallathea1583+	37,8	37,2	36,7	36,2	36,6	36,5	36,4	36,0	35,7	35,8	36,1	35,6	35,2	35,0	35,0	35,3	34,9	34,6	34,8	35,0	34,7	35,2	35,5	35,8
107	ljly_motherbombie	36,9	36,4	35,6	35,0	35,4	35,4	35,4	35,2	34,7	34,6	34,6	33,8	33,2	32,8	33,0	32,8	32,4	32,1	32,3	32,5	32,4	32,5	32,6	33,0
108	ljly_mydas1589	35,0	34,7	33,9	33,7	34,1	33,8	33,6	33,2	32,9	32,9	32,7	32,3	32,0	32,1	32,5	32,5	32,1	31,8	31,6	32,0	32,1	32,2	31,8	31,8
109	ljly_saphophao1584	31,3	31,2	30,4	30,3	30,6	30,2	30,1	29,7	29,3	29,4	29,7	29,1	28,9	29,0	29,4	29,4	28,9	28,5	28,5	28,9	28,9	29,1	28,9	29,1
110	mar_tamburlain1	27,2	27,2	27,0	27,6	27,7	27,5	27,3	27,2	26,8	26,6	26,0	25,8	26,0	26,8	27,3	26,7	27,2	27,2	27,0	27,4	28,0	27,3	26,7	25,4
111	mar_tamburlain2	25,9	25,9	25,8	26,5	26,8	26,8	26,6	26,4	26,0	25,7	25,1	24,7	24,7	25,2	25,7	25,4	25,7	25,3	24,8	25,0	25,4	25,0	24,3	23,2
112	mar_antmellid	34,4	34,0	33,4	32,8	33,0	32,8	32,7	32,9	32,2	32,1	32,0	31,8	31,6	31,6	31,5	31,2	30,8	30,5	30,4	31,0	30,9	30,8	30,4	30,5
113	mar_antorevenge	38,5	38,2	37,9	37,9	38,2	37,8	37,5	37,6	36,9	36,9	36,6	36,2	36,0	36,4	36,3	35,8	35,3	35,2	34,8	35,3	35,1	34,9	34,4	34,5
114	mar_dutchocourt	37,9	37,5	37,0	36,2	36,3	36,2	36,0	35,8	35,3	35,4	35,6	35,2	34,9	34,5	34,6	34,3	33,7	33,7	33,9	33,9	33,6	33,7	33,6	34,5
115	mar_malcontent	29,1	28,4	27,5	27,2	27,6	27,5	27,6	27,8	27,2	27,3	27,5	26,8	26,4	26,5	26,8	26,4	26,2	26,1	26,3	26,7	26,6	27,0	27,0	27,0
116	mid_fivegallants	34,0	33,2	32,4	31,5	31,3	31,4	31,5	31,4	31,3	31,1	31,8	31,2	30,5	30,4	30,1	29,8	29,6	29,8	30,4	30,5	30,1	30,5	30,7	31,6
117	mid_fourp	47,8	47,5	46,8	46,4	46,7	46,4	46,5	46,1	45,9	45,9	46,2	45,9	45,7	45,8	46,5	46,6	46,2	46,1	46,1	46,2	46,4	46,7	46,9	47,0
118	middle_changeling	31,0	30,3	29,2	28,5	28,8	28,8	29,0	29,0	28,4	28,3	28,7	27,7	27,4	27,4	27,3	27,4	27,4	27,6	28,2	28,3	28,1	28,4	28,7	29,7
119	middle_cheapside1613	31,7	31,0	30,0	29,2	29,2	29,4	29,5	30,0	29,8	29,9	30,3	29,5	28,7	28,1	28,1	27,7	27,4	27,6	28,0	28,1	27,4	27,7	28,0	29,1
120	middle_hengist1619	28,0	27,1	26,1	25,2	25,4	25,6	25,8	25,6	25,4	25,3	25,9	25,4	25,1	25,2	25,6	25,4	25,3	25,6	26,1	26,2	25,8	25,9	26,1	26,7
121	middle_nowit1611	32,0	31,2	30,0	29,3	29,4	29,4	29,4	29,4	28,8	28,9	29,4	28,7	28,2	28,1	28,1	28,0	27,7	28,0	28,3	28,4	27,7	28,1	28,3	29,4
122	middle_phoenix1603	30,9	30,0	28,9	27,9	28,1	28,1	28,4	28,2	28,0	28,2	28,5	27,7	27,5	27,6	27,5	27,3	27,1	27,4	28,0	27,9	27,5	28,1	28,4	29,1
123	middle_revengerstrag1606	29,9	29,3	28,3	27,9	28,1	28,1	28,3	28,2	27,3	27,5	28,1	27,3	26,8	26,7	27,1	26,7	26,3	26,6	26,9	27,0	27,0	27,0	26,9	27,1
124	middle_trickcatch1606	35,1	34,2	33,2	32,2	32,4	32,4	32,6	32,5	32,3	32,0	32,3	31,8	31,3	31,1	31,2	31,0	30,4	30,5	30,9	31,0	30,4	31,1	31,2	32,0
125	middle_witch1613	31,3	30,3	29,2	28,3	28,5	28,8	29,0	29,1	28,6	28,7	29,1	28,3	27,9	27,5	27,6	27,4	27,1	27,1	27,6	27,7	27,3	27,9	28,2	29,0
126	middlecoll_famlovepure160	27,4	26,7	25,8	25,3	25,6	25,7	25,7	25,6	25,2	24,9	25,0	24,6	24,2	24,5	24,8	24,4	23,9	24,1	24,8	25,0	24,9	24,6	24,6	25,0
127	middlecoll_yorkstrag1605	33,8	32,8	31,8	30,9	31,1	31,1	31,1	30,9	30,5	30,3	30,6	30,0	29,6	29,2	28,8	28,5	28,2	28,4	29,2	29,3	29,1	29,5	29,3	30,1
128	middledek_roaringgir1608	30,9	30,2	29,0	28,0	28,2	28,3	28,3	28,5	28,3	28,2	28,5	27,7	27,1	26,4	26,3	26,0	26,0	26,3	26,8	27,0	26,5	26,9	27,4	28,2
129	middlefletch_nicevalour161	32,8	31,8	30,6	29,9	30,0	30,2	30,3	30,3	28,0	28,2	28,5	27,7	27,0	26,4	26,3	26,2	28,5	28,7	29,4	29,5	29,3	29,7	30,2	31,0
130	middleerowl_fairquarrel1615+	29,9	28,9	27,8	27,2	27,8	27,8	27,8	27,5	27,3	27,1	27,5	27,0	26,8	27,0	26,8	26,4	25,9	26,1	26,5	26,6	26,5	26,8	26,9	27,7
131	middleerowl_oldlaw1618	28,8	27,8	26,8	25,8	26,0	26,1	26,3	26,2	25,7	25,7	26,0	25,4	24,8	24,7	24,7	24,4	24,6	25,3	25,3	24,9	25,4	25,6	26,6	26,6
132	middleton_2ndmaids1611	30,8	29,7	28,7	27,9	28,2	28,4	28,4	28,5	27,7	27,4	27,6	27,0	26,7	26,8	26,7	26,0	25,8	26,0	26,1	25,9	26,4	26,5	26,9	27,0
133	middleton_puritan1606	32,8	31,7	30,6	30,0	30,1	30,2	30,2	30,1	29,9	30,1	30,6	29,8	29,4	28,8	29,0	28,7	28,4	28,8	29,4	29,6	29,3	29,7	29,8	30,6
134	middleweb_quietlife1621	31,0	30,1	29,2	28,1	28,2	28,3	28,4	28,2	28,1	28,1	28,4	27,8	27,6	27,8	27,6	27,3	27,2	27,6	28,3	28,1	27,6	27,9	27,8	28,8
135	mun_deathh1601	29,1	28,2	27,2	26,2	26,4	26,4	26,3	26,1	25,5	25,5	26,0	25,3	24,5	24,1	24,1	23,4	23,5	23,5	23,6	23,6	23,5	23,5	23,5	24,1
136	mun_downfall1598	33,3	32,7	32,1	31,2	31,5	31,4	31,5	31,5	30,9	30,4	30,7	30,4	29,9	29,8	30,2	29,4	29,0	28,9	28,8	28,7	28,7	28,8	28,6	29,2
137	mun_kentcumber	34,4	33,7	33,4	32,8	33,2	33,0	32,9	32,6	31,9	31,5	31,9	31,6	31,2	31,1	31,5	31,6	31,1	30,9	31,1	30,7	30,9	31,1	31,0	31,3
138	mun_kentcumberms	30,0	29,5	28,9	28,2	28,5	28,4	28,2	27,8	27,2	26,9	27,3	26,8	26,2	26,1	26,4	26,4	26,0	26,2	26,4	26,0	25,9	26,2	26,2	26,9
139	mun_mskentcumber	34,5	34,0	33,6	32,9	33,1	32,9	32,7	32,4	31,7	31,4	31,8	31,5	31,1	30,9	31,2	31,3	31,0	31,2	30,7	30,7	31,0	30,9	31,6	
140	nashe_anatomy	32,0	32,2	32,4	33,5	33,8	33,9	33,8	33,8	34,2	34,2	34,0	34,1	34,4	35,6	36,3	36,4	36,5	36,3	36,4	37,0	37,3	36,8	36,1	34,8
141	nashe_parrot	30,5	29,9	29,5	29,8	30,1	30,1	30,2	29,9	30,0	30,2	29,7	29,6	29,4	30,1	30,7	30,3	30,3	30,2	30,3	30,7	30,8	30,7	30,3	29,5
142	nashe_piercepenniless	30,7	30,8	30,5	31,1	31,4	31,4	31,2	31,1	31,4	31,4	31,3	31,3	32,0	33,0	32,6	32,6	32,0	32,1	32,5	32,8	32,5	32,1	31,4	
143	nashe_summers	25,8	25,3	24,4	24,2	24,4	24,3	24,5	24,5	24,3	24,3	24,6	24,1	23,5	23,7	24,1	23,6	23,4	23,5	24,0	24,5	24,4	24,6	24,3	24,1
144	Nobodysomebody	29,8	29,4	28,6	27,7	27,9	27,7	27,9	27,7	27,4	27,2	27,4	27,1	26,8	27,1	27,0	26,5	26,4	26,3	26,7	26,5	26,6	26,7	26,4	26,8
145	peeel_arraignement	32,0	31,7	31,1	31,3	31,8	31,1	31,3	30,9	30,3	30,2	30,4	29,8	29,6	30,3	30,8	30,2	29,8	29,2	28,9	28,9	29,4	29,5	29,0	28,8
146	peeel_oldwives1595	32,5	31,9	31,0	30,3	30,5	30,3	30,9	30,9	30,7	30,6	30,9	30,4	29,6	28,9	28,9	28,6	28,3	28,1	28,3	28,3	27,8	28,2	28,5	29,4
147	row_whenysee	28,3	27,7	26,9	26,2	26,3	26,4	26,7	26,5	26,0	25,8	26,1	25,8	25,5	25,6	26,4	25,6	25,4	25,2	25,6	25,3	25,5	25,8	25,6	25,9
148	row_whenysee1603	28,3	27,6	26,9	26,2	26,3	26,																		

176	shak_pericles	26,7	25,8	25,0	23,8	24,0	24,0	24,3	24,3	24,1	24,4	24,7	24,3	23,7	24,0	24,1	23,4	23,4	23,7	23,9	24,0	23,6	23,6	23,8	24,4
177	shak_richii	26,7	26,4	26,0	25,9	26,0	25,8	25,6	25,4	24,9	24,7	24,6	24,2	23,9	24,4	24,9	24,4	24,2	23,6	23,2	23,2	23,7	23,5	22,8	22,6
178	shak_richiii1592	27,1	26,6	25,7	25,1	25,4	25,3	25,4	25,1	24,4	24,4	24,6	24,2	23,6	24,0	24,4	23,9	23,7	23,4	23,2	23,3	23,5	23,3	23,1	23,3
179	shak_romjul1595	30,4	29,5	28,4	27,8	28,3	28,3	28,4	28,3	27,4	27,1	27,5	26,8	26,2	26,0	26,2	25,9	25,4	25,0	24,8	25,1	25,0	25,5	25,7	26,2
180	shak_shrew	32,0	31,4	30,4	29,6	29,7	29,7	30,1	29,7	29,7	29,4	29,5	28,8	28,3	28,1	28,1	27,7	27,2	27,3	27,8	27,6	27,3	27,7	28,2	29,2
181	shak_tempest1611	28,5	27,7	26,6	26,1	26,5	26,4	26,4	26,3	26,0	25,7	26,0	25,6	25,3	25,2	25,2	24,7	24,4	23,9	23,8	24,1	24,3	24,6	24,5	24,8
182	shak_timon1605	29,1	28,5	27,7	26,6	27,0	26,8	26,8	26,6	26,2	26,0	26,5	26,3	26,0	26,2	26,5	26,3	25,8	25,4	25,7	25,8	25,8	26,3	25,8	26,2
183	shak_titus	28,4	27,7	26,6	26,0	26,3	26,2	26,4	26,3	25,7	25,4	25,7	25,1	24,3	24,1	24,3	24,1	23,8	23,4	23,0	23,0	23,4	23,6	23,5	23,2
184	shak_troilus1602	27,0	26,3	25,2	24,6	24,8	24,8	24,9	24,7	24,2	24,0	24,2	23,7	23,5	23,8	24,3	23,6	23,2	23,0	23,3	23,7	24,0	23,8	24,0	24,3
185	shak_twokins1613	31,1	30,3	29,6	29,1	29,3	29,4	29,6	29,4	29,2	29,2	29,4	28,8	28,3	28,2	28,5	27,9	27,5	27,3	27,6	27,4	27,6	27,7	28,0	28,3
186	shak_verona1590	34,1	33,3	32,0	30,8	30,9	30,9	30,8	30,4	30,2	30,2	30,4	30,1	29,5	29,4	29,3	29,1	28,4	28,2	28,2	28,1	27,5	27,9	28,2	29,3
187	shak_windsor1597	35,2	34,4	33,3	32,2	32,5	32,4	32,5	32,4	32,2	32,2	32,4	31,6	30,9	30,3	30,3	29,9	29,5	29,6	30,1	30,2	29,8	30,2	30,5	31,7
188	shak_winter	28,4	27,6	26,4	25,4	25,6	25,6	25,6	25,2	24,8	24,8	24,9	24,4	24,0	23,9	24,1	23,8	23,3	23,4	24,0	23,9	23,8	24,0	24,0	24,8
189	sheridan_rivals	34,3	33,8	32,7	31,8	31,9	32,0	32,2	32,3	32,4	32,6	32,9	32,2	31,8	31,8	31,6	31,2	31,1	31,2	31,8	31,9	31,7	31,9	32,2	33,1
190	sidney_marcantonie	37,6	37,6	37,3	37,3	37,8	37,4	37,1	36,8	36,1	36,0	35,9	35,6	35,5	35,9	36,2	35,8	35,7	35,4	35,2	35,5	35,6	35,2	34,6	34,2
191	tourneur_atheists1611	32,7	32,1	31,6	31,4	31,9	31,8	31,8	31,7	31,3	31,3	31,4	31,1	31,1	31,8	32,2	31,9	31,5	31,2	31,3	31,5	31,8	31,5	31,0	30,9
192	web_malfi	27,5	26,7	25,7	24,6	25,0	25,2	25,3	25,2	25,2	25,3	26,0	25,4	24,9	25,2	25,3	24,9	25,0	25,1	25,4	25,5	25,2	25,4	25,4	26,2
193	wever_lustjuventus	35,7	35,1	34,2	33,6	33,7	33,7	33,7	33,2	32,8	32,3	32,3	31,8	31,3	30,9	31,3	31,0	30,8	30,7	30,9	30,9	30,8	30,9	31,1	31,9
194	wilkins_misenfmar	30,2	29,9	28,8	27,9	28,3	28,5	28,4	28,4	28,5	28,3	28,4	27,8	26,9	26,5	26,4	25,9	25,6	25,5	25,8	25,8	25,3	25,6	26,4	27,1
195	wilson_3ladieslondon1584	35,3	34,6	33,4	32,6	32,6	32,4	32,6	31,9	32,0	31,6	32,0	31,6	31,5	30,8	31,0	30,8	30,4	30,1	30,7	30,6	30,0	30,7	31,1	32,4

The colour palette impressively confirms the Shakespeare plays, and parts of the Jonson texts are also highlighted. In addition to *Edward III*, appropriate values are found in *Edmund Ironside*, *Sir John Oldcastle* and *The Troublesome Reign of King John*. The latter have all been studied with R Stylo and have Shakespearean references. Not too far away in style were Dekker's *The Whore of Babel* (1605) and *The Family of Love* (1608), and Heywood's *2 Edward IV* (1599).

It is clear that these plays will once again be included in the set of reference texts to be studied when, following Table 1, it comes to making assignment decisions with the classifiers nsc, svm and delta, spread over window sizes from 1000 to 8000 words, in order to establish consolidation tendencies of the results.

According to the number of 250-word segments assigned, Shakespeare's plays occupy just under 80% of all segments (K49) and around 71% (J46) are allotted to *1 Henry VI*. This history play falls into the early 1590s according to official dating, but previous research with R Stylo has also shown that there is a high probability that *1 Henry VI* was only completed for the 1623 Folio edition. The remaining reference texts in the table do not belong to early Shakespeare either, but indicate Dekker, Heywood and Jonson, so that the assumption of an original play produced around 1588 when the Armada threatened England is not explicitly strengthened. Instead, Rolling Delta points to a collaborative situation not only with the first eight segmental assignments but also with second and third lowest values, especially since all the delta values are very close together. A Shakespearean pre-text, however, is not completely ruled out.

It is interesting that Chambers refers to a play called *The Siege of London* when he looked into the situation of the Admiral's Men after the plague years 1591 to 1593 (vol. II, p. 147). He reckoned that "the Admiral's had a considerable stock of old" plays. He continues: "But it is not likely that many new plays were written during the plague years, and probably most of the revived plays of 1594–5 were a good deal more than two or three years old" (p.146). Unfortunately, *The Siege of London* is not an extant play, but may well be a Shakespeare play of that name, which then found its way from the Queen's or Pembroke's Men to the Admiral's, like *Edward II* and *The Jew of Malta*. There is another indication of a

mixture of an older and a more recent play if one looks into the frequency distributions of speech lengths. Around 1599 there was a shift towards shorter speeches, and in most plays produced after 1599 the speech length used most often was that of four words (Rizvi 2019, Ilsemann 2013, Jackson 2007). A brief graphic listing of Shakespeare's plays with their averaged speech lengths before and after 1599 summarizes the initial situation.

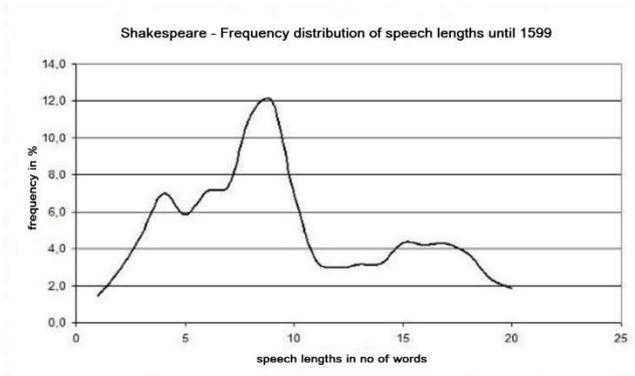


Figure 2 most often used speech lengths until 1599

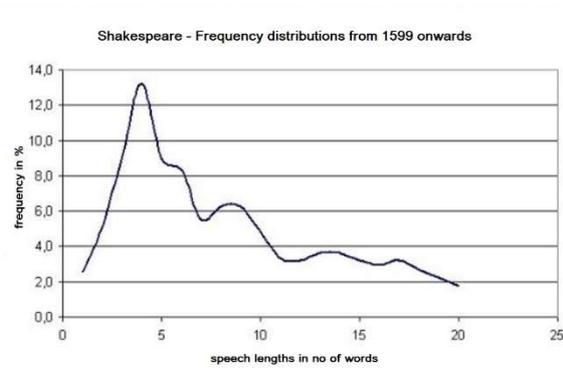


Figure 3 most often used speech lengths after 1599

A Larum for London returns a somewhat strange distribution.

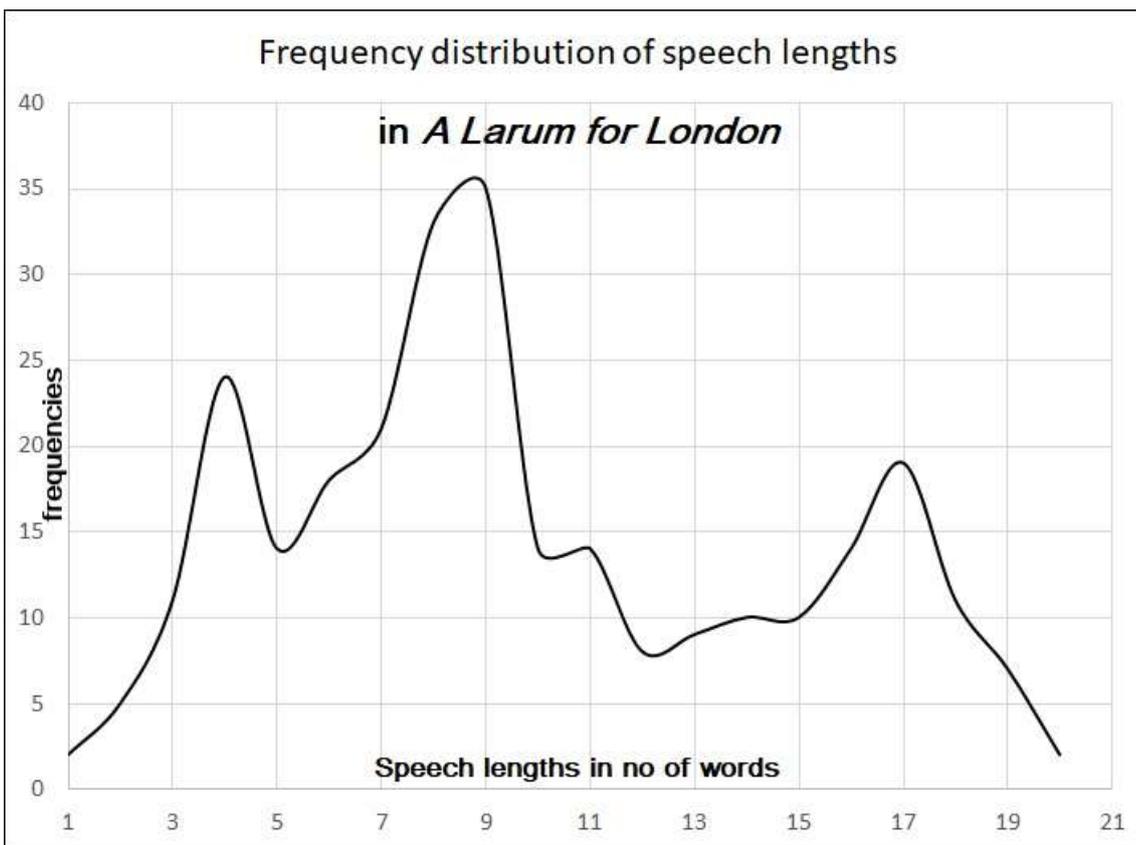


Figure 4 Frequency distribution of speech lengths in *A Larum for London*

There is an unmistakable maximum at eight and nine words, those values that apply to all early Shakespeare texts before 1599. However, the second maximum at four words, which did not appear anywhere else before 1599, is also striking. MacDonald P. Jackson had found in his investigations the suitability of frequency distributions for dating confirmed,

so that the distribution curve can indeed be used as evidence for a chronologically mixed text with two distinct populations. As *2 Henry IV*, *Much Ado About Nothing*, *Henry V* und *As You Like It*, which, with their most frequent speech lengths of six words, show individual transition values for Shakespeare's plays around 1599, do not, however, emerge with a maximum in Figure 4 the probability of an early Shakespeare play actually gains considerable weight.

Rolling Classify also gives expression to this and can be summarised as follows. Table 3 records a Shakespeare average of 79.6 %, a quantitatively similar allocation to Rolling Delta in Table 1. The svm classifier with a high decision level even reaches 91.5 % Shakespearean shares. This also corresponds with the window sizes, because Dekker and Heywood are mainly represented in the smaller windows, which according to Eder are unreliable. Complete Shakespeare assignments result from the window sizes of Table 4, depending on the classifier and variable:

Table3 Summary of classification results

Autor	nsc	%	svm	%	delta	%	Summe	%
Shakespeare	549	88,0	571	91,5	370	59,3	1490	79,6
Jonson	23	3,7	41	6,6	189	30,3	253	13,5
Heywood	47	7,5	12	1,9	48	7,7	107	5,7
Dekker	5	0,8	0	0,0	17	2,7	22	1,2
Summe	624	100,0	624	100,0	624	100,0	1872	100,0

Table4 Shakespeare attribution and window sizes

classifier	variable		window size
Nsc	mf1w	from	4000 words
	mf2c	from	5000 words
	mf3c	from	4000 words
Svm	mf1w	from	1000 words
	mf2c	from	1000 words
	mf3c	from	7000 words
Delta	mf1w	from	4000 words
	mf2c	from	5000 words
	mf3c	from	4000 words

Table 4 gives the window size for each classifier and variable that comes first with a 100 % Shakespeare attribution. The reliable svm classifier only reaches this point with 7000-word windows and character trigrams (mf3c). Window sizes of 4000 or 5000 words are just above the stage of collaborative recordings.

As a methodological supplement, the General Imposters Method can also provide information on the identification of authors or possible collaborators whose values are in the grey area of uncertain assignments. Even the very brittle Cosine Delta of the Würzburg Computational Stylistics Group (wu) lists Shakespeare three times. More interesting, however, are the grey subordinate values, whose collaborative share could indicate that Dekker, Heywood and above all Jonson, in all haste and concern for London, produced a text, based on a Shakespearean pre-text. Since audience interest may also have waned with the waning of the threat at the end of August 1599, the dramatic construct remained pointless and only saw one quarto printing.

Table5 GI Analysis of *A Larum for London*

	A	B	C	D	E	F	G	H
1	delta	low	high	dek	heyw	jon	shak	var.
2	anon_alarum	0.22	0.75	0	1	0.08	0.54	mf1w
3	anon_alarum	0.3	0.69	0.74	0.02	0.26	0.94	mf2w
4	anon_alarum	0.12	0.74	0.01	0.05	0.69	0.92	mf2c
5	anon_alarum	0.19	0.78	0	0.13	0.47	0.99	mf3c
6								
7	wu	low	high	dek	heyw	jon	shak	var.
8	anon_alarum	0.08	0.59	0.12	0.61	0	0.65	mf1w
9	anon_alarum	0.07	0.85	0.63	0.05	0.07	0.53	mf2w
10	anon_alarum	0.01	0.6	0.28	0.02	0.2	0.72	mf2c
11	anon_alarum	0.1	0.61	0.13	0.11	0.01	0.92	mf3c
12								
13	ru	low	high	dek	heyw	jon	shak	var.
14	anon_alarum	0.44	0.55	0.03	0.04	0.13	0.92	mf1w
15	anon_alarum	0.09	0.76	0	0.03	0.25	0.98	mf2w
16	anon_alarum	0.03	0.73	0.11	0.13	0.66	0.72	mf2c
17	anon_alarum	0.07	0.76	0.02	0.08	0.28	1	mf3c

It is also conceivable, and in fact quite likely that *A Larum* was one of the first plays of the newly built Globe to be performed, with all its flaws, even during the precarious political situation, and that at the time its topicality was considered more important than its quality.

This is in part also the tenor of Genevieve Love's 2013 paper "Past, Present, Presence, Prosthesis in *A Larum for London*," in which she analysed the action from a presentist point of view, and interestingly in line with the heading of the essay cluster "Presentism Without Shakespeare." She

saw the play aesthetically deficient with flaws in the eruption of the past into the present. It is the figure of Stump in particular who stands for the play's movement into our present whom she sees as "halting" rather than "bursting."

Roslyn Knutson, in her attempt to characterise the type of play that was typical of the Lord Chamberlain's Men and not knowing the actual author, provided a description, which, in retrospect and with the knowledge of the actual author, confirms all that has hitherto been associated with Shakespeare's name. Knutson guesses at the audience appeal of plays and noted the commercial potential of dramatising issues in medieval structures. Thus, one might add, Shakespeare had taken artistic liberties to portray Richard III in a villainous light, in part to appeal to the political climate of his own time. *Henry VIII* is another example. It referred to the Tudor era and served to promote the legitimacy of the Tudor dynasty, especially given the controversial nature of Henry's marital and religious decisions. In medieval moral plays the representation of vice became an important figure and in *A Larum for London* various characteristics of the Vice were used to enhance the villainy of the Spanish commanders and their collaborators. The figure of Time took the role of preacher with many biblical references that were well known to Shakespeare, but "in the figures of Sancto Danila and Stump, the dramatist turned to more contemporary [Marlovian and post-Marlovian] stage models, but these characterizations too have medieval analogues" (p. 65).

Knutson then reports that the dramatist of *A Larum for London* had an additional stratagem to please audiences. He advertised the name of the company's new playhouse and its painted heavens in the opening lines of the prologue:

Round through the compasse of this earthly ball
The massie substance hanging in the skie.(72)

If *A Larum for London* opened the 1599-1600 season of the Globe the same stratagem was used only a little later in the premiere of *Henry V*:

can this cockpit hold
The vasty fields of France?
or may we cram
Within this wooden O
the very casques
That did affright the air at Agincourt?

A year later, on the same stage, Hamlet advises the actors on how to perform their roles, stressing the importance of natural and authentic acting. He refers to the purpose of acting as holding "the mirror up to nature," reflecting life as it is, and capturing the essence of human behaviour. This passage not only highlights the connection between the material stage and the fictional play but also serves as a commentary on the art of acting itself, emphasizing the need for authenticity in performance.

The tension between real life and fictional life is also given room in Jacques famous monologue in *As You Like It*.

All the world's a stage,
And all the men and women merely players;
They have their exits and their entrances,
And one man in his time plays many parts,

The fact that *A Larum for London* disappeared after its first quarto print may have to do with the excessive anxiety that it evoked in the audience during a time of distress. Once all danger had disappeared the audience was more than reluctant to face once again the more than oppressive danger of defeat and massive impact of war caused by rogues and traitors. It can be assumed that the London audience did not consist of masochists and was inclined to self-harm. The interesting question, therefore, is whether urgent topicality really carried greater weight than quality when the Globe opened in August 1599. From what Roslyn Knutson has said about the typical features of this production, one gets the impression that it is the same skills and constructions of the author that were successful in his other works. The fact that *A Larum for London* disappeared from the scene may therefore be the result of the turn of the times and is not necessarily due to an inferior dramatic design.

Notes

Rolling Delta was developed from John Burrows's delta which made use of z-scores rather than frequencies of function words, thus relying on a much larger vocabulary with its capacity to establish authorships from the comparison of reference texts. Rolling delta used word windows of a particular size that were moved through the text with an overlap, returning a sequence of lowest delta values that could indicate the texts with the smallest

stylistic difference from the search text, including possible collaborations. It was developed by Maciej Eder, Jan Rybicki and Mike Kestemont. In this study character trigrams (mf3c) were preferred due to their high number of variables. The window size was set to 5000 words, and there was a culling value of 70% to avoid idiosyncratic vocabulary that would have produced weird results. Rolling Classify used the classifiers nsc (nearest shrunken neighbours), svm (support vector machine) and delta (classic Burrowsian). The analysis tested window sizes between 1000 and 8000 words at a distance of 1000 words. The average attribution percentage of 250-word segments can be seen as a reliable indicator of authorship. Last but not least the General Imposters Method that was built into a script optimised by Jan Rybicki followed the outline laid down by Maciej Eder in a blog of the computational stylistics group <https://computationalstylistics.github.io/blog/imposters/>. Here, words (mf1w), character bigrams (mf2c) and character trigrams (mf3c) were run with the most frequent 5000 variables, only word bigrams (mf2w) were run with 2000 items. In the first section, the delta classifier was used, in the second cosine delta (introduced by the Würzburg computational group), and in the third part one finds the results achieved with Ružička metrics that many people believe to be the most reliable procedure. In 2016 M. Kestemont et al. came to the conclusion: “Comparative evaluations across a variety of benchmark corpora show that this metric yields better, as well as more consistent results than previously used metrics.” (Kestemont, M. et al.)

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