

EARLY MODERN LITERARY STUDIES



Is EEBO-TCP / LION Suitable for Attribution Studies?

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In all humanities research, access to the original documents is vital. In the case of early modern drama, for a long time that meant being able to use one of the major libraries which had decent holdings of the material identified in A. W. Pollard and G. R. Redgrave's path-breaking *Short-Title Catalogue of Books Printed in England, Scotland, & Ireland and of English Books Printed abroad 1475–1640* (1927). This indispensable reference work, recently revised,¹ revealed an unexpected number of variant editions and issues and identified the libraries around the world where copies were located. In 1938 Eugene Power founded University Microfilms and began filming copies of books in the British Museum Library. The process gradually expanded, until his company could offer libraries substantial tranches of both *STC1* and *STC2*, as the continuation by Donald Wing, covering the period 1641-1700, became known.² Many scholars will still remember the excitement of loading a microfilm for the first time, but also the frustration of finding that some copies were of very variable quality. The photographers who produced the films were hampered by the limitations of the technology, the unevenness of early modern printing, and defects in the copy available for filming. Many words were illegible, especially those containing the long 's' or easily mistaken letters, such as 'a' and 'c'. Power's company also filmed American dissertations, becoming so successful that it was bought and sold on by a series of companies, culminating in its purchase by ProQuest. In 1998 ProQuest launched a 'Digital Vault Initiative', purported to include 5.5 billion images digitized from UMI microfilm,

¹ See the *Second Edition, Revised and Enlarged, begun by W. A. Jackson & F. S. Ferguson, completed by Katharine F. Pantzer* 3 vols. (London: The Bibliographical Society, 1976-1991).

² See Donald Wing, *Short-Title Catalogue ...1641/1700*, 3 vols. (New York: Index Society 1945-51), and the *Second edition, newly revised and enlarged* by J. J. Morrison, C. W. Nelson, and M. Seccombe, 4 vols. (New York: Modern Language Association, 1982-98).

including major newspapers, and Early English books dating back to the 15th century. The following year they purchased Chadwyck-Healey, a one-time microfilm publishing company that was one of the first to produce full-text CD-ROM databases.³ Many scholars will remember with gratitude these pioneering collections. The logical next step was to make these collections available online, as *Early English Books Online* (EEBO), which contains *STC1* and *STC2*, together with the Thomason Tracts and the Early English Books Tract Supplement, a total of more than 125,000 volumes. A smaller repository, *Literature Online* (LION), resembling the Chadwyck-Healey collections, contains over a third of a million full-text works of poetry, prose and drama in English, together with online criticism and a reference library.⁴

The transformation of these vast resources from microfilm to CD-ROM and finally online, has opened them up to a world-wide public. However, the technology was not accompanied by the old-fashioned discipline of proofreading and checking against the original texts, with the result that many of the original defects survive. In 1999 a Text Creation Partnership was formed to remedy these failings. In partnership with ProQuest and with more than 150 libraries, their aim is to generate ‘highly accurate, fully-searchable, SGML/XML-encoded texts corresponding to books from the Early English Books Online Database’.⁵ Where other electronic databases have been produced by the inaccurate method of optical character recognition, the TCP texts provide keyboarded full-text transcriptions of EEBO images, linked to the individual page images. Currently, some 60,328 titles are available to libraries belonging to the partnership, with another 4,000 being processed.⁶ Although the accuracy level of the TCP texts is high, many of the titles that a researcher might need to consult have not yet been processed, so that users will still find illegible words, replaced in some cases by question marks. The great advantage of the online version compared to its previous existence as CD-ROMs is the provision of a search engine. It was not an easy task to devise a tool that could handle all the un-coordinated orthography of early modern English, and the early version was involved several procedures; recent modifications offer helpful options for ‘variant spellings/forms’. Users can make ‘select from a list’ searches, or ‘proximity searches’, in which they can search for a specific word string by using a wildcard (*). In other searches, the term **FBY** can specify a word ‘followed by’ another specified word. The procedure is logical, if cumbersome, but with experience one can learn appropriate refinements.

³ See the entries in *Wikipedia* for ‘University Microfilms’ and ‘ProQuest’.

⁴ See <http://lion.chadwyck-healey.com>

⁵ See <http://www.textcreationpartnership.org/tcp-eebo/>

⁶ This information was kindly supplied by Dr Paul Schaffner, Director of the project (email, 31.8.18).

The potential applications of EEBO-TCP are massive, and some have been unexpected, for instance in textual criticism. While editing *Measure for Measure* for the recent Norton Shakespeare, Matthew Steggle confronted some long-standing textual problems, one of which he solved by using this database. In the Folio text Escalus describes ways in which human beings can go astray:

Some rise by sinne, and some by virtue fall:
Some run from brakes of Ice, and answer none
And some condemned for a fault alone (2.1.38–40).

In 1709 Nicholas Rowe proposed to read ‘brakes of vice’: as Steggle puts it, ‘an easy aural error; “vice” would fit with “virtue” in the line before’, and the antithesis would be clarified.⁷ No illustrative contemporary example had been found for this phrase, but in searching EEBO-TCP Steggle discovered that ‘the “brakes” are a metaphor for vanity, self-indulgence or foolish entanglement’, as in a 1629 devotional tract by Richard Brathwaite, which refers to ‘the pricking brakes of sensuality’ and ‘the brakes of vanitie’.⁸ Three centuries later, an electronic database supports an emendation by the first Shakespeare editor.

Steggle extended the application of EEBO-TCP for literary studies into another field. Scholars have known for centuries the titles of many plays referred to in contemporary documents that have not survived.⁹ Indeed, current estimates suggest that their number (1,100) exceeds that of the known plays (543).¹⁰ In many instances sufficient information exists for us to establish a good sense of a play’s subject-matter, its authors, actors, and theatre companies. In other cases, only a name survives, and it has been impossible to verify whether such a play existed. In recent years a revival of interest has led to the creation of a database of lost plays documenting what is known.¹¹ Steggle systematically searched EEBO-TCP for verbal evidence and succeeded in identifying

⁷ Matthew Steggle, ‘The cruces of *Measure for Measure* and EEBO-TCP’, *Review of English Studies* 65 (2014), 438-55 (p. 443).

⁸ *Ibid.*, 444. The meaning of ‘brakes’ as ‘thickets’ would be supported by Brathwaite’s epithet ‘pricking’. But the alternative spelling ‘breaks’ together with ‘ice’ could refer to ‘broken places’, ‘openings’ or ‘faults’ in a geological sense (OED, *break*, *n.*), hence places of danger from which people would run. It is difficult, however, to see a connection with ‘and answer none’.

⁹ See, e.g., C. J. Sisson, *Lost Plays of Shakespeare’s Age* (Cambridge: Cambridge University Press, 1936).

¹⁰ Matthew Steggle, *Digital Humanities and the Lost Drama of Early Modern England. Ten Case Studies* (Farnham: Ashgate, 2016), pp. 8-11, citing estimates by Martin Wiggins.

¹¹ See the ‘wiki-style’ database maintained by Rosalyn Knutson, David McInnis and Matthew Steggle, https://www.lostplays.org/index.php?title=Main_Page

ten lost plays. One especially evasive play title was *Richard the Confessor*, a seemingly unlikely topic for the public theatre in Protestant England. Henslowe recorded two performances at the Rose by Sussex's Men in 1593-4, but some historians followed Malone in dismissing it as an error for Edward the Confessor. Steggle's thorough researches have identified the subject as Saint Richard of Chichester (*d.* 1252), a bishop-saint frequently referred to in the early modern period.¹² Steggle had searched EEBO-TCP for 'Richard the Confessor', without success, but the same entry in Google Books led him to the extensive historical record. He subsequently returned to EEBO-TCP and entered '**Richard NEAR.3 confessor**, where the **NEAR.3** operator serves as an instruction to the database: "Find me all the places where the string **Richard** occurs within three word-breaks of the string **confessor**". The **.3** can be replaced with any other number of the user's choice...' ¹³ As well as being a research success story, this shows the importance of knowing correct procedures.

The value of these resources to authorship studies seems undeniable, and MacDonald Jackson, that frequent pioneer, recognised its potential in an essay published in 2001.¹⁴ It is an accepted fact that, due to the intense competition between Elizabethan theatre companies, dramatists regularly wrote under time pressure and were prone to repeat words and phrases that they had used before. One basic method in attribution work is to search for verbal parallels between a text of known authorship and one where the authorship is unknown, and the provision of these vast databases seems an ideal resource. When Steggle performed his searches, he knew exactly what he was looking for, a textual crux or a play title, and he could recognise that he had been successful. But when attribution scholars search for repeated phrases and collocations stretching over several lines of verse, how do they know that they have found all the relevant data? In this essay I wish to raise some doubts about its efficacy by reviewing two recent studies using LION/EEBO-TCP on the Shakespeare canon, by MacDonald Jackson and Anna Pruitt.

¹² Steggle, *Digital Humanities*, pp. 43-60, who explains that, 'as a saint who had not actually been killed for his faith, Richard was technically a Confessor', as defined by *OED*: 'One who avows his religion in the face of danger, and adheres to it under persecution and torture' (p. 50).

¹³ *Ibid.* pp.23-4, 51n.

¹⁴ MacDonald P. Jackson, 'Determining Authorship: A New Technique', *Research Opportunities in Renaissance Drama*, 41 (2001), 1-14; reprinted in Jackson, *Defining Shakespeare: 'Pericles' as Test Case* (Oxford: Oxford University Press, 2003), pp. 190-217 as 'A New Technique for Attribution Studies'. Quotations will be from this version.

I

In his pioneering essay Jackson began by criticising recent erroneous authorship claims (by Eric Sams and Mark Dominik) based on ‘the haphazard and biased accumulation of verbal parallels’. Jackson suggested that such mistakes ‘can be avoided through systematic and comprehensive electronic searches’ (193) and illustrated his method with examples from the co-authored play *Titus Andronicus*. Having chosen short passages from a scene universally ascribed to Peele (1.1.1-17), and one ascribed to Shakespeare (2.3.10-29), ‘words, phrases, and collocations from the two passages were methodically keyed in [to LION], one at a time, to be searched’ in eight plays and eight poems by Peele and seven plays and one narrative poem by Shakespeare (196). That search produced a listing of ‘phrases and collocations that occur in one author’s canon but not in the other’s’, consisting mostly of ‘groups of two or more words that are either consecutive or closely associated’. As Jackson explained, ‘the requirement that these collocations should be confined to the canon of only one of the two playwrights ensures that high-frequency examples (such as “of the”) are ignored’ (198). Analysing the results, Jackson noted that ‘a straight count – scoring only one authorial hit, however many times a phrase or collocation occurs within the canon that includes it – yields five hits for Peele, six for Shakespeare’ (199). Jackson added two riders to explain this counter-intuitive result, one quantitative (‘Shakespeare’s canon is more than eight times greater than Peele’s’), the other qualitative:

the more impressive linkages are with Peele. The phrase ‘that ware the’ occurs nowhere else in English drama; nor is there in English drama another instance of ‘to virtue consecrate’ (where ‘consecrate’ = ‘consecrated’)... The phrase ‘let desert’ not only occurs in the mature history *2 Henry IV* (1597-8), written much later than *Titus Andronicus*, but is a barely significant link. In several cases where Shakespeare provides the more exact linkage, Peele has almost equally good matches. (199)

That interesting discussion reveals that Jackson used two evaluative criteria to rank these matches, unique occurrence and quality (‘significant’, ‘good’).

The second passage, when submitted to the same test, yielded clear-cut results: twenty ‘connections with the Shakespeare canon (unmatched in Peele’s)’ but only two for the converse test (201). Moreover,

The two Peele linkages are among the very weakest. That at line 12 consists merely of the conjunction of ‘melody’ and ‘birds’ in ‘here is melody... A charm

of birds' in *The Arraignment of Paris*, and is accepted as a hit for Peele only because it brings together those two precise words. Some of the Shakespeare linkages, in contrast, are complex, based on characteristically Shakespearian associations: echoes of the baying of hounds and the coupling of these to a 'nurse's song' to a babe; the 'snake' that is 'rollèd' in the sun or flowers and is mentioned close to the adjective 'chequered'. (201–2)

Here, too, Jackson used evaluative criteria to rank the phrasal matches, judging 'the Shakespeare linkages' to be 'complex' because they used more sustained verbal associations. Briefly reverting to the Peele test, Jackson conceded that 'several of the locutions that link *Titus Andronicus*, 1.1.1-17 to Peele are commonplace and prove nothing in themselves. But their triteness is immaterial', apparently because the passage was 'methodically searched for phrasal links with Peele's canon...' (202). Introducing this 'new technique', as he called it, Jackson suggested three evaluative criteria for phrasal matches: unique occurrence, quality, and 'commonplace... triteness'. That would seem to cover all occasions.

In 2006 Jackson gave an extended demonstration of his new method, to support his claim that scene 8 in *Arden of Faversham* (the second quarrel between Alice Arden and her adulterous lover Mosby) was written by Shakespeare.¹⁵ Jackson briefly described the evidence for Kyd's authorship produced by 'early twentieth-century attribution scholars', but rejected it outright:

Although the basic assumption was correct – that playwrights have individual habits as phrasemakers and tend to echo themselves more often than they echo others – the value of the proffered parallels could not be reliably assessed, because the search for them had been haphazard and biased by the scholar's preconceptions. (256)

¹⁵ Jackson, 'Shakespeare and the Quarrel Scene in *Arden of Faversham*', *Shakespeare Quarterly* 57 (2006), 249-93. Jackson has argued the case for Shakespeare's authorship many times. See M.P. Jackson, 'Material for an edition of *Arden of Faversham*' (B. Litt. thesis, Oxford University, 1963); 'Shakespearean features of the poetic style of *Arden of Faversham*', *Archiv für das Studium der neuen Sprachen und Literaturen*, 230 (1993), 273-304; 'Parallels and poetry: Shakespeare, Kyd, and *Arden of Faversham*', *Medieval and Renaissance Drama in England* 23 (2010), 17-33; 'Compound adjectives in *Arden of Faversham*', *Notes and Queries*, 53 (2006), 51-5; 'Reviewing authorship studies of Shakespeare and his contemporaries, and the case of *Arden of Faversham*', *Memoria di Shakespeare Nuova serie* 8 (2012), 149-67; 'Gentle Shakespeare and the authorship of *Arden of Faversham*', *The Shakespearean International Yearbook* 11 (2011), 25-40.

How does Jackson know that these searches were haphazard? The three main authors concerned – Charles Crawford (1903), Walter Miksch (1907), and Paul Rubow (1948) – between them amassed over a hundred close verbal matches between *Arden of Faversham* and the three plays then ascribed to Kyd.¹⁶ They worked systematically, drawing on a wide reading knowledge. And why should Jackson accuse them of bias? They knew enough about Elizabethan drama to recognise Kyd's hand, not Marlowe's, nor Peele's. In his pioneering essay Charles Crawford recorded that, after 'an exhaustive and painstaking examination of Kyd's work as a whole', he had concluded that 'the vocabulary, phrasing, and general style' of the play 'are those of Kyd, and that they cannot be mistaken for those of any other author of the time'.¹⁷

Another scholar might have thought that the value of these parallels should be directly established by inspecting them. Jackson, however, dismissed 'the old discredited methodology', proposing that its defects could be remedied by using *Literature Online*. He 'methodically explored' this database for links with the Quarrel scene, searching for 'phrases and collocations that occur five or fewer times in other plays first performed from 1580 to 1600... Parallels in imagery and ideas were recorded only if passages had at least one prominent word in common' (257). Although Jackson did not draw attention to it, this was a new approach in attribution studies. Previous scholars had looked for individual matches, each of which helped to build up the documentation of an author's self-repetition, in terms of quality, accepting the criteria laid down by Muriel St Clare Byrne that parallels should satisfy the criteria of both quantity and quality – that is, when a parallel of thought is accompanied by a parallel of language.¹⁸ However, these predecessors had never quantified their results. By allowing matches that had only one word in common, and by introducing multiple examples, Jackson included many matches that his predecessors would have rejected as not fulfilling the unitary criterion of verbal similarity coupled with a similarity of thought. Secondly, by extending the limit to five, Jackson could bring into his net authors with a large canon, above all Shakespeare. Of the 132 plays that Jackson searched, he found that '28 have four or more links to the quarrel scene', the titles and scores being set out in Table 1

¹⁶ In his Oxford thesis Jackson brusquely dismissed the arguments for Kyd's authorship made by these authors: see 'Material', pp. 91-115. Jackson has never acknowledged Rubow's book, although it was often cited by M.L. Wine in his edition of *Arden of Faversham*, which Jackson frequently cites.

¹⁷ Crawford, 'The Authorship of *Arden of Faversham*', *Jahrbuch der Deutschen Shakespeare Gesellschaft* 39 (1903), 74-86, quoted from Crawford, *Collectanea*, First Series (Stratford-on-Avon, 1906), pp. 101-30 (113,118). I have collected the matches with Kyd noted by Crawford, Miksch, and Rubow on my website: http://www.brianvickers.uk/?page_id=808

¹⁸ See Byrne, 'Bibliographical clues in Collaborate Plays', *Library*, 4th ser., 13 (1932), 21-48.

(259). Sixteen of these were sole-authored plays by Shakespeare, three were co-authored (*Titus Andronicus*, *1 Henry VI*, and *Edward III*).

Jackson's discussion of the date of *Arden* showed his awareness of the correct use of 'chronological limits' to date a play. As he argued, since *Arden* is 'influenced in places by copious marginalia printed for the first time in the 1587 edition' of Holinshed's *Chronicles*, and has two references to events of 1588, this establishes a *terminus a quo*. Jackson then observed that 'plays were seldom published until at least a year after they had begun their run on the stage', thus setting for him the later limit to 1591.¹⁹ Lukas Erne's recent study of Shakespeare as a literary dramatist had shown that

the Lord Chamberlain's Men did not try to have Shakespeare's plays printed immediately after they had been written. If we consider the likely dates of composition and the dates of entrance in the Stationers' Register, a consistent pattern presents itself: as a rule, roughly two years seem to have elapsed between the former and the latter.²⁰

On this basis, *Arden of Faversham* would have been performed in 1590, and this is indeed the date that Martin Wiggins gives in his authoritative new *Catalogue*.²¹

Jackson used the 'probable date of first performance' throughout,²² but he followed the Shakespeare chronology given in Wells and Taylor's 1986 Oxford edition, which assigns earlier dates than those given by Wiggins.²³ The result of Jackson's searches was that 'links to plays by Shakespeare are overwhelmingly predominant' (258). The scores for the first four titles in his list are as follows:

¹⁹ See Jackson, 'Shakespeare and the Quarrel Scene', 255, and 'Material for an Edition', pp. 65-78.

²⁰ Lukas Erne, *Shakespeare as Literary Dramatist* (Cambridge: Cambridge University Press, 2003), p. 84.

²¹ Martin Wiggins, in association with Catherine Richardson, *British Drama 1533-1642: A Catalogue. Volume III: 1590-1597* (Oxford: Oxford University Press, 2013), p. 9. For a thoughtful discussion of the process of assigning dates see *ibid.*, *Volume I: 1533-1566* (Oxford: Oxford University Press, 2012), pp. xxxix-xli.

²² Inconsistently, Jackson assigns to Kyd's *Soliman and Perseda* the date of its entry in the Stationer's Register, 1592, rather than its probable first performance, which Erne places 'in 1588 or 1589', and Wiggins in '1588'. See Erne, *Beyond 'The Spanish Tragedy': A Study of the Works of Thomas Kyd* (Manchester: Manchester University Press, 2001), p. 160; Wiggins, *British Drama, Volume II: 1567-1589* (Oxford: Oxford University Press, 2012), #799 (p. 403).

²³ *2 Henry VI* (1591), *3 Henry VI* (1591), *The Taming of the Shrew* (1592), *The Two Gentlemen of Verona* (1594).

Play	No. of links
<i>3 Henry VI</i> (1591)	19
<i>The Two Gentlemen of Verona</i> (1590–1)	12
<i>2 Henry VI</i> (1591)	12
<i>The Taming of the Shrew</i> (1590–1)	11

Scholars familiar with chronology studies will immediately raise the likelihood that all four plays post-date *Arden*. Indeed, Jackson himself pointed out that ‘it is probable that no Shakespeare play listed’ in his Table 1 (259) ‘was written before *Arden of Faversham*, and it is virtually certain that several of those with many links were written after it’ (261). If that is the case, then the evidence for Shakespeare must be dismissed, since the ‘matches’ cannot be separated from the categories of authorial imitation, or (more likely), the recollection of a play seen in performance. Shakespeare’s extensive knowledge of *Arden* has seemed to many scholars to suggest that he must have acted in it, a possibility that Jackson vehemently denies (261, 270, 273). In his 2001 introduction to the use of LION Jackson had used three criteria: unique occurrence, quality, and ‘commonplace’ phrases. In this 2006 essay, as in his 2014 monograph, two of those criteria have been dropped, leaving only ‘quality’ in the sense of the semantic congruity of a match, together with a newly-devised quantitative scoring procedure. Regarding the former, Jackson explains,

links were not recorded when collocated words occurred in entirely different senses: thus ‘loathsome weeds’ in line 67 of the quarrel scene provides a link to *A Knack to Know a Knave*, where the ‘loathsome weeds’ are again plants, but not to *Caesar and Pompey*, where ‘loathsome sable weeds’ are mourning clothes (258).

That seems an unexceptionable principle, but several of the matches that Jackson claimed fail to meet his own criteria. For the collocation ‘climbed the top bough of the tree’ (*AF* 8.15),²⁴ Jackson cited the closest two matches produced by the LION search function, the first being a phrase from Dekker, ‘catched at the highest bough’. This match observes Jackson’s new criterion of accepting matches that have only one word in common, but in this case ‘bough’ has quite different connotations (attempting to grasp, rather than successfully climbing), and it satisfies neither criterion of quantity nor quality. The second match is the phrase ‘tree tops’, as found in Shakespeare, *Romeo and Juliet* (278), which is very different from ‘highest bough’. Moreover, a check of the text

²⁴ Quotations, by scene and line number, are from M.L. Wine (ed.), *The Tragedy of Arden of Faversham* (London: Methuen, 1973), abbreviated as ‘*AF*’.

shows that Romeo refers to ‘yonder blessed moon... / That tips with silver all these fruit-tree tops’ (2.2.107-8). Here the noun ‘fruit’ evidently modifies ‘trees’, whether the early editions hyphenated it or not, so this instance is even less of a match. For the collocation ‘Each... airy gale doth shake my bed’ (AF 8.17) the best matches that the LION search function could offer is ‘by whirlwind shaken’, from *Alarum for London*, where ‘whirlwind’ implies a force that would do considerably more than shake his bed. Secondly, Jackson cited from *The Taming of the Shrew* (2.1.141) a phrase even more remote from Mosby’s precarious position in a tree: ‘as mountains are for winds, / That shake not, though they blow perpetually’. These phrases have only one word in common, ‘shake’, and they use differing synonyms for ‘gale’. In some of his other claimed links between the quarrel scene and *The Rape of Lucrece* Jackson includes such slender parallels as these:

To make my harvest nothing but pure corn (AF 8.25)
 And useless barns the harvest of his wits (*Lucr.* 859)
 ’Tis fearful sleeping in a serpent’s bed (AF 8.42)
 The adder hisses where the sweet birds sing (*Lucr.* 870)
 Thou hast been sighted as the eagle is (AF 8.126)
 eagles gaz’d upon with every eye (*Lucr.* 1015)

Judged by his own criteria, most of Jackson’s ‘links’ do not satisfy the acceptability condition for matches. The ‘harvest’ in the first quotation is that of an aged miser who has hoarded his wealth; in the second it is metaphorical. A serpent and an adder are both snakes, but otherwise they cannot count as matching phrases or collocations. In *Arden* ‘sighted’ refers to the eagle’s remarkable eyesight, whereas ‘gaz’d upon’ in *Lucrece* has the eagle as the object of scrutiny by others. The fact that his list includes relatively rare single words, such as ‘sland’rous’ and ‘copesmate’, found in both texts, may be explained by the fact that the poem was published four years after the play was performed and could have picked up these words.

For the 167 lines of the quarrel scene Jackson claimed to have found 135 links to a variety of dramatists (276–89), but many of these are multiple matches for the same line. For Mosby’s complaint about the ‘Continuall trouble of my moody braine’ (AF 8.3) Jackson found three single-word links: ‘troubled brain’, *The Misfortunes of Arthur* (1584); ‘moody thoughts’, *3 Henry VI* (1591); and ‘moody discontented’ in both *1 Henry VI* (1592)²⁵ and *Richard III* (1593) – three of those plays post-dating *Arden*. Jackson noted that ‘there are no other collocations of “moody” and “discontent(ed)

²⁵ The phrase ‘moody discontented fury’ (3.1.123).

within the space of sixty words' (276). If that refers to his own practice, that is an unusually large extent for collocations. The default setting for EEBO-TCP is ten words, and in Corpus Linguistics the standard interval is four words. The most remarkable feature of these 135 links is that only eight come from the plays of Thomas Kyd. In introducing his new method Jackson promised to replace discredited old methods by using 'systematic and comprehensive electronic searches.'²⁶ Yet, having 'methodically explored' this database, Jackson missed over 60 close matches with Kyd.

Appendix 1 lists 74 verbal between the acknowledged plays of Kyd and the Quarrel scene. These have been found with the help of two resources. First, the software recently developed by universities to deter students from plagiarizing published work. Here it is used not to detect plagiarism as such, but to identify a writer's self-repetition. When two electronic documents are compared the program can be set to highlight every instance where two or more consecutive words are common to both.²⁷ The identification is entirely objective, lacking any element of subjectivity or bias, and is precise. Jackson had to cut up the text of scene 8 into segments that appeared to him to constitute a meaningful unity of utterance, which he then submitted to the LION search function manually to see if they would indicate a match. The procedure depends on the researcher's choice of words or phrases to be searched for, and the energy with which that search is executed, to check all possible verbal combinations. That introduces two subjective elements into frame. In contrast, my method starts with a match already discovered by the software program. The precision with which the software identifies matching collocations removes all guess-work or bias. Secondly, in recent months I have benefited from the newly available marked up corpus of 527 early modern plays prepared by Pervez Rizvi, which allows users to search for n-grams and collocations in all the texts.²⁸ I used old-spelling texts with the software program, which had no difficulty recognising words spelled differently; the Rizvi database, given its massive scope, necessarily uses modernised texts. By using both methods side by side I hope to have overcome any weaknesses.

Of the 74 matches I have identified, Jackson's findings agree in seven instances (nos. 11, 16, 18, 25, 26, 48, and 51). Other matches that I accept, however, he considered but dismissed. For no. 4, Mosby's complaint that insecurity '**nippes** me, as the bitter Northeast wind, / Doeth check **the** tender **blossoms** in the spring' (*AF* 8.5-6), Jackson rejected the parallel with 'Deaths winter **nipt the blossomes** of my blisse' (*Sp. T*

²⁶ 'New Technique', p. 193.

²⁷ I have used *WCOPYFIND4.1.1*, a free program developed at the University of Virginia by Dr Lou Bernard.

²⁸ See <http://www.shakespearetext.com/can/index.htm> 'Collocations and n-grams'.

1.1.13), although this three-term collocation is unique in drama up to and including 1590. Jackson rejected it because ‘the verb “nip” ... relate[s] specifically to “winter” cold’, whereas the *Arden* image presents ‘the premature destruction of budding spring blossoms...’ (277). To cite the difference between the seasons is a trivial objection. Both passages share the sense of growth or happiness being destroyed by some destructive, unwelcome influence, whether Mosby’s anxiety, a bitter wind in spring, or death. Moreover, in Kyd’s first publication, *Verses of Prayse and Joye* (1586), written after the foiling of the Babington plot to murder Queen Elizabeth, Kyd addressed Chidioc Tychborne, one of the conspirators who had been executed, with this verdict:

Time trieth trueth, and trueth hath treason tript;
 thy faith bare fruit as thou hadst faithles beene:
 Thy well spent youth thine after yeares hath **nipt**.²⁹

Match no. 26 is a striking parallel between two lovers’ quarrels. In the first, Mosby unjustly accuses Alice of exploiting her ability ‘To **forge** distressful **looks to wound** a breast’ (*AF* 8.57). In the second, Perseda accuses Erastus of the same skill:

Ah, how thine eyes can **forge** alluring **looks**
 And feign deep oaths **to wound** poor silly maids (*SP* 2.1.114–15)

The two passages, using a four-term collocation, could hardly be closer. The earlier is the more expansive but sets up a syntactical structure that the later version exactly repeats. However, Jackson did his best to minimize the significance of this unique collocation match with Kyd, arguing that

The image, which has eyes feigning oaths, is characteristically confused, and whereas in Kyd ‘forge’ simply means ‘simulate’ in the *Arden of Faversham* passage it retains a hint of a blacksmith’s weapon making, and so interacts with the verb ‘wound’ to vivify the metaphor. (282 note).

(The dismissive judgment, ‘characteristically confused’, is a prejudicial aesthetic evaluation of Kyd that has no place in modern attribution studies.) Jackson’s reading is strangely literal, taking us into a blacksmith’s workshop only to find that the smith has merely produced ‘distressful looks’. If weapon-making had truly been hinted at, the result would be more than ‘distressful’. In Perseda’s accusation the parallel structure

²⁹ See F.S. Boas (ed.), *The Works of Thomas Kyd* (Oxford: Clarendon Press, 1901), p. 340. I have emended ‘will spent youth’ to ‘well spent’.

means that ‘forge’ and ‘feign’ are synonyms. Jackson reads this phrase literally, taking ‘eyes’ as the subject of both lines, whereas I understand the more general reference as being to her lover’s unreliability. Despite Jackson’s attempted disassociation, the two usages are identical, and there is no confusion.³⁰ These attempts to minimise Kyd’s possible authorship of *Arden of Faversham* could not disguise the fact that my search using anti-plagiarism software identified over 70 close verbal matches that were missed by Jackson’s LION search. Does this discrepancy reflect the weakness of the search-engine itself, or must it be put down to the subjective elements of the search process, with the researcher responsible for choosing words and word-combinations to be entered manually?

II

It is regrettable that Jackson’s new technique has never been critically evaluated, with the result that recent writers on authorship attribution treat it as a kind of gold standard. William Weber, contesting the widely accepted attribution of *Titus Andronicus* 4.1 to Peele (along with 1.1, 2.1, and 2.2), followed Jackson unquestioningly. Accepting the claims that ‘this method has been successfully applied to a number of complicated attribution problems’, he praised Jackson’s ‘instructions’ as a ‘clear and comprehensive’ guide to using EEBO-TCP.³¹ Weber describes the recommended process as

simple but painstaking: in the case of testing a passage with two potential authors, one advances through the text line by line, entering every word, phrase and collocation of nearby words into the database’s search field, with results limited by author to ‘Shakespeare OR Peele’. When a given phrase or collocation appears in one author’s works but not the other’s, it counts as a single ‘hit’, regardless of how many times it may appear in that one author’s works’.

Following Jackson, Weber used a reduced Shakespeare canon, consisting of eight works chosen to match Peele’s output ‘in terms of size, period, and genre’ (80). Having made his search, Weber claimed, for this scene of 128 lines, 65 ‘Shakespeare hits’ as against 22 for Peele (81).

³⁰ Jackson has rejected this match before.

³¹ Weber, ‘Shakespeare after all? The authorship of *Titus Andronicus* 4.1 reconsidered’, *Shakespeare Survey* 67 (2014), 69-84 (p. 80, n. 43).

Weber's results were called in question by Anna Pruitt in her contribution to the recent *New Oxford Shakespeare Authorship Companion*. Pruitt declared that

The testing method pioneered by Macdonald P. Jackson, which determines authorship by searching for verbal parallels in the Chadwyck-Healey Literature Online (LION) database provided by the company ProQuest, is bound to grow in popularity due to the wide range of applications of the test and the relative accessibility of the testing method (p. 92).

Pruitt posed the confident question, 'Why does the LION test work so well?', and answered that 'it is based on a solid principle, confirmed by cognitive science, that an individual writer's word choices form a unique pattern that can be distinguished from those of other writers' (p. 92). This principle is correct, but Pruitt credits the wrong discipline: the credit is primarily due to Corpus Linguistics.³² Pruitt added some cautions:

However, like any powerful testing technique, it is only as good as the strength and reliability of the database (and the search tools used to access the information in the database), the experiment's design, and the clear, reliable, and reproducible procedures for generating, collecting, sorting, and analyzing the raw data it provides. The LION test itself may seem relatively simple, but running a viable experiment using the test is not (p. 92).

Having made this important point, identifying the congeries of factors involved – the reliability of the database and search tools, the experiment's design, and the need for 'clear, reliable, and reproducible procedures' – Pruitt gave a commendably thorough description of the correct procedure to be used, while acknowledging how time-consuming it was.³³ To illustrate its correct application, Pruitt returned to *Titus*

³² See, e.g., J. M. Sinclair, *Corpus, Concordance, Collocation* (Oxford: Oxford University Press, 1991); John Sinclair (ed. with Ronald Carter) *Trust the Text: language, corpus and discourse* (London and New York: Routledge, 2004); Alison Wray, *Formulaic Language and the Lexicon* (Cambridge: Cambridge University Press, 2002).

³³ Pruitt recorded that 'The exact-match test is optimal for short passages, at least with the current limitations of our searches and data collection tools. Finding exact matches for this one scene comprising 128 lines and 1,118 words took over five weeks of full-time work, plus additional work from a two-person team to eliminate duplicate results... This manual labour presents an insurmountable barrier to large-scale application of the technique' (op. cit., p. 104). The use of anti-plagiarism software, which certainly meets Pruitt's criterion of 'clear, reliable, and reproducible procedures', is far less time-consuming. A careful search can be performed in days, rather than weeks.

Andronicus 4.1 and worked through her method, comparing it with Weber's use. She claimed that

the results produced by my test outnumbered those from Weber's test. Weber's combined exact-match-and-close-association search with the restricted canon found 65 hits for Shakespeare and 22 for Peele, while my exact-match-only search returned 154 hits in Shakespeare's restricted canon compared to 51 hits in Peele's canon. Even when excluding hits comprised of a pronoun and a verb (which Weber excluded), my exact-match-only test still produced 98 more hits than Weber's exact match-and-close-association test (p. 99).

Pruitt explained that her score did not include 'five valid exact matches' found by Weber, all given to Shakespeare, which would raise his score to 159, while Peele remains on 51. However, Pruitt's Peele score vastly under-estimates the evidence for his presence in this scene. I give my results in Appendix 2, once again using anti-plagiarism software, supplemented with data from the Pervez Rizvi database. With this double aid I have identified a further 29 matches missed by both Weber and Pruitt, and added supplementary examples.³⁴ And whereas their evidence, following the model of Jackson's 2006 essay, includes many 'commonplace' or 'trite' phrases,³⁵ my matches consist of more extended phrases and collocations that are individual and unique.

If Jackson missed over 60 matches with Kyd in *Arden of Faversham* scene 8 (167 lines), while Weber and Pruitt missed over 30 matches with Peele in *Titus Andronicus* 4.1(128 lines), this would suggest that LION is not necessarily an appropriate tool for discovering verbal matches, and that attribution results based on it cannot be relied on. As for the cause of these failures, one might blame the search engine, if it were not for the evidence of its success elsewhere. Anti-plagiarism software is evidently superior in discovering verbal matches, since it has an automatic procedure, independent of the user's diligence or curiosity. It could be that all the matches that I have discovered by anti-plagiarism software might have been discovered if the users had persisted in their searches. If there are variations in the results, this means that the method is not reproducible. As Matthew Steggle has suggested, 'if it were possible to devise an utterly mechanical written set of rules, like "every time you come to a word longer than five letters, look for collocations with words ten forward and ten back", then you might be

³⁴ For my additional matches see Appendix 2, nos. 3, 5, 6, 7, 9, 11, 12, 13, 20, 21, 25, 29, 31, 32, 33, 34, 36, 42, 43, 47, 48, 55, 56, 57, 61, 62, 68, 70. For supplementary matches see nos. 4, 15, 18, 23, 24, 41, 44, 45, 49, 51, 69.

³⁵ In his 2001 essay Jackson ensured that 'high-frequency examples (such as "of the") are ignored' (198).

able to get the LION method reproducible'.³⁶ Technology in this area is developing so quickly that such an algorithm may soon be available.

One further point to be considered is the human factor. In the studies reviewed here the users have certainly displayed diligence, but they have also clearly favoured one authorship candidate and rejected others. MacDonald Jackson dismissed Kyd's possible authorship of *Arden of Faversham* back in 1963, and has never wavered in that belief, while increasingly favouring Shakespeare. Weber and Pruitt explicitly set out to disprove Peele's authorship of one scene in *Titus Andronicus*. Perhaps, then, to succeed in using EEBO-TCP or LION in attribution studies, in addition to systematic procedures one needs an open mind.

³⁶ Steggle, email 16 July 2018.

Appendix 1. 74 Kyd matches with *Arden of Faversham*, scene 8

Texts used: *Arden of Faversham 1592*, ed. by H. Macdonald (Oxford, 1940; Malone Society Reprints), with line-references from *The Tragedy of Arden of Faversham*, ed. by M. L. Wine (London: Methuen, 1973); *The Spanish Tragedy 1592*, ed. by W.W. Greg (Oxford, 1948; Malone Society Reprints), with line-references from *The Spanish Tragedy*, ed. by Philip Edwards (London: Methuen, 1959); *Soliman and Perseda [1592/93]*, ed. by Lukas Erne (Oxford, 2014; Malone Society Reprints); *Cornelia*, in F. S. Boas (ed.), *The Works of Thomas Kyd* (Oxford: Clarendon Press 1901, 1951).

Words printed in bold face are exact matches; those underlined fulfil the same semantic or syntactical functions in both passages.

1.	Continuall trouble of my moody braine Dissolue the fatall trouble of my daies,	8.3 <i>Corn.</i> 3.1.109
2.	Continuall trouble of my moody braine Ah that my moyst and cloud-compacted braine	8.3 <i>SP</i> 827
3.	Feebles my body by excesse of <u>drinke</u> , Thus hath he tane my body by his <u>force</u> ,	8.4 <i>Sp. T</i> 2.1.130
4.	And nippes me, as the <u>bitter</u> Northeast wind As on the Alpes the <u>sharpe</u> Nor-North-east wind	8.5 <i>Corn.</i> 5.1.190
5.	And nips me as the <u>bitter</u> Northeast wind Doeth check the tender blossoms in the spring <u>Deaths winter</u> nipt the blossomes of my blisse But suffered thy faire crimson coloured spring With <u>withered winter</u> to be <u>blasted</u> thus	8.5–6 <i>Sp. T</i> 1.1.13 <i>Sp. T</i> 3.3.147–8
6.	Doeth check the <u>tender blosoms</u> in the spring . Brings in the spring , with many <u>gladsome flowers</u>	8.6 <i>SP</i> 753
7.	And he but pin es amongst his delicats	8.9–10

	<p>Whose <u>troubled</u> minde is stuf with <u>discontent</u>.</p> <p>You that amongst the darksome mansions Of pyning ghosts, twixt <u>sighes</u>, and <u>sobs</u> and <u>teares</u>, Do exercise your mirthlesse Empory</p>	<p><i>Corn. 2.1.21–3</i></p>
8.	<p>And he but pines amongst his delicats</p> <p>Into the bondage where (enthrald) we pine? To serue (no stranger, but amongst vs) one That with blind frenzie buildeth vp his throne?</p>	<p>8.9</p> <p><i>Corn. 3.2 61–3</i></p>
9.	<p>Though then I wanted, yet I slept secure, My dayly toyle, begat me nights repose My nights repose made daylight fresh to me</p> <p>Thus day and night I toyle in discontent, And sleeping wake, when sleep it selfe that rydes Upon the mysts, scarce moysteneth mine eyes.</p>	<p>8.12–14</p> <p><i>Corn. 203–5</i></p>
10.	<p>Ile <u>heau</u>e him vp a while, / And after <u>smother</u></p> <p>Stay <u>hold</u> a while, / And heer_ with pardon of his Maiestie</p>	<p>8.14–15</p> <p><i>Sp. T 3.1.58–9</i></p>
11.	<p>Each gentle starry gaile doth shake my bed And makes me dread my downfall to the earth</p> <p>The left-hand path declining fearfully, Was ready downfall to the deepest hell. Where bloudie furies shakes their whips of steele,</p>	<p>8.17–18</p> <p><i>Sp. T 1.1.63–5</i></p>
12.	<p>And makes me <u>dread</u> my downfall to the earth</p> <p>And makes me <u>wish</u> that I had beene at Rhodes</p>	<p>8.18</p> <p><i>SP 1244</i></p>
13.	<p>And makes me dread my downfall to the earth</p> <p>Was ready downfall to the deepest hell.</p>	<p>8.18</p> <p><i>Sp. T 1.1.64</i></p>
14.	<p>Is hedged behinde me that I <u>cannot back</u></p> <p>I and so mooues me, that I now <u>repent</u>,</p>	<p>8.21</p> <p><i>SP 1720</i></p>

15.	Is hedged behinde me that I <u>cannot</u> back It grieues me that I <u>know not</u> why you grieue	8.21 <i>Corn.</i> 3.1.24
16.	To make my haruest nothing but pure corne That thrust his sickle in my haruest corne Thou talkest of haruest when the corn is greene	8.25 <i>SP</i> 1735 ³⁷ <i>Sp. T</i> 3.6.7
17.	And for his paines Ile heaue him up a while Shall haue three thousand Ducket for his paines	8.26 <i>SP</i> 1095
18.	Cheefe actors to Ardens ouerthrow Whose cheefest actor was my sable dart Prooues me cheefe actor in this tragedie	8.30 <i>SP</i> 49 <i>SP</i> 1888
19.	Who when they shall see me sit in <u>Ardens seat</u> Come enuie then and sit in <u>friendships seate</u>	8.31 <i>SP</i> 1695
20.	They will <u>insult vpon me</u> for my mede Or for thy mede hast <u>falsely me accused</u>	8.32 <i>Sp. T</i> 3.1.53
21.	Or fright me by detecting of his end The manner of his end / Will haply comfort	8.33 <i>Corn.</i> 5.1.42–3
22.	Ile none of that , for I can cast a bone No, no, fie no: pardon me, ile none of that :	8.34 <i>Sp. T</i> 3.12.19
23.	And then am <u>I sole ruler</u> of mine owne Fortune may make <u>me maister</u> of mine owne	8.36 <i>SP</i> 949
24.	You haue <u>supplanted</u> Arden for my sake , / And wil	8.40

³⁷ Cf. *AF* 10.83: ‘Why should he **thrust his sickle in** our **corne**?’

	You gentle brother <u>for</u> ged this for my sake , / And you	<i>Sp. T</i> 3.10.64
25.	You haue supplanted Arden for my sake Perseda, for my sake weare this crowne	8.40 <i>SP</i> 1699
26.	And will extirpen me to plant another Tis feareful sleeping in a serpents bed. An Easterne winde comixt with noisome aires, Shall blast the plants and the yong saplings, The earth with Serpents shalbe pestered	8.41–2 <i>Sp. T</i> 4.1.17–19
27.	Tis feareful sleeping in a serpents bed. Whose sweeter sleepes , are turnd to fearefull dreames.	8.42 <i>Corn.</i> 3.1.16
28.	But here she comes But heere she comes	8.44 <i>Sp. T</i> 3.10.24
29.	But I will dam that fire in my breast / Till by the force But how can love find harbour in my breast , / Till I revenge	8.48–9 <i>Sp. T</i> 1.4.64–5
30.	Lyke to a cannons burst, Dischargde <u>against</u> a <u>ruinated wall</u> Hath planted a double cannon in the doore Ready to discharge it <u>vppon you</u> , when you go by,	8.51–2 <i>SP</i> 1157–8
31.	To forge <u>distressefull looks</u> , to wound a breast Where lies a heart that dies when thou art sad Ah how thine eyes can forge <u>alluring lookes</u> And faine deepe oathes to wound poor sillie maides	8.56–7 <i>SP</i> 857–8
32.	To forge distressefull looks, to wound a breast, Where lyes a hart, that dies where thou art sad And on the earth theyr braines lye trembling. Here one new wounded , helps another dying .	8. 56–7 <i>Corn.</i> 5.1.256–7

33.	To forge distressefull looks , to wound a breast And with the wounds of my distresfull sonne ³⁸	8.56 <i>Sp. T</i> 3.2.14
34.	It is not loue , that loues to murther loue . I loue , I loue him deerely. But the loue That men theyr Country and theyr birth-right beare, Exceeds all loues , and deerer is by farre Our Countries loue , then friends or chyldren are.	8.59 <i>Corn.</i> 4.1.63–6
35.	It is not loue , that loues to murther loue . Calst thou me loue , and louest another better That though Loue winke, Loues not starke blinde Parting him from his loue , in spight of Loue	8.59 <i>SP</i> 861 <i>SP</i> 1505 <i>SP</i> 1210
36.	It is not loue, that loues to murther loue . Where filthie lust must murther honest loue .	8.59 <i>SP</i> 2032
37.	Thou knowest how dearly Arden <u>loved me</u> Thou knowest how I have <u>favoured thee</u>	8.61 <i>Sp. T</i> 2.1.50
38.	And then <u>conceale</u> the rest , for tis too bad The rest <u>I dare not speake</u> it is so bad	8.63 <i>SP</i> 1995
39.	And then conceale the rest , for tis too bad, Welcome Castilian too amongst the rest , / For fame	8.63 <i>SP</i> 205-6
40.	And then <u>conceale</u> the rest , for tis too bad, I will <u>hear</u> the rest / For now I must attend	8.63 <i>SP</i> 1383–4

³⁸ Kyd favoured this epithet as the penultimate word of a line. Cf. also ‘**distresfull** trauellers’ (*Sp. T* 2.2.46), ‘**distresfull** words’ (*Sp. T* 3.13.75), ‘**distresful** wretch’ (*Corn.* 5.1.338), and ‘**distresfull** wife’ (*AF* 3.13.51).

41.	<p>And then conceale the rest, for tis too bad, Least that my words be carried with the wind</p> <p>And carry you obscurely some where els, Least that his highnes should haue found you there.</p>	<p>8.63–4</p> <p><i>Sp. T</i> 3.10.60–1</p>
42.	<p><u>Least</u> that my words be <u>carried</u> with the wind</p> <p><u>For feare</u> the priuie whispring of the winde, <u>Conuay</u> our words amongst vnfriendly eares</p>	<p>8.64</p> <p><i>Sp. T</i> 3.4.84–5</p>
43.	<p>Least that my words be carried with the wind.</p> <p>Words are but winde, nor meant he what he spoke.</p>	<p>8.64</p> <p><i>Corn.</i> 3.3.93</p>
44.	<p><u>carried with the wind</u> / And published</p> <p>When as a raging Sea / <u>Tost with the winde and</u> tide</p>	<p>8.64–5</p> <p><i>Sp. T.</i> 3.13.102–3</p>
45.	<p>And publisht in the world to both our shames</p> <p>I mean by doing wonders in the world</p>	<p>8.65</p> <p><i>SP</i> 1796</p>
46.	<p>And all the causes that enchanted me: -- Nay if thou ban, let me breathe curses forth</p> <p>O if thou beest magnanimious, come before me. -- Naye, if thou beest a right warrior</p>	<p>8.79–80</p> <p><i>SP</i> 331–2</p>
47.	<p>Nay if thou <u>ban</u>, let <u>me</u> breath <u>curses</u> forth</p> <p>Nay if thou <u>dally</u> then <u>I</u> am thy <u>foe</u></p>	<p>8.80</p> <p><i>Sp. T</i> 2.1.67</p>
48.	<p>Nay if thou ban, let <u>me</u> breath curses forth</p> <p>Nay if thou hadst, <u>I</u> had not feard thee I</p>	<p>8.80</p> <p><i>SP</i> 1816</p>
49.	<p>Nay if thou ban, let <u>me</u> breath <u>curses</u> forth</p> <p><u>I</u> breathe an autumn forth of fiery <u>sighs</u></p>	<p>8.80</p> <p><i>Corn.</i> 3.3.122</p>

50.	Whose dowry would haue weyed down all thy wealth , Whose beauty and demianor farre exceeded thee. To her whose worth will neuer equall mine. What, is Lucinaes wealth exceeding mine?	8.89–90 <i>SP</i> 874–5
51.	I now I see, and too soon find it trew I now I lay Perseda at thy feet	8.106 <i>SP</i> 2262
52.	Nay heare me speake <u>Mosbie</u> a word or two Ah stay my sweet <u>Perseda</u> heare me speake	8.110 <i>SP</i> 893
53.	Looke on me Mosbie, or Ile kill my selfe For if I hang or kill my selfe	8.112 <i>Sp. T</i> 3.12.17
54.	If thou cry warre, there is no peace for me There is no death so hard torments mee so	8.114 <i>Corn.</i> 3.3.138
55.	And thereon will I chiefly meditate But whereon doost thou chiefly meditate ?	8.121 <i>Sp. T</i> 2.2.26
56.	what malice stopes thine eares? And stopt the mallice of his fell approach	8.124 <i>Sp. T</i> 1.2.45
57.	Why speaks thou not? What silence Why speakest thou not? / What lesser libertie	8.125 <i>Sp. T.</i> 4.4.178–9
58.	Why speaks thou not what silence ties thy tongue? this Knight, / Seemes by greefe tyed to silence , So his deserts binds me to speake for him.	8.125 <i>SP</i> 1283–5
59.	And spoke as smoothly as an orator That glide as smothly as a Parthian shaft	8.128 <i>Corn.</i> 4.2.14

60.	And spoke as smoothly as an orator Brother, you are become an Oratour	8.128 <i>Sp. T 3.10.83</i>
61.	When I haue bid thee heare, or see, or speak When I haue mist thee how haue I lamented	8.129 <i>SP 79</i>
62.	When I haue bid thee heare, or see, or speak. Hinder me not what ere you heare or see.	8.129 <i>Sp. T 2.1.38</i>
63.	When I haue bid thee hear, or see, or speak. And art thou sensible in none of these? <i>Hieronimo enters againe... who staring him in the face speaks.</i> And art thou come Horatio from the depth, To aske for justice in this upper earth?	8.129–30 <i>Sp. T 3.13.133–4</i>
64.	So what so ere my Mosbies <u>father was</u> O wicked butcher what so ere <u>thou wert</u>	8.144 <i>Sp. T 2.5.30</i>
65.	<u>Himself</u> valued gentle by <u>his worth.</u> / Ah not loose <u>him</u> for <u>my kingdomes worth,</u> / Ah poore Erastus	8.145–6 <i>SP 2043-4</i>
66.	I will forget this <u>quarrel</u> gentle <u>Ales</u> I will forget <u>thy</u> former <u>crueltie</u>	8.148 <i>SP 803</i>
67.	Then with thy <u>lips</u> seale vp this new made match Pluto was pleased, and sealed it with a <u>kisse</u> By mutuall tokens to seale vp their loues.	8.150 <i>Sp. T 1.1.80</i> <i>SP 696</i>
68.	I have little <u>news</u> but heres a letter No meruaile then if I haue little <u>minde</u>	8.153 <i>SP 1519</i>
69.	<u>Ah</u> would it were	8.164

	<u>O</u> would it were but an illusion.	<i>Corn.</i> 3.1.115
70.	till then my <u>blisse</u> is mixt with bitter gall. Till then my <u>sorrow</u> neuer shalbe spent.	8.165 <i>Sp. T</i> 2.5.56
71.	Till then my <u>bliss</u> is mixt with bitter gall A <u>sweete renowne</u> , but mixt with bitter <u>sorrow</u>	8.165 <i>SP</i> 715
72.	I <u>to the gates of death</u> to follow thee And bad thee lead me <u>through the gates of Horn</u>	8.167 <i>Sp. T</i> 1.1.82
73.	I, to the <u>gates of death</u> to follow thee That I would follow her , though she went to <u>hell</u>	8.167 <i>SP</i> 1479
74.	Whose <u>beauty and demianor</u> farre exceeded thee. What thinkst thou of their <u>valour and demeanor</u> ?	8.90 <i>SP</i> 1256

Appendix 2. Additional Peele matches with *Titus Andronicus* 4.1

The texts used are: *Titus Andronicus* from the Folio, but with line-numbering from the *Riverside Shakespeare*; Peele: from C. T. Prouty (ed.), *The Life and Works of George Peele*, 3 vols. (New Haven: Yale University Press, 1952-70), and Charles R. Forker (ed.), *George Peele, The Troublesome Reign of John, King of England* (Manchester and New York: Manchester University Press 2011), which reproduces the original (and misleading) division into two parts. The reference ‘TR 1: 1.165’ means *Part 1*, scene 1, line 165.

Parallels marked ‘W’ were noted by William Weber: see

<https://williamweatherfordweber.wordpress.com/>

Those marked ‘P’ were noted by Anna Pruitt: see

<http://www.oxfordscholarlyeditions.com/fileasset/assets/NOS%20addenda/Pruitt-data.xlsx>

In both cases I have checked the text and added line references. Those marked ‘V’ are my additions.

Abbreviations

Peele Plays³⁹

<i>Alc.</i>	<i>The Battle of Alcazar</i> (1588)
<i>AP</i>	<i>The Arraignment of Paris</i> (1584)
<i>DB</i>	<i>David and Bethsabe</i> (1590)
<i>Ed. I</i>	<i>Edward I</i> (1591)
<i>HC</i>	<i>The Hunting of Cupid</i> (1585)
<i>OWT</i>	<i>The Old Wife’s Tale</i> (1592)
<i>TR</i>	<i>The Troublesome Reign of King John</i> (1589)

Peele Poems

<i>AnF</i>	<i>Anglorum Feriae</i> (1595)
<i>AF</i>	<i>A Farewell to Sir John Norris and Sir Frauncis Drake</i> (1589)
<i>DA</i>	<i>Descensus Astraeae</i> (1591)
<i>EG</i>	<i>An Eglogue Gratulatory</i> (1589)

³⁹ Play dates are from Martin Wiggins, *British Drama 15331–642: A Catalogue*, 11 vols. (Oxford, 2012-).

HG *The Honour of the Garter* (1593)

PC *The Praise of Chastity* (1593)

Pol. *Polyhymnia* (1590)

Pol. *The Tale of Troy* (1589)

Son. *A Sonet* ('His Golden lockes, Time hath to Siluer turn'd')

1.	my Aunt Lavinia Followes me every where I know not why. Faire Thamar now dishonour hunts thy foot, And followes thee through every covert shade,	(4.1.1–2) (DB 296–7) W
2.	Alas sweet Aunt, I know not what you meane. Good sir, I know not what you meane.	(4) (OWT 57) P
3.	I when my father was in Rome she did First when my Father was Embassadour	(7) (TR 1:1.165) V
4.	What meanes Neece Lauinia by these signes? What meanes your wisdome by all this. Draw it ouer, what meanest thou by that? Alas, what meanes this Monke to murder me?	(8) (Ed.1 500) P (Ed.1 1816) V (TR 2: 6.106) V
5.	What meanes my Neece Lauinia by these signes? What meanes my Queene Gloster, What meanes my lord, the Kings beloued son, What meanes my lord, the lampe of Israel,	(8) (Ed.1 1639) V (DB 245) V (DB 1641) V
6.	See Lucius see, how much she makes of thee: that thou maist see / How much I scorne thy new made Duke	(10) (TR 1: 5.52-3) V
7.	Ah boy, Cornelia never with more care Read to her sonnes, then she hath read to <u>thee</u> , Ah boy, <u>thy</u> yeares I see are farre too greene To looke into the bottome of these cares.	(12–13) (TR 1: 4.196–7) V
8.	then she hath read to thee, / Sweet Poetry, On thee, sweet Ned	(13–14) (Ed.1 721) P

9.	Unlesse some fit or frenzie do possesse her: Misdoubt not Lords the truth of my discourse, No frenzie , nor no brainsick idle fit ,	(17) ⁴⁰ (<i>TR</i> 2: 5.29–30) V
10.	For I haue heard my Grandsier say full oft, For thou hast harde my stoore long since	(18) (<i>AP</i> 251) P
11.	For I haue heard my Grandsier say full oft, A wofull tale as I haue heard it tolde, And Iohn as I haue heard reported of	(18) (<i>Troy</i> 396) V (<i>TR</i> 1:2.20) V
12.	And I have read that Hecuba of Troy, Ran mad through sorrow , Hecuba ... this unhappy Queen surviv'd the last, Till fortune's spite and malice all was past, And worn with sorrow , wexen fell and mad	(20-1) (<i>Troy</i> 458–64) V
13.	But thou art deeper read and better skild, But thou art of those Harvesters I see	(33) (<i>EG</i> 100) V
14.	Come and take choyse of all my Library And thou shalt take thy liberall choice of all ,	(34) (<i>Alc.</i> 557) V
15.	Why lifts she vp her armes in sequence thus? As he intends to manage armes in right To armes in hast, K. Iohn relyes his men, And cary Armes in holy Christian warres. And carry armes in right of holy Rome.	(37) (<i>Alc.</i> 805) P (<i>ITR</i> : 7.25) V (<i>2TR</i> : 2.186) V (<i>2TR</i> : 4.5) V
16.	I thinke she meanes that ther was more then one I haue not any money more than one bare three-half - pence	(38) <i>OWT</i> 722–3 P
17.	Confederate in the fact Paris replies vnguiltie of the fact	(39) (<i>AP</i> 888) P
18.	Or else to heaven she heaves them to revenge. Or else to slay before ye were assaild Or else to win the thing for which we came,	(40) (<i>Alc.</i> 1067) V (<i>Alc.</i> 1072) V

⁴⁰ Weber and Pruitt suggest 'Vertue, and Stedfastnesse **Possesse** hir hart' (*DA* 30), but the sense differs.

	Was Stukely driuen to fight or else to dye Or else to be so well accompanied	(<i>Alc.</i> 1358) V <i>Ed.</i> 11740–1) P
19.	Or else to heaven she heaves them to revenge There to curse heaven , and he that heaves me hence,	(40) (<i>Alc.</i> 272) W
20.	This is the tragicke tale of Philomel your face imports / A tragick tale behinde thats yet untolde. I so escapt to tell this tragick tale .	(47) (<i>TR</i> 1:10.18–19) V (<i>TR</i> 2:6.53) V
21.	What Romaine Lord it was durst do the deed? Who dare? why I my Lord dare do the deede ,	(62) (<i>TR</i> 2:6.136) V
22.	durst do the deed? / Or slunke not Saturnine As myght not taynted be for deede or worde	(62–3) (<i>Troy</i> 22) P
23.	Or slunke not Saturnine, as Tarquin erst , As earst we gave in charge? As erst I gave my pledge to Mercurie As erst my heart was hurt, displeasing thee My gracious Lord, as erst I was assigned As erst did Aegeus to behold his sonne Expect my doome, as erst at Ida hilles As erst our father, when he thought to scape	(63) (<i>Alc.</i> 1304) V (<i>AP</i> 829) W (<i>DB</i> 145) W (<i>Ed.</i> 1 183) W (<i>Ed.</i> 1 523) W (<i>Ed.</i> 1 666) W (<i>Ed.</i> 1 970) W
24.	That left the Campe to sinne in Lucrece bed. Zareo, have you thorough the campe proclaimd The Campe complains upon his loue and sloth Their paiment in the campe is pasing slow his death be bruted in the campe	(64) (<i>Alc.</i> 1387) V (<i>Troy</i> 300) P (<i>Alc.</i> 1008) P (<i>Alc.</i> 1235) P
25.	Or slunke not Saturnine, Tarquin erst , That left the Campe to sinne in Lucrece bed. The child shall surely die, that erst was borne, His mothers sin , his kingly fathers scorne.	(63–4) (<i>DB</i> 668–9) V
26.	Sit downe sweet Neece beleeve him not sweete Neece	(65) (<i>Ed.</i> 1 1709–10) W

27.	brother sit downe by me , Gwenthian set downe by me	(65) (<i>Ed.1</i> 1358) P ⁴¹
28.	Appollo, Pallas , Jove, or Mercury , / Inspire me Now by Mars and Mercury , Jupiter / and Janus, Sol and Saturnus, Venus and Vesta, / Pallas and Proserpina,	(66–7) (<i>OWT</i> 257–9) W
29.	Appollo, Pallas, Jove , or Mercury, / Inspire me Whose Muse was dipt in that inspiring deaw, Arch-angels stilled from the breath of Jove	(66–7) (<i>DB</i> 3–4) V
30.	Inspire me that I may this treason finde. Glocester, who may this be, a bride or what? Why how now sirs, what may this outrage meane?	(67) (<i>Ed.1</i> 1747) P (<i>ITR</i> : 12.25) V
31.	<i>He writes his Name with his staffe, and guides it</i> To suffer him give up his staffe and Armes	(68.1) (<i>Pol.</i> 285) V
32.	This sandie plot is plaine , guide if thou canst Balioll my king in Barwicke makes his Court, His campe he spreads uppon the sandie plaine , As gave your grace in charge, right roiall prince, The fields and sandie plaines we have survaide,	(69) (<i>Ed. I</i> 1981–2) V (<i>Alc.</i> 1408–9) V
33.	This after me, I have writ my name Ist not a slacknes in me wortheie blame, To be so olde, and cannot write my name .	(70) (<i>TR I</i> : 1.391–2) V
34.	Without the helpe of any hand at all. Curst be that hart that forc'st us to that shift: He staves my hand , he maketh soft my heart , Goe cursed tooles, your office is exempt	(72-3) (<i>TR I</i> : 12.127–8) V
35.	Heauen guide thy pen to print thy sorrowes plaine, Now sits thy sorrowes sucking of my bloud	(75) (<i>DB</i> 1832) P

⁴¹ Pruitt also cites 'The times of truce **sette downe** by Marshall lawe' (*Troy* 292), but the sense differs.

36.	That ⁴² we may know the Traytors and the truth. That we may know what Philip King of Fraunce	(76) (<i>TR 1:1.17</i>) V
37.	That we may know the Traytors and the truth Fight not in feare as traitors and their pheres	(76) (<i>Alc.</i> 112) P
38.	<i>She takes the staffe in her mouth</i> And cunning need he be that takes the charge gentle takes the gentleman that oft the clowne will scorene.	(77.1) (<i>Troy</i> 284) P (<i>AP</i> 59) P
39.	<i>She takes the staffe in her mouth</i> And charging tight his staffe in eager mood	(77.1) (<i>Troy</i> 309) P
40.	Oh calme thee gentle Lord: Thankes gentle Lord Thankes gentle Lord	(83) (<i>Ed. I</i> 1487) W (<i>Ed. I</i> 2156) W
41.	To stirre a mutinie in the mildest thoughts, The loade that in her wombe did lie / Began to stirre Why kissings good – To stirre your bloud tis the worst lucke in the world, to sturre a witch Baliell hath chosen at this time to sturre ,	(85) (<i>Troy</i> 40–1) P <i>HC</i> 28 P (<i>Ed. I</i> 2395) P (<i>Ed. I</i> 1969) V
42.	To stirre a mutinie in the mildest thoughts, And arme the mindes of infants to exclames. Would breed a mutinie in peoples mindes ,	(85–6) (<i>TR 1:13.38</i>) V
43.	And arme the mindes of infants to exclames And arme yourselues against the Romane pride.	(86) (<i>TR 1: 9.46</i>) V
44.	My Lord kneele downe with me <i>They kneele downe</i> Kneele downe , in sight of Philip King of Fraunce Thomas kneele downe , and if thou art resolude,	(87) (<i>Ed. I</i> 1565.2) P (<i>ITR: 5.45</i>) V (<i>2TR: 6.139</i>) V
45.	And kneele sweet boy, Come then and kneele vnto him where he stands Or shall we home, and kneele vnto the King.	(88) (<i>DB</i> 97) P (<i>2TR: 5.53</i>) V

⁴² Pruitt compares ‘print thy sorrowes **plaine**, | **That** we may know’ (75–6) with ‘That sweet **plaine that** beares her pleasant weight’ (*DB* 58), but the sense differs.

	And kneele for pardon to our Souereigne Iohn.	(2TR: 5.64) V
46.	the Romaine Hectors hope, Betwixt the Roman and the Alban camp As much as erst the Roman empery In whom the Roman monarchy began	(88) (Pol.174) P (PC 12) P (PC 95) P
47.	And swear with me , as with the wofull Feere In presence of his Highnes swear with me ,	(89) (TR 2:3.219) V
48.	And swear with me , as with the wofull Feere It farde with thee as with the marriner,	(89) (TR 1:4.35) V
49.	Mortall revenge upon these traytorous Gothes, Thunder revenge upon me in this place: A straunge revenge upon the maide And sound revenge upon this traitors soule, And bee revenged upon this London Dame.	(93) (TR 2: 1.73) V (AP 668) W (Alc. 287) W (Ed. I 2072) W
50.	And see their blood, or die with this reproach Semei useth me with this reproach	(94) (DB 1312) W
51.	And see their blood , or die with this reproach. For in their blood and slaughter of the slaine To spend their bloods in honor of their Christ.	(94) (DB 773) P (Alc. 774) V
52.	<i>They rise</i> <i>The songe being ended they rise</i> <i>All they rise and goe foorth</i>	(94.1) (AP 313.1) P (AP 1007.1) P
53.	But if you hunt these Beare-whelpes, I will goe hunt these cursed solitarie	(96) (Alc. 505) P
54.	And when he sleepes will she do what she list. And when he saddest sits in homely cell and when he list to mount so hie	(100) (Son. 13) P HC 23 P
55.	And come, I will goe get a leafe of brasse , And with a Gad of steele will write these words And for this deed ye all shall be renowmd, Renowmd and chronicled in books of fame, In books of fame and caracters of brasse	(102–3) (Alc. 951–3) V

56.	the angry Northerne winde Unkindly rage more rough than Northern winde , The bitter Northern winde uppon the plaines:	(104) (<i>TR 1</i> : 13.219) V (<i>Ed. I</i> 1223) V
57.	the angry Northerne winde Will blow these sands like Sibels leaves abroad And them some gentle winde let blowe abroad	(104–5) (<i>AP</i> 619) V
58.	And wheres our lesson then. But wheres our nephew Muly Mahamet?	(106) (<i>Alc.</i> 1033) P
59.	Boy what say you? -- I say my lord Then Captaines what saie you? – I saie my Lord	(106–7) (<i>Alc.</i> 719–20) P
60.	For these bad bond-men to the yoake of Rome As Pompey to the citizens of Rome That triumpht in the roiall right of Rome	(109) (<i>DA</i> 44) P (<i>Pol.</i> 175) P
61.	Sance scandall to the holy sea of Rome , Not Cæsar leading through the streetes of Rome , And set himselfe against the Man of Rome , submit your selfe to the Church of Rome . The King of England to the gates of Rome . Disdaingnd the blessed ordinance of Rome ? (Simply deuoted to the See of Rome) Who gins to scorne the See and State of Rome , And doo submit me to the see of Rome Thou must surrender to the see of Rome In thee, the Pope, and all the Church of Rome , Since Iohn did yeeld vnto the Priest of Rome , Whose armes shall reach vnto the gates of Rome ,	(<i>Alc.</i> 406) V (<i>Ed.I</i> 1.91) V (<i>1TR</i> Pref. 7) V (<i>1TR</i> : 5.12) V (<i>1TR</i> : 5.136) V (<i>1TR</i> : 13.17) V (<i>1TR</i> : 13.25) V (<i>1TR</i> : 13.172) V (<i>2TR</i> : 2.183) V (<i>2TR</i> : 2.206) V (<i>2TR</i> : 4.46) V (<i>2TR</i> : 8.96) V (<i>2TR</i> : 8.106) V
62.	Presents that I intend to send them both, With greater honour than to send them thus	(116) (<i>TR 1</i> : 1.41) V
63.	Come, come, thou'lt do thy message I hope thou wilt do no more then thou darst aunswer.	(117) (<i>OWT</i> 73–4) W
64.	Lucius and Ile goe brave it at the Court What? let me brave it now or never Ned.	(117) (<i>Ed. I</i> 209) W

65.	Lucius and Ile goe brave it at the Court He shalbe present at the courte of Iove ⁴³ I warrant thee	(117) (AP 780) W
66.	I with my dagger in their bosomes Grandsire: <i>by the collar, with a dagger in his hande</i>	(118) (Ed.1 5.83.3) P
67.	I with my dagger in their bosomes Grandsire: Should dart into their bosomes gladsome beames	(118) (DB 1885) P
68.	O heavens! Can you heare a good man grone He is a good man , and good tidings brings. I know sirra he is a good man and never deceaves none.	(123) (DB 1786) V (Ed.1 11.1815) V
69.	That hath more scars of sorrow in his heart , Contagious venyme dwelleth in his heart , And in his heart to shrowd the wounds of wrath The armes of Loialtie / lodgd Skydmoore in his harte	(126) (TR 1:12.57) V (DB 368) V (AF 319-20) W
70.	But yet so just that he will not revenge , Revenge the heavens for old Andronicus. The furies just impes of dire revenge , Revenge cries Abdilmelecs grieved ghost,	(128–9) (Alc. 293–4) V
71.	Reuenge the heauens for old Andronicus. ⁴⁴ The angye heauens for this fatall iar	(129) (AP 786) P

⁴³ Pruitt misreads this word ('Jove') as 'Love'.

⁴⁴ Cf. 'Sent by the **heauens for** Prince Saturnine' (1.1.335), another Peele scene.