

# Shakespeare's Pauses, Authorship, and Early Chronology

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**Abstract.** This paper explores the implications of Ants Oras's *Pause Patterns in Elizabethan and Jacobean Drama: An Experiment in Prosody* (Oras 1960) for the chronology and authorship of plays in early modern England. Oras's brief monograph has been noticed by a relatively few scholars, mainly those interested in changes to Shakespeare's pentameter line. Recent developments in the field, however, have rendered his data newly attractive. Compiled by hand, Oras's figures on the punctuated pauses in pentameter verse offer computational approaches a wealth of information by which writers' stylistic profiles and changes can be measured. Oras's data for a large number of playwrights and poets, as well as his methodology generally, may prove instrumental in constructing a portrait of the aesthetic environment for writers of pentameter verse during the sixteenth and seventeenth centuries in England. In particular, pause percentages may lend context to our attributions of texts of uncertain authorship. A hypothetical chronology is offered for Shakespeare's earliest writing, including his contributions to *Arden of Faversham*, *1 Henry VI*, and *Edward III*.

**Keywords:** William Shakespeare, attribution, authorship, Ants Oras, prosody, metrics, pause patterns, caesura, iambic pentameter, chronology, *Arden of Faversham*, *1 Henry VI*, *Edward III*, *2 Henry VI*, *3 Henry VI*, Marina Tarlinskaja

## 1. Oras and Pause Patterns

In 1960, Ants Oras published a short book in the University of Florida Monographs series ('Humanities') titled *Pause Patterns in Elizabethan and Jacobean Drama: An Experiment in Prosody*. Compiled by hand and largely forgotten by the field, Oras's data has become newly useful owing to the rise of the digital humanities and a related interest in the statistical analysis of literary style. This paper examines Oras's pause-pattern research, and considers various possible objections to his procedures. It is my argument that Oras's findings, as well as his methodology, offer a rewarding way of understanding the structure and development of iambic pentameter in Shakespeare and in

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early modern drama generally. Further, Oras's procedure can provide valuable information regarding both chronology and authorship.

At only ninety pages, Oras's book has been overlooked by many but has influenced others in a manner that belies its size. Employed in attribution studies by such scholars as Brian Vickers (Vickers 2002) and MacDonald P. Jackson (Jackson 2002), Oras's research has also been cited approvingly in the Oxford *Middleton* (Taylor and Lavagnino 2007: 93–94), *The Quest for Cardenio* (Jackson 2012: 137–138) and, perhaps most consequentially, the influential 'Canon and Chronology' section of Oxford's *Textual Companion* (Taylor 1987: 107–108), where it has something like pride of place among the metrical tests consulted.

The title of Oras's study is slightly misleading, as he surveys continental and English writers, from Machaut and Marot through Massinger, who produced decasyllabic verse over a span of nearly three centuries. He offers discrete figures for various Canterbury Tales, the books and cantos of Spenser's *Faerie Queene*, the differing versions of Jonson's *Every Man* plays, and subdivides such collaborative plays as *Henry VIII*, *The Two Noble Kinsmen*, and *Pericles*. His aim is to demonstrate historical and personal patterns in iambic pentameter by tabulating where punctuated pauses fall within its first nine syllables (punctuation after the tenth syllable is not counted). With almost two-thirds of its pages devoted to figures and graphs, *Pause Patterns* can be said to emphasise evidence over interpretation, although Oras is insightful in his concise commentary.

Pauses can be counted in three different ways in Oras's tabulation; he labels these A, B, and C pauses. A pauses are those signaled by punctuation of any kind within a pentameter line (Oras counts short lines, but not their terminal punctuation). B pauses, a sub-group of the A pause, are so-called 'strong' pauses within the line: pauses signaled by any punctuation mark other than a comma, including periods, question marks, colons, semi-colons, and dashes. C pauses are comprised of punctuation marks dividing 'split-' or 'shared' lines. Almost by definition, C pauses are a sub-group of the B pause: the punctuation dividing shared lines is invariably 'strong' in nature, rather than a comma. To summarise, then; in Oras's methodology, A pauses are all pauses, B pauses strong pauses, and C pauses those that divide a line or lines amongst two or more speakers. All B and C pauses are also A pauses, with C pauses representing the smallest (because most heavily specified) of the groups.

Oras counted A, B, and C pauses for thirty-eight Shakespeare plays, adding the A and B figures as well for *Venus and Adonis*, *The Rape of Lucrece*, and the *Sonnets*. He also tabulated A, B, and C pauses for approximately fifty non-Shakespearean plays from the era, as well as major poems by these and other

authors. Additionally, he provides figures for C pauses (though only C pauses) for a large number of seventeenth-century playwrights, from Chapman and Heywood through Shirley and Davenant. All of this data is presented in the appendix to *Pause Patterns* (Oras 1960: 61–88). Assigning each title a row in his appendix's tables, for example, Oras records the number of pauses in each position, followed by the total for each work. At the far right of the landscape-oriented page, he calculates the percentages for each pause position, rounding to one place after the decimal. Between these strings of figures, Oras also supplies an entry for 'First Half' percentages (that is, the ratio of pauses falling in the first-through-fourth positions to those in the whole line minus the 'middle' fifth pause) and an entry for 'Even' percentages (the percent of pauses falling on even-numbered positions – that is, second, fourth, sixth, eighth). Finally, Oras provides line graphs (Oras 1960: 33–60) in which each title's relevant pauses are represented as (in most cases) a slender but steep set of peaks and valleys.

The mechanical nature of such scholarship – at once its strength and weakness – has been noted by at least one observer. As Vincent Leitch has described Oras's work in another study, an inquiry into the manifestation of sound patterns in the poetry of Spenser and Milton, "It is rather like the study of subatomic particles, turning up new entities like neutrinos and quarks" (Leitch 2008: 19). Oras himself analogised his pause-pattern results to the output of a piece of medical technology that had come into general use during his lifetime: "the total patterns are likely to reveal much over which the person concerned has little or no control, almost as people are unable to control their cardiograms" (Oras 1960: 2). Extending Oras's metaphor, we might say that his *Pause Patterns* monograph seeks to graph the heartbeat of iambic pentameter as it was manifested by a variety of texts written across a considerable number of years. Just as any individual's electrocardiographic results are likely to change over time (and, as Oras posits, not be under an individual's control), so do pause patterns develop in appreciable ways. By gathering this information, Oras put himself and others in a position to trace verse's meaningful patterns – and, by extension, the formal careers of poets, genres, and cultures.

## 2. Shakespeare's Pauses over Time

Oras's compilation of figures for Shakespeare's work confirms something that the playwright's readers have traditionally recognised: Shakespeare's lines

become longer as his career unfolds. We could take as representative instances three lines from, respectively, the early, middle, and later parts of his career:

Thou art a fool; if Echo were as fleet,  
(*Taming of the Shrew*, Ind.1.26)

To be, or not to be, that is the question.  
(*Hamlet*, 3.1.55)

Unto my end of stealing them. But, gracious sir,  
(*Cymbeline*, 5.5.347)<sup>1</sup>

The lines here grow, syllabically, from an even pentameter in the early comedy to an 11-syllable line in *Hamlet* and a 12-syllable line in his late romance. The syntactical pause that seems built into the structure of substantial verse lines shifts, accordingly and progressively, later in each line.

In these examples, as Shakespeare's lines lengthen, the units that introduce each line ('Thou art a fool,' etc.) grow in both length and complexity:

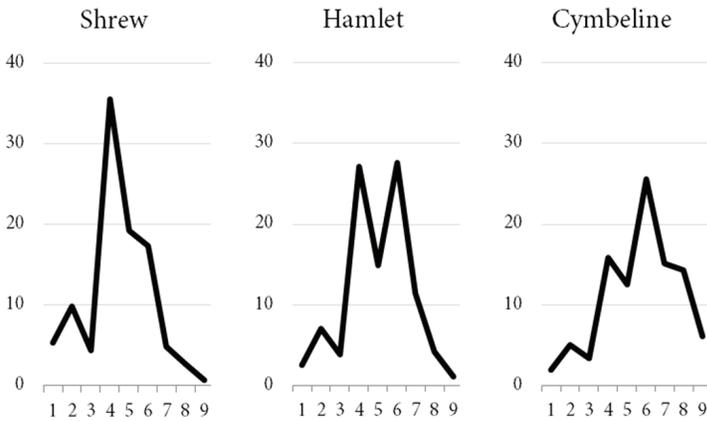
Thou art a fool	if Echo were as fleet,
To be, or not to be	that is the question.
Unto my end of stealing them	But, gracious sir,

These lines 'break' at increasing distances; an early play is more likely to feature a pause after the fourth syllable while a later play is more likely to have a pause in the second half of the line.

In line graphs of the type that Oras constructed (Oras 1960: 33–60), pause percentages for *The Taming of the Shrew*, *Hamlet*, and *Cymbeline* would appear as in charts 1–3.

Even a cursory examination reveals that, as represented in these plays, the dominant pause position shifts, from early to late in Shakespeare's career, from after the fourth syllable to after the sixth. During the 1590s, most of the pauses in Shakespeare's plays come in the first half of his line – that is, before the fifth syllable. After 1600, the majority of the pauses shift to the second half of his pentameter line. Consequently, one could nearly 'flip' the first chart, left to right, and produce something more at home after 1600 than before.

<sup>1</sup> As reproduced above, the lines follow Evans, ed., in the *Riverside* text (Shakespeare 1997). In the First Folio of 1623 (Shakespeare 1968), the *Shrew* punctuation is a comma, the *Hamlet* marking is identical to that above, and the *Cymbeline* punctuation similar save that the Folio has no comma after 'But'. Later in this essay I discuss the relation of compositors to punctuation.



Charts 1–3. Pause patterns, as percentages, in three Shakespeare plays

However familiar, this story is also somewhat circular. While I have selected the three lines and three plays above as representative of ‘early’, ‘middle’, and ‘later’ Shakespeare, and used them to narrate his development as a writer, our chronology of his works – our very sense of early, middle, and later Shakespeare – is not independent of line length and prosody. To the contrary, we have long relied on these features to date his plays in the first place.

This potential tautology traces to an idea articulated in a monograph from the Victorian era. *Remarks on the Differences in Shakespeare's Versification in Different Periods of his Life and on the Like Points of Differences in Poetry Generally* was published anonymously in 1857, but has since been identified as the work of Charles Bathurst. There he observes:

It must have been remarked by most readers of Shakespeare who are not very unobserving, that his versification, in respect of the cæsura, as it is called, or division of the pauses, differs most exceedingly in different places. This difference is not as between one passage and another, or one scene and another, but generally, and in its extremes always, as between one play and another; and it depends on the time of his life (Bathurst 1857: 1).

Echoing his title, Bathurst correlates chronology and caesura, with Shakespeare's pauses revealing a veritable law of his verse: “in metre,” he continues, “Shakespeare changed very nearly regularly and gradually, always in the same direction” (Bathurst 1857: 6).

More nuanced than such a law suggests, the story of this change is also much larger than Shakespeare. Readers who make their way through the pages of any

anthology of Renaissance drama feel the differences in pentameter verse as the even beats and ten-syllable lines of the late 1580s begin to give way to something less predictable early in the next century. Whether referring to this transformation as an ‘unscrewing’ (Saintsbury 1906, 2: 302) or an ‘evolution’ (Tarlinskaja 1987: 44), scholars agree that iambic pentameter became less iambic, and less clearly pentameter, in a process that commenced within a decade after its establishment as the dominant vehicle for plays in London’s commercial theaters.<sup>2</sup>

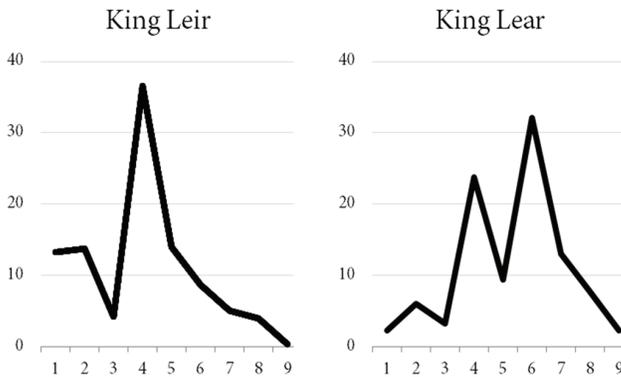
Told many times and from various angles, the narrative of blank verse’s transformation depends in part on the sensitive readings of individual phrases, lines, and speeches by such scholars as Marina Tarlinskaja, George T. Wright, Coburn Freer, and Russ McDonald, to name only these. Also crucial, however, has been evidence of a more extensive nature: statistical information relating to meter and vocabulary and typically surviving in tables that grace handbooks and the appendices of collected works. In its nearly 100 pages of data, for example, Tarlinskaja’s detailed study of dramatic verse in the playhouses of early modern England (Tarlinskaja 2014: 287–375) provides a compendium of this kind of information. Oras’s *Pause Patterns* study anticipates such ‘panoramic’ (Spevack 1976) scholarship with its broad examination of the punctuated pauses of early verse.

Using Oras’s figures, and data like that which he provided, we can better place works of early modern drama in chronological order. A play from the early 1590s, for example, is likely to possess a different pause profile than a play written a decade or more later. One can see a stark example of this in two plays based on the same content: the anonymous *True Chronicle History of King Leir*, thought to have been written in the late 1580s or early 1590s, and Shakespeare’s *King Lear*, commonly dated to 1605–1606. To compare their pause patterns, as in charts 4–5, is to see a difference in stylistic eras.

If we lacked any other information about the two plays, these graphs would suggest that *King Leir* is more likely to have come from earlier in the playhouses’ tenure: as we will see, its profile most resembles Kyd’s composite in its steady decline from the fourth position. With its higher sixth-position pauses, in contrast, *King Lear* looks like the Jacobean text we know it to be.

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<sup>2</sup> Saintsbury characterised Beaumont and Fletcher as “the first noteworthy examples of that ‘unscrewing’ of dramatic blank verse which led, before long, to the break-up of its whole structure as a dramatic medium” (Saintsbury 1906, 2: 302). Shortly thereafter Saintsbury noted that Shakespeare “in his own later plays eased the screws very freely, and rather hazardously in appearance” (Saintsbury 1906, 2: 303). Tarlinskaja observes that ‘the dramatic iambic pentameter of the Elizabethan-Jacobean epoch evolved from a more rigid to a looser form’ (Tarlinskaja 1987: 44), returning to the metaphor of evolution on 54, 82, and 218. Tarlinskaja’s 2014 study represents the state of the art on dramatic pentameter during the early modern period in England.



Charts 4–5. Pauses in *King Leir* and *King Lear*

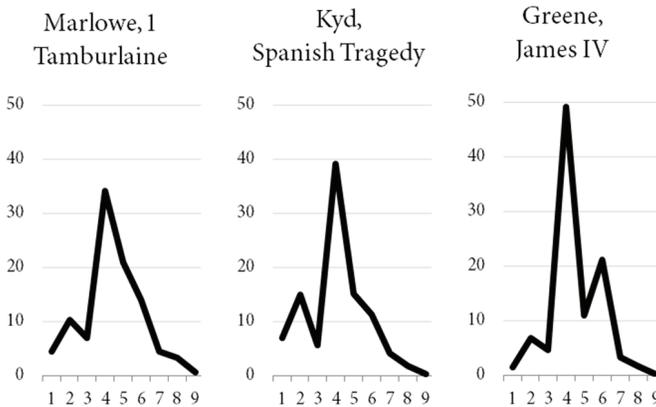
Oras did not offer a chronology on the basis of his research, even though his figures suggested obvious modifications to the Chambers timeline. A number of options existed, including sorting by the ratio of ‘first half’ pauses, the ‘even’ pauses, or some arrangement of his A, B, and C pauses. Had he made such an attempt, he would have needed to address the discrepancies between his results and the chronology he started with (wherein *Titus Andronicus* and *The Comedy of Errors* are the first two plays). It is worth noting, too, that a simple arrangement of Oras’s figures would lead to some counter-intuitive placements: *2 Henry IV* would come before *1 Henry IV*, for example, in an ordering based on both ‘first half’ and ‘even’ pauses;<sup>3</sup> *Antony and Cleopatra* would come apparently too late, and *The Tempest* earlier than we think it was written. Ideally, then, a chronology based on Oras’s figures would need to address whatever in them led to such counter-intuitive placements. It would also need to incorporate the most recent state of knowledge concerning Shakespeare’s collaboration with others, employing Oras’s methodology on the parts of texts that scholars believe Shakespeare wrote. Finally, such a chronology would be buttressed by a statistical test or tests to analyse both the interrelation of the pause data and the movement of Shakespeare’s style over time.<sup>4</sup>

<sup>3</sup> As Henri Suhamy notes: “Il est inutile d’autre part de souligner longuement que les preuves internes que contient le texte de Shakespeare ne permettent pas de dater les œuvres avec une précision rigoureuse. Si l’on se fiait aveuglément aux chiffres on en arriverait à affirmer que par exemple la seconde partie de *Henry IV* a pu être écrite avant la première” (377).

<sup>4</sup> For a chronological study of this kind, see Bruster and Smith 2014.

### 3. Pause Patterns and Authorship

Oras's study shows us that although the rhythmical environment of a literary marketplace changes over time, differences among writers often obtained regardless of when they wrote their works. An unremarkable observation on its face, this nonetheless has important implications for understanding authorship and even for attributing shares of various collaborative texts. How different were the practices of various playwrights? The following charts represent the pause-pattern percentages of single plays by Christopher Marlowe, Thomas Kyd, and Robert Greene, respectively. All three playwrights wrote for the professional playhouses during the late 1580s and early 1590s.

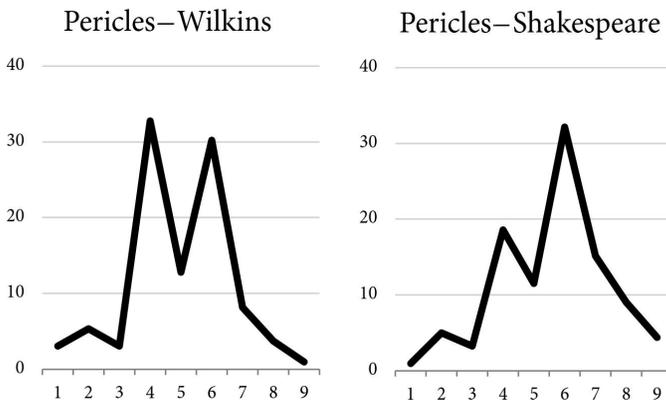


Charts 6–8. Pause patterns in plays by Marlowe, Kyd, and Greene

Even with this chronological proximity, one can note differences among the syntactic patterns of their lines. No play of Marlowe's, for instance, features a fourth position percentage higher than Kyd's lowest figure (from his translation, *Cornelia*); likewise, *The Spanish Tragedy's* figure of 39.1% for its fourth position is higher than only one of Greene's plays – *Friar Bacon and Friar Bungay*, at 38.5%. Indeed, charts of Greene's pause patterns reveal an extremely high 'peak', betraying a regular punctuated pause after his fourth syllables, and, not surprisingly a high percentage of pauses after even syllables. High figures for even-syllable pauses are the sign of a thoroughly iambic poet. Greene's composite for even-syllabled pauses is in the 70s. Kyd's percentage is in the 60s (as is Marston's), Marlowe's in the upper 50s, and Shakespeare's – owing to the length of his career – from the upper 60s in *Titus Andronicus* through the upper 50s in such late plays as *Henry VIII* and *The Two Noble Kinsmen*. Jonson

is the least concerned with metrical fluidity; unsurprisingly, his percentages range from the mid- to lower 50s (Oras 1960: 68).

While far from a fingerprint, in certain instances of synchronic collaboration – texts written virtually simultaneously by two or more hands – pause patterns may help to indicate which parts of a text came from which author. To give one example: scholars have long considered *Pericles*, a play published in 1608, as partly by Shakespeare, and partly by George Wilkins (see Jackson 2003). Usually acts 1 and 2 are given to Wilkins, and acts 3–5 to Shakespeare. The following charts set out the pauses, from Oras's count, for this traditional division of *Pericles*.



Charts 9–10. Pause patterns of two *Pericles* dramatists

Writing at approximately the same time, Wilkins and Shakespeare nonetheless display markedly divergent syntactical profiles. Wilkins, born in 1576, was Shakespeare's junior by 12 years; significantly, he was not as experienced a playwright. Perhaps unsurprisingly, then, the pause profile of his iambic pentameter in *Pericles* is closer to something that Shakespeare would have done almost a decade earlier in his career, with *Hamlet* (see chart 2, above). If the Wilkins share of *Pericles* looks backward, stylistically, toward the late 1590s, Shakespeare's leans forward into the emerging, more flexible style of such contemporaries as Thomas Middleton and John Fletcher.

Pauses percentages can enrich our conversations about attribution even when they do not resolve specific questions. The chart below, for example, sets out the pause profiles of sections of the first part of *Henry VI* (1H6) that have been ascribed to various playwrights by Gary Taylor (Taylor 1995).

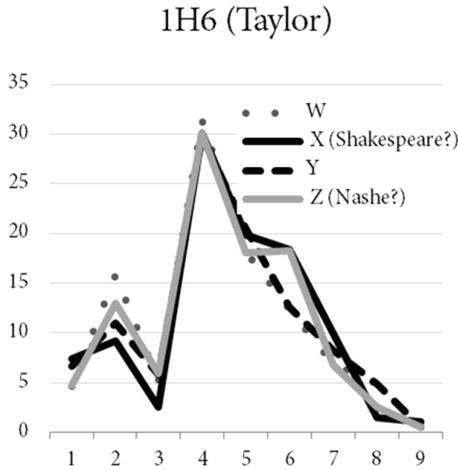
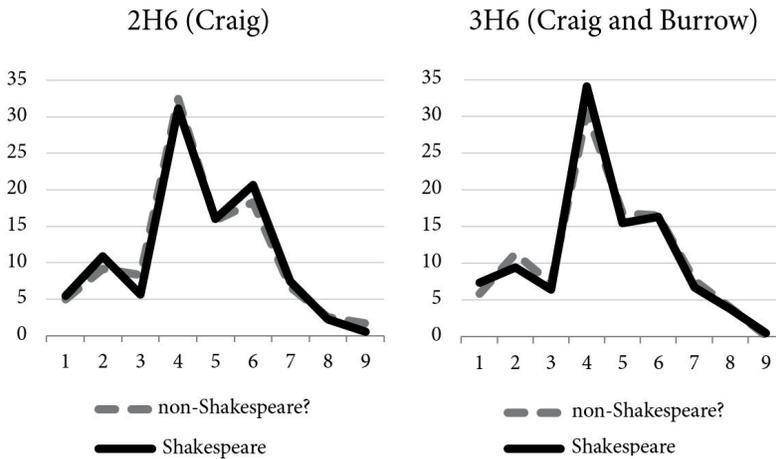


Chart 11. Hypothesised shares of *1 Henry VI* (after Taylor 1995)

Taylor attributes the ‘X’ portion to Shakespeare and the ‘Z’ to Thomas Nashe, who – Taylor suggests – wrote the first act of this history play. Although these two sections feature a visible uptick after the sixth syllable, the ‘X’ section (Shakespeare’s, in the Taylor attribution) does not feature the highest (which belongs to author ‘Y’) or even second highest ‘even’ count (author ‘Z’, Nashe). Nevertheless, a pause analysis beginning with Taylor’s attributions would linger over the sixth-position differences between, on one hand, X and Z and, on the other, W and Y. While such variation is not unprecedented in the data that Oras gathered, it nonetheless seems especially meaningful given Taylor’s identification of other patterns of difference amongst these sections. If we believe that *1H6* was written at approximately a single moment – rather than as a process, over a number of years – the discrepancies in these pause patterns might be attributable to multiple authorship.

The longstanding arguments concerning collaborative authorship in *1 Henry VI* have recently been joined by similar observations about *2 Henry VI* and *3 Henry VI*. Hugh Craig (Craig 2009: 40–77) has argued that vocabulary – in particular, divergences in the percentages of function words and lexical words – indicates the likelihood of multiple hands in *2 Henry VI*. Together with John Burrows, Craig has explored a similar divergence of vocabulary in *3 Henry VI* (Craig and Burrows 2012). Without subscribing to Craig’s identification of Marlowe as the *2 Henry VI* coauthor, Tarlinskaja confirms Craig’s sense of linguistic variety in that play, as well as in *3 Henry VI* (Tarlinskaja 2014: 112–116). What might we learn about these plays, and the possibility

of multiple authorship, by looking at their pause patterns? Particularly if we divide them along the lines that Craig, along with Burrows, has offered? The following charts, charts 12 and 13, present the pause patterns of *2 Henry VI* and *3 Henry VI*.



Charts 12–13. Hypothesised shares of *2 Henry VI* (after Craig 2009) and *3 Henry VI* (after Craig and Burrows 2012).

While the uncontested Shakespearean sections have a (just) slightly more pronounced development following the fifth and sixth syllables, both charts present pause figures so closely aligned that it is difficult, on the basis of pause data above, to ascribe their respective sections to multiple authors. Such leaves us with various possibilities, including but not limited to the following: (1) both plays are the product of a single hand; (2) any collaborators had the same pause patterns as Shakespeare; or (3) the pause patterns here are the product not of the author(s) but of scribe(s) or compositor(s) who homogenised the texts. Given the evidence, the first of these possibilities seems worth strong consideration.

#### 4. Pauses and Early Shakespeare

Pause patterns may shed light on two other plays from early in Shakespeare's career, each of disputed authorship. The following charts represent the pause patterns in *Arden of Feversham* and *Edward III*, respectively. Each of these plays

has been attributed, at least in part, to Shakespeare. For *Arden of Faversham*, I have used Macdonald P. Jackson's suggestions in *Determining the Shakespeare Canon* (Jackson 2014) to divide the play into 'Shakespeare' and 'non-Shakespeare' scenes; for *Edward III* I have employed the division suggested by the research of Ward Elliott and Robert Valenza (Elliott, Valenza 2010).



Charts 14–15. Hypothesised shares of *Arden of Faversham* (after Jackson 2014) and *Edward III* (after Elliott and Valenza)

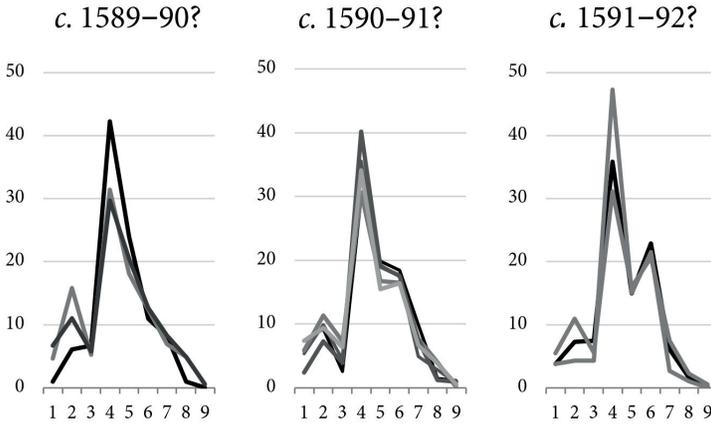
In certain aspects, the pause patterns that these graphs represent may diverge more than one would expect from chance. For instance, the *Arden* chart, chart 14, reveals a higher fourth-position figure in the ostensibly Shakespearean section, and the *Edward III* chart, chart 15, a lower, less-developed sixth-position figure for the ostensibly non-Shakespearean section. But, taking into account the real divergences we have seen in the various shares of *1 Henry VI* and *Pericles*, can we say, on the basis of the data above, that either *Arden* or *Edward III* is likely to have been written by multiple playwrights? Perhaps both plays were written by the same author, and some other factor is responsible for the slight if perceptible differences in pause patterns visible in the charts here. It is possible for instance, that these differences trace to diachronic composition – to having been composed by the same hand over an interval during which, for whatever reason or reasons, the writer's style developed in appreciable ways. It is also possible that these differences are owing to the nature of the materials used for printing: judging from the *Sir Thomas More* pages, Shakespeare's manuscripts (to name only these) were probably punctuated very differently than a professional scribe's. (In this regard, it seems potentially significant that the Shakespearean segment of *Arden* features a smaller

proportion of punctuated pauses, per verse line, than the non-Shakespearean section – what we might expect if copy for that segment of the quarto were closer to his pen.) Whatever the reason, we could note that, in relation to the more iambic second-half syntax we have seen in various playwrights, the ostensibly non-Shakespearean material of *Edward III* is the least developed of the four sections examined. It is worth pointing out that Eliot Slater believed *Edward III* to feature distinct parts ('A' and 'B') which nonetheless both trace to Shakespeare; Slater argued that much of what is defined above as non-Shakespearean writing (part 'B') was composed by Shakespeare earlier in his career (Slater 1988: 124–125, 134–135).

The possibility of Shakespeare generating same-text material at various times may confirm and qualify a suggestion that Tarlinskaja makes concerning various sections in *Arden of Faversham*, *2 Henry VI*, and *3 Henry VI*. Noting similar prosodic textures in the ostensibly non-Shakespearean sections of these works, she offers that the dramatist – whom she calls 'Y' – "seems to be a poet of an older generation, and [...] is the collaborator in *Arden*, and *2, 3 Henry VI*" (Tarlinskaja 2014: 116). Could the pause patterns in these texts indicate that author 'Y' is Shakespeare himself, writing at an earlier phase of his development as a stylist? Before we consider this possibility, it seems right to acknowledge other playwrights who could be considered as potential authors of this material. Pause-pattern evidence for the few texts we have of undisputed authorship suggests that Kyd is unlikely to have written any of the *Arden* material: his fifth-position percentages are always higher than his sixth, producing a kind of ski-slope pattern to graphs of his verse. Nothing we believe that Kyd wrote has the fifth-position notch or the sixth-position uptick. Marlowe remains a possibility, at least in terms of pause patterns; the graph for the non-Shakespearean sections of *Arden* is not unlike his profile in *Edward II* and *The Massacre at Paris*.

If Tarlinskaja's author 'Y' is indeed Shakespeare, such would imply that the pause profiles of Shakespeare's pentameter lines went through at least one stage before reaching the familiar sawtooth formation we see in the great majority of his verse. It is necessary to say 'great majority' here because the graphs of *A Midsummer Night's Dream* and *King John* (Oras 1960: 46) have an idiosyncratic shape; they demonstrate a transitional phase during which Shakespeare slid his pauses across the middle of the line, through the 5th position and toward the 6th. With an eye toward such variation, and in an entirely speculative vein, the three charts below group the pause profiles of some Shakespearean and disputed texts, and parts of these texts, along with dates that would imply an even development. All these profiles have been featured earlier in this essay. The chart on the left, chart 16, features pause profiles for the ostensibly

non-Shakespearean section of *Edward III*, and Taylor's 'W' and 'Y' sections for *1 Henry VI* (Taylor 1995). Chart 17, in the middle, has profiles for *1 Henry VI*'s author 'X', *The Taming of the Shrew*, the Shakespearean section of *Edward III*, and *3 Henry VI* (complete). The chart on the right, chart 18, displays data for both parts of *Arden* (the Shakespearean and ostensibly non-Shakespearean) as well as the undisputed section of *2 Henry VI*.



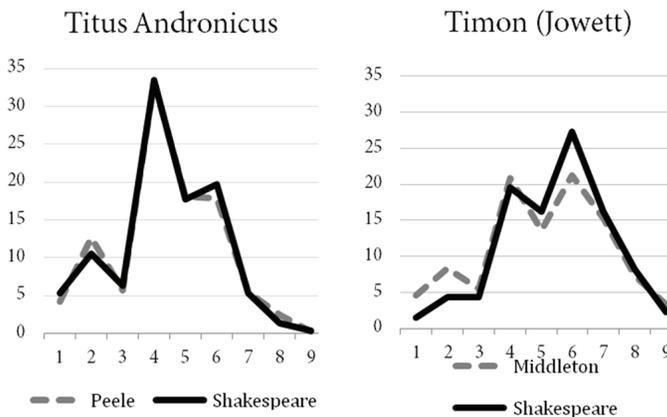
Charts 16-18. Three phases in Shakespeare's development?

This three-stage arrangement hinges, obviously, on the appearance of the notch at the fifth position and the related rise of pauses after the sixth. The sequence imagined here – and it must be stressed, again, that this illustration is purely conjectural – implies a poet developing longer and longer phrases in his pentameter line, so that ultimately (as in his career generally) he is pausing further into his sentences – from 'Thou art a fool' (fourth) to 'To be, or not to be' (sixth as well as second). While it is a difference of only a few percentage points across a text, the long duration of Shakespeare's career allows us to see the kind of development imagined here as both measurable and chronologically significant. If these charts bear any relation to historical reality, Shakespeare's first writing may have included the ostensibly non-Shakespearean portion of *Edward III* and perhaps the 'W' and 'Y' sections of *1 Henry VI* (chart 16); he may have next written *Shrew*, the 'X' section of *1 Henry VI*, the Shakespearean portion of *Edward III*, and *3 Henry VI* (chart 17, where the texts mentioned last are responsible for the two lines flagging a fifth position notch); *Titus Andronicus* may have followed (see chart 19, below); and then he may have written (in whatever sequence before the spring of 1592) both parts of *Arden* and revised the text of *2 Henry VI* (which had almost certainly existed, in some

form, prior to the 3 *Henry VI* material) – thus lending the unrevised portion a comparatively earlier pause profile as well as, perhaps, divergent vocabulary. While conjecture, and dependent on the idea of an even stylistic development to Shakespeare's practice, the sequence sketched here would go some ways toward accounting for these otherwise puzzling materials. It is thus offered as a possible narrative for further investigation.

## 5. Collaborative Plays

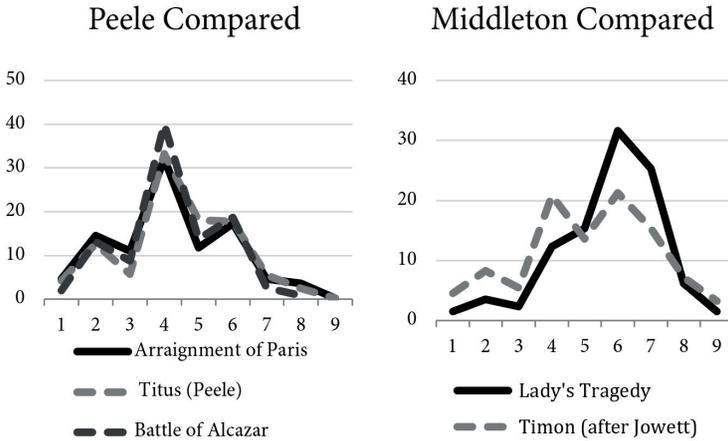
Either accommodation or divergence in the style of collaborators could qualify the value of pause data. Is it possible that the mere fact of writing together somehow blends two writers' styles? Or perhaps that, when prepared for print, various contributions were made more uniform by a scribe or scribes, compositor or compositors? To address this question, the series of charts below traces, first, the differences between Shakespeare and his collaborators in two plays – *Titus Andronicus* and *Timon of Athens* – then considers whether the shares accorded these collaborators in the Shakespeare plays square with their practice in two plays of their own composition.



Charts 19–20. Peele and Shakespeare in *Titus Andronicus* and Middleton and Shakespeare in *Timon of Athens* (after Jowett)

These charts represent the pause patterns in two collaborative plays of Shakespeare according to our best sense of how authorship was divided. What is interesting is how close the Peele section of *Titus* seems to be to Shakespeare's practice. We could also note the general similarity between Middleton's section

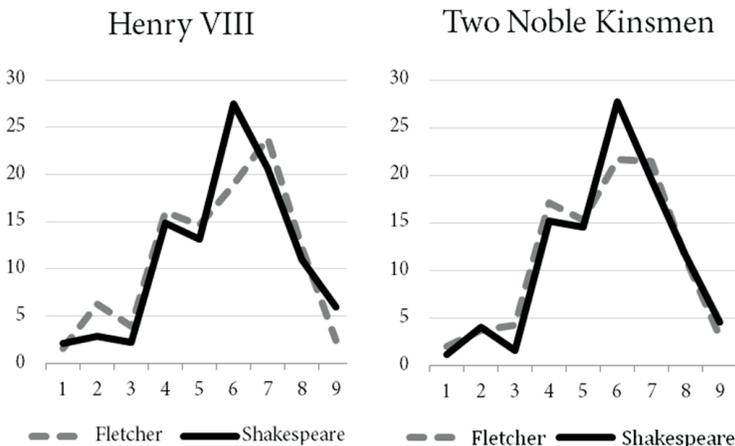
of *Timon* and Shakespeare's. Although the *Timon* graph presents a greater divergence than the *Titus* figures, a comparison of Peele's and Middleton's style in those texts with their style in sole-authored plays suggests that, on the basis of pause profiles, our *Timon* attribution may be more questionable than that for *Titus*.



Charts 21–22. Peele in *Titus Andronicus*, *The Arraignment of Paris*, and *The Battle of Alcazar*; Middleton in *Timon of Athens* and *The Lady's Tragedy*.

Chart 21 implies that the Peele profile in *Titus* (1590–1591?) is a decent fit for his practice in *The Arraignment of Paris* (early 1580s?) and *The Battle of Alcazar* (1589?). In contrast, the Middleton chart, chart 22, shows significant divergence between the profile from the *Timon*-attributed writing and that from *The Lady's Tragedy* (also known as *The Second Maiden's Tragedy*, from around 1611). Middleton's syntactical pattern in the latter is closer to Fletcher than to Shakespeare, and asks us to revisit the broad similarity in chart 20, which sets out the Shakespeare and Middleton parts of *Timon* (1606?) side-by-side. The similarity we see in chart 20 is not there in chart 22. In fact, the patterns in chart 22 diverge substantially. How to account for this? At least four possibilities advance themselves: (1) Middleton's style is inconsistent, or changed considerably between 1606 and 1611; (2) his style accommodated itself to Shakespeare's as they collaborated; (3) a scribe or compositor, or multiple agents of this kind, were responsible for imposing a uniformity of punctuated pauses in *Timon*; or (4) our current attributions overestimate Middleton's share of *Timon of Athens*. Without more information concerning Middleton's prosody, it is difficult to say which of these possibilities is most likely.

Two late plays by Shakespeare, *Henry VIII* and *The Two Noble Kinsmen*, provide additional information about differences between collaborators. Both of these plays are known to have been written with John Fletcher, an experienced playwright 15 years Shakespeare's junior. Charts 23 and 24 provide the pause patterns for the two playwrights' respective shares of these dramas.



Charts 23–24. Fletcher and Shakespeare in *Henry VIII* and *The Two Noble Kinsmen*

Both charts reveal a tight similarity in the patterns for these two plays up to and including the fifth position. The sixth and seventh positions, however, show a sharp divergence in the percentage of punctuated pauses. Shakespeare's more iambic practice gives his lines a higher percentage after the sixth syllable, whereas Fletcher displays an idiosyncratic affection for the seventh position, frequently to underwrite line splits (Oras 1960: 25). If Shakespeare and Fletcher are writing like one another in terms of syntax, that similarity is tempered by an individuality that becomes more apparent later in the pentameter line.

## 6. Objections and Qualifications

The clear exposition of his methodology and “breathtakingly exhaustive” (Wright 1988: 317 n.2) analysis of hundreds of thousands of lines of verse lend Oras's study the air of the empirical. Yet, as Oras was himself aware, his research – perhaps any such prosodic analysis – depends on a number of assumptions that qualify the findings. As even a casual student of metrics realises, prosody is in certain respects as much an art as a science: experienced

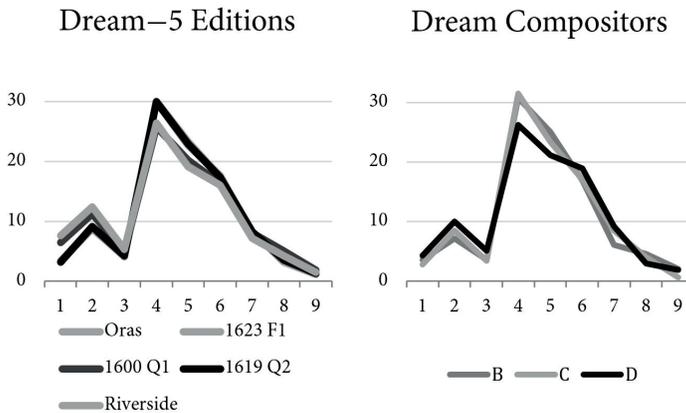
readers can and do disagree about what counts as syllable, not to mention a stress. Thus an eleven-syllable line to one scholar can seem perfectly decasyllabic to another. Such variability has obvious implications for the repeatability of a tabulation like Oras's. Even more uncertain is the status of the text. Oras is careful to cite the editions he uses for his research; for the most part, these are facsimiles of the texts as they were first published. Yet we have learned too much about the conditions of early modern print culture to suppose that these texts represent anything like a direct recording of an author's practice in iambic pentameter: scribes, composers, printers, and publishers can all be imagined as potential influences on, and even collaborators in the production of, the appearance of pentameter in these printed works. Anyone who opens the First Folio, for example, can soon find punctuation marks that seem misplaced, or superfluous; still other lines will seem to lack punctuation that grammar, logic, or clarity calls for.

Other influences are internal to the texts themselves: genre, rhyme, prose, characterological idiolect, and dramatic subgenres such as wit combats, declarations, and plays-within-the-play (including masques) all have a potential claim on the style of a work's verse.<sup>5</sup> To be considered, too, is the fact that a text may not represent a single 'event' of composition, but rather reveal layers of continuation and revision. Last in what is admittedly an abbreviated list of qualifying factors is the dubious assumption that Bathurst made (Bathurst 1857): namely, that patterns move inexorably in one direction. Authors can and do choose to modify the style of their writing, as we are reminded by *Julius Caesar* – apparently written in the midst of plays very unlike it in many elements of style. If we are tempted to read pause-pattern data as a cardiogram, then, we should be aware of its limitations. Rather than an unmediated record of a single writer's single event of writing, a text may be a composite of many hands, and many times. It may also be shaped by unknown contingencies of form or occasion. To interpret Oras's findings without acknowledging their limitations is to ignore his own cautions, relayed in the study.

What evidence is there, then, concerning the potential influence of various external factors, literary and industrial, on the pause profiles of early modern drama? The following chart, chart 22, plots the pause percentages for five editions of *A Midsummer Night's Dream*. These editions, it should be pointed out, were not generated independently from some Platonic idea of the play; by and large they represent tradition rather than innovation, as editors and printers use previous texts for their models.

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<sup>5</sup> On the metrical differentiation of character, see Tarlinskaja 1987: 135–176.



Charts 25–26. *A Midsummer Night's Dream* in five editions; *Dream's* three compositors in F1 1623

Even granting such interwoven practice, however, the consistency of percentages across the five texts, as shown in chart 25, is remarkable – if partly in suggesting the inertia of punctuation in received materials. A further observation could be made on the closeness of chart 25's profiles. The first quarto of *A Midsummer Night's Dream* seems to be one of the more heavily punctuated playbooks of the English Renaissance. Commas – particularly mid-line commas – abound, lending it 43% more punctuation marks than the First Folio *Dream* of 1623. Yet even with this extreme overabundance of punctuation, the percentages for Q1 *Dream* are not radically different from the texts that came in its wake. Glancing across at chart 26, we see the percentages for three compositors – B, C, and D – commonly ascribed with setting the type of *A Midsummer Night's Dream* for the First Folio of 1623. Of the three figures, compositor D diverges the most, yet, even so, the pause profile of his material matches that of the text generally. While further research might confirm or deny an individualised pattern in other Folio plays, the profile here suggests that, at least in this text, the material has a pause profile regardless of who sets it into type.

## 7. Conclusions

As we have seen, pause pattern analysis in the style of Oras offers useful vantages on questions of authorship and chronology. Yoked with studies of vocabulary, meter, and imagery, and as an ancillary to these genres of analysis, pause profiles can strengthen cases for attribution. A virtue of the procedure involves the binary nature of its evidence: in a text, a space either has or does

not have a punctuation mark. As such, Oras's pause procedure is more reproducible than more sensitive tests of metrical emphasis and stress. While the latter have the apparent advantage of tapping directly into an author's linguistic rhythm at some distance from the determining agency of a scribe, compositor, or other editorial agent, such tests often seem difficult to recreate in an objective way. As with all such procedures, Oras's methodology depends on the existence of large numbers of verse lines. Shorter texts – such as, say, a single sonnet or even *A Lover's Complaint* – lack sufficient pauses for confident pronouncements to be made about their date or authorship. (The shorter the text, the more tests are needed). At the same time, pause profiles add to our understanding of the rhythmical climate of early modern literature, as well as the personal styles of various writers. They thus can complicate, in the best sense of that word, arguments concerning authorship and writing.<sup>6</sup>

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## Appendix

Table 1. Raw counts for pauses from texts cited. Figures from Oras (Oras 1960) unless indicated; tabulations from asterisked titles are by author.

Shrew	63	117	52	422	228	206	58	33	8
Hamlet	43	121	65	461	254	470	195	71	19
Cymbeline	61	159	104	493	389	796	473	445	192
1H6 W*	16	55	18	109	63	43	24	17	2
1H6 X*	20	25	7	82	54	50	27	4	3
1H6 Y*	37	61	32	165	114	70	46	27	3
1H6 Z*	17	46	21	107	64	65	24	9	2
Arden non-Sh*	19	33	38	219	112	128	31	10	1
Arden Sh*	4	6	8	73	27	34	6	3	0
King Leir	178	184	57	490	187	117	68	53	5
King Lear	40	104	56	405	160	547	223	131	40
E3 non-Sh*	3	20	22	139	79	36	27	3	0
E3 Sh*	8	24	13	133	63	58	25	4	3
2H6 non-Sh*	6	11	10	39	19	22	8	3	2
2H6 Sh*	78	156	80	445	229	295	106	32	8
3H6 non-Sh*	44	86	55	232	127	125	58	30	1
3H6 Sh*	100	128	87	465	211	223	91	52	7
Titus Peele*	17	51	23	134	73	72	22	10	1
Titus Sh*	45	89	53	282	149	166	45	11	3
Timon Midd*	21	38	25	95	62	97	70	33	15
Timon Sh*	16	45	45	204	170	285	170	86	24
H8 Fletcher	23	92	57	233	213	275	347	178	35
H8 Sh	25	34	26	177	157	328	246	131	71
TNK Fletcher	29	52	60	241	216	306	303	159	43
TNK Sh	10	34	13	127	122	232	163	97	38
Lady's Tragedy	21	48	32	166	206	424	340	84	21
1 Tamburlaine	26	59	40	194	119	80	26	19	4
Span Tragedy	60	127	48	332	129	97	36	16	3
James IV	14	61	41	434	97	187	30	15	1
Pericles Wilkins	13	23	13	141	55	130	35	16	4
Pericles Sh	5	26	17	97	60	168	79	47	23
Arraignment	17	53	40	117	43	63	17	13	1
Battle of Alcazar	7	45	30	137	47	64	9	3	0
MND Comp B*	7	14	7	60	49	33	12	9	4
MND Comp C*	13	40	16	148	110	80	40	19	3
MND Comp D*	16	37	19	97	78	70	34	11	7