

Claremont McKenna College's Shakespeare Clinic:  
Who Really Wrote Shakespeare?

By Peter Moore

In 1990, the Shakespeare Clinic of Claremont McKenna College, headed by Ward Elliott, a professor of political science, released statistical results from its three-year study of the Shakespeare authorship problem. The Clinic used a computer to compare selected linguistic tendencies in Shakespeare's poetry to fifty-eight of his contemporaries, including Edward de Vere, 17<sup>th</sup> Earl of Oxford. The conclusion is that none of the other poets wrote like Shakespeare, hence it was highly unlikely that any of them was the true author of Shakespeare's works.<sup>1</sup>

The Clinic's tests are of two types, one being nine "conventional" tests, which this article is concerned with.

The nine tests are as follows. "Line Beginnings" tests word choice at the start of sentences and lines of verse. I have not seen an explanation of how it works, but the *Report* says that the Earl of Oxford matches Shakespeare, so I didn't pursue it. "Feminine Endings" counts the percentage of verse lines that end with an unstressed syllable; Oxford received a tentative mismatch on this test. "Open Endings" counts the percentage of verse lines that have no punctuation mark at the end. Oxford reportedly matches Shakespeare on this test. Oxford reportedly mismatched Shakespeare on the remaining six tests. "Hyphenated Compound Words" counts the rate of such words per thousand words in the verse of each author. "Relative Clauses" counts the rate per thousand words of relative pronouns and clauses beginning with such words as "that," "which," "who," and "whom."

"Percentage Word Length" counts the number of words of each poet that are made up of one letter, two letters, three letters, etc., up to twelve-letter words, expressing each as a percent of the total. As no poet uses many words of thirteen or more letters, the summed percentage of one-to-twelve letter words should amount to almost 100%. "Exclamation Points" counts the rate of occurrence of this punctuation mark for each author. "Reading Ease" and "Fog Index" are unexplained combinations of sentence length and word length. Incidentally, Professor Elliott remarked to me that his group regards hyphenated Compound Words, Relative Clauses, and Exclamation Points as their best tests.

Before looking further into the nine tests, I would like to express several reservations to this procedure. First, William Shakspeare of Stratford-on-Avon is not tested, maintaining his status as the Teflon candidate. Second, when scientists or engineers devise a new metric or other measuring device, it is normally validated on known distances before being used to measure a disputed or unknown quantity. The Shakespeare Clinic's nine conventional tests therefore have not been validated. Third, the canon of poems for Oxford is small and uncertain, as he had no known involvement in the publication of fifteen of them.

Fourth, the Shakespeare Clinic's Report ignores the factor of time. Shakespeare's poetry was published from 1593 to 1609 and was probably not initiated until the early 1590s. Nine of Oxford's poems had been published by 1576, three more were quoted in a book that appeared in 1582, the next three are of uncertain date, while the last was responded to by Sir Philip Sidney, who died in 1586. There is an interval of about fifteen years between the bulk of the Oxford canon and the start of Shakespeare's non-dramatic verse and three important events occurred during or just before this gap. Oxford traveled extensively in Italy and France in 1576, which should have greatly increased his knowledge of the languages and literature of those nations; on his return he was regarded as an Italianized Englishman. This trip followed the writing of his first nine poems and possibly some of

the others. Next, the English language was in a process of transition throughout the period. Not only was its vocabulary increasing exponentially, but it was changing in more fundamental matters, such as pronouns, possessives, punctuation, and verb forms. To quote from A. C. Partridge's valuable *Orthography in Shakespeare and Elizabethan Drama*:

In vocabulary, accident, syntax, colloquial usage, spelling, punctuation, and handwriting, the period from Spenser's 'Shepherd's Calendar' (1579) to the closing of the theatres (1642) was one of great flexibility, fluidity and change. A writer who began his literary career in one writing style might end it in another markedly different in its details.<sup>2</sup>

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Sir Edmund Chambers' preface to *The Oxford Book of Sixteenth Century Verse* describes the poverty of English poets during the middle decades of that century, concluding:

The most hopeful of them was Edward de Vere, Earl of Oxford, a real courtier, but an ill-conditioned youth, who also became quite mute in later life. The revival begins with Edmund Spenser's 'Shepherd's Calendar' in 1579. And thereafter, of course, there is God's plenty.<sup>3</sup>

The Clinic feels that one of its best tests is its exclamation mark count; Shakespeare's works show some exclamation marks, and May's edition of Oxford's poems show none. But, again, the Clinic neglected the time factor. According to Partridge, the exclamation mark was not used in England until the 1590s, that is, after Oxford's poetry was written.<sup>4</sup>

Alert readers may have wondered how the Clinic could judge Shakespeare's use of exclamation marks, as there is no presumption that the punctuation in Shakespeare's early texts is his, rather than that of a scribe or publisher. The answer is that the Clinic took its punctuation for Shakespeare straight from the 1974 *Riverside* edition of Shakespeare's works, edited by Professor G. Blackmore Evans of Harvard University. The clinic did not bother to study Elizabethan punctuation, nor did they notice Professor Evans' careful description of his unusual, intentionally archaic approach to punctuation.<sup>5</sup> Three of the Clinic's nine tests are direct counts of punctuation (Open Endings, Hyphenated Compounds, and Exclamation Marks), while two more are also dependent on punctuation (Reading Ease and Fog Index depend on sentence length, which depends on the placement of periods, question marks and exclamation marks).

On the matter of hyphens we may note another item. Over 99% of the Shakespeare poetry analyzed by the Clinic was originally printed by two publishers, Richard Field printed *Venus and Adonis* and *Lucrece*, while George Eld printed the *Sonnets* and *A Lover's Complaint* (for Thomas Thorpe). The Clinic's *Report* shows some significant differences in hyphenation between these two publishers, with Field using about 70% more hyphens per thousand words. Does this reflect Shakespeare's word use changing over time or genre; does it capture punctuational differences between Field and Eld; does it simply pick up variations in Professor Evans habits; or is it something else? These are the sort of questions the Clinic should have asked before making assertions like "Shakespeare...loved compound words."<sup>6</sup>

I wrote earlier that the Clinic's nine conventional tests had not been validated, to which the Clinic might reply that the high rate of consistency among different blocks of Shakespeare's poetry is validation of sorts. Yet it is not validation of the conventional tests' ability to distinguish different poets, rather than distinguish different editors.

English punctuation in Shakespeare's day was evolving rapidly with printers being far ahead of the educated public (save for Ben Jonson). Most surviving manuscript letters, poems, and plays are very lightly punctuated, and punctuation was then added by scribes, play directors, and printers. Expert conjecture on Shakespeare's punctuation is tentative and conflicting. Commas, semi-colons, colons, periods, and question marks are used today according to a logical grammatical system. But we simply accept the dictionaries' authority on "already," "all-around," and "all right," which, so far as I can see, reflects no particular logic, but rather the usage dictated by a few authoritative books like the King James *Bible* and standard editions of Shakespeare, and a few authoritative lexicographers like Samuel Johnson and Noah Webster. Any study of Shakespeare that has a punctuational basis must consider these matters in detail. The Clinic failed to do so.

Let us consider the four non-punctuation dependent tests. The Clinic passed Oxford on Line Beginnings and, as we have seen, he also passes on Percentage Word Length once the Clinic's faulty data is corrected, but he allegedly falls on Relative Clauses. This test has two main subtests, Relative Pronouns and Relative Clauses. Oxford is within Shakespeare's range and within two standard deviations of Shakespeare's mean on Relative Pronouns, so he passes that subtest. The Relative Clause subtest is broken into six categories, and Oxford is well within Shakespeare's range on five of them; he is outside Shakespeare's range in having too many relative clauses beginning with the word "that."

On the total Relative Clause subtest score, Oxford shows 60 relative clauses, but would have passed had he had only 58. In other words, Oxford matches Shakespeare on six of seven subtests, but is given a "mismatch" for two too many "that's." This outcome could be reversed by a small change in Oxford's canon, but let us accept the methodology and improve the test by considering the time factor.

Casual inspection reveals that the number of "that's" falls off sharply with the later poems. In other words, the youthful Oxford was already moving in Shakespeare's direction, and so, when the time factor is taken into account, Oxford passes on Relative Clauses.

We now consider the final test, Feminine Endings. Oxford has virtually no feminine lines, while about 10% of Shakespeare's lines are feminine. Clearly Oxford mismatches Shakespeare, but that is to be expected if the time factor is considered. Poetry in that period first sought to achieve regularity of meter and then moved toward studied irregularity. This trend is found in sixteenth century English poetry in general, in dramatic verse in the second half of the century, and in Shakespeare's works. Feminine lines are a form of irregularity, and so we should not expect to find as many in Oxford's youthful poetry as in Shakespeare's mature poetry.

In conclusion, the *Report* of the Shakespeare Clinic has the following initial faults. Shakespeare is not even tested, the methodology has not been validated, Oxford's small and uncertain canon makes a treacherous basis for statistical analysis, and the time factor has been ignored. As we begin to examine the tests in detail, they crumble. Serious bias is seen in setting up the scoring system, as Relative Clauses and Relative Pronouns are lumped together as one test, when they are really two different things, while Reading Ease and Fog Index, which really measure the same thing, are counted as two tests.

I do not think that this bias was intentional; errors in counting up the basic data are found with ease and one of them, Daniel's word count, is egregious. Moreover, Oxford is faulted for lacking exclamation marks though his poems were written before there were any such marks. Further, all of the five punctuation tests simply capture the usual pointing of the *Riverside Shakespeare*. The Clinic

failed to standardize its data, to use the technical term for removing the effects of extraneous variables. The four tests not based on punctuation might hold some interest if the data could be trusted, which is not presently the case. But even if they were redone properly, they would only have the status of evidence, data, or tendencies subject to interpretation rather than decisive tests. At any rate, and for what they're worth, they support the theory that the Earl of Oxford wrote Shakespeare.

#### ENDNOTES

1. For the most recent report on the Clinic's project, see Ward Elliott and Robert Valenza, "Oxford by the Numbers: What are the Odds that the Earl of Oxford Could Have Written Shakespeare's Poems and Plays?", *University of Tennessee Law Review*, 72 (1), Fall 2004, 323-453 – Editor
2. A.C. Partridge, *Orthography in Shakespeare and Elizabethan Drama* (Univ. of Nebraska Press, 1964), 106.
3. Sir E.K. Chambers, *The Oxford Book of Sixteenth Century Verse* (Oxford: Clarendon Press, 1932), vii.
4. Partridge, 124-26.
5. *The Riverside Shakespeare*. Ed. G. Blakemore Evans (Boston: Houghton Mifflin, 1974), vi and 39-40.
6. Prof. Elliott quoted in the Washington Post, April 17, 1990.