

**An Enquiry
into the Authorship
of the Works of
William Shakespeare**

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INTRODUCTION

This is a shortened version of a paper that proves that Francis Bacon wrote the works of Shakespeare and enciphered and encoded his name into the *1609 Quarto of Sonnets* and the *First Folio*, and used isopsephy to construct a system of numerical reference based on a Root Formula. The numeric codes are primarily the various values of the names 'Francis Bacon', 'Athena', 'William Shakespeare', and a few Greek words or phrases. Taken together, the whole system confirms Francis Bacon's authorship, however it appears to serve more than just that purpose, a point that will be dealt with more fully in the Conclusion. So that the reader may be assured that one has not gone through the plays and pomes of Shakespeare and simply chosen text because it added up to fortuitous numbers, only portions of the plays and pomes which have already been identified by orthodox scholars or Baconian researchers as having some connection to Bacon's name or life, special numerical significance, or unexplained anomalous properties, will be used. Two portions of text, the Title page and Dedication from the *1609 Quarto of Sonnets* and p287 of the Tragedies from the *First Folio* will comprise the proof. Because some facets of the theory depend on the spelling or layout of certain words, in order to properly evaluate the theory presented in this paper it is necessary to use the original versions of the texts or photo-facsimiles. When referring to the actor from Stratford, the spelling 'Shakspeare' is used, when referring to the poet and playwright 'Shakespeare'.

QUESTIONING AUTHORSHIP?

Are there any valid reasons to doubt that the actor William Shakspeare of Stratford-on-Avon is the same person who wrote the plays and poems attributed to William Shakespeare? And does it make a difference? In his encyclopedic history of cryptography *THE CODEBREAKERS*, David Kahn writes:

People ask, 'Does it matter who wrote the Shakespeare plays? After all, it is the plays themselves that count, not who wrote them.' It matters because truth matters. The Baconian error has implications far beyond the Bacon-Shakespeare question. 'If one can argue that the evidence in Shakespeare's case does not mean what it says,' a scholar has written, 'that it has been falsified to sustain a gigantic hoax that has remained undetected for centuries, then one can just as surely argue that other evidence is not to be trusted and that, as Henry Ford said, "history is bunk."'

It is as pointless to try to convince Baconians of this on rational grounds, as it would be to demonstrate to an inmate of a mental hospital, with pictures of Napoleon's funeral and tomb and attested documents of Napoleon's death, that he is not Napoleon. For neither he nor the Baconians hold their views rationally.¹

Kahn's remarks help demonstrate the extent to which orthodox scholars claim that the authorship of the Stratford man has been verified. And therefore, how irrational the Anti-Stratfordian position is. The positions taken by literary scholars are similar, for

¹ David Kahn, *The CODEBREAKERS*, (New York: Scribner, 1996) p. 891

example the following question and answer comes from an interview Harold Bloom gave to the magazine *The Atlantic*:

Shakespeare is so enigmatic that there's been a lot of debate about whether he was even a single individual. I know you're very much opposed to those sorts of theories.

The other weekend, they actually were trying to get me down to New York to take part in a so-called debate on television as to whether the Earl of Oxford wrote Shakespeare. As I remarked rather nastily to them, the only answer to that is that the founder of the American Flat Earth Society died only recently. I also told them that I am not necessarily delighted but that I find it very *enlightening* that every month or so, there is a society in London that sends me its literature—unsolicited, of course. It's devoted entirely to demonstrating that all of the works of Lewis Carroll were written by Queen Victoria. That is just as likely as that the Earl of Oxford, or Christopher Marlowe, or Sir Francis Bacon, or who you will, wrote William Shakespeare.²

Notice that Bloom volunteers the information that he was 'nasty' in his reply, this kind of rancor is common in the responses of orthodox scholars. Notice also that Bloom equates the idea that Bacon wrote Shakespeare with the clearly irrational belief that the earth is flat, or the equally absurd belief that Queen Victoria wrote the works of Lewis Carroll. The comments of these two well-respected scholars lead one to believe that Shakespeare's authorship has been verified to the same extent as Napoleon's death, the roundness of the earth, or Charles Dodgson as the writer of the works of Lewis Carroll. Now there are readily available historical documents for the first, satellite photos of the earth from space to confirm the second, and Dodgson's original handwritten manuscripts and diary still extant, to confirm the latter. It must be stated that if orthodox scholars can present documentary evidence (as opposed to conjectural arguments) from Shakespeare's lifetime that clearly establishes him as a poet and shows a connection to any part of the Shakespeare canon; that would clinch the case for the Stratford man. Any subsequent doubts would in fact be irrational. Such evidence could include: contemporary allusions that spoke of him personally and as a poet; letters, either to or from him, that spoke of literary matters; extant original manuscripts; diary entries (either his or others who knew him personally) that refer to him as a poet; evidence (such as receipts) that he was paid to write; any handwritten materials, such as inscriptions, touching on literary matters; or an extensive personal library, especially one which includes books known to be sources for any plays or poems in the Shakespeare canon. This leads to the next question: has the authorship of the Shakespeare canon been verified in the normal historical manner, that is, by the use of contemporaneous personal evidence? In *Shakespeare's Unorthodox Biography* Diana Price writes on the subject of historical evidence for Shakespeare:

In that same year, 1598, Shakespeare's name appeared as a byline on editions of *Love's Labour's Lost*, *Richard II*, and *Richard III*, and references to him as a dramatist started to surface (e.g., "Friendly Shakespeare's Tragedies"). Over the

² Atlantic Unbound 2003.07.16, www.theatlantic/unbound/interviews/int2003-07-16.htm

next eighteen years, until the year of Shakspere's death, over a dozen explicit references were made to Shakespeare as a writer. But when people wrote about Shakespeare, they did one of two things. Either they confined their comments to his literary works, or they used ambiguous language.³

.....
Most of the explicit literary allusions to Shakespeare, set down during Shakspere's lifetime, could have been written after reading or seeing one of Shakespeare's works.⁴

.....
In the end, there is no contemporary reference to Shakespeare remotely comparable to Marston's dedication to "his frank and earnest friend, Benjamin Jonson, the weightiest and most finely discerning of poets." Contrary to the impression created in traditional biographies, none of the contemporaneous Shakespearean allusions qualify as personal literary paper trails for Shakspere of Stratford.⁵

Later, she speaks of the documentary evidence that has been collected by historians:

Shakespeare's biography is deficient in many other critical areas. Far from following the fragmentary literary trails in his personal life, the orthodox biography fails to find *any* personal literary fragments. The documents that literary biographies are based on-academic records; letters, manuscripts, diaries, and remnants of the personal library-simply do not exist for Shakespeare.⁶

.....
All of Shakspere's undisputed personal records are nonliterary, and that is not only unusual-it is bizarre. Statistically, it is also a virtual impossibility. Over seventy historical records survive for Shakspere, but not one reveals his supposed primary professional occupation of writing. Indeed, the only evidence that proves Shakspere wrote anything is six shaky signatures.⁷

Instead of finding the wealth of solid evidence that Kahn and Bloom's comments lead us to expect, one finds that of the seventy pieces of historical documentation for William Shakspere of Stratford, there are no letters⁸, no manuscripts, no diaries, and no personal library. To place this information in the proper context, Price examines the documentation left by twenty-four other writers of the same era. She writes, "If such evidence is extant for other writers of Shakespeare's day, then it will be possible to compare the types of documentation supporting their literary biographies with that for Shakspere's."⁹ Below find a table that summarizes the existing evidence focusing on: letters (especially concerning literary matters); evidence the person was paid to write;

³ Diana Price, *Shakespeare's Unorthodox Biography*, (Westport, Conn.: Greenwood Press, 2001) p 136

⁴ *ibid.*, p. 138

⁵ *ibid.*, p. 138

⁶ *ibid.* p. 129

⁷ *ibid.* p 149

⁸ The only surviving letter to Shakspere was from Richard Quiney, but it was not delivered, and never refers to him as a writer or touches on any literary matters.

⁹ *ibid.* p. 113

extant original manuscripts; miscellaneous records (referring to him as a writer); handwritten inscriptions, receipts, letters touching on literary matters:¹⁰

	Letters	Evidence was paid to write	Extant original manuscripts	Misc. records (e.g., referred to as a writer)	Handwritten material touching on literary matters
Ben Jonson	Yes	Yes	Yes	Yes	Yes
Thomas Nashe	Yes	Yes	Yes	Yes	Yes
Philip Massinger	Yes	Yes	Yes	Yes	Yes
Gabriel Harvey	Yes	-	Yes	Yes	Yes
Edmund Spenser	Yes	-	Yes	Yes	-
Samuel Daniel	Yes	-	Yes	Yes	Yes
George Peele	Yes	Yes	Yes	Yes	Yes
Michael Drayton	Yes	Yes	-	Yes	Yes
George Chapman	Yes	Yes	-	Yes	Yes
William Drummond	Yes	-	Yes	Yes	Yes
Anthony Mundy	-	Yes	Yes	Yes	Yes
John Marston	-	Yes	-	Yes	Yes
Thomas Middleton	-	Yes	-	Yes	Yes
John Lyly	Yes		Yes		Yes
Thomas Heywood	-	Yes	Yes	Yes	Yes
Thomas Lodge	Yes	-	-	Yes	-
Robert Greene	-	Yes	-	Yes	-
Thomas Dekker	Yes	Yes	-	Yes	Yes
Thomas Watson	-	-	-	Yes	-
Christopher Marlowe	-	-	-	Yes	-
Francis Beaumont	-	-	-	Yes	-
John Fletcher	-	Yes	-	Yes	-
Thomas Kyd	Yes	-	-	Yes	-
John Webster	-	Yes	-	Yes	-
William Shakspere	-	-	-	-	-

Despite the fact that there exists much more historical documentation for Shakspere than for most of these other writers, there is some *literary* documentation for all of them. But, none for Shakspere. So, if there are no letters, no manuscripts, no diaries, no evidence he was paid to write, no handwritten material touching on literary materials, and no personal library, on what basis are the plays and poems attributed to Shakspere? Price writes:

According to Chambers, 'the canon of Shakespeare's plays rests primarily on the authority of the title-pages' (*Facts*, 1:205).¹¹

¹⁰ *ibid.* Appendix

¹¹ *ibid.* p 129

.....
However title page attributions are not *personal* records. In fact, they are not even reliable as evidence of authorship. *The London Prodigal* of 1605 and *A Yorkshire Tragedy* of 1608 were not written by Shakespeare, yet they were originally published over his name. . . .¹²

. . . . Title page attributions count as literary allusions, but not as *personal* literary paper trails. In other words, Shakespearean title pages are not necessarily personal records belonging to Shakspeare, unless corroborating evidence is found to confirm them as such.¹³

A title page listing William Shakespeare as the author is no more proof than a title page listing Lewis Carroll as the author. (Just as we can verify that Charles Dodgson wrote the works attributed to Lewis Carroll, one should be able to verify that William Shakspeare wrote the works attributed to William Shakespeare.) Another source of the attribution to Shakspeare is the front matter of the *First Folio*. Price says, "It is in this prefatory material that Shakspeare of Stratford is identified as the dramatist for the first time in the historical record."¹⁴ Ben Jonson is recognized by orthodox scholars as the primary force behind the *First Folio*, and is even thought to be the true author of the letters from Heminges and Condell, which appear in the First Folio front matter, in addition to the poem and letter attributed to him. Of Jonson's writing in the Folio, Price states, "Overall, Jonson's authorship testimony is simply too ambiguous and self-contradictory to accept without qualification."¹⁵ If the *First Folio* attribution were false, Jonson would have had to have participated in the fraud. But, is there any evidence that Jonson thought that Bacon was the true author of the Shakespeare canon? In fact, in *Timber or Discoveries*, Jonson referred to Francis Bacon as:

he, who hath fill'd up all numbers; and perform'd that in our tongue, which may be compar'd, or preferr'd, either to insolent Greece, or haughty Rome.¹⁶

Jonson is claiming that Bacon has written poetry that is equal to or better than Homer and Virgil. But Francis Bacon is known to have published only a few poems in his lifetime. Why would Jonson then claim that Bacon had "fill'd up all numbers"? The answer lies in the phrase 'and perform'd that in our tongue, which may be compar'd, or preferr'd, either to insolent Greece, or haughty Rome'. This being a clear allusion to Jonson's poem in the *First Folio* where he says of Shakespeare:

Leaue thee alone, for the comparison
Of all, that insolent Greece, or haughtie Rome
Sent forth, or since did from their ashes come.

¹² *ibid.* p 129

¹³ *ibid.* p 129

¹⁴ *ibid.* p. 169

¹⁵ *ibid.* p. 190

¹⁶ Ralph Walker ed., *Ben Jonson's Timber or Discoveries*, (Syracuse: Syracuse University Press 1953), p. 60

Were there two Elizabethan poets the equal of Homer or Virgil? If so, where is the body of work that would allow Jonson to make this claim for Bacon? This allusion only makes sense if Bacon wrote the plays and poems that are attributed to William Shakspeare. But, there is additional evidence from Jonson as well, since Price also noted that:

On at least one occasion, though, Jonson exercised restraint in a complimentary verse to someone who might be compromised by brushing elbows too closely with him:

To one that desired me not to name him
Be safe, nor fear thy self so good a fame,
That, any way, my book should speak thy name:
For, if thou shame, rank'd with my friends, to go,
I am more ashamed to have thee thought my foe.

(Epigram 77)

Jonson seems to be protecting the anonymity of someone who would be disgraced by an overt association with him, a professional writer. Jonson did not want to embarrass this friend with any explicit praise. That friend may or may not be Shakespeare, but the epigram shows that Jonson took care for some reason not to identify in print a person whom he admired.¹⁷

As will be demonstrated later, the Epigram number 77 gives good reason to suspect that the individual being referred to is in fact Shakespeare.

So it has been established that the attribution to the Stratford man is not as solidly confirmed as some leading scholars have claimed, not even as solidly as is normally the case with Elizabethan writers. But that instead it rests on a foundation (title pages and posthumous evidence) that could easily be false. When one includes the fact that Shakspeare's biography doesn't match up well with the emotional landscape of the Sonnets or provide any explanation for the ability to read the un-translated materials that have been established as sources for many of the plays; and expert knowledge of the technical jargon of upper class pursuits, such as hunting and falconry, the reasons for doubt are significantly strengthened. None of this proves the Stratford man is not the true author, but it does mean that there is a strong rational basis for the Anti-Stratfordian position.

ISOPSEPHY

The ancient Greeks used the letters of their alphabet to also represent numbers. This meant that words could also have numeric values. In *The Greek Qabalah*, Kieren Barry describes isopsephy as: "The addition of the letters in a word or phrase to achieve a numerical value. This number was either of importance in itself, or was used to connect it to another word or phrase of equal value."¹⁸ For example, the Greek phrases:

¹⁷ Price, *Shakespeare's Unorthodox Biography*, p.191

¹⁸ Barry, *The Greek Qabalah*, p. 195

‘ μ ’ (The Macrocosm) = 1110

‘ μ ’ (The Microcosm) = 1110

and also:

‘ μ ’ (Macrocosm) = 1040

‘ μ ’ (Microcosm) = 1040

This demonstrates by mathematical analogy the Hermetic axiom “As above, so below”; that is, that the Macrocosm and the Microcosm are equal. To an uninitiated reader who encountered these phrases in a text, they would appear to be perfectly normal with no occult meaning at all. However to one who can compute the numerical values of the words and understands the system, there is hidden meaning.

Isopsephy is often confused with ‘Gematria’. While the term ‘Gematria’ is a Hebrew word,¹⁹ the earliest extant examples of the Greek alphanumeric system date from the sixth century B.C.E. and predate any Hebrew examples. The Greeks used the technique for both secular and religious purposes. In *The Greek Qabalah*, Kieren Barry :

The Greeks called this phenomenon *isopsephos* (*iso-* means “equal”; *psephos*, “pebble”), since it was common practice among the early Greeks to use patterns of pebbles or stones to learn arithmetic. Another word for pebbles (*kalkuli*) is the origin of our word “calculate”.²⁰

.....

Examples of Greek Qabalah can also be found outside of mainland Greece well before the third century C.E. in Egyptian amulets, Roman Graffiti, Gnostic philosophy, and early Christian writings. This is the earliest likely date of the first known work in Hebrew Qabalah. *The Sefer Yezirah*, or *Book of Formation*. This early work was essentially a product of the impact of Greek Gnosticism on Jewish Mysticism, and shows the influence of numerous concepts, such as the Gnostic theory of creation by emanations, the Pythagorean decad, Platonic philosophy, Ptolomaic astrology, and the four elements of Empedocles, all of which were already part of existing Greek alphabetic symbolism.²¹

The Greeks employed at least two different alphabet based numeral systems. In one, the ‘Milesian’ system, the first 10 letters represent the numbers one through ten, then the next nine represent the numbers 20 through one hundred, and finally the last eight represent the numbers 200 through 900, as such: (sampi not shown)

¹⁹ Although derived from the Greek ‘geometria’

²⁰ Kieren Barry, *The Greek Qabalah* (York Beach: Samuel Weiser 1999), p. 23-24

²¹ *ibid*, p. *xiv*

Letter	α	β	γ	δ	ε	ς	ζ	η	θ	ι	κ
Milesian	1	2	3	4	5	6	7	8	9	10	20
Ordinal	1	2	3	4	5	–	6	7	8	9	10

Letter	λ	μ	ν	ξ	ο	π	φ	ρ	σ	τ	υ
Milesian	30	40	50	60	70	80	90	100	200	300	400
Ordinal	11	12	13	14	15	16	–	17	18	19	20

Letter	φ	χ	ψ	ω
Milesian	500	600	700	800
Ordinal	21	22	23	24

For example, the name ‘ Παλλάς Ἀθήνη ’ (Pallas Athene) gives:

$$80 + 1 + 30 + 30 + 1 + 200 + 1 + 9 + 8 + 50 + 8 = 418.$$

Unless otherwise designated, the Milesian system is used to calculate the values of Greek words. In another Greek system, the ‘Ordinal’ system, each letter is assigned a number sequentially, beginning with $\alpha = 1$, through to $\omega = 24$ (The archaic letters digamma, qoppa, and sampi are not used). So that Παλλάς Ἀθήνη (Athene) gives:

$$1 + 8 + 7 + 13 + 7 = 36.$$

This paper uses (O), to designate the Greek Ordinal system.

The same technique can be applied to the English Alphabet, as shown below (using the twenty-four letter Elizabethan alphabet), A = 1, B = 2, C = 3, and so on, until Z = 24. So the name ‘Bacon’, for example, would give:

$$\text{B A C O N} \\ 2 + 1 + 3 + 14 + 13 = 33$$

Following previous Baconians, the above is called the Simple Count and it will be the default system for English words. That is, when the count is not specified, it is always assumed to be the Simple count. There are two other systems that Baconians claim Bacon used; one of which is called the Kay Count:

A	B	C	D	E	F	G	H
27	28	29	30	31	32	33	34
I	K	L	M	N	O	P	Q
35	10	11	12	13	14	15	16
R	S	T	U/V	W	X	Y	Z
17	18	19	20	21	22	23	24

In the Kay count, the letter A is assigned the number 27, so that the ‘&’ can be 25, and the Latin word ‘et’, also meaning ‘and’ can be given the number 26. So for example, the name ‘Shakespeare’ gives:

S H A K E S P E A R E
18 + 34 + 27 + 10 + 31 + 18 + 15 + 31 + 27 + 17 + 31 = 259

A third system, called the Reverse Count will also be employed, in it the numbering of the letters is reversed so that Z = 1, Y = 2, X = 3, and so on until A = 24. In this system the name ‘Bacon’ gives:

B A C O N
23 + 24 + 22 + 11 + 12 = 92.

In order to distinguish between the three systems, the abbreviations; (S), (K), and (R) will be utilized after words, i.e. 33 = Bacon (S) When needed with numbers, a small letter will be attached to the number to designate the system used to derive the number, i.e. 47r, means 47 Reverse count.

In *The Shakespearean Ciphers Examined*, William and Elizebeth Friedman evaluated the work of Frank Woodward, (one of the authors of *Francis Bacon’s Cipher Signatures*), and objected to the use of the Kay Count. They first quote from Bacon’s *Advancement of Learning* where he mentions ‘Kay-cyphars’ and then state:

There is unfortunately, an erroneous assumption at the basis of the ‘kay cipher’: the Baconians concluded that in using the term ‘kay cyphars’ Bacon had meant that the numbering of the alphabet should begin with the letter K. It is at once obvious to anyone who knows anything about cryptography that Bacon meant nothing of the kind: he was referring to key ciphers, which are systems using different alphabets, each being identified by a key-word or key-number.²²

They confirm this by citing the Latin edition of Bacon’s *Advancement* where he uses the Latin phrase “Ciphrae Claves” which means ‘key cipher’. In so stating, the Friedmans were correct. Bacon was in fact referring to key-ciphers. However, Woodward had acknowledged the very same fact in his book. Woodward wrote:

In order to distinguish the two Ciphers used in this book, the one from the other, I have ventured to call the first “The Simple Cipher” and the other “The Kay Cipher” although Bacon, by using in his Latin edition, the words “Ciphrae Clavis” probably meant “Key” Cipher rather than “K” Cipher.²³

In other words, far from deriving the origin of the Kay count from Bacon’s *Advancement*, as the Friedmans stated, Woodward had merely borrowed its name from that source. In fact, a few pages later Woodward describes how his friend W. E. Clifton

²² Elizebeth Friedman and William Friedman, *The Shakespearean Ciphers Examined* (London: Cambridge Univ. Press, 1957) p. 171

²³ Frank Woodward, *Francis Bacon’s Cipher Signatures* (London: Grafton and Co. 1923) p. 7

had deduced the use of the Kay count from a strange passage in the *Repertorie of Records* (1631) and a footnote covered by a strip of paper on pp17 of Rawley's *Resuscitato* of 1671.²⁴ A fact the Friedmans may have known, because they also refer to Clifton as the discoverer of the Kay count.²⁵ These are serious errors on the Friedman's part. Their hasty rejection of the Kay count and its connection to Bacon made it impossible for them to properly evaluate the work of Woodward and others.²⁶ The point here is not to defend all of Woodward's claims about Bacon's alleged cipher signatures, but rather to establish that the Friedman's investigation into the possible use of alphabet as number in the works of Shakespeare was compromised: in the best case scenario by sloppiness, in the worst by an outright prejudice against the legitimacy of the concept.

There are some valid concerns about the use of Isopsephy to prove authorship that were raised by the Friedmans:

... we have noticed that any amount of unsystematic manipulation (addition, subtraction, reversal of digits, addition of digits, factorization, and indiscriminate separation of totals into sums of two or more numbers) is allowed, and that there is a generous range of different counting systems (simple, reversed, kay, and short count alphabets) so that any number inconvenient in one system may well yield a promising result in another. . . .²⁷

.....
... Indeed proofs of authorship based on this kind of operation are even easier to come by than those derived from anagrams; the method is even more flexible, and it is entirely impotent to establish anything except the gullibility of those who use it. If anyone still disputes this, we shall be content with proving that we ourselves wrote the works of Bacon and Shakespeare. In Simple count 'Wm. Friedman' is represented by 100; therefore, wherever the number 100 appears (as it does frequently, according to the Baconians, since it also represents 'Francis Bacon') there exists a sign of our authorship. But in case of doubt, we have left additional clues in a different form of signature, 'Wm. & E. Friedman', which in kay cipher comes to 287 (the magic number traced so profusely as the sign of 'Fra. Rosicrosse').²⁸

These points should be addressed before going any further.

First of all, the point here is not that number counts of names alone are sufficient to establish Bacon's authorship. This paper will show his name appears in a substitution

²⁴ *ibid*, p.10

²⁵ Friedman and Friedman, *The Shakespearean Ciphers Examined*, p. 175

²⁶ Although this paper sometimes relies upon the research of Woodward and other 'Baconians', this should not be taken as an endorsement of all of their claims. Much of what they have written is spurious and unsupportable. But, because this is true of some, or even most of their claims; does not mean that it is true of all their claims. Indeed, in many cases these individuals did find things that legitimately pointed to Francis Bacon as the true author. But when more evidence was not forthcoming, the strength of their zeal often lead them to engage in 'unsystematic manipulation' of the data, or to invent things from whole cloth. Thus, when their findings were published it was very easy for their critics to point out the obvious flaws in methodology and thereby reject their conclusions.

²⁷ Friedman and Friedman, *Shakespearean Ciphers Examined*, p. 185

²⁸ *ibid*, p. 186-187

cipher in the *Sonnets* and is encoded in the *First Folio*. It will also show he used the number counts in a systematic fashion to *confirm* that the above cipher and code were intentional. On the issue of unsystematic manipulation, the reversal of digits will only be used with certain numbers, under a strict set of guidelines. The addition of the digits of the numerical equivalents to letters of names will not be utilized (i.e. Francis = 67, Bacon = 33, so $6 + 7 + 3 + 3 = 16$). Factorization, and the ‘indiscriminate separation of totals into sums of two or more numbers’ will not be used at any time, for any reason. The primary count employed is the Kay Count; the Simple Count is used on its own on only a few pages. The short-count alphabet will not be employed. The Reverse count will be used only sparingly, primarily as part of the Triple-count of names, which is explained below; in addition, only two Reverse values of names will be used, they are ‘Bacon’ (R) = 92, and ‘Athena’ (R) = 103.

On the issue of multiple systems, there is a crucial point that appears to have escaped the Friedmans’ notice. In Chapter XII they state, “There is of course, another fundamental drawback to numerological ‘proofs’: any chosen number can stand for a whole host of different names.”²⁹ While this is certainly true, Bacon seems to have solved this problem by utilizing more than one way of representing the name numerically, like combining the Simple, Kay, and Reverse counts of a given name to generate a single larger number. For example, both the name ‘Francis Bacon’ and the name ‘Wm. Friedman’ = 100s. However, their Reverse count and Kay count totals are different as shown below:

	‘Francis Bacon’	‘Wm. Friedman’	‘John Welt’
Simple	100	100	100
Kay	282	230	100
Reverse	200	150	178
Total	582	480	378

Thus using the three-count total, such as 582 or 480, differentiates between the names. Except in rare instances, each name will have a unique number.³⁰ These are very high numbers that are therefore unlikely to also be the total of any other single name or word. The Triple-count of the last names has similar characteristics:

	‘Bacon’	‘Friedman’	‘Welt’
Simple	33	67	56
Kay	111	197	82
Reverse	92	133	44
Total	236	397	182

Once again the totals are all different. Thus, if one could show a clear and un-ambiguous use of the Simple and Kay values, along with the Triple-count numbers, especially in

²⁹ *ibid*, p. 185

³⁰ For two names with the same Simple value to also have the same Reverse value, they must have the same total amount of letters. For them to have the same Kay value, they must have the same amount of letters that come from among the first nine letters of the alphabet. For them to have the same Triple-count, all of the above must be true.

conjunction with the actual name, one would be able to state with confidence that Bacon used those numbers intentionally to refer to his name. For the rest of this paper a superscript 3 after a name will be used to indicate a Triple-count value (i.e. 582 = 'Francis Bacon³').

In addition to adding the values of the first and last names together to achieve a total ($67 + 33 = 100$) and the Triple-count of the name, one could also represent a name by juxtaposing the two numbers to form a larger number, (i.e. 6733 for Francis Bacon or 4456 for John Welt). These four (or in some cases, five) digit numbers would be even more distinctive and would be impossible to confuse with the number of another name that simply added to the same sum, unless that name had exactly the same totals for both the first and last name. If Bacon used all three of the above methods of representing names, that would allow one to determine with a great deal of certainty which name was being referenced.

Since Isopsephy was itself an ancient Greek practice, it is proposed that Bacon used numbers that were already established as references to ancient Greek words and phrases. And that following the Greek example, Bacon used Isopsephy in English to derive code numbers for references to certain names, i.e. using the numbers 33, 92, 111, 236, 582, 6733, and 67033, to refer to himself;³¹ the numbers 77, 103, and 151, to refer to Athena; and the numbers 74, 103, 259, 411, 861, and 74103, to refer to his pseudonym William Shakespeare. The use of well-established numbers acts as a verifying source, like a codebook. This paper will demonstrate that Bacon twice gives his actual name in conjunction with the numbers to help verify the references to the English values. All of the numbers will be obtained by a clear and simple method, without recourse to needlessly complex calculations.

SHAKESPEARE AND NUMBERS

Nigel Davies, on his website *Shakespeare the Place 2 Be*, points out that:

- A. Only two sonnets refer to music, 8 and 128. There are 8 notes in an octave, and the chromatic scale has 12 tones, of which eight are used in a diatonic scale (12/8).
- B. Only two sonnets begin with the word 'Against', they are 49, and 63. The number 49 is 7×7 , and 63 is 7×9 , seven and nine being 'climacteric numbers'.
- C. Sonnet 75 deals with the 7 deadly sins, of which only five are mentioned (7/5).
- D. Sonnet 126 is actually not a sonnet, but a 12-line poem, arranged in 6 couplets (12/6).³²

Notice that in some of the above examples, the Author used a number such as 128, when he actually meant 12 and 8, or 75 where he meant 7 and 5.

³¹ The number 67033 is to balance or mirror the corresponding number for William Shakespeare (74103), which has five digits.

³² Nigel Davies, *The Sequencing of Shakespeare's Sonnets*
(www.geocities.com/athens/troy/4081/SonnetSequence.html)

Even orthodox literary critics recognize that the author of Shakespeare's Sonnets had an intense interest in numbers and "numerology." Katherine Duncan-Jones' introductory essay from *The Arden Shakespeare's edition of the Sonnets* is sufficiently exemplary to quote at length. In discussing the possible significance of the total number of sonnets in the sequence, Duncan-Jones writes:

. . . . The arrangement of *Shakespeare's Sonnets* appears to allude to many other number systems in addition to those based on biblical allusion.³³

Still further on she writes of Sonnet 144:

It is probably not by chance that this unpleasant dichotomization of the angelic 'man right fair' and the grossly carnal 'woman coloured ill' occurs under the figure of 144 (12 X 12), this number being popularly known as a 'gross'. It is one of many placings of individual sonnets which appear to be numerologically significant.³⁴

.....

. . . Some of these have temporal references, such as 12, "When I do count the clock that tells the time", alluding to the number of hours in a day, as in John, 11.9, 'Jesus answered, Are there not twelve hours in the day?' Sonnet 60, opening

Like as the waves make towards the pebbled shore,
So do our minutes hasten to their end,

puns on 'hour minutes', the sixty minutes which compose each of 'our' hours. Sonnet 52, with its allusion to annual 'feasts', and their 'seldom coming, in the long year set', alludes to the fifty-two weeks of a calendar year. Other numbers relate to the human lifespan. For instance, the figure 70, or 'threescore and ten', is strongly associated with the limit of a human life: it is noticeable that in 71, 'No longer mourn for me when I am dead', the speaker anticipates the aftermath of his own death. The number 63, the 'grand climacteric' 7 X 9, is traditionally associated with change and mortality. In sonnet 63 the speaker stresses his own senility and anticipates that of the youth; and in the envoi 126 (63 X 2), marking the completion of two grand climacterics, the death of the young man, also, is seen as imminent. . . .

. . . Many more numerological finesses may be discerned. For instance, the embarrassingly anatomical sonnet 20, 'A woman's face with nature's own hand painted', probably draws on primitive associations of the figure of the human body, whose digits, fingers and toes, add up to twenty.³⁵

Duncan-Jones concludes her numerological discourse by observing:

³³ *ibid.*, p. 99

³⁴ *ibid.*, p. 100

³⁵ *ibid.*, p. 100-101

Indeed, it seems that Shakespeare was *unusually inventive and ingenious* both in his deployment of numerological structure and in his symbolic use of numerical allusion.³⁶ (Emphasis added)

If all of this were not enough, the date of publication of the *Sonnets*, (1609) also appears to have been chosen for mathematical reasons, since Bacon was born in 1560, and $1609 - 1560 = 49$, which is a climacteric number.³⁷ Thus the Author's interest in, and use of numbers in myriad ways, can be firmly established

WHEN WAS THE AUTHORSHIP FIRST CHALLENGED?

Stratfordians claim that the authorship of the Shakespeare corpus wasn't challenged until the Eighteenth century. However, in *The Shakespeare Claimants* H. N. Gibson examined the Baconian Walter Begley's claim that, in their works *Satires* and *Pigmalion* the Elizabethan writers Joseph Hall in 1597 and John Marston in 1598 had fingered Bacon as the true author of the poems *Rape of Lucrece* and *Venus and Adonis*. Gibson concluded:

It follows then that only two facts can be deduced with absolute certainty from the works of Hall and Marston. They are:

- (1) That Hall believed that he had guessed the real author, or rather part-author, of some poem published under a pseudonym, but does not clearly indicate either.
- (2) That Marston believed that Hall meant Bacon as the author and *Venus and Adonis* as the poem.

Anything further takes us into the realm of surmise.

Still it must be admitted that the possibility that both writers did actually believe that Bacon was the author of the poem in question exists.³⁸

.....
It may prove that Hall and Marston were the first proponents of the Baconian theory, but it does not, and cannot, prove that the Baconian theory is true.³⁹

On this same issue, in *Who Wrote Shakespeare*, John Michell states:

Strictly speaking, Gibson was right, but Hall and Marston were not just Bacon theorists. They were Bacon's contemporaries, and their evidence disproves the Stratfordian contention that no one in Bacon's time ever hinted that he wrote any of Shakespeare's works. If as the Baconians claim, Bacon had powerful support in keeping his Shakespeare writings a secret, Hall and Marston would surely have been persecuted for letting the cat out of the bag. In fact, they were. The year after

³⁶ *ibid*, p. 101

³⁷ In 1560, (the year in which Bacon's birth is registered), England still used the Gregorian calendar, beginning the year March 25th, and making January the eleventh month, as opposed to the first. Modern sources employ the Julian calendar, with Jan. 1st as the beginning of the year. Since Bacon was born on the 22nd of Jan. this would change his birth year to 1561, and makes the date above differ from modern sources.

³⁸ H. N. Gibson, *The Shakespeare Claimants* (London: Methuen & Co. LTD. 1962), p. 64

³⁹ *ibid*, p. 65

their publication, Hall's *Satires*, Marston's *Pygmalion* and other writings were suppressed and ordered to be burnt by Archbishop Whitgift of Canterbury. There was no obvious reason for this; both satirists were respectable citizens and both became clergymen, Hall a bishop.⁴⁰

So, far from remaining "undetected for centuries," it is established that by 1597, within four years of the publication of *Venus and Adonis*, the true identity of the poet William Shake-speare was questioned in print. If one keeps in mind that the plays were published anonymously until 1598 when the Queen took exception to a scene from *Richard II*, and that only then did the name William Shake-speare begin to appear on the title pages, one can understand why the true identity of the author would still be a sensitive subject when Hall and Marston's work appeared. If that were not enough, *Venus and Adonis* was published in 1593, the year Bacon turned thirty-three years of age.⁴¹ Thirty-three is the Simple count value of the name 'Bacon'. But Bacon's first name 'Francis' equals sixty-seven, and if he wanted to complete the parallel by publishing a poem in his 67th year, he would have to wait thirty-four more years until 1627. So he conceived an ingenious idea, he published his next poem *Lucrece* in 1594, the year he turned thirty-four, because $33 + 34 = 67$. Thus the dates of publication of the first two poems published under the name Shake-speare would also mark the true identity of the author. (And as will be demonstrated later, the dates of both *Shakespeare's Sonnets* (1609) and the *First Folio* (1623) also bear a parallel relationship to the date of Bacon's birth.) It is therefore probably not a coincidence that the name Hall chose to represent the mystery writer was 'Labeo', a Roman Lawyer. For 'Labeo' also totals 33 in Simple Count, supporting the idea that Hall knew Bacon's secret and how it was disguised.

THE ORIGIN OF THE NAME WILLIAM SHAKE-SPEARE

The publishing of plays and poems under assumed names or the names of other actual people was a common occurrence in the Elizabethan era. The claim of the great Baconian William Smedley makes in *The Mystery of Francis Bacon*, that "The name William Shakespeare must have been created without reference to him of Stratford, who possibly bore or had assigned to him a somewhat similar name,"⁴² will now be examined. The first time the name 'William Shakespeare' appears in print is in 1593 as the author of *Venus and Adonis*, at which time the actor William Shakspeare was not very well known. Price writes "The name 'Shake-speare' could have been chosen to represent the Elizabethan ideal of a soldier-scholar, a chivalrous man of letters, often celebrated in the Greek Goddess Pallas Athena."⁴³ Likewise, Michell says that Baconians theorize:

Under the name Shake-speare (the spear-shaker, in Latin *hastivibrans*, an epithet of Athena, Goddess of Wisdom) Bacon chose to publish the poems and plays

⁴⁰ John Michell, *Who Wrote Shakespeare*, (London: Thames and Hudson, 1996) p.129

⁴¹ $1593 - 1560 = 33$

⁴² William T. Smedley, *The Mystery of Francis Bacon* (London: R. Banks and Son, 1912), p. 124

⁴³ Price, *Shakespeare's Unorthodox Biography*, p. 61

which, for personal and political reasons, he was unable to acknowledge as his own.⁴⁴

Ben Jonson also makes reference to Pallas Athena in the *First Folio* when he writes that Shakespeare “seems to shake a lance/ As brandish’d at the eyes of Ignorance” The idea here is that Bacon chose the name ‘Shake-speare’ to honor Athena, the Goddess of Wisdom, and patron of Drama. Returning to a point about isopsephy made earlier, Barry observed:

The Greeks called this phenomenon *isopsephos* (*iso-* means “equal”; *psephos*, “pebble”), since it was common practice among the early Greeks to use patterns of pebbles or stones to learn arithmetic. Another word for pebbles (*kalkuli*) is the origin of our word “calculate”.⁴⁵

The word for the use of alphabet as number ‘isopsephia’ could, by means of a pun on the word pebble in the Greek, be taken to mean ‘equal calculations’, or ‘balanced calculations’. The very idea of a pun itself involves a double or parallel meaning for one word or phrase. If the pseudonym William Shakespeare serves as an alter ego for Francis Bacon, then that is another double or parallel. The prevalence of punning and the use of doubles, masks, mirror images, and parallels in the work of Shakespeare, are sufficiently well established that they require no further comment. These ideas, of isopsephy, and of balanced, equal or parallel calculations, form the theme upon which the entire code system created by Bacon operates. The most common spelling used with ‘Pallas’ is (Athena).⁴⁶ It is proposed that since ‘balanced calculations’ is Bacon’s theme, he chose two spellings of Athena’s name and used them in tandem. Thus one has:

	Ordinal	Milesian
, (Athena)	30	69
, (Athene)	36	76
(Pallas Athena)	88	411
(Pallas Athene)	94	418

Since the Milesian and Ordinal values of ‘ (Athene) are 36 and 76, note that:

$$36 + 76 = 112$$

If 112 is added to the Milesian and Ordinal values of , (Athena), 30 and 69, one gets:

$$36 + 76 + 30 + 69 = 211.$$

⁴⁴ Michell, *Who Wrote Shakespeare*, p. 114-115

⁴⁵ *ibid*, p. 23-24

⁴⁶ While Barry lists five spellings of ‘Athena’, he lists only one spelling for ‘Pallas Athene’.

This means that the number 211 contains two sets of values of Athena's name paralleled. Note that 211, is 112 reversed or mirrored, which is another form of a parallel. **In addition, 211 is the Milesian value of the Greek word 'Ἴσα' (Equilibrium).**

The structure here is:

$$[36 + 76] + [30 + 69] = 211$$

$$\text{'Athene'} + \text{'Athena'} = \text{Equilibrium or balance}$$

Bacon therefore used Isopsephy (equal pebbles) to construct from Athena's name a set of balanced equations that form a numerical mirror (112-211), and add up to the Greek word for equilibrium or balance. To demonstrate how he put that into action, and why he chose 'William' as the first name for his pseudonym, below find the values of Athena's name in English:

	Simple	Kay	Reverse
Athena	47	151	103
Athene	52	155	99

The number 103 is the Reverse value of 'Athena'. It is also the Simple value of 'Shakespeare'. This means that the number 103 can serve as a sort of numerical pun (Simple value/Reverse value), or if you will, a coin with William Shakespeare on one side and Athena on the other. This relationship parallels the Shakespeare/Bacon relationship. But there is also a similar relationship in the Kay count. In that count the name 'Shakespeare' totals 411, which is also the Milesian value of 'Παλλας Αθηνα' (Pallas Athena). Two connections between the names 'Athena' and 'Shakespeare' have been established.

$$\text{'Athena'}(\text{R}) = 103 = \text{'Shakespeare'}(\text{S})$$

$$\text{'Παλλας Αθηνα'}(\text{Pallas Athena}) = 411 = \text{'William Shakespeare'}(\text{K}).$$

The above relationships are the epitome of isopsephy, and taken together form another set of 'balanced equations'. But the second equation requires the name 'William', which is why Bacon chose that particular Christian name. Lest one think that this is merely an isolated coincidence, note that adding the values of the names 'Francis' (67) and 'William' (74) to the Milesian values of 76, (Athene) and 69, (Athena) respectively, produces the following parallel:

$$67 + 76 = 143$$

$$74 + 69 = 143$$

That is to say, each of the English first names when added to a value of 'Athena' produces equivalent sums or equilibrium. (The name 'Bacon' spelled in the Greek alphabet () **has a Milesian value of 143, and 143 = 'F. Bacon' (K)**)

The aptness of 'William' is confirmed by noting that, if the English spelling 'Athena' whose Simple count value is 47 is employed, one gets this set of parallels:

Francis – 67s 76g – (Athene)

William – 74s 47s – Athena

Note that each English male name is the mirror image of a value of Athena's name, thus creating a third different sort of 'equilibrium' or balance. The preceding pun on 'equal pebbles' or 'equal calculations' parallels the framework for these structures.

As was noted earlier by the Friedmans, the name 'Francis Bacon' = 100s. This same number was also intimately associated with the Goddess Athena. The Parthenon, that acme of Greek architecture dedicated to Athena, is exactly 100 Greek feet wide. And the temple that previously occupied that spot was known as the 'Hecatompodon' or 'the hundred-footer'. The connection between 100 and Athena may have been attractive to Bacon. Combining the number 100, with the Ordinal values of her name one gets:

$$100 + 30 \text{ 'Αθηνα' (O) = 130}$$

$$100 + 36 \text{ 'Αθηνη' (O) = 136}$$

and with the English values:

$$100 + 47 \text{ 'Athena' (S) = 147}$$

$$100 + 51 \text{ 'Athene' (S) = 151}$$

Returning to the combinations of 'Francis' and 'William' with 'Athena', and 'Athene', note that if one switches which version of Athena's name is paired with the names 'Francis' and 'William', one gets:

$$67 + 69 = 136$$

$$74 + 76 = 150$$

Which is very close to:

$$100 + 36 \text{ (O) = 136}$$

$$100 + 51 \text{ Athene (S) = 151}$$

In fact, the second calculation is off by one. But if one were to substitute the number 77, for 76, one would then have:

$$67 + 69 = 136$$

$$74 + 77 = 151$$

The number 77 is allowable because Athena's Roman counterpart is Minerva (Elizabethans used the two interchangeably) and the Simple value of Minerva is:

$$M \quad I \quad N \quad E \quad R \quad V \quad A$$

$$12 + 9 + 13 + 5 + 17 + 20 + 1 = 77.$$

The Triple-count of Minerva's name would have been especially appealing to Bacon:⁴⁷

$$\text{Minerva}^3 = 77s + 98r + 155k = 330$$

330 = 'Ισον' (Equilibrium)

Another reason for using 77 is that:

$$236 \text{ 'Bacon'}^3 + 534 \text{ 'Shakespeare'}^3 = 770.$$

Finally, the count of the name 'William Shakespeare' is:

$$74 + 103 = 177$$

Thereby giving the name 'William Shakespeare' another connection to Minerva:

$$\text{'William Shakespeare'} = 177 = [100 \text{ 'Francis Bacon'} + 77 \text{ 'Minerva'}]$$

It is these properties of Minerva's name that would have made the number 77 an ideal one for Jonson to use in the epigram quoted earlier as a reference to Shakespeare/Bacon. Now in using 77, an earlier parallel is lost:

$$67 + 76 = 143$$

$$74 + 69 = 143$$

But a new formula is gained:

$$\begin{array}{r} 67 + 69 = 136 \\ 77 + 74 = 151 \\ \hline \text{Sum} \quad 144 + 143 = 287 \end{array}$$

Note that the values of the names are added in both directions to form four numbers. The above set of calculations will be referred to as the '**Root Formula**', because the code

⁴⁷ In Isopsephy numbers that are linked by a factor of ten, like 33, 330, or 3300, are connected through the root number, in this case 33.

system found in the works of Shakespeare makes constant reference to it, not only to these specific numbers; but also by analogy or metaphor. That is, the idea that the numbers one finds, will not only refer to the names of Athena, Bacon, and Shakespeare; but also will form parallel calculations that allows them to construct other numbers which will be references themselves.

That the name 'William Shakespeare' could be a pseudonym designed to pay tribute to Athena, by way of allusion (shake-spear) and isopsephy (103s, 411k) has been demonstrated. And that a set of balanced values of Athena's name form a numerical mirror (112-211), and add up to the Greek word for equilibrium or balance; which along with the ideas inherent in a pseudonym (Bacon = Shakespeare), and in isopsephy (equal pebbles), form an analogy or metaphor upon which the entire code system is based. It should be noted that the above math requires one specific spelling of the name 'William Shakespeare', a spelling that the poet and dramatist used very consistently, but that the actor never did.

THE SONNETS CIPHER

Michell stated that "If a regular and consistent cipher could be found in Shakespeare, so that anyone who was given the key could read the same message, that would decide the matter once and for all."⁴⁸ In *The Second Cryptographic Shakespeare* by Penn Leary, the author claims to have found many, many cryptograms in the plays of Shakespeare that reveal Bacon's name in various spellings. The length of a cryptogram is very important, as an English language message in a mono-alphabetic substitution cipher usually needs to be at least 25 letters long before one can preclude its appearing strictly by chance.⁴⁹ None of the cryptograms Leary claims to have found in the plays are longer than 10 letters, and thus could all simply be due to chance. Except one. The cryptogram he found concealed in the Title page and Dedication of the Aspley imprint of the 1609 *Quarto of the Sonnets*.⁵⁰ Since after 25 letters Leary's acrostic method of choosing letters becomes arbitrary, this paper will confine itself to the first 25 letters of his solution. And this portion can be shown to meet the requirements of modern standard cryptanalysis as established by the Friedmans.⁵¹ Leary states that the method of decipherment is thus:

The ciphertext letters are selected by using the last letter of each capitalized word (and a capitalized letter standing alone is to be recognized as the last letter of a capitalized word) beginning with SHAKE-SPEARES on the title page and ending with the lower case, superscripted 'r' in 'Mr.' in the Dedication. When you come to the date, '1609', enter the letters 'A F I' because these numbers represent the

⁴⁸ Michell, *Who Wrote Shakespeare?* p. 135-136

⁴⁹ Friedman and Friedman, *Shakespearean Ciphers Examined*, p.23

⁵⁰ Penn Leary, *The Second Cryptographic Shakespeare* (Omaha: Westchester House Pub., 1990) p147-150

⁵¹ "We shall only ask whether the solutions are valid: that is to say, whether the plain texts make sense, and the cryptosystem and the specific keys can be, or have been, applied without ambiguity. Provided that independent investigation shows an answer to be unique, and to have been reached by a valid means, we shall accept it, however much we shock the learned world by doing so." Friedman and Friedman, *Shakespearean Ciphers Examined*, p. 26

elementary, numerically corresponding letters of the Elizabethan alphabet (there is no letter equivalent to the number zero).⁵²

The capitalized words are as follows: Shake-speare's, Sonnets, Never, Imprinted, AT, LONDON, By, G, Eld T, T, William, Aspley, 1, 6, 9, TO, THE, ONLIE, BEGETTER, OF, THESE, INSVING, SONNETS, MR.

This produces the following string of letters: SSRDTNYGDTTMYAFIOEERFEGSR.

Leary then proposes that if one uses a twenty-one-letter alphabet: "ABCDEFHGHIKLMNOPQRSTVY" (excluding W, X, and Z), and shift the letters back four places,⁵³ so that A becomes E, one will get the following message:

OONYPIRCYPPHRSBEKAANBACON

Or "OO NYPIR CYPHRS BEKAAN BACON"

In normal English "OO Napier ciphers beacon Bacon"

The primary method for attacking mono-alphabetic ciphers is an analysis of the frequency with which the various letters of the alphabet appear. In *The Code Book*, Simon Singh writes of attempts by sixteenth century cryptographers to make their ciphers more secure:

An equally simple development was that cryptographers would sometimes deliberately misspell words before encrypting the message. **Thys haz thi ifekkt off diztaughting thi ballans off frikwenseas-** making it harder for the cryptanalyst to apply frequency analysis.⁵⁴

Phonetic or deliberately bad spelling changes the letter frequencies and makes the cryptanalyst's job harder. The words in the Sonnets cryptogram have had their spelling changed to reduce the times the letter E appears in the message from three to one, (E being the most frequently appearing letter in the English language). The response from the academic community was to ignore Leary, almost completely. One might think that at least one scholar would ask a professional cryptographer to examine the cryptogram and decipherment, but this was not the case. Donald Foster in his otherwise excellent book, *Author Unknown*, does make a disparaging reference to Leary's discovery saying, "one cryptographer of the Sir Francis Bacon party, by way of a secret decoding formula that I do not fully understand, has uncovered here an anagrammatic message that the Sonnets of Shakespeare are actually the 'CYPHRS' of 'BEEKAAN.'"⁵⁵ But there is nothing 'secret' about Leary's formula for the 25-letter solution; it is stated very clearly in his book and is perfectly within the parameters of the cryptography of the

⁵² Leary, *Second Cryptographic Shakespeare*, p.148

⁵³ One reason why shifting four places back would have appealed to Bacon is, the plaintext letter B becomes ciphertext F; and those letters are his initials.

⁵⁴ Simon Singh, *The Code Book*, (New York: Anchor Books, 1999) p. 29

⁵⁵ Donald Foster, *Author Unknown*, (New York: Henry Holt, 2000) p. 21

era. Furthermore, the message is acrostic, not anagrammatic, (the difference is important) and Leary never claims "that the Sonnets of Shakespeare are actually the "CYPPHRS" of "BEEKAAN" or anything of the sort, but at least Foster mentioned it. It seems to have mostly been ignored by orthodox scholars. Which is a little surprising, because the Stratfordian Terry Ross on his website *Shakespeareauthorship.com* has an entire section titled "The Code that Failed: Testing a Bacon Shakespeare Cipher" that purports to examine the work of Penn Leary. But Ross conveniently looks at all of Penn Leary's claims, except the *Sonnet's* front-matter cipher.

The message begins with two O's or 'ciphers', ⁵⁶ which indicate that it is double ciphered; and Napier could be a reference to John Napier, Bacon's contemporary, who invented logarithms, and the use of the period as a decimal point to separate decimal fractions. If as Leary proposed, NYPIR means Napier, what then is a Napier cipher? John Napier had no known interest in cryptography, nor is there any type of cipher that was named after him. A Napier cipher could mean a logarithmic cipher; they are used to provide security for some Internet applications. But David Kahn's encyclopedic history of Cryptography *The CodeBreakers*, doesn't even list 'logarithmic ciphers' in its index. So, why 'Nypir'? Let us return to the deciphered message. As stated earlier, the two O's could indicate that this message is double ciphered. Is it possible that another purpose of the unusual spelling was to change the number values of the words? Let's look at its values in both Kay and Simple count:

28k	103	151	136	111	= 529k
OO	NYPIR	CYPPHRS	BEKAAN	BACON	
28s	77	99	32	33	= 269s

The two numbers of the name 'Nypir' are very familiar, 103 is 'Shakespeare' (S), and 'Athena' (R); and 77 is 'Minerva' (S), so one notes that the double values of the name 'Nypir' confirm the relationship between Shakespeare and Minerva. These parallel values mean that the message is indeed double-ciphered. The name 'Napier' was deliberately spelled 'NYPIR' to give it these numerical values. With 103 as the value of 'NYPIR' the message, by use of isopsephy, can mean:

"Shakespeare ciphers beacon Bacon."

Looking first at the Kay values of the message, one finds 136 and 151, two numbers from the Root Formula. These Kay values alone confirm that this is a legitimate decipherment, since the 136 and 151 comprise part of the Root Formula. 529 is the value of the Greek word 'μηδεν', which means 'none', or 'nothing': in other words 'zero' or 'cipher.' It is inconceivable that this message containing the name 'Bacon' could bear these numbers by coincidence, because the words in the message are not spelled in the normal manner. If they were, one might be able to argue that these numerical values appear strictly by chance. But the numerical values must be attributed to this and only this particular way of spelling the words. Noting that the only correctly spelled word in

⁵⁶ The word cipher is derived from the Arabic word 'zifr' which means zero.

the message is Bacon's name, if one then subtracts the Kay and Simple values of 'Bacon', from their respective totals, one gets this set of parallels:

$$529k - 111k = 418 \text{ 'Παλλας Αθηνη' (Pallas Athene)}$$

$$269s - 33s = 236 \text{ 'Bacon'}^3.$$

In addition to the above, note that the message contains two names, and two words which are not names. Summing the Kay and Simple values of the two words that are not names: 'CYPPHRS' and 'BEKAAN', one gets:

$$136k + 151k + 99s + 32s = 418$$

This both parallels and confirms the above result. The two names found in the message are 'Bacon' and 'Nypir'. The double values of the name 'Bacon' give:

$$33s + 111k = 144$$

Which is the Simple value of 'Sir Francis Bacon' and a number from the Root Formula. The question still remains however, if it is Sir Francis Bacon or some other Bacon who is responsible for the above cryptogram, since the deciphered message gives us no first name. A vital first step has been made by demonstrating that a legitimate cipher does exist in the works of Shakespeare, and second one by showing how Isopsephy can be used to verify the results. But more verification must be provided before one can state conclusively that Sir Francis Bacon was Shakespeare.

P. 287 TRAGEDIES

Given that the Root Formula totals 287 in two different ways, it seems reasonable that this number would play a large role in any code system. In fact, it is on this page that Bacon chose to encode his full name. There are twenty-two lines of dialogue on this page that begin with a character name and go all the way to the right margin. In the second column, the last four of these lines each contain thirty-three letters, not counting the last word.⁵⁷ Below, find a table of all such lines, and the amount of letters on each line, (excluding the last word of each line):

First Column

Line # ⁵⁸	TLN #	# of Letters	Ital. Char. Ltrs.	Last Word Letters
3	486	28	3	9
9	493	34	3	6
22	507	34	3	3
25	510	31	3	5
40	525	35	3	5
Totals		162	15	28

⁵⁷ Woodward, *Francis Bacon's Cipher Signatures*, p. 72

⁵⁸ Counting down from the top of each respective column.

Second Column Section A

Line #	TLN #	# of Letters	Ital. Char. Ltrs.	Last Word Letters
2	539	36	4	3
5	542	31	4	4
7	544	35	4	5
13	550	38	4	2
15	552	41	4	1
21	558	29	4	11
26	563	40	4	1
31	568	32	4	7
34	571	39	4	2
40	577	34	4	4
43	580	36	5	4
44	581	39	5	2
46	583	39	5	2
Totals		465	54	47

Second Column Section B

Line #	TLN #	# of Letters	Ital. Char. Ltrs.	Last Word Letters
49	586	33	6	2
56	593	33	5	3
59	596	33	4	3
65	602	33	6	6
Totals		132	21	14

Thus, of the twenty-two lines of dialogue on this page that are being examined, only four of the lines contain exactly **33 letters**, (excluding the last word). The appearance of four such lines consecutively, is unlikely to be a chance occurrence. In support of this, note these calculations, to be explained below:

- (1) **465 – 132 = 333**
- (2) **54 – 21 = 33**
- (3) **47 – 14 = 33**
- (4) **54 + 47 + 21 + 14 = 136.**

That is, if one divides these lines from the second column into two sections, A-for the first thirteen lines and B- for the last four, one finds that, excluding the letters of the last words:

- 1) Section A has 333 more letters than Section B, and the number 333 turned up on p. 54 of the Histories in connection with forms of the word ‘Bacon’.
- 2) Section A’s character names have 33 more letters than Section B’s.

One also finds that:

- 3) The last words in Section A have 33 more letters than do those of Section B.
 4) The total amount of letters in both the character names and the last words of all seventeen selected lines in the second column is 136, which number and the page number 287 are part of our Root Formula. ($136 + 151 = 287$)

This means that not only are the total amount of letters in the four lines of Section B by design, but that the total amount of letters in the thirteen other lines from the second column also appear to be by design. Why was this done?

Counting from the top of the 2nd column, the four lines of Section B are:

Line 49- <i>Knight</i> . My Lord, I know not what the matter is,	[586]
Line 56- <i>Knigh</i> . I beseech you pardon me my Lord, If I bee	[593]
Line 59- <i>Lear</i> . Thou but remembrest me of mine owne Con-	[596]
Line 65- <i>Knight</i> . Since my young Ladies going into <i>France</i>	[602]

The fact that these lines contain 33 letters excluding the last words highlights the number 33, which is equal to 'Bacon' (S), and the exclusion of said last words draws our attention to them. The last four words of these lines and the catchword are: is, bee, Con-, *France*, and Sir. They can be re-arranged to form '**Sir France is bee Con**', or '**Sir Francis Bacon**'. Although these words can be re-arranged in other ways, none of those ways forms a name or a coherent sentence. At this point there can be no doubt that the individual in question is Sir Francis Bacon.

Now excluding the last words, these four lines contain 132 letters, and the character's names contain 21 letters:

132 - 21 = 111 'Bacon' (K)

The same numbers from Section A parallels this:

465 - 54 = 411 'Παλλας Αθηνα' or 'William Shakespeare' (K)

The above calculations should make indisputably clear the relationship between Francis Bacon and the names William Shakespeare and Pallas Athena.

The name "Sir Francis Bacon" has a Simple Count value of 144, and the relationship of 144 to the page number 287 has already been established. Thus even the form of Bacon's name that appears on this page appears to have been carefully chosen. One also finds that the Kay value of the words were carefully chosen:

	Sir	France	is	bee	Con-	Total
Kay Value	70	149	53	90	56	418 'Παλλας Αθηνη' Pallas Athene

This clearly re-confirms the connection between Francis Bacon and Pallas Athene, through the use of a number whose significance is anciently attested.⁵⁹ This is verified a third time by noting that the Kay value of all the words on all four selected lines is 3319, and that the Kay value of 'Sir' is 70.

$$3319 + 70 + 287 \text{ (page number)} = 3676 \text{ (36/76)}$$

The numbers 36 and 76 are the Ordinal and Milesian values of the names 'Pallas Athene'. It has been established beyond any reasonable doubt that there is a cipher and code system in the works of Shakespeare which points to Sir Francis Bacon as the true author.

CONCLUSION

"Either the wisdom of the primitive ages was very great or they were very lucky"
Sir Francis Bacon

It has been established that the authorship of William Shakspeare of Stratford is not based on the solid historical evidence that is normally used to verify provenance. That instead it rests primarily on title page attributions and statements in the *First Folio*, both of which could easily be false. It has also been demonstrated that there are no personal contemporary references that would serve to establish Shakspeare as a writer. This is despite the fact that his life has been researched more thoroughly than any other writer. Evidence has been presented to prove that Bacon was suspected of writing *Venus and Adonis* and the *Rape of Lucrece* as early as 1598. It has been shown that Ben Jonson wrote statements that can be taken to mean that Francis Bacon wrote the work attributed to Shakspeare. The name William Shakespeare has been shown to be a pseudonym constructed by Francis Bacon for the purposes of honoring Pallas Athene. It has been demonstrated that Bacon used ciphers to conceal his name in the works of Shakespeare. These ciphers include a steganographic cryptogram in the *Sonnets* Title page and Dedication, and a phonetic anagram on p. 287 of the Tragedies in the *First Folio*. It has also been shown that Bacon used Isopsephy to construct a system of numerical codes based on a unifying analogy that refers to the names of Pallas Athene, Francis Bacon and William Shakespeare. The code numbers confirm that the ciphers are a valid part of a larger system, and eliminate any chance of the ciphers being due to coincidence. For example, the Kay value of the words 'CYPHRS BEKAAN' from the *Sonnets'* cryptogram is 151, and 136. These two numbers add up to 287, which is the page number where Bacon's name is encoded in the *First Folio*. The Simple and Kay values of 'CYPHRS BEKAAN' are 151, 99, 136, and 32. These four numbers total 418, which is the value of the name 'Pallas Athene' (Pallas Athene) and the Kay value of the words; 'Sir', 'France', 'is', 'bee', and 'Con', which are found on p. 287 and combine to form the name 'Sir Francis Bacon'. The name 'Sir Francis Bacon' has a Simple value of 144, which is the total of the Kay and Simple values of the name 'Bacon' found in the cryptogram. The remaining word in the cryptogram, 'NYPIR' equals 77s, which is also the value of 'Minerva' (S). 'NYPIR' also equals 103k, which is also the value of 'Shakespeare' (S), and 'Athena' (R). These two numbers (77, 103) when added to the

⁵⁹ Barry, *The Greek Qabalah*, p. 232

Triple-count numbers of the names ‘William Shakespeare’ (861) and ‘Francis Bacon (582), give the equation $77 + 103 + 582 + 861 = 1623$, which is the year the *First Folio* was published. The above evidence proves unequivocally that Sir Francis Bacon is the true author of the body of plays and poems generally attributed to William Shakspeare of Stratford-on-Avon. It should be manifestly obvious at this point that had Bacon merely desired to indicate his authorship, he could have done so with a few simple ciphers. Why then would he go through so much time and trouble to construct such a complex superstructure? One answer is that he wanted the world to know that he could. That is, he wanted to display that his facility with numbers was the equal of his facility with words. There could be another deeper reason. Many of the techniques Bacon used in his system are associated historically with the Pythagoreans, whose motto was “all is number.” That is, that the entire universe could be understood in terms of numbers *and their relationships*. Earlier the Hermetic axiom: “As above, so below,” was introduced. One of the meanings of this phrase is that the Microcosm is equal to the Macrocosm, or in plain English: that the universe is scalar. The point here that the ancients understood that the universe was scalar and that it could be represented with numbers and their relationships. Those relationships are expressed in math as proportions and ratios. Indeed, any scalar system is all about proportions. Since the Greek word ‘Logos’ can also mean ‘ratio’ or ‘proportion’, as well as ‘word’, and the Logos was understood in Neo-Platonic philosophy to be an intermediating force, the Hermetic (or Gnostic) meaning of the Discourse of the Logos in the Gospel of John has been discovered. That there is esoteric wisdom hidden in the Bible and especially the New Testament (which is written almost entirely in Greek) has always been alleged. A full exploration of the implications of the preceding statements is unfortunately outside the scope of this paper, which merely intends to prove Bacon’s authorship of the Shakespearean canon. It does appear however, that Bacon wanted to praise the Creator by employing the highest and most sincere form of flattery, imitation. So he displayed his understanding of Hermetic wisdom by creating a system (a microcosm) that paralleled the workings of the universe (the Macrocosm). Since the numerical understanding of the world was considered to be a deeply guarded secret (hidden even by the Creator), Bacon maintained the exoteric and esoteric structure of the physical universe in his own life’s work. Returning now to the Root Formula:

$$\begin{array}{r} 67 + 69 = 136 \\ 77 + 74 = 151 \\ \hline 144 + 143 = 287 \end{array}$$

Previously, the numbers were added horizontally and vertically, but not diagonally. Doing so now, one finds that:

$$67 + 74 = 141 \text{ ‘Franciscus Bacon’}^{60}$$

$$77 + 69 = 146 \text{ ‘ } \mu \text{ ’ (Drama or Plays)}$$

⁶⁰ Bacon’s birth was registered under this name.

At this point, it must be acknowledged that Sir Francis Bacon was clearly too clever for words.

"If this be error and upon me prov'd/ I never writ, nor no man ever loved"

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