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## **4in1**

Mask of Shakespeare  
Mysteries of Bacon  
Book by Cartier  
Secrets of the NSA

*Second edition, 2023*

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4in1. Mask of Shakespeare and Mysteries of Bacon, Book by  
Cartier and Secrets of the NSA

*2nd edition, revised and expanded. 2023*

*Translated from Russian*

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In the foundations of cryptography as a solid scientific computer-mathematical discipline there lies a big Mystery of the occult-mystical sense.

By a long-standing tradition, it is forbidden to talk about this Mystery.

But by whom it is forbidden and on what grounds, actually, no one knows...

# Table of Contents

<b>Foreword.....</b>	<b>4</b>
<b>Introduction.....</b>	<b>7</b>
Shakespearean Mythology.....	8
If The Case Reaches Court.....	26
The Secrets of The Cryptographic Grave.....	38
<b>The Problem of Cryptography and History.....</b>	<b>87</b>
General Cartier, “The Problem of Cryptography and History”. 88	
The Secret Autobiography of Francis Bacon.....	100
Bacon’s Cipher and Confirmation of Correctness of its Decryption.....	120
The New Document.....	132
Bacon and Shakespeare: Anatomy of Deception.....	164
Bacon, Rosicrucians and Levitation.....	182
Bacon and Pauli.....	204
Bacon and Magic.....	220
Bacon and Tempest.....	238
Concealing the Truth.....	264
Message to the Decipherers.....	298
The problem of Shakespearean authorship as an OSINT task.....	316
<b>Conclusion. Mystical and Simply Intriguing Coincidences.....</b>	<b>347</b>
Bacon as Shakespeare. Keys and hints from William Friedman.....	348
Philosopher or clown? (Bacon is back... ).....	368
Post Scriptum, or The New Beginning.....	374

# Foreword

From the fall of 2020 to the spring of 2022, a very strange and astonishing work emerged spontaneously, created without any plans or preliminary thoughts.

First, a kind person got hold of an extremely rare book, digitized it and sent it to me as a surprise or a gift.

Soon afterwards, scientific-mystical investigations and the accompanying findings of little-known documents and facts in a natural way began to occur around the chapters of this book. All this work gradually developed into a series of interconnected publications with interim reports. Which eventually led the research to its completed form.

It's important to note, that during all the long time of debate around the topic disclosed here, only three detailed works from professionals in military intelligence cryptology have appeared.

The first book was published in 1938 by Reserve General François Cartier, the head of the cryptographic service of the French military forces during WWI.

The second book was published by Lieutenant Colonel William Friedman in 1957, in collaboration with his wife. During WWII he was the chief cryptanalyst of the U.S. Army, in the post-war period acted as a special assistant to the director of the NSA, and after death became an icon, nowadays revered as “the father of American cryptology.”

Finally, as for the third book of this short series, published in parts during 2020-2022 on the *kiwi arXiv* website<sup>1</sup>, that's exactly what is now in front of your eyes. At the end of the last century its author was a colonel, cryptographer and analyst in one of Russian special services, and all the subsequent years of current century has been

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<sup>1</sup> <https://kiwibyrd.org>

doing about the same things as in intelligence, just as a freelance journalist.

The strangest thing here is probably the structure of this work, consisting of multiple books nested within one another. It came out a book about returning to this world a significantly different, very rare and deliberately hidden from everyone other book, which tells about the old third books, where the fourth book — a book about important secrets of history and science that have not been disclosed up to this day — is encrypted in parts.

The most amazing thing here is not even how bizarre the path of reaching the inmost mysteries is, but what will happen to this whole story further...

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The second edition of the book, expanded with chapters of Introduction and Conclusion, gives a more comprehensive view of the whole story. Or otherwise, talks about what else notable happened before, during and after finishing of the main work.

All texts of the Introduction, Conclusion and the book itself were initially articles of journalistic investigations published in the period 2001-2022. For this reason, a number of facts and ideas are repeated in the final work many times and in different contexts. Seeing the importance of these things, however, this shouldn't be considered a defect, but a feature of the book.



# Introduction

# Shakespearean Mythology

The story of the myth about Shakespeare, as the author of Shakespeare's works, contains many truly strange and surprising things. For example, how long and safely can mass delusion exist in the minds in the complete absence of evidence that can support it. Especially, how stubbornly and energetically people reject reliable facts that prove the falsity of their determined views.



William Shakespeare was born in 1564 and died in 1616. These are the few indisputable facts known about this person documented and historically quite reliable. Well, from the same undoubted facts follows, that in spring 2021 no “anniversaries” connected to Shakespeare’s biography can be found.

Nevertheless, in May 2021, one after another, three English popular science magazines devoted their colorful articles to Shakespeare’s work, his prominent place in history and his, surrounded by many secrets, biography<sup>2</sup>. Traditionally, in each of these articles

<sup>2</sup> **Tudors. The complete guide to Britain’s most iconic dynasty**, 3rd edition, 2021  
**History of Royals. The Tudors**, issue 58, 2021  
**BBC History Revealed**, issue 94, May 2021

the absence of facts is largely veiled with varied speculations of Shakespeare scholars and the rich imagination of illustrators.

Here, on the contrary, you won't find any speculation or fantasies about what could have caused this Shakespearean blast. Wasn't it provoked by a project initiated on the *kiwi arXiv* website to bring back to life a unique but long-forgotten book by a cryptographer General Cartier, revealing the secret autobiography of Francis Bacon?

Instead, we offer something completely different.

A quarter of a century ago, in 1997, the publishers of the *Baconiana* almanac, produced in England by The Francis Bacon Society, decided to revive another forgotten book. Partly autobiographical, partly satirical, and in general historical and literary work of the famous Mark Twain named *Is Shakespeare dead???*. It was published in 1909 and became the last book released during the life of the writer.

For reasons that will become clear later along with reading the fragment of this book, it is not customary for the Collected Works of Twain to include it. However, here, following the publishers of *Baconiana*, nothing prevents us from posting the appropriate fragment published in the almanac (pp. 12-20).

*(Since historians don't have a single indisputable picture of Shakespeare made during his lifetime, all the illustrations introduced below — №2, №3, №6 — are only the fruits of the creative imagination of painters.)*

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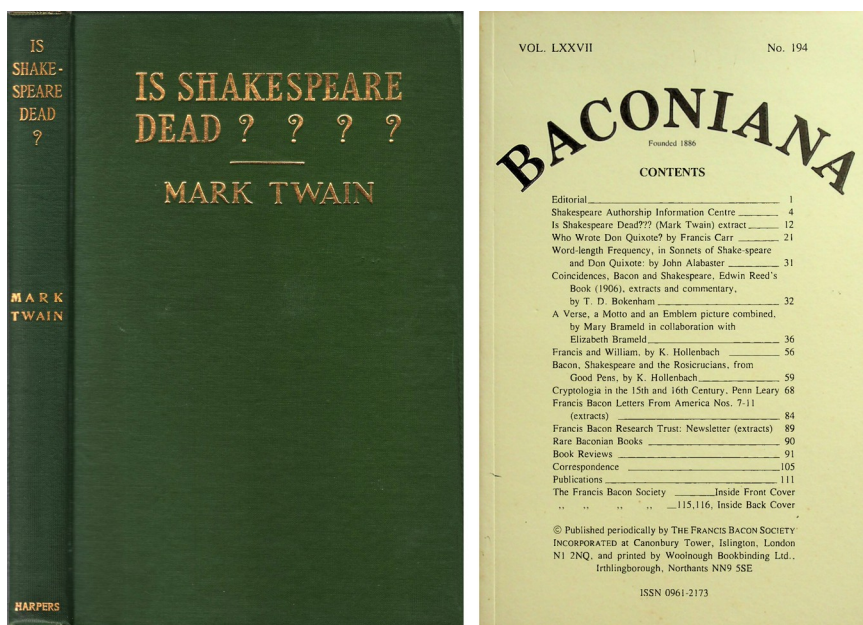


Fig. 1. On the left: a cover of Mark Twain's book.  
On the right: *Baconiana*, Volume LXXVII, №194 (1997)

## Is Shakespeare Dead???

### By MARK TWAIN

How curious and interesting is the parallel — as far as poverty of biographical details is concerned — between Satan and Shakespeare. It is wonderful, it is unique, it stands quite alone, there is nothing resembling it in history, nothing resembling it in romance, nothing approaching it even in tradition. They are the best known unknown persons that have ever drawn breath upon the planet.

For the instruction of the ignorant I will make a list, now, of those details of Shakespeare's history which are facts — verified facts, established facts, undisputed facts.

## Facts

He was born on the 23<sup>rd</sup> of April, 1564. Of good farmer-class parents who could not read, could not write, could not sign their names.

At Stratford, a small back settlement which in that day was shabby and unclean, and densely illiterate. Of the nineteen important men charged with the government of the town, thirteen had to 'make their mark' in attesting important documents, because they could not write their names.

Of the first eighteen years of his life *nothing* is known. They are a blank.

On the 27<sup>th</sup> of November (1582) William Shakespeare took out a licence to marry Anne Whateley.

Next day William Shakespeare took out a licence to marry Anne Hathaway. She was eight years his senior.

William Shakespeare married Anne Hathaway. In a hurry. By grace of a reluctantly-granted dispensation there was but one publication of the banns.

Within six months the first child was born.

About two (blank) years followed, during which period *nothing at all happened to Shakespeare*, so far as anybody knows.

Then came twins — 1585. February.

Two blank years follow.

Then — 1587 — he makes a ten-year visit to London, leaving the family behind.

Five blank years follow. During this period nothing happened to him, as far as anybody actually knows.



Fig. 2. Shakespeare reads 'Hamlet' to his family

Then — 1592 — there is mention of him as an actor.

Next year — 1593 — his name appears in the official list of players.

Next year — 1594 — he played before the Queen. A detail of no consequence: other obscurities did it every year of the forty-five years of her reign. And remained obscure.

Three pretty full years follow. Full of play-acting. Then:

In 1597 he bought New Place, Stratford.

Thirteen or fourteen busy years follow; years in which he accumulated money, and also reputation as actor and manager.

Meantime his name, liberally and variously spelt, had become associated with a number of great plays and poems, as (ostensibly) author of the same.

Some of these, in these years and later, were pirated, but he made no protest.



Fig. 3. A 19th-century painting depicts Shakespeare reading his work to Queen Elizabeth I.

Then — 1610-1611 — he returned to Stratford and settled down for good and all, and busied himself in lending money, trading in tithes, trading in land and houses; shirking a debt of forty-one shillings, borrowed by his wife during his long desertion of his family; suing debtors for shillings and coppers; being sued himself for shillings and coppers; and acting as confederate to a neighbour who tried to rob the town of its rights in a certain common, and did not succeed.

He lived five or six years — till 1616 — in the joy of these elevated pursuits. Then he made a will, and signed each of its three pages with his name.

A thoroughgoing business man's will. It named in minute detail every item of property he owned in the world — houses, lands, sword, silver-gilt bowl, and so on — all the way down to his 'second-best bed' and its furniture.

It carefully and calculatingly distributed his riches among the members of his family, overlooking no individual of it. Not even his wife: the wife he had been enabled to marry in a hurry by ur-

gent grace of a special dispensation before he was nineteen; the wife whom he had left husbandless so many years, the wife who had had to borrow forty-one shillings in her need, and which the lender was never able to collect of the prosperous husband, but died at last with the money still lacking. No, even this wife was remembered in Shakespeare's will.

He left her that 'second-best bed.'

And *not another thing*; not even a penny to bless her lucky widowhood with.

It was eminently and conspicuously a business man's will, not a poet's.

It mentioned not a *single book*.

Books were much more precious than swords and silver-gilt bowls and second best beds in those days, and when a departing person owned one he gave it a high place in his will.

The will mentioned *not a play, not a poem, not an unfinished literary work, not a scrap of manuscript of any kind*.

Many poets have died poor, but this is the only one in history that has died *this* poor; the others all left literary remains behind. Also a book. Maybe two.

He signed the will in three places.

In earlier years he signed two other official documents.

These five signatures still exist.

There are *no other specimens of his penmanship in existence*. Not a line.

Was he prejudiced against the art? His granddaughter, whom he loved, was eight years old when he died, yet she had had no teaching, he left no provision for her education although he was rich,

and in her mature womanhood she couldn't write and couldn't tell her husband's manuscript from anybody else's — she thought it was Shakespeare's.

When Shakespeare died in Stratford *it was not an event*. It made no more stir in England than the death of any other forgotten theatre-actor would have made. Nobody came down from London; there were no lamenting poems, no eulogies, no national tears — there was merely silence, and nothing more. A striking contrast with what happened when Ben Jonson, and Francis Bacon, and Spenser, and Raleigh and the other distinguished literary folk of Shakespeare's time passed from life! No praiseful voice was lifted for the lost Bard of Avon; even Ben Jonson waited seven years before he lifted his.

*So far as anybody knows and can prove*, he never wrote a letter to anybody in his life.

*So far as any one knows, he received only one letter during his life.*

*So far as anyone knows and can prove*, Shakespeare of Stratford wrote only one poem during his life. This one is authentic. He did write that one, a fact which stands undisputed; he wrote the whole of it. He commanded that this work of art be engraved upon his tomb, and he was obeyed. There it abides to this day; This is it:

*Good friend for Jesus sake forbear  
To digg the dust enclosed heare:  
Blest be ye man yt spares thes stones  
And curst be he yt moves my bones.*

In, the list as above set down, will be found *every positively known fact* of Shakespeare's life, lean and meagre as the invoice is. Beyond these details we know *not a thing* about him. All the rest of his vast history, as furnished by the biographers, is built up, course upon course, of guesses, inferences, theories, conjectures — an Eiffel Tower of artificialities rising sky-high from a very flat and very thin foundation of inconsequential facts.

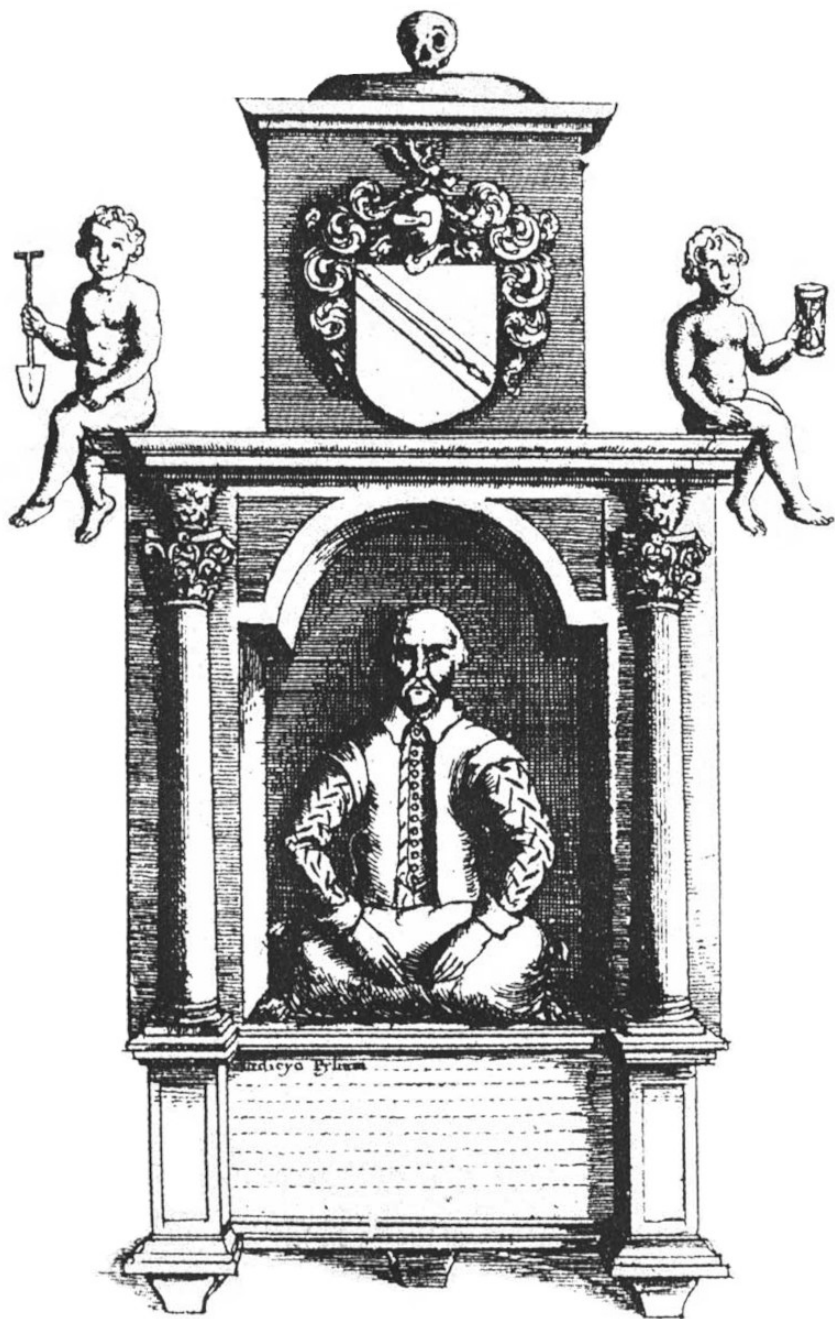


Fig. 4. The tombstone of Shakespeare in Stratford, as it appeared in the 1656 guidebook (holding a bag or pillow to his stomach).



Fig. 5. The same monument now, as it looks after a series of restorations in the 18-20<sup>th</sup> centuries.

## Conjectures

The historians ‘suppose’ that Shakespeare attended the Free School in Stratford from the time he was seven years old ’til he was thirteen. There is no evidence in existence that he ever went to school at all.

The historians ‘infer’ that he got his Latin in that school — the school which they ‘suppose’ he attended.

They ‘suppose’ his father’s declining fortunes made it necessary for him to leave the school they supposed he attended, and get to work and help support his parents and their ten children. But there is no evidence that he ever entered or retired from the school they suppose he attended.

They ‘suppose’ he assisted his father in the butchering business; and that, being only a boy, he didn’t have to do full-grown butchering, but only slaughtered calves. Also, that whenever he killed a calf he made a high-flown speech over it. This supposition rests upon the testimony of a man who wasn’t there at the time; a man who got it from a man who could have been there, but did not say whether he was or not; and neither of them thought to mention it for decades, and decades, and decades, and two more decades after Shakespeare’s death (until old age and mental decay had refreshed and vivified their memories). They hadn’t two facts in stock about the long-dead distinguished citizen, but only just the one: he slaughtered calves and broke into oratory while he was at it. Curious. They had only one fact, yet the distinguished citizen had spent twenty-six years in that little town — just half his lifetime. However, rightly viewed, it was the most important fact, indeed almost the only important fact, of Shakespeare’s life in Stratford. Rightly viewed. For experience is an author’s most valuable asset; experience is the only thing that puts the muscle and the breath and the warm blood into the book he writes. Rightly viewed, calf-butchering accounts for *Titus Andronicus*, the only play — ain’t it? — that the Stratford Shakespeare ever wrote; and yet is the only one everybody tries to chouse him out of, the Baconians included.

The historians find themselves ‘justified in believing’ that the young Shakespeare poached upon Sir Thomas Lucy’s deer preserves and got hauled before the magistrate for it. But there is no shred of respectable evidence that anything of the kind happened.



Fig. 6. Young Shakespeare before Sir Thomas Lucy after his arrest for poaching deer

The historians, having argued the thing that might have happened into the thing that did happen, found no trouble in turning Sir Thomas Lucy into Mr. Justice Shallow. They have long ago convinced the world — on surmise and without trustworthy evidence — that Shallow is Sir Thomas.

Shakespeare pronounced *Venus and Adonis* ‘the first heir of his invention,’ apparently implying that it was his first effort at literary composition. He should not have said it. It has been an embarrassment to his historians these many, many years. They have to make him write that graceful and polished and flawless and beautiful poem before he escaped from Stratford and his family — 1586 or ’87 — age, twenty-two, or along there; because within the next five years he wrote five great plays, and could not have found time to write another line.

It is sorely embarrassing. If he began to slaughter calves, and poach deer and rollick around, and learn English, at the earliest likely moment — say at thirteen, when he was supposedly wrenched from that school where he was supposedly storing up Latin for future literary use — he had his youthful hands full, and much more than full. He must have had to put aside his Warwickshire dialect, which wouldn't be understood in London, and study English very hard. Very hard indeed; incredibly hard, almost, if the result of that labour was to be the smooth and rounded and flexible and letter-perfect English of the *Venus and Adonis* in the space of ten years; and at the same time learn great and fine and unsurpassable literary form.

However, it is 'conjectured' that he accomplished all this and more, much more: learned law and its intricacies, and the complex procedure of the law courts; and all about soldiering, and sailing, and the manners and customs and ways of royal courts and aristocratic society; and likewise accumulated in his one head every kind of knowledge the learned then possessed, and every kind of humble knowledge possessed by the lowly and the ignorant; and added thereto a wider and more intimate knowledge of the world's great literatures, ancient and modern, than was possessed by any other man of his time — for he was going to make brilliant and easy and admiration-compelling use of these splendid treasures the moment he got to London. And according to the surmises, that is what he did. Yes, although there was no one in Stratford able to teach him these things, and no library in the little village to dig them out of. His father could not read, and even the surmises surmise that he did not keep a library.

It is surmised by the biographers that the young Shakespeare got his vast knowledge of the law and his familiar and accurate acquaintance with the manners and customs and shop-talk of lawyers through being for a time the *clerk of a Stratford court*; just as a bright lad like me, reared in a village on the banks of the Mississippi, might become perfect in knowledge of the Bering Strait whalefishery and the shop-talk of the veteran exercisers of that adventure-bristling trade through catching catfish with a 'trot-line' Sundays. But the surmise is damaged by the fact that there is *no*

evidence and not even a tradition — that the young Shakespeare was ever clerk of any court.

He had to acquire a knowledge of war at the same time; and a knowledge of soldier-people and sailor-people and their ways and talk; also a knowledge of some foreign lands and their languages: for he was daily emptying fluent streams of these various knowledges, too, into his dramas. How did he acquire these rich assets?

In the usual way: by *surmise*. It is surmised that he travelled in Italy and Germany and around, and qualified himself to put their scenic and social aspects upon paper; that he perfected himself in French, Italian and Spanish on the road; that he went in Leicester's expedition to the Low Countries, as soldier or subtler or something, for several months for years — or whatever length of a time a surmise needs in his business — and thus became familiar with soldiership and soldier-ways and soldier-talk, and generalship and general-ways and generaltalk, and seamanship and sailor-ways and sailor-talk.

Right soon thereafter he became a stockholder in two theatres and manager of them. Thenceforward he was a busy and flourishing business man, and was raking in money with both hands for twenty years. Then in a noble frenzy of poetic inspiration he wrote his one poem — his only poem, his darling — and laid him down and died:

*Good friend for Jesus sake forbear  
To digg the dust enclosed heare:  
Blest be ye man yt spares thes stones  
And curst be he yt moves my bones.*

He was probably dead when he wrote it. Still, this is only conjecture. We have only circumstantial evidence. Internal evidence.

Shall I set down the rest of the Conjectures which constitute the giant Biography of William Shakespeare? It would strain the Unabridged Dictionary to hold them. He is a Brontosaur: nine bones and six hundred barrels of plaster of paris.

## We May Assume

In the Assuming trade three separate and independent cults are transacting business. Two of these cults are known as the Shakespearites and the Baconians, and I am the other one — the Brontosaurian.

The Shakespearite knows that Shakespeare wrote Shakespeare's Works; the Baconian knows that Francis Bacon wrote them; the Brontosaurian doesn't really know which of them did it, but is quite composedly and contentedly sure that Shakespeare *didn't*, and strongly suspects that Bacon *did*. We all have to do a good deal of assuming, but I am so fairly certain that in every case I can call to mind the Baconian assumers have come out ahead of the Shakespearites. Both parties handle the same materials, but the Baconians seem to me to get much more reasonable and rational and persuasive results out of them than is the case with the Shakespearites.

Let me try to illustrate the two systems in a simple and homely way calculated to bring the idea within the grasp of the ignorant and unintelligent. We will suppose a case: take a lap-bred, house-fed, uneducated, inexperienced kitten; take a rugged old Tom that's scarred from stem to rudder-post with the memorials of strenuous experience, and is so cultured, so educated, so limitlessly erudite that one may say of him 'all cat-knowledge is his province'; also, take a mouse. Lock the three up in a holeless, crackless, exitless prison-cell. Wait half an hour, then open the cell, introduce a Shakespearite and a Baconian, and let them cipher and assume. The mouse is missing: the question to be decided is, where is it? You can guess both verdicts beforehand. One verdict will say the kitten contains the mouse; the other will as certainly say the mouse is in the tomcat.

The Shakespearite will Reason like this — (that is not my word, it is his). He will say the kitten *may have been* attending school when nobody was noticing; therefore *we are warranted in assuming* that it did so; also, *it could have been training* in a court-clerk's office when no one was noticing; since that could have happened, *we are*

*justified in assuming that it did happen; it could have studied catology in a garret when no one was noticing — therefore it did; it could have attended cat-assizes on the shedroof nights, for recreation, when no one was noticing, and harvested a knowledge of cat court-forms and cat lawyer-talk in that way: it could have done it, therefore without a doubt it did; it could have gone soldiering with a war-tribe when no one was noticing, and learned soldierwiles with a war-tribe when no one was noticing, and learned soldierwiles and soldier-ways, and what to do with a mouse when opportunity offers; the plain inference, therefore is, that that is what it did. Since all these manifold things could have occurred, we have every right to believe they did occur. These patiently and painstakingly accumulated vast acquirements and competences needed but one thing more — to convert themselves into triumphant action. The opportunity came, we have the result; beyond shadow of question the mouse is in the kitten.*

It is proper to remark that when we of the three cults plant a “*We think we may assume,*” we expect it, under careful watering and fertilizing and tending, to grow up into a strong and hardy and weather-defying “*there isn’t a shadow of a doubt*” at last — and it usually happens.

We know what the Baconian’s verdict would be: “*There is not a rag of evidence that the kitten has had any training, any education, any experience qualifying it for the present occasion, or is indeed equipped for any achievement above lifting such unclaimed milk as comes its way; but there is abundant evidence — unassailable proof, in fact — that the other animal is equipped, to the last detail, with every qualification necessary for the event. Without shadow of doubt the tomcat contains the mouse.*”

[ End of quotation ]

The facts of this story show that after the release of Mark Twain's book, namely for a period of over a century, numerous Shakespeare scholars haven't been succeed to find a single new fact or evidence convincingly confirming that Shakespeare was the author of works signed by his name.

On the other hand, during the same period, other researchers presented an impressive number of new convincing documents and facts proving the authorship of Francis Bacon.

And how is this interesting situation reflected in the current articles by Shakespeare scholars published in three recent journals in May 2021? Supremely originally. None of these articles mention Francis Bacon at all. Nowhere and never.

A very effective way to solve problems...

## Main Sources

- *Is Shakespeare Dead???* (Mark Twain) extract. *Baconiana*, Vol LXXVII, No 194 (1997), pp 12-20.
- “William Shakespeare: Your essential guide to...” (pp 28-58) BBC History Revealed, May 2021
- “William Shakespeare: Uncover the works and life of the Bard. Everything You Need To Know About...” The Tudors (AHB3503) Bookazine Series by Future PLC, May 2021
- “Shakespeare: Plays and Politics. Book of the Tudors. History of Royals,” Bookazine Series by Future PLC. Issue 58, May 2021

## Additional Reading

- “Lenin-Mushroom from Shakespearean Library” (*rus.*) <https://kiwibyrd.org/2019/05/31/1954/>

*May 2021*

## If The Case Reaches Court...

“My body to be buried obscurely. For my name and memory, I leave it to men’s charitable speeches, and to foreign nations, and to the next ages ***and to my own countrymen after some time had elapsed***<sup>3</sup>”...

The mysterious words put into the epigraph are very poorly combined with the biography and work of Francis Bacon (1561-1626), who was one of the smartest persons of his time and author of more than 20 works published and recognized by his contemporaries during the lifetime of this philosopher and prominent statesman.

But the vague hints of the will become much clearer if we recall the centuries-long disputes about the true author of the works that are attributed to Bacon’s contemporary William Shakespeare (1554-1616).

To date more than enough facts and arguments have been collected for an objective rehabilitation of historical justice. However, the traditional point of view is already supported by such a gigantic heap of works from literature specialists, that a radical change of the author would mean, in fact, a catastrophe for many scientific authorities.

Therefore, we can’t count on a solving the problem in an honest scientific dispute. Unless through the court with the involvement of the harsh methods of examination adopted by the justice system.

In this regard, it is relevant to recall a rather comical story from the beginning of the 20<sup>th</sup> century about a trial in Chicago. Local judge Richard Tuthill delved into the arguments of the parties and, by his verdict, declared Francis Bacon the author of all Shakespearean works<sup>4,5,6,7</sup>.

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<sup>3</sup> “That portion appearing in italics Bacon deleted from his will, apparently fearing that he had said too much.” Manly P. Hall. *The Secret Teachings Of All Ages*. 1928

<sup>4</sup> <https://sirbacon.org/links/nytimes.html>



Fig. 7. Sir Francis Bacon. Painting by John Vanderbank

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<sup>5</sup> <https://www.nytimes.com/1916/03/10/archives/rich-men-in-court-over-shakespeare-film-magnate-enjoins-fabian-from.html>

<sup>6</sup> <https://www.nytimes.com/1916/04/22/archives/finds-shakespeare-was-an-impostor-chicago-judge-rules-that-bacon.html>

<sup>7</sup> <https://www.nytimes.com/1916/04/23/archives/defends-bacon-decision-chicago-jurist-sharply-criticised-insists-he.html>

A little later, though, he got a thrashing from higher authorities for that. They regarded such literary historical outrage as exceeding the powers of an ordinary judge<sup>8,9</sup>.

Since the arguments accumulated by researchers during the 19-20<sup>th</sup> centuries are of undoubted scientific interest, let's consider at least some of them in order to get a general idea of the essence of the problem and, by the way, see some of the arguments proposed in the memorable trial in Chicago.

## Biography Facts

There is very little evidence of Shakespeare's life, but they are quite telling.

It is known that the parents of the greatest writer couldn't read, which, however, was natural with their humble origins. But Shakespeare's children also couldn't read, which causes some bewilderment.

There is not a single documentary evidence that Shakespeare himself could write at least a little fluently. No manuscripts of his plays or poems have been found, not even business papers, despite the fact that in Stratford, his hometown, he was known not as a writer, but as a businessman.

Remind that the young Shakespeare came to London practically dog-poor and after a successful career in the capital's theaters, many years later he returned to Stratford as a fairly wealthy merchant.

Shakespeare was known as an extremely tight-fisted man, he harassed business partners even for penny debts. In his will, he scrupulously, down to cups and vases, does detail to whom what household items he leaves, but writes not a word about his literary

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<sup>8</sup> <https://www.nytimes.com/1916/05/02/archives/to-vacate-bacon-decision-chicago-court-takes-action-after-collusion.html>

<sup>9</sup> <https://www.nytimes.com/1916/05/03/archives/tuthill-rescinds-shakespeare-edict-sets-verdict-for-bacon-aside-and.html>

works, most of which have not even been published yet. There is nothing in the will about any books, of any authors, it's obvious that there were simply no books in Shakespeare's house.

It was customary to dedicate epitaphs to famous people. For example, when dramatist Ben Jonson, who was Shakespeare's colleague and friend in London, died, at least 37 epitaphs were dedicated to him. And when Shakespeare died, not a single poem appeared. No one reacted, except for his son-in-law, who added a line telling that his father-in-law passed away in his personal notes.

In general, all the facts indicate that Shakespeare died as the most ordinary merchant in a quiet provincial town. In fact, the glory of the great writer begins only seven years later. Just in 1623 in London was prepared a canonical set of works by William Shakespeare, the so-called First Folio.

Shakespeare's plays and poems were published before, too. At first it was anonymous and, by the way, the grasping author made no effort to restore his rights to these books. Then they were published in relatively small "quarto" formats. But it was the First Folio that became the foundation of the world fame of the genius, and it is the edition, published during the life of Francis Bacon, that provides most of the evidence pointing to the true author.

## Stylistic and Textological Analysis

*Merry Wives of Windsor*, *Henry IV* (parts 2 and 3), *King John*, *Richard III* and *Othello* in the First Folio have about 4479 new lines added<sup>10</sup>. That is after these plays had already been published in the "quarto" editions, produced 3 to 6 years after Shakespeare's death.

In other words, some unknown person added about 4500 lines of himself seven years after the death of a genius. And he copied the style of the author with such skill, that there is no way to distinguish these additions from the original text.

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<sup>10</sup> <https://sirbacon.org/costyle.htm>

It's generally accepted that the average craftsman or farmer uses about 500 words in his vocabulary, an educated business person about 3000, an average writer — about 5000 words, and a great scientist — 7000 words.

There are 21000 words in Shakespeare's poems and plays, and such a gigantic lexicon is unusual for any other famous author, with one exception. Only the works of Francis Bacon are characterized by an equally rich vocabulary coinciding with Shakespeare by 95%<sup>11</sup>.

It so happened that the authors of the two most outstanding legacies in world literature, in terms of lexical richness, lived not only at the same time, but also in the same place. Moreover, in the works of Bacon and Shakespeare, the same mistakes are made when quoting ancient authors<sup>12</sup>.

Finally, in Bacon's personal notebooks of 1594-1596, published later as the volume "Promus," there are many ideas, thoughts and all sorts of well-turned expressions, found almost word to word in Shakespeare's later plays<sup>13</sup>.

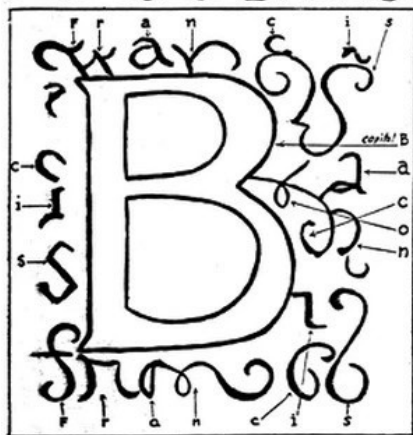
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<sup>11</sup> <https://sirbacon.org/covocab.htm>

<sup>12</sup> Both misquote Aristotle. Manly P. Hall. *The Secret Teachings Of All Ages*. 1928

<sup>13</sup> <https://sirbacon.org/copromus.htm>

## Bacon Signatures and Numerological Analysis



The First Folio, prepared for printing during Bacon's lifetime, was literally studied letter by letter by a whole army of meticulous researchers. And if something is really wanted, it will certainly be found in one form or another.

For example, the collection of works begins with the comedy *The Tempest*, and the very first word of the play, "Boteswaine," begins, as usual, with an initial letter surrounded by intricate vignettes. In the 1930s, among these vignettes, researchers distinguished<sup>14</sup> the repeatedly repeated name of Francis Bacon.

The other signatures are numerological. Bacon's numeral signature is 33. People who are familiar with numerology know that this is calculated very simply: by summing up the numbers of letters in the alphabet. B=2, A=1, C=3, O=14, N=13, 33 in total. For the particularly meticulous but not too informed, it should be noted that in the era of Queen Elizabeth, there were only 24 letters in the English alphabet. I and J were written as I; U and V were also denoted by the same letter.

<sup>14</sup> This was noticed by a researcher named Annette Covington from Cincinnati in 1931.

In the first part of the play Henry IV there is a fragment where the word Francis occurs 33 times on one page. In the First Folio, all 33 times the name is settled even in one column.

In order to achieve such a result, the author had to resort to absurdly bulky constructions such as "Anon Francis? No Francis, but tomorrow Francis; or Francis on thursday; or indeed Francis when thou wilt. But Francis..."

Since the full name of Francis Bacon has numeral signature 100: F=6, R=17, A=1, N=13, C=3, I=9, S=18, 67 in total, B=2, A=1, C=3, O=14, N=13, 33 in total, so, theoretically, one might expect that on page 100 of the First Folio there is also some kind of specific sign.

while I question my puny Drawer, to what end hee gaue me the Sugar, and do neuer leaue calling Francis, that his Tale to me may be nothing but, Anon : step aside, and Ile shew thee a Prefident.

Poin. Francis.

Prin. Thou art perfect.

Poin. Francis.

*Enter Drawer.*

Fran. Anon,anon fir ; looke downe into the Pomgar-net, Ralfe.

Prince. Come hither Francis.

Fran. My Lord.

Prin. How long hast thou to serue, Francis?

Fran. Forfooth fife yeares, and as much as to ———

Poin. Francis.

Fran. Anon,anon fir.

Prin. Fife yeares : Berladly a long Lease for the clin-king of Pewter. But Francis, darest thou be so valiant, as to play the coward with thy Indenture, & shew it a faire paire of heeles, and run from it?

Fran. O Lord fir, Ile be sworne vpon all the Books in England, I could finde in my heart.

Poin. Francis.

Fran. Anon,anon fir.

Prin. How old art thou, Francis?

Fran. Let me see, about Michaelmas next I shalbe ———

Poin. Francis.

Fran. Anon fir, pray you stay a little, my Lord.

Prin. Nay but harken you Francis, for the Sugar thou gauest me, 'twas a penyworth, was't not?

Fran. O Lord fir, I would it had bene two.

Prin. I will giue thee for it a thousand pound : Aske me when thou wilt, and thou shalt haue it.

Poin. Francis.

Fran. Anon,anon.

Prin. Anon Francis? No Francis, but to morrow Francis : or Francis, on thurfday: or indeed Francis when thou wilt. But Francis.

Fran. My Lord.

Prin. Wilt thou rob this Leatherne Jerkin, Chrifstall button, Not-pared, Agat ring, Puke stocking, Caddice garter, Smooth tongue, Spanih pouch,

Fran. O Lord fir, who do you meane?

Prin. Why then your browne Bastard is your onely drinke : for looke you Francis, your white Canuas doublet will fuffley. In Barbary fir, it cannot come to so much.

Fran. What fir?

Poin. Francis.

Prin. Away you Rogue, dost thou heare them call?

And indeed, in the book, this page falls at the end of the play *Comedy of Errors*. The Abbess there says "Thirty-three years have I but

gone in travail / Of you,” although the events recorded in the play indicate it couldn’t be more than 25 years.

Naturally, such “vignette” and “numerological” arguments are able to convince only those people who believe in the importance of such “signs.” But there are more significant arguments.

## Cryptographic Analysis

The most serious cryptographic arguments in favor of the authorship of Bacon are collected in the book of the French General Cartier, published in 1938<sup>15</sup>. General Cartier had long been the head of the French cipher intelligence service. He achieved the greatest success in this field during World War I.

It should also be noted, that in 1918, while serving in the American Expeditionary Force in France, Lieutenant William Friedman, the future “father of American cryptology,” also deciphered German messages. These two cryptographers certainly knew each other personally. Thereby, Cartier began a correspondence with Colonel Fabyan, who was not only Friedman’s patron, but also supported Elizabeth Wells Gallup, the main American “baconist-cryptographer” (details of this story can be found in the material “Science a la Riverbank”<sup>16</sup>).

From the letters of George Fabyan, General Cartier learned for the first time about a kind of cipher, once invented by Francis Bacon and described in two of his works: *The Advancement of Learning*<sup>17</sup> and *De Augmentis Scientiarum*<sup>18</sup>).

Bacon came up with this cipher system as a young man and called it a “bilateral cipher.” In fact, it was steganography binary system. With the help of two types of fonts, called A and B, additional in-

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<sup>15</sup> François Cartier. *Un problème de Cryptographie et d’histoire*. Paris: Editions du Mercure de France, 1938

<sup>16</sup> <https://kniganews.org/map/e/01-11/hex70/> (rus.)

<sup>17</sup> Full title: *Of the Proficiency and Advancement of Learning, Divine and Humane*. Francis Bacon, 1605

<sup>18</sup> Full title: *De Dignitate et Augmentis Scientiarum*. Francis Bacon, 1623.

formation was secretly embedded into the letters of any text. As can be seen in Fig. 8, each letter of the steganogram is assigned to five consequent letters of the main text that masks the cipher.

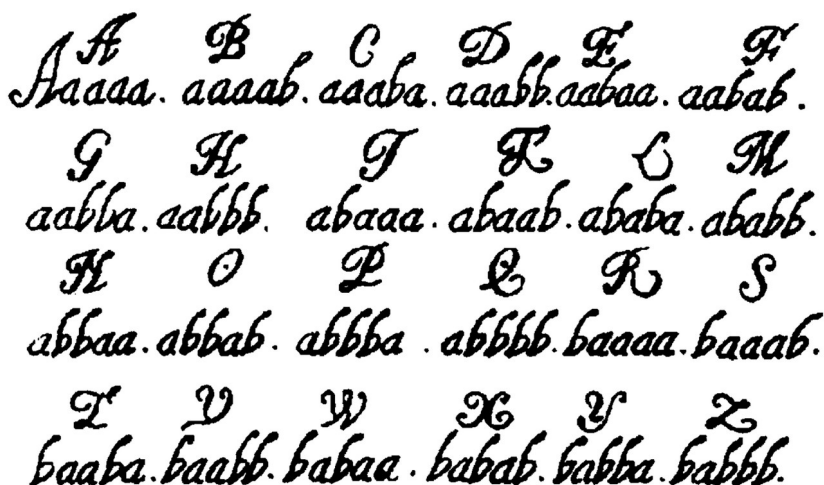


Fig. 8. Source: Francis Bacon, *Of the Advancement and Proficiencie of Learning, or, The Partitions of Sciences*, IX Bookes.

Oxford, Printed by L. Lichfield, for R. Young & E. Forrest, 1640, p. 268

From the following example you can see how delicate and elusive the signs of secret writing can be, where the whole meaning is hidden in the nuances of the different fonts of the letters “I,” “e,” “d” and so on.

*Wisdom and understanding  
are more to be  
desired than riches*

Fig. 9. Source: Manly P. Hall, *The Secret Teachings of All Ages*, 1928.  
“An example of biliteral writing,” chapter “The Cryptogram as a factor in Symbolic Philosophy”

When Cartier got to know this cipher, Fabyan recommended him to study carefully one page in the first edition of Bacon's *Novum Organum*. Having found this rare book in the National Library of France and equipped himself with a loupe for reliability, Cartier discovered that the text was clearly typed in two kinds of fonts.<sup>19</sup>

When the fact of presence of a cipher was discovered, it was no longer difficult for a professional cryptographer to break the binary sequence into letters and reveal the meaning of the encrypted words...

And then he worked with other texts. The result was a cryptographic book by Cartier, which generally confirmed the results of Mrs. Gallup's amazing research. Although she didn't have solid titles or ranks, she devoted more than 30 years of her life to this work.

After analyzing dozens of 16-17<sup>th</sup> century books signed by Bacon, Shakespeare and others, Gallup restored Bacon's "secret and unknown" biography<sup>20</sup>, entrusted only to the cipher. About Shakespeare in this biography, in particular, the following is written<sup>21</sup>:

*"My plays are of divers kinds, history, comedy and tragedy. Many are upon the stage, but these already put forth in Wm. Shakespeare's name, we do nothing doubt, have won a lasting fame, — comedy, the historic drama and tragedy, are alike in favor.*

*The next volume will be under W. Shakespeare's name. As some which have now been produced have borne upon the title page his name though all are my own work, I have allowed it to stand on many others which I myself regard as equal in merit. Having put forth a number of plays in his theater, I shall continue so doing since I do make him the thrall to my will."*

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<sup>19</sup> Alain Decaux. *Les grands mystères du passé*. 1964

<sup>20</sup> Ibid

<sup>21</sup> For more details, see Section "**The Problem of Cryptography and History**"

Let's completely leave outside the scope of this narrative considerations about the reasons that prompted the genius author first to anonymity, and then tied him to one of the chosen pseudonyms.

However, to confirm the correctness of Gallup's research, built on such unsteady for non-specialists ground as subtle differences in fonts, we present one more important fact.

## Investigative Experiment

Studying the text of one of the Baconian circle authors, William Rawley's *Resurrection*, published in 1657, Mrs. Gallup caught with a trained eye a fragment encrypted using the Bacon system.

In the fragment restored by her, there was, in particular, the following:

*“Now to reach rare papers, take panell five in F(ranci)s tower room, slide it under fifty with such force as to gird string. Follow ABC's therein. Soon will the M(anuscript)SS so much vaunted, theme of F'S many books, be your own.”*

It was obvious from the context that the reference was to Canonbury Tower, where Francis Bacon lived for several years until 1619.

Before WWI Gallup came from America to London and, accompanied by a local intendant, went to explore the tower. Of course, there were quite a few hopes for finding the recess.

But, surprisingly, she did find 50 panels in the great hall of the tower. They were arranged in a circle in two rows: 34 panels in the bottom row and 16 in the top row. To determine the right one, Gallup started tapping and pressing the panels. Suddenly one of them, 5<sup>th</sup> in the top row, shifted and went down behind the last one in the bottom row, 50<sup>th</sup>...<sup>22</sup>

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<sup>22</sup> Alain Decaux. *Les grands mystères du passé*. 1964

Alas, there was a blank wall behind the panel. But then the intendant remembered that one day, for some reason, this panel had fallen behind the neighbor one. Because of that, a hole appeared in the wall, so bricklayers were called in and they patched up the niche.

So there really was a recess in the tower, although it had been long empty.

However, if we recall in what unusual way Mrs. Gallup came to it, we must admit that all the results of her research deserve much closer attention from professional historians and specialists in literature.

No matter how exotic do these results look.

## Main Sources

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<https://web.archive.org/web/20010303104753/http://www.geneva.il.us/riverbnk/riverpag.htm>
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July 2001  
Jan-Feb, Nov-Dec 2023

# The Secrets of The Cryptographic Grave

In January 2018, at an information security conference held in the U.S. capital, an amusing report was made about the “mystery of the Arlington cemetery.” More precisely, about breaking the code, which for half a century was hidden in the letters on the tombstone of the most famous married couple of state cryptologists. And, although now their secret message seems to have been read, its essence, however, didn’t sound at all.



Fig. 10. A tombstone on Friedmans’ grave.



Fig. 11. Arlington National Cemetery

The report<sup>23</sup> was made by Elonka Dunin<sup>24</sup>, an extremely active lady and social activist, famous for her boundless enthusiasm in everything related to decoding ciphers. Dunin is best known as the author of a collection of “the most famous cryptograms in history” and as the most visible organizing force in the collective effort to decipher the Kryptos sculpture at CIA headquarters<sup>25</sup> in Langley. In addition, she is the director of the support fund for the National Museum of Cryptology at the NSA. And also she spends a lot of effort on creating another Museum of Cryptology, independent from the NSA...

However, the story is not about this energetic lady, but about the secret of the encoded crypto message that Elonka found among the graves of the Arlington National Cemetery. Everything about her finding is interesting. Whose exactly this grave is, then how the secret inscription went unnoticed in front of everyone for about half

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<sup>23</sup> <https://archive.org/details/Shmoocon2018/Shmoocon2018-TheFriedmanTombstone.mp4>

<sup>24</sup> Elonka Dunin, “Cipher on the William and Elizebeth Friedman tombstone at Arlington National Cemetery is solved.” <http://elonka.com/friedman/index.html>

<sup>25</sup> <https://kiwibyrd.org/tag/kryptos/>

a century and, finally, why Dunin decided to find this particular tombstone among more than 400,000 graves of the most famous U.S. cemetery.

The latter is the easiest to clarify. The tombstone is located on the grave of William Friedman, revered in the United States as “the father of national cryptology” and his wife Elizebeth Friedman, also famous in the field of cryptography. On the official website of the NSA, in the Hall of Honor section, the Friedmans have a separate web page for each. But the story about the father of cryptology, William Friedman<sup>26</sup>, looks extremely poor, just three small paragraphs of 200 words or about 1400 symbols including spaces:

*Wolfe Frederick Friedman was born on 24 September 1891 in Kishinev, then part of imperial Russia, now Chisinau, capital of Moldova. His father, an interpreter for the Czar’s postal service, emigrated to the United States the following year to escape increasing anti-Semitic regulations; the family joined him in Pittsburgh in 1893. Three years after that, when the elder Friedman became a U.S. citizen, Wolfe’s name was changed to William.*

*After receiving a B.S. and doing some graduate work in genetics at Cornell University, William Friedman was hired by Riverbank Laboratories, what would today be termed a “think tank,” outside Chicago. There he became interested in the study of codes and ciphers, thanks to his concurrent interest in Elizebeth Smith, who was doing cryptanalytic research at Riverbank. Friedman left Riverbank to become a cryptologic officer during World War I, the beginning of a distinguished career in government service.*

*Friedman’s contributions thereafter are well known — prolific author, teacher, and practitioner of cryptology. Perhaps his greatest achievements were introducing mathematical and scientific methods into cryptology and producing training materials used by several generations of pupils. His*

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<sup>26</sup> <https://web.archive.org/web/20180918005407/https://www.nsa.gov/about/cryptologic-heritage/historical-figures-publications/hall-of-honor/1999/wfriedman.shtml>

*work affected for the better both signals intelligence and information systems security, and much of what is done today at NSA may be traced to William Friedman's pioneering efforts.*

So that no one thinks that three short paragraphs for the founding father of American cryptology is completely normal, note the following fact. The adjacent web page<sup>27</sup>, dedicated to the wife of the cryptographer, Elizebeth Smith Friedman, also very advanced and with a long career of civil service, contains a story in its length of about 12,000 symbols exceeding the text about her husband by more than 7 times. And this despite the fact that Elizebeth was never a staff member of the NSA, specializing mainly in the fight against domestic crime and smugglers...

Sure, the main reason for the agency's brevity in describing its most famous cryptographer is the extreme delicacy of his top-secret work. Which essentially was constant and inventive reading of other's encrypted letters. Moreover, the authors of these letters, as a rule, were very important persons and organizations that directly influenced the course of world events. And many, many of the materials of such secret correspondence are still hidden in the secret archives of the NSA, absolutely not accessible to historians for research. Or maybe the most interesting things have long been destroyed...

However, despite the secrecy of his office, Friedman's biography has been studied by independent historians of the special services in detail. And since true cryptology in its full form isn't only a mathematical science, but also partly an occult and magical art, a close interest in the life and work of the real cryptographer Friedman has many times brought great surprises to researchers.

Thanks to facts-surprises of this kind, not only the well-known events of the 20<sup>th</sup> century, but also things of much older times begin to look significantly different and extremely astonishing. Not even believable. But if those looking for answers are interested in

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<sup>27</sup> <https://web.archive.org/web/20180918024648/https://www.nsa.gov/about/cryptologic-heritage/historical-figures-publications/hall-of-honor/1999/efriedman.shtml>

the real picture, not the inventions and concealing of official history, then it makes sense to accept the facts exactly as they are. No matter how strange this reality may seem.

The simplest and clearest way to convincingly illustrate these theses is to select a few phrases from a short official NSA text about their extraordinary employee William Friedman. And then show authentically known and irrefutable facts for a more detailed story about what these concise words actually mean.

## Occultism and Ciphers of Francis Bacon

Quote #1:

***“William Friedman was hired by Riverbank Laboratories, what would today be termed a ‘think tank,’ outside Chicago.”***

The historical facts are that in September 1915, when the young geneticist Friedman moved to live and work in the town of Geneva near Chicago, there were no Riverbank Laboratories yet. There was just a vast estate of textile magnate George Fabyan, which he recently bought, named Riverbank and decided to turn into a place of cutting-edge scientific research. Over time, Riverbank really signed in history as the first private research institution in the United States. But that happened a little later.

And that time, the rich man Fabyan, who was not very learned, but overflowing with energy and enthusiasm, decided to work there over implementation of his various ideas about new paths to revolutionary achievements in science. These intentions were sustained by a lot of money, that the millionaire began to invest in scientific progress.

As for Friedman, Fabyan invited him as the head of the “department” of genetic research he had conceived. There it was planned to select especially strong breeds of animals and plant varieties in a new way. For example, one of the innovations that attracted Fabyan was the idea of obtaining “lunar varieties” of plants — not

only due to their sowing under moonlight, but also in certain phases of the moon cycle.



Fig. 12. George Fabyan, 1915

And it was not the strangest of the scientific projects of Colonel Fabyan, who received his respectable military rank, by the way,

not in the army, but personally from the governor of Illinois. When William Friedman moved to Riverbank, a certain Mrs. Elizabeth Wells Gallup was already living and working there at the invitation of the landlord. As well as her younger sister, Katie Wells, who helped Gallup in her unusual crypto-historical research.

The area of extensive research of this lady was the old printed books of the 17<sup>th</sup> century, and the main working tool was the so-called biliteral cipher of Francis Bacon, the famous philosopher, scientist and statesman of the Shakespearean era. Having mastered the identification and reading of this cipher, which hides a secret message in the main text using fonts of various types, Mrs. Gallup managed to extract a lot of new and very extraordinary information from old books.

From this information, in particular, it followed that Francis Bacon considered himself the secret son of Queen Elizabeth, and therefore the rightful heritor to the English throne. And because of that, in order to save his own life, he was forced to hide this fact in every possible way. In other Bacon's cipher texts, it was reported that he was the author of all the plays and sonnets that became known as Shakespeare's. Moreover, on the pages of one of the ancient books, Gallup even managed to identify and extract the text of the previously unknown "Shakespearean" play.

Finally, in the same encrypted messages, it was reported that Bacon was one of the leaders of the secret Rosicrucian Order, which had the goal of radically changing society and its regularity based on their occult science built on three basic components — magic, astrology and alchemy. Among the scientific and magical experiments conducted by the Rosicrucians, Bacon described, in particular, the mechanism of the acoustic levitation machine, with help of which they lifted objects into the air with the power of sound alone...

All this highly unusual information obtained by Mrs. Gallup from old books inflamed Fabyan's interest insofar that he persuaded the lady to move with her sister to his estate, where he created perfect conditions for them to continue cryptographic research. In addi-

tion, the millionaire got excited with the idea of building a real acoustic levitator based on an encrypted description from Francis Bacon.

That is how, in addition to the cryptographic and genetic research areas, another department was created at Riverbank, acoustics. Later it not only caused the emergence of the most advanced sound physics laboratory in the United States at that time, but also gave this place its current name: Riverbank Acoustical Laboratories.

All this happened later, and in early 1916, George Fabyan began actively looking for an assistant to expand the crypto research of Gallup and her sister. And in spring he managed to find exactly the one they needed. The young and well-educated philologist Elizebeth Smith, who was found for Fabyan by a familiar librarian, was actively interested in Shakespeare's work and was just looking for a job.

It wasn't difficult for Fabyan to persuade her to move to the Riverbank estate. The girl turned out to be not only smart and quick-witted, but, what is especially important, evidently capable of cryptographic analysis. And most importantly, the chief local agronomist-geneticist William Friedman got seriously carried away by the new young assistant. This is the beginning of one of the most interesting and now either silent or falsified pages in the history of the birth of the NSA.

When Friedman's romantic interest in Elizebeth Smith naturally expanded into an interest in the girl's professional occupation, he unexpectedly turned out to be a powerful cryptographic talent. Friedman could easily decode such ciphers that seemed very complicated to others. And more importantly, he very skillfully applied probability theory, statistical and other mathematical methods of analysis used in genetics, to break codes. Moreover, not only well-known methods, but also invented by Friedman himself, even more powerful and especially effective for the specific work of cryptanalysts, soon were used...



Fig. 13. The Department of Ciphers at Riverbank Laboratories.

Far left in the bottom row – Elizabeth Wells Gallup.

In the center of the next row – Elizebeth Smith Friedman.

In short, the next year, 1917, was marked by great changes at Riverbank. In spring, the mutual sympathy of the young people led to a marriage that lasted for the rest of their lives. Along with the genetics department, William Friedman also headed the ciphers department. Under his leadership, a whole team of cryptography ladies was already working on the identification and decoding of Bacon's cryptograms in old books. And since in the same year the U.S. authorities decided to join World War I, in autumn, 1917 more serious occupations were quickly found for the Riverbank Department of Ciphers and Codes.

More precisely, George Fabyan found these occupations for himself. When the country joined the war, it quickly became clear that the American army actually lacked its own cryptographers capable of breaking enemy codes. But in the Riverbank at Colonel Fabyan's, there were plenty of such specialists. Thanks to the advanced scientific methods of William Friedman, they were already experienced qualified professionals able not only to help the state in breaking ciphers, but also to train military personnel in effective cryptanalysis techniques.

Fabyan proactively offered to help the authorities in both cases at the same time. His proposal was accepted with interest, so that in autumn, 1917, Riverbank not only began to deal with the decoding of military cryptograms, but also to prepare a small trial group of cryptanalysts for the army. The first experience turned out to be quite successful, therefore, at the beginning of 1918, Riverbank specialists quickly prepared and released a quite solid course of officer cryptographers numbering about 70 people.



Fig. 14

A large group photograph of that memorable graduation with Riverbank instructors sitting among officers in civil clothes for some “encrypted” reasons has become a very important family heirloom for the Friedmans. Moreover, the secret of the message in

this photo is directly related to the secret farewell encryption of the cryptographer spouses on their tombstones. But it's more convenient to tell about these secrets closer to the end.

Here, it should be noted that those two photos (Fig. 14) are borrowed from the materials of the report by Elonka Dunin<sup>28</sup>. In the second enlarged fragment, for some reason she decided to cut the team of Riverbank representatives, carefully removing the personality of George Fabyan from the picture. That is, the actual organizer of this entire military-cryptographic business.

What were the motives of Elonka Dunin when she removed George Fabyan from the photo remained unknown.

Well, on the other hand, it's known and undeniable that this "cutting out" operation is in full accordance with the official text about William Friedman on the NSA page. There is also not a single word about Fabyan and his key role in this story about the birth of the national cryptographic intelligence service.

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<sup>28</sup> <http://elonka.com/friedman/FriedmanTombstone.pdf>

A historically fairer version of the same fragment should look like this:



Fig. 15. The civilian on the left is Fabyan.  
The one on the right is Friedman.  
The lady in the center is Elizebeth Smith Friedman.

However, let's continue quoting.

## Friends in High Positions

Quote #2:

***“Friedman left Riverbank to become a cryptologic officer during World War I, the beginning of a distinguished career in government service.”***

The military service of Lieutenant Friedman began in summer 1918, and in November of the same year World War I ended. From this it's clear that the experience of personal participation in hostilities specifically for this cryptographer officer turned out to be minimal.



Fig. 16. The Friedman spouses. Summer of 1918

(By an interesting coincidence, the military service of Lieutenant Colonel William Friedman ended just before the United States joined World War II. After that, for many years he devotedly and in respectable positions served the government as a purely civilian.)

Despite its short duration, World War I played the most important determinative role in Friedman's destiny. For the rest of his life, it firmly connected the talented analyst with the secrets of U.S. intel-

ligence services and cryptography. Besides, it was World War I that brought the young officer together with three outstanding generals. Although these persons are not directly related to the history of the NSA, they take a very prominent place in our story.

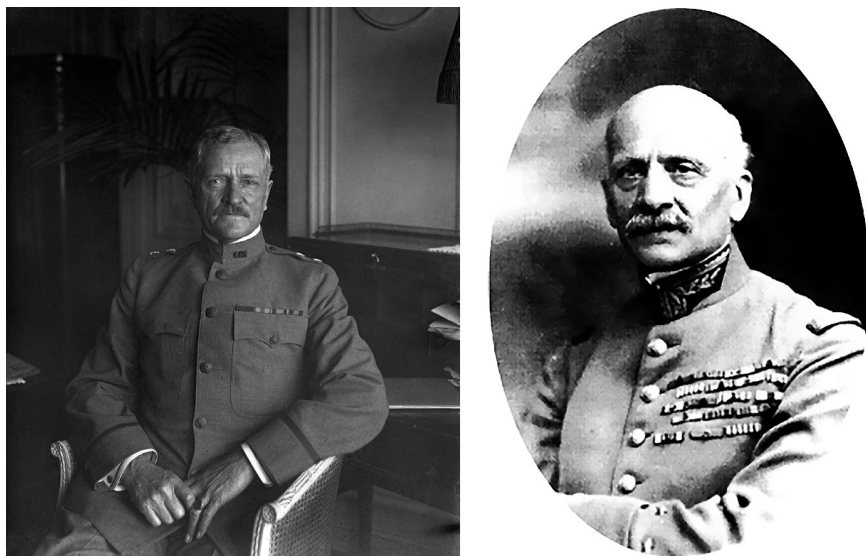


Fig. 17. Generals John Pershing and François Cartier

The first is General John Pershing. On the battlefields of World War I, he commanded the American Expeditionary Force, headquartered in Chaumont, France. Just then, in July 1918, a newcomer lieutenant Friedman arrived to head a unit of cryptanalysts, who were, by the way, earlier trained by him. The unit was engaged in the decoding of German ciphers in the close proximity of the front.

The name of the second general is François Cartier. During the war period of interest to us, he headed the cryptographic service of France. He was responsible for the crypto protection of communications in the French army and the interception and decryption of the enemy's secret correspondence. Since the allied crypto services worked in contact with each other, a personal acquaintance began between Cartier and Friedman.

Although the experience and knowledge of French cryptographers at that time vastly exceeded the professional level of their American colleagues, General Cartier was greatly impressed by the successes of Friedman and his team. And when the war ended, thanks to the acquaintance of Friedman and Cartier, George Fabyan soon began to correspond actively with the French General. The pushing Fabyan managed not only to arouse in Cartier the cryptographer's professional interest in the topic of Baconian ciphers rather quickly, but also to provide him with an extensive field for his own research on this topic for many years after the retirement in the early 1920s.

The name of the third general from this remarkable group of military stars is George Marshall. A quarter of a century later, during World War 2 and in subsequent years, Marshall became famous as Chief of Staff of the U.S. Army, then as U.S. Secretary of State and Secretary of Defense. And also as the initiator of the well-known Marshall Plan for the post-war reconstruction of Europe and the only Nobel Peace Prize winner among the American Army generals.

At the end of World War I, he was not yet a general at all, but only a young promising officer quickly advanced from captain to colonel. At Pershing's headquarters, he was involved in the planning and organization of military operations. George Marshall appeared in the entourage of the commander in the same summer of 1918 as William Friedman, and thanks to his undoubted military and organizational talents, for the next few years he became General Pershing's closest assistant not only in France, but also upon his return to Washington.

For reasons that will become clear later, with a more detailed analysis of the "brief quotes," the official sources of the NSA and the American intelligence services in general are trying in every possible way to keep silent about the facts of the young Friedman's personal acquaintance not only with the French General Cartier, but also with the future leader of the nation, George Marshall. Although, in the case of the latter, it is extremely difficult to imagine the work of the front headquarters, in which the person who



Fig. 18. Colonel Marshall and General Pershing

planned the military operations of General Pershing would not be familiar with the head of the decryption service, which opened the secret correspondence of the enemy for Pershing.

Another very expressive fact. In the late 1960s, already at the end of his life, William Friedman left his entire personal archive and valuable cryptographic collection, assembled over many years, to be deposited in the library of the George Marshall Foundation. These materials are still stored there, from time to time acquiring either new previously “closed” documents declassified from the archives of the NSA, or losing the old “open” ones, when they suddenly decide to hide and classify them for unknown reasons...<sup>29</sup>

## Magic and SIGABA

Quote #3:

***“His work affected for the better both signals intelligence and information systems security...”***

After the end of the war, when William Friedman returned from France in spring 1919, he tried to restart his former civilian life in Riverbank, where his wife Elizebeth continued to work for Fabyan. However, nothing good came of it.

Fabyan, domineering like a feudal lord, still treated Friedman as his property, which was temporarily leased to the U.S. Army. In Friedman’s textbooks on cryptanalysis, printed at the Riverbank Laboratories, he continually strove to remove the name of the author, not forgetting to put his own name at the same time.

Naturally, such tensions and conflicts led to Friedman’s attempts to find a respectable job somewhere else. He failed to return to genetic research, but in Washington, where the Army Chief of Staff was his old acquaintance General Pershing, a talented cryptographer was taken to a worthy position.

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<sup>29</sup> Using a little-known reclassification of the documents law, the Agency repeatedly thinned Friedman’s collection “to preserve national security secrets.” And what is especially curious is the among the seized and classified archive items one of the articles of Cartier’s five-part works series on Bacon-Shakespeare problem and at least three more documents from the same set of materials are found. It’s unlikely that anyone can explain how exactly initially open publications about the affairs of the 17<sup>th</sup> century, written 30 years before the creation of the NSA, could threaten nation security and compromise the work of the super secret American intelligence service...

So in the very end of December 1920, the Friedmans, without notifying Fabyan and actually secretly fled from Riverbank to Washington. And from the first days of January 1921, William Friedman began his new civil service as head of the codes and ciphers department in the U.S. Army Signal Corps.

The cryptographer's new job seemed to be solid and allowed him to feed his growing young family in the difficult years of the economic downturn. The Friedmans, with an interval of several years, gave birth to two children, a daughter and a son. But providing reliable encryption means to protect army communications turned out to be a very boring routine, in no way comparable to the exciting work of a cryptanalyst who decoded enemy ciphers during the war years.

Everything changed radically only in late 1920s, when President Herbert Hoover took over the White House, and the new Secretary of State Henry Stimson, who had a very exalted idea of nobility in politics, began to be in charge of U.S. foreign affairs. For this reason, as soon as Stimson became aware that Herbert Yardley's "Black Chamber" was working at the State Department and they regularly broke encrypted diplomatic correspondence of foreign states, he immediately closed this super-secret and "inappropriate for gentlemen" business. More precisely, he deprived this intelligence structure of most of the funding coming from the State Department, which was equivalent to liquidation.

Since the rest of the funding for the "Black Chamber" came from the military, the Army gained at its full disposal a valuable archive of decrypted materials, analytical researches and developments of the secret intelligence service. And since the pragmatic ideas of Army chiefs about international affairs were fundamentally different from the ideas of the head of the diplomats, it was decided to continue decoding foreign ciphers, but now completely by the military. And then the true rise of William Friedman's star began.

As an experienced cryptographer and analyst, and with personal contacts in the top military echelons, Friedman was a natural choice to head a new SIS (Signal Intelligence Service) division. In

the difficult years of the economic depression, a very poor budget was allocated for the new special service, but it was quite enough to form a team of fresh young cryptanalytic personnel.

And Friedman performed this task brilliantly. The very first four young people he personally selected quickly became the backbone of the new crypto-analytical intelligence. Three of them: Frank Rowlett, Abraham Sinkov and Solomon Kullback, were advanced mathematicians, each with a good knowledge of one of the key foreign languages (German, Spanish, French).

As for another very important language for military spies, Japanese, in no way they could find a mathematician but not a Japanese. However, a young and gifted linguist John Hurt was soon found. He hated mathematics, but on the other hand, he was fluent not only in Japanese, but also in several other languages, and for a long time became the best and chief Japanese translator of American military intelligence.

On the basis of this team, which Friedman personally taught the basics and subtleties of cryptanalysis, extremely competent special services soon formed, which created absolutely amazing things, often similar to magic, in breaking codes. And it's no coincidence that later secret reports on the materials of the decrypted correspondence were named the code word MAGIC...

In addition to purely intelligence magic, they sometimes practiced magic of a different kind, inventing extremely strong ciphers and cipher machines to protect American military communications. The most advanced of the cipher machines, invented personally by Friedman and greatly improved by Rowlett, was codenamed SIGABA. It signed in history as the most secure American cipher machine of World War II. Moreover, even in post-war time, the crypto scheme of the device was considered so important and valuable that the U.S. authorities ventured to declassify it only at the beginning of the 2000s, that is, almost 70 years after its creation.



Fig. 19. Magicians-cryptanalysts of SIS, William Friedman at the center.

Now these things are already well known. However, another much less known story is connected with the same aspects of such a strict secrecy around SIGABA. This more than once plunged the cryptographer into a deep depression, which became especially aggravated by the mid-1950s, when Friedman visited his old acquaintance and friend Boris Hagelin in Switzerland on intelligence business. Hagelin at that time was already not only a fairly successful businessman, but also a very rich man who made millions on his own encryptors “as reliable as Swiss watches and banks.” He received the old friend very well and generously, but this visit had an extremely overwhelming effect on Friedman, eventually causing an attack of severe depression. The cause of the disease is usually not pronounced aloud, but humanly, it is quite understandable.

As a high-class professional cryptographer, Friedman knew very well that their own machine, SIGABA, was much more secure and stronger than Hagelin cipher machines. But Boris Hagelin became a prosperous multimillionaire with his inventions, while Friedman

and Rowlett haven't received a single cent from their Government. Moreover, the U.S. authorities didn't even allow them to obtain patents for SIGABA "in the interests of national security." Thus, the invention was in a classified state until the beginning of the 2000s, by that time neither Rowlett nor Friedman were alive anymore.

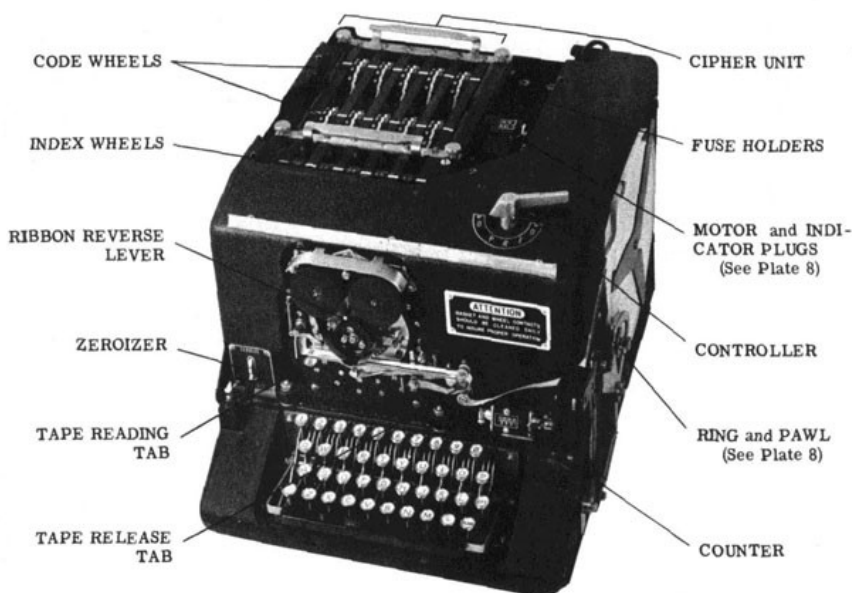


Fig. 20. The SIGABA cipher machine

It cannot be said that cryptographers-inventors accepted this flagrant injustice with meek humility. For many years they tried to fight for their rights through the courts and, in general, not without success. Friedman managed to achieve at least some financial compensation in the mid-1950s, which, remarkably, coincided with his visits to Switzerland, and Frank Rowlett sued for his \$100,000 in the mid-1960s. But no one knows how much effort and nerves they spent on this.

William Friedman, in his mental organization distinguished by a delicate and vulnerable psyche, was practically sure that repeated depressions and nervous breakdowns that required serious medical attention were caused by the extraordinary secrecy and ambiguity

of his espionage cryptographic work. In this regard, Friedman's very first nervous breakdown in 1941, that is, in the year of the American fleet defeat at Pearl Harbor, deserves special consideration.

According to a long-standing tradition established in official history — “to reflect events not as they really were, but as it's expedient” — there are still many unanswered questions around that military catastrophe. What are the real facts?

Under Friedman's direction, the SIS cryptanalysts, and primarily the people from the Rowlett team, by 1940 achieved, with the help of their mathematical “magic,” truly great success in deciphering Japan's secret correspondence. The main success was the massive breaking of a system codenamed Purple, a new Japanese cipher machine for diplomatic correspondence. And although the correspondence of the Japanese armed forces was decoded much worse and slower, the volume and efficiency of decrypting the Japanese Foreign Ministry materials gave intelligence analysts every reason to believe that the U.S. authorities were fully aware of plans and intentions of a potential enemy.

In particular, shortly before the disaster at Pearl Harbor, such an episode took place. Here it is reconstructed according to the personal testimony of its participant, military linguist John Hurt<sup>30</sup>, who translated those encrypted telegrams from the Japanese Foreign Ministry that were decoded by Friedman's analysts.

In November 1941, 10 days before the attack, while Hurt and Friedman were visiting a mutual friend in a sanatorium, the cryptographer asked the interpreter how he assessed the current state of relations between the United States and Japan from decrypted dispatches. Hurt replied that the negotiations between Tokyo and Washington seemed to be over. In turn, he asked Friedman what, in his opinion, such an escalation of relations meant. Friedman answered very briefly it meant war. Shocked by these words, Hurt

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<sup>30</sup> John Hurt. “The Japanese Problem in the Signal Intelligence Service.” NSA William F. Friedman Collection, Document A58132.

<https://www.nsa.gov/news-features/declassified-documents/friedman-documents/>

emotionally asked the cryptographer, who was much closer to the high authorities, whether the United States was ready for such an escalation of hostility. “I hope so,” Friedman replied...

About what happened to Friedman on the day of the disaster, on Sunday, December 7 1941, his wife Elizebeth told this<sup>31</sup>:

*Friedman himself, hearing the news of the Pearl Harbor attack on the radio, at first found it difficult to believe. For some while, his wife recalls, he could do no more than pace back and forth across the room, muttering to himself over and over again: “But they knew, they knew, they knew.”*

But the most striking thing about this dramatic story is that a decade and a half later, William Friedman managed to change his views on what happened literally exactly the opposite. He wrote an analytical work where he very competently, authoritatively and argued began to prove that in fact “they did NOT know.” Because this matter, you see, is far from straightforward...

## Deception as a State Necessity

Quote #4:

***“Friedman’s contributions thereafter are well known — prolific author, teacher, and practitioner of cryptology.”***

For certain reasons, it’s more convenient to separate the stories about the outstanding and well-known deeds of William Friedman as a “teacher and practitioner” from the story about Friedman as a productive author. Because those two specific works, the author of which, unfortunately, is William Friedman and which are discussed now, played absolutely no role in the theoretical development of cryptological science or the practical studying of its details. But they certainly served to fixate the deliberately constructed lies very firmly in the minds of the general public.

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<sup>31</sup> Ronald Clark. *The Man Who Broke Purple: The Life of Colonel William F. Friedman, Who Deciphered the Japanese Code in World War II*. Boston, MA: Little Brown, 1977.

Almost all espionage special services have been engaged in this kind of systematic “deception and denial” for a long time. Traditionally, it’s considered there that the interests of national security oblige the state to disorient all its opponents about the real state of affairs. Sad as it may seem, but the “opponents” often turn out to be the state’s own citizens. It’s especially sad when the authors of a subtle creative lie turn out to be smart, talented and otherwise very decent people, as in this case. More precisely, in two specific cases from William Friedman’s biography.

Both of these cases took place at about the same time — in 1957. That is, shortly after Friedman officially retired but continued to maintain a very close working and commercial relationship with the National Security Agency. In particular, one of his “commercial” works of that period was prepared by order of the NSA management and was directly related to the previous topic — the disaster at Pearl Harbor. In the archive, the article is accompanied by an invoice for the agreed cost of the order — \$4,000, which, for an approximate comparison with the current exchange rate, should be multiplied by 10. And it makes sense to start with this article.

Friedman’s work has a rather unusual title for such articles: “Certain Aspects of ‘Magic’ in the Cryptological Background of the Various Official Investigations into the Attack on Pearl Harbor”<sup>32</sup>. Those days, even in government structures, not to mention the general public, very few people knew what the code word Magic meant. Well, since the work was originally conceived as a secret one and intended for distribution in the circles of government persons with access to state secrets, Friedman decided to take some liberties here.

Although the title of the article clearly states an official investigation of the disaster, it’s in fact obvious to historians that all the arguments in this work are intended to disprove the conclusions of the unofficial investigation from the so-called “revisionists of his-

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<sup>32</sup> Friedman, William F. “Certain Aspects of ‘Magic’ in the Cryptological Background of the Various Official Investigations into the Attack on Pearl Harbor.” NSA William F. Friedman Collection, Document A485355.

<https://www.nsa.gov/news-features/declassified-documents/friedman-documents/>

tory.” The main of these revisionist attacks on the official position of the state, which completely removed any responsibility from the top military-political establishment of the United States, at that time was undoubtedly the book *The Final Secret of Pearl Harbor. The Washington contribution to the Japanese Attack* by Admiral Robert Theobald published in 1954<sup>33</sup>.

During the attack on Pearl Harbor, the author commanded one of the squadrons that were unexpectedly attacked by the Japanese. In this work, it was stated directly and without any ambiguity that President Roosevelt, Chief of Staff of the Army George Marshall (note a familiar name from Friedman’s front-line youth) and Chief of Naval Operations Harold Stark were directly responsible for the defeat of the U.S. Pacific Fleet at Pearl Harbor.

Quoting the admiral literally, there would be no Pearl Harbor if the Hawaiian command had not been deprived of Magic. Moreover, it was Roosevelt who ordered Marshall and Stark to keep in secret the decrypted information from the Japanese correspondence. This was done so that an unexpected and sensitive blow from Germany’s ally forced the neutral United States to join the war on the side of Britain and the anti-Hitler coalition as a whole. Roosevelt strove for this in every possible way, but the Congress, dominated by pro-German and anti-Soviet spirits, actively resisted.

Theobald’s serious accusations weren’t based on his personal speculations, or muddled rumors, but on documentary facts from declassified materials from several official investigations, which is very important. That is why there were no lawsuits against the obstinate admiral discrediting the honor and dignity of the highest people of the country. Because usually during such trials even more inconvenient and compromising information pops up.

Instead, as soon as Robert Theobald died in May 1957, the top management of the NSA instructed its chief specialist in Magic to prepare, and not without reward, a solid and convincing “refutation” in response to all accusations of the admiral. Fortunately, the

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<sup>33</sup> Robert A. Theobald. *The Final Secret of Pearl Harbor. The Washington contribution to the Japanese Attack*. New York: The Devin-Adair Company, 1954.

dead admiral himself, with his declassified documents, could no longer fend off counter-arguments.

And all other independent researchers who were still alive were deprived of the opportunity to analyze and criticize the “refutation” in a very simple way: Friedman’s work was classified and sent only to competent government authorities. In exactly the same way, a secret “UFO report” prepared by the Robertson Science Commission was been distributed a few years earlier and authoritatively “debunked” all the evidence and facts about the increasing sightings of aliens in the U.S. sky.

The scientists of this commission found rather strange and sometimes ridiculous, but most importantly, “natural” explanations for all anomalous events. They did their best to calm the very nervous power structures in Washington, assuring that there were no aliens or a threat to the state at all. Of course, they didn’t tell anyone that the head of the commission and its secretary, who prepared the final report, were secret employees of the CIA with the tasks of preventing panic and introducing disinformation...<sup>34,35</sup>

The secret analytical work from Friedman, the Army’s Chief Cryptanalyst, played essentially the same role by providing a competent disproof: reassurance for all those began to worry and ask unnecessary questions due to the emergence of “another truth” about Pearl Harbor. Along the way, Friedman’s report solved one more problem. So that in the future, when declassifying state secrets over the years, this particular document would surface and take its place in history as “the final truth.”

Actually, this is exactly what happened nowadays, when in 2014 a set of those Friedman’s works that were stored in the closed archives of the NSA was declassified. And the official historians of

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<sup>34</sup> For details about the very specific role of the CIA and the Robertson Commission in the UFO topic, see, for example, the texts “Sci-Myst#3: Deception of the Workpeople, or Watching the Hands,” section “Secret Stories” (*rus.*)  
<https://kniganews.org/2015/02/24/nmd3/>

<sup>35</sup> “UFO: Medical Case History,” section “1993-1997: Official CIA Report” (*rus.*)  
<https://kiwibyrd.org/2014/04/13/1343/>

the Agency, accordingly, quote Friedman's article on the role of Magic in the Pearl Harbor disaster as the final and indisputable confirmation of the state's official position on this controversial and still actively debated issue of history.<sup>36</sup>

How was such a remarkable result achieved? The essence of Friedman's detailed and in some places really convincing argument boils down to the fact that among all the decrypted Japanese materials, there was not a single message that would clearly say where and when exactly the U.S. would be struck. And that does mean that the top governance of the country, who read these decrypts, could neither know nor warn the fleet in Hawaii of the impending attack...

It's quite possible that William Friedman even tried to be honest. Having somehow managed to radically rethink his former absolute certainty of the opposite and his heavy despair from the fact that "they knew, they knew" and did nothing to prevent the catastrophe. But this change of position would be truly honest only if Friedman entered into an open discussion with Admiral Theobald, which implied a competent discussion by the parties of those declassified documents that had by then become known. But to refute serious arguments from a person conversant in the subject immediately after he died... Such things can be called different words, but definitely not "honest and noble."

And the most unpleasant thing is that just a few months before the preparation of this work, a surprisingly similar story took place with the "productive author" William Friedman, as if it was made by the same pattern. When the same very authoritative specialist, but in collaboration with another veteran cryptographer, his wife Elizebeth Smith Friedman, released another serious, well-founded "refutation." Only not classified, but published openly for everyone. And not about the dark secrets of military espionage cryptography, but about the strange and inept attempts of all kinds of amateurs who tried to prove with the help of pseudo crypto-analytical

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<sup>36</sup> David Sherman. "William Friedman and Pearl Harbor," *Intelligence and National Security*, 2017 November  
<http://dx.doi.org/10.1080/02684527.2017.1400226>

tricks that the author of Shakespeare's texts was supposedly Francis Bacon.

The book was titled *The Shakespearean Ciphers Examined*<sup>37</sup> and brought significant financial bonuses to the authors in the form of fees and a literary award from Shakespeare scholars. And also, of course, it signed in history of Shakespeare studies and is still regularly quoted as the final word from cryptography specialists who competently testified that there are actually no encrypted messages in the first editions of Shakespeare and Bacon and have never been...



It's quite possible, or rather partly documented, that the Friedman spouses had some deeply personal reasons in their old age to completely reconsider the bright deeds of their own youth, along the way discrediting all those who brought them to cryptography. Calling Elizabeth Wells Gallup a woman completely lost in her own fantasies and Colonel Fabyan an extravagant rich man who knows nothing about cryptography and is only concerned with self-glorification.

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<sup>37</sup> W. F. Friedman, and E. S. Friedman. *The Shakespearean Ciphers Examined*. London: Cambridge University Press, 1957.

There is no need here to delve into the arguments and arguments of Friedmans' book. But it must be emphasized that those whom they expose especially stoutly — Gallup and Fabyan — by that time had already died a long time ago back in the pre-war 1930s. All this “quasi revealing” from the crypto spouses looks especially bad for the reason that the original and even more detailed version of this work was prepared in 1955. That is, shortly after the death in 1953 of the French general already familiar to us from World War I, cryptographer François Cartier. (In 1954, at the request of Friedman, he was provided with a review of the general's biography prepared by colleagues from Paris through NATO channels.<sup>38</sup>)

In the 1920-30s, having completed his military service, Cartier, at the suggestion and on specific tips from George Fabyan, spent a lot of time researching and cryptanalyzing Bacon's biliteral cipher in old books of the 17<sup>th</sup> century. He first published a series of articles and then a generalizing monograph *The Problem of Cryptography and History*<sup>39</sup> where, on the whole, he confirmed both Gallup's findings and the rationality of further research on materials of this kind.

In other words, the Friedmans had more than enough time to comprehensively discuss with General Cartier, at the level of high-class professionals, their such significant differences in assessments of the same material equally interesting to the parties. But they preferred to wait until Cartier died at the age of 90. And only then they issued their competent and much more convenient for official science “refutation,” that firmly entrenched in history and literary criticism.

Since both William Friedman and his wife also left this world a long time ago, we are unlikely to know the true motives that led respectable people in their so questionable work, which is clearly similar to the deliberate creation and dissemination of false and manipulated information.

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<sup>38</sup> Sheldon, R.M. “The Friedman Collection: An Analytical Guide,” 2014, Item 397.2

<sup>39</sup> François Cartier, *Un problème de Cryptographie et d'histoire*. Paris: Editions du Mercure de France, 1938

On the other hand, there are quite enough facts to understand why this kind of deception might be needed by the state and its spy agency. The situation with Pearl Harbor is, of course, much clearer. Always and everywhere, the first persons of the state are usually depicted in a highly flattered and artificially ennobled form. Especially the leaders of the state, winners in a big war. That is, without all the bloody dirt that accompanies any war...

But why on earth could the NSA spies be interested in active interference in purely literary disputes about the real author of Shakespeare's works? In order to at least partially understand this dark moment, one more final quote is needed. And the accompanying comment, which helps to look at things that seem to be well-known for a long time in a fundamentally different way...

## **Backdoors, TEMPEST and more...**

Quote #5:

***"...much of what is done today at NSA may be traced to William Friedman's pioneering efforts."***

The main part of what the NSA really does now, until recently, remained one of the main state secrets of the United States. This "terrible secret" was revealed in 2013 thanks to Edward Snowden and a great many secret documents from the agency's daily espionage work, provided by him.

In short, the essence of this work isn't so much creation of own strong ciphers and analysis and breaking of someone else's ciphers, as it's traditionally believed, but very persistent and aggressive implementation of artificial weaknesses or otherwise "backdoors" into any cryptography that the NSA can reach. Because with such backdoors, any even formally strong ciphers, the Agency breaks not only easily and simply, but also in industrial scope.

The other major part of what the NSA does is codenamed TEMPEST, and in the old days was also considered an extremely serious state secret. From the beginning of the 2000s, however, the

dense veil of secrecy was gradually and quite officially removed from the TEMPEST topic, but in a very specific way. Since the essence of TEMPEST is side signals, emanations and channels of information leaking, both espionage technologies through these channels and the ability to protect their own compromising radiation are equally important for special services.

When the details of such technologies are officially disclosed, the NSA diligently pretends that TEMPEST is a purely defensive matter to protect their own secrets. That is why so far, among all the documents declassified by the Agency, there is no description of a single intelligence TEMPEST NSA operation. Although at the same time it is perfectly and documentedly known that this whole topic arose and developed precisely as a spyware one in the early 1950s as a result of mutually agreed research by the NSA and the CIA.

And finally, just as important, the third main part of “what the NSA is doing now” is something that organically combines “classic” cryptanalytical espionage and both “especially secret” intelligence technologies: backdoors and TEMPEST. Something that isn’t clearly said almost anywhere and ever, remaining a great secret in everyone’s sight. Finally, this is something that originates not so much from the works of William Friedman as from much more ancient developments of his main inspirer — the English Rosicrucian Francis Bacon.

To understand the essence of this “magic secret in everyone’s sight” it’s necessary to comprehend several facts of history in their complex. These facts are reliable and indisputable. But historians always consider them separately and in isolation from each other, and therefore do not see the obvious.

The literary glory of William Shakespeare, who didn’t leave behind a single handwritten page of his brilliant texts, began seven years after his death, in 1623, along with the printed edition of the so-called First Folio. It was a thick book of large format, and it’s not very clear who exactly prepared and published it. In it, for the

first time in one volume, all the plays of the great master were collected, as grateful readers and literary scholars later understood.

In the same 1623, which is noteworthy, another book by Francis Bacon, at that time still alive and healthy, was published. The book was written in Latin and was called *De Augmentis Scientiarum*. In its content it was an expanded Latin version of Bacon's earlier work of 1605 *The Advancement of Learning*. Particularly interesting for our story is the section on ciphers. Because in the new version of the work, Bacon described in detail the absolutely wonderful method of encryption invented by him in his youth. The so-called "biliteral Bacon's cipher" or steganographic binary substitution cipher, as it would be called now, allowed everyone to encrypt "anything with anything" in plain sight and without arousing suspicion. Or "Omnia Per Omnia" in Latin.

Returning to Shakespeare's First Folio, it should be emphasized that the book began with the play *The Tempest*. And then the rich cryptographic story of this book turned out to be such that in the very first pages of the comedy *The Tempest* and in the other places in this volume, researchers of the 19<sup>th</sup> and 20<sup>th</sup> centuries discovered a great many hidden messages encrypted by Bacon's method "Omnia Per Omnia."<sup>40</sup>

Colonel George Fabyan set up a special printing house in his Riverbank Laboratories to publicize these discoveries. At the beginning of the 20<sup>th</sup> century, he published several books with detailed instructions and tools to help all seekers independently identify and break the Bacon's cipher in the books of the Shakespearean era. But now IN ALL modern books on the history of cryptography you can read about Fabyan only one thing: that he was an "eccentric textile millionaire who tried to find confirmation in the works of Shakespeare that their author was Bacon." And of course, he didn't actually find anything there, because the great cryptographer William Friedman said so.

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<sup>40</sup> Details about the "Omnia Per Omnia" encryption method and its varieties see chapter "If The Case Reaches Court...", section "The Problem of Cryptography and History" and the General Cartier's book.

The authors of all such books naturally didn't even try to analyze the First Folio with the help of Fabyan's books. As for the real professional cryptographer, General François Cartier, whom Fabyan managed to seriously interest in the topic and inspire him to his own analysis, the conclusions of this professional were simply deleted from the modern history of cryptography. As well as the name of the General himself. Therefore, today, neither on Wikipedia in any of its languages, nor on the entire Internet in general, you will find practically no meaningful information about this person.

Even in *The Codebreakers*<sup>41</sup>, the famous work of David Kahn, as the most detailed history of cryptography, in the supplemented form reprinted in 1996. There, in the sections on World War I, the name of the main French cryptanalyst is mentioned repeatedly, and still there is not a single mention of Cartier's book *The Problem of Cryptography and History*... Instead there is a whole section called "pathological cryptanalysis" where fragments of Friedman's book with devastating criticism of the "baconians" are retold with reverence and those amateurs who are poking around in books of Shakespeare's era in search of non-existent ciphers are ridiculed in every possible way.

However, the grateful U.S. government represented by the NSA personally marked one of these amateurs with a special memorial plaque on the building of the Riverbank Laboratories. And this is precisely in memory of the cryptographic merits of George Fabyan. But this fact was simply ignored in David Kahn's historical work. Tellingly, Kahn's over 1000-page thick book also doesn't mention TEMPEST or NSA cryptographic backdoors.

Consider the facts of NSA history. Since the creation of this super secret intelligence service in 1952, when a single powerful agency was created on the basis of several units in the army, the position of chief cryptographer was taken by William Friedman. And one of the earliest crypto-active undertakings of the NSA in the inter-

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<sup>41</sup> David Kahn. *The Codebreakers. The Comprehensive History of Secret Communication from Ancient Times to the Internet*. Scribner, 1996

national arena was the effort to introduce artificial weaknesses or backdoors into popular cipher machines on the world market.

The details of these operations are still classified, but it has long been no secret that all began with the visits of William Friedman to Europe and, first of all, Switzerland, to his old friend Boris Hagelin.

### **Project BORIS**

*One of the most important covert operations of the NSA, started back in the 1950s, is known among intelligence historians as Project BORIS. This title comes from the name of the very famous businessman Boris Caesar Wilhelm Hagelin, who during World War 2 made a fortune on cipher machines for the U.S. Army, and in the post-war period founded still famous Crypto AG corporation in Europe.*

*After the end of the war, there was a growing demand in the world for modern cipher equipment — to secure important correspondence not only in the military, but also in diplomatic, banking and industrial communication systems. But only the most powerful states, such as the USA, UK and Germany, had their own crypto industry.*

*However, they were all members of the pro-American NATO alliance, and many states, especially those not aligned with NATO or the Warsaw Pact, had very reasonable grounds not to trust cryptography made in one of the adversarial blocs.*

*Therefore, in neutral countries with solid scientific and industrial potential, such as Switzerland or Austria, very favorable conditions appeared for the development of the business of independent crypto manufacturers whose machines everyone could trust in the same way as they trust money to Swiss banks.*

*And by the mid-1950s, the Swiss company Crypto AG was about the same in the commercial encryptor market as General Motors Corporation was in the automobile market. In such a situation, the NSA chiefs in 1957 sent William Friedman, one of the veteran founders of the American crypto service and the most authoritative cryptographer, to Europe on an extremely delicate and secret mission.*

*Friedman had good connections in Western European intelligence services since World War I and besides, he was personally well acquainted with Hagelin from the time when the latter had business in America. (It's notewor-*

*thy that Friedman and Hagelin were born almost the same year in the Russian Empire, the first in a family of local Jews in Bessarabia, the second in a family of a Swedish oil engineer in Baku.)*

*Both the results and the very fact of Friedman's secret negotiations with encoders manufacturers in Switzerland still remain a big state secret. However, in the 1990s, a number of investigative journalists and the documentary evidence they collected convincingly demonstrated that, as a result of backstage collusion commercial encryptors from manufacturers of Western neutral countries, such as Crypto AG, for decades had artificially weakened cryptographic schemes, making them easier for the NSA to break.<sup>42</sup>*

Other documented known facts from the NSA history are that around the same years, the development of the topic of leakage side channels, code-named TEMPEST, began. Where did this term come from, the declassified official history of the special service is still silent. But it's absolutely impossible to hide the fact that the first chief cryptologist of the NSA, William Friedman, came into great cryptography through the analysis of the First Folio of Shakespeare, which begins with the play *The Tempest*. And there, literally from the very first letters and pages, important secret information is reported through "side channels of information delivery." If you believe all these amateur baconians, of course.

But the most interesting thing is that if the strange ideas of the baconians are taken really seriously, you can see that back in the 17<sup>th</sup> century, Francis Bacon, with his ingenious encryption method "Omnia Per Omnia," predicted, in fact, the most advanced of modern TEMPEST backdoors. This refers to such active backdoors that give out secret information and, first of all, crypto keys, modulating the natural effects in the operation of computer devices using the binary "Bacon's" coding. In particular, effects such as sounds in the operation of components, heat generation or natural electromagnetic radiation.<sup>43</sup>

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<sup>42</sup> Source: "Reading between the lines" (*rus.*)  
<https://kiwibyrd.org/2013/09/06/0903/>

In a more detailed form, you can read about the fate of this project in a later article "Total Hagelin, or Finita la commedia" (*rus.*)  
<https://kiwibyrd.org/2020/02/20/20h22/>

This kind of espionage technology has only been discovered by independent computer security researchers in recent years. However, there are strong arguments for the fact that the NSA always knew about this, since the days of William Friedman's "Magic..."

## Once More About Magic

All modern science, based on the subtraction of mathematics, dates back to the 17<sup>th</sup> century — it starts from the foundational works of titans like Galileo, Descartes and Newton. But their great achievements arose, of course, not from nothing, but thanks to the work of predecessor researchers who were engaged in such questionable, for modern scientists, things as alchemy, astrology and magic. As you know, over time, modern chemistry was born from alchemy, respectable astronomy appeared from astrology, and modern physics and cryptology can be considered the direct heirs of medieval magic.

How this ancient magic works in advanced physical science is well known. In the foundations of quantum physics, for example, there is an amazingly powerful mathematical toolkit like the relativistic Dirac equation or Feynman path integral, which is not just good for scientific predictions, but truly excellent. That is, scientists have formulas that are indisputably true and very widely used. But at the same time, no one knows and can explain why these formulas work. For they come from nothing and, in fact, appeared in their authors' heads in a completely unknown "magical" way. However, the suspicious word "Magic" is not accepted among serious scientists<sup>44</sup>.

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<sup>43</sup> For the recent rediscovery of TEMPEST backdoors by the academic information security community, see the text "Cutting out the reality," section "Minus GSMem, or cutting the access methods out" (*rus.*) <https://kiwibyrd.org/2016/08/09/168/>

<sup>44</sup> How in 1952 (the year of the creation of the NSA, by coincidence) the famous theoretical physicist Wolfgang Pauli published his analytical work with an attempt to synthesize the magical methods of ancient alchemists and modern mathematical methods of science, see the text "The Language of Synthesis (<https://kniganews.org/map/n/00-01/hex17/>) in the material 'Dreams of Wolfgang P.'" (*rus.*)

In the science of cryptography, with its much deeper occult roots, as we have already seen, even very serious persons did not hesitate to use this term. But just in case or for concealment, they turned it into a specific code word, such as are always in abundance in the work of secret intelligence services. But it doesn't mean that genuine magic and sorcery have now disappeared from the work of real cryptographers. Not at all. And there are plenty of good examples.

Here is a fairly typical case of cryptographic magic in the work of the Friedman spouses, given in the mentioned book of Kahn *The Codebreakers*. In 1917, when the Riverbank Laboratories began helping the U.S. government with cryptanalytic code-breaking, English military intelligence colleagues sent them five short messages for a test. The texts were not encrypted manually, but with a special device — a new enciphering machine by Vincent Pletts, a radio engineer of the Marconi Wireless Telegraph Company who worked with the MI1.

The British were absolutely confident in the strength of their new cipher and sent it to their American colleagues only to be additionally convinced of this with the help of an independent examination. The gifted William Friedman, however, almost immediately managed to decrypt some of the material by identifying the system and finding one of the crypto keys. This key was the word CIPHER. But he couldn't find the second key analytically. Then Friedman decided to apply a slightly different method — “magic” or “psychological cryptanalysis,” if you like.

In the same room, Friedman's wife Elizebeth was working on other cryptograms at the next table. Interrupting her work for a moment, the cryptographer asked his wife to take a break, relax and “make her mind a blank...” After a pause, Friedman asked: “now I want you to tell me the first word that comes to your mind when I say a word...” After another short pause, he said “Cipher...” “Machine,” Elizebeth replied immediately. Having used the word MACHINE as a crypto key, Friedman immediately saw that the key was really suitable and completely decoded all the test material.

And the very first of the encrypted phrases said: “This cipher is absolutely undecipherable...”

Such episodes with intuitive guessing of an intermediate answer in the work of talented cryptanalysts occur regularly and aren’t even considered some kind of special magic. But when a team of cryptographers, using only the texts of encrypted telegrams intercepted on the air manages not only to completely break the crafty scheme of an unknown cipher machine for classifying communications, but also organize mass decryption of such crypto correspondence — these things really look like fantastic magic. Even for professional experienced cryptographers. And what is especially important, amazing miracles of this kind are not just possible, but actually happened in the history of cryptanalysis many times.

That is how, in particular, Friedman’s people in the SIS special service at the turn of 1930-40 broke the crypto scheme of the cipher machine that covered the diplomatic correspondence of Japan and got the code name Purple from the Americans. And in the same way, exclusively using the ciphertexts of radio interception, their colleagues from the British crypto intelligence in the 1940s completely broke and massively decrypted the most secure German cipher Lorenz Schlüsselzusatz, which encrypted the correspondence between Hitler and the Wehrmacht high command<sup>45</sup>.

Of course, all such fantastic successes, if desired, can be explained without any magic, by purely mathematical talents and the amazing intuition of cryptanalysts. Nevertheless, in the history of cryptography of the 20<sup>th</sup> century there are many such pages that are completely impossible to explain for ordinary reasons. And because of this, the explanation can either be something completely ridiculous and helpless like “coincidence” or a real factor, but for modern people it sounds extremely improbable, “just magic with the participation of supernatural powers...”

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<sup>45</sup> Details about the first supercomputer in history and fantastic successes of cryptanalysts during WWII: “The British Colossus” (*rus.*)  
<https://kiwibyrd.org/2013/04/30/200606/>

Here are a few offhand examples of parallel and in some places even still classified stories of crypto intelligence agencies in the USA and the USSR.

In the 1940s, the world-famous Soviet engineer, inventor and musician Leon Theremin invented for the Chekists a completely ingenious spying gadget, a bug that got the code name BURAN. In terms of design and function, it was a typical TEMPEST device, as it is called now. And BURAN in literal translation from Russian is a snow storm, that is, the same as TEMPEST (BURYA in Russian). The striking fact is that Soviet intelligence began actively using Theremin's invention to listen to the American ambassador when neither the NSA nor the TEMPEST topic existed in the United States.

Just as the veil of state secrets continues to conceal in the NSA not only the espionage aspects of the “tempest” topic, but also the story of the origin of the term TEMPEST itself, so the details about the “Buran device” were also a big secret of the Soviet special services for a long time. But the structure of another most famous invention of Leon Theremin, an electronic musical instrument called “Termenvox” (or “The theremin”), has never been a secret.

If acoustic electronics professionals look at this instrument from the spy-related point of view, they can easily see that the physical rationale for the operation of “Termenvox” and “Buran” are essentially the same. For they are created on the basis of a deep understanding by the inventor of those interactions and mutual influences that are specific for vibrations and movements of objects, acoustic and electromagnetic waves.

Phrasing it a little differently, Leon Theremin felt very subtly how sounds and movement could modulate — or otherwise encode — electromagnetic waves. And this, in turn, is one of the objectifications of the Bacon's idea “*Omnia Per Omnia*”: to encode “anything with the help of anything.”

In order for the influence of Bacon-Rosicrucian magic on the cryptography of the 20<sup>th</sup> century to become obvious and undeniable, it's

necessary to take into consideration such an absolutely reliable fact of history. In the 1930s, the founder and head of the first Soviet crypto service or a Special Department of VChK-OGPU, the old bolshevik and chekist Gleb Bokii, became quite close to the underground circles of mystics and occultists. In particular, he developed a close relationship with the biologist Alexander Barchenko, a member of the Russian branch of the Order of the Rosicrucians-Orionists. Under the strong influence of Barchenko, for whom Bokii became a protector and patron, for some time the secret society called “Ancient science” even operated in the OGPU to study secret mystical knowledge.<sup>46</sup>

Almost nothing is known about the secret influence of the Rosicrucian order on state cryptography in the 1930s and other years in the USA or Great Britain. For both in open public and in secret books on the history of cryptography, which are gradually declassified, the authors either do not know about these things or are silent.

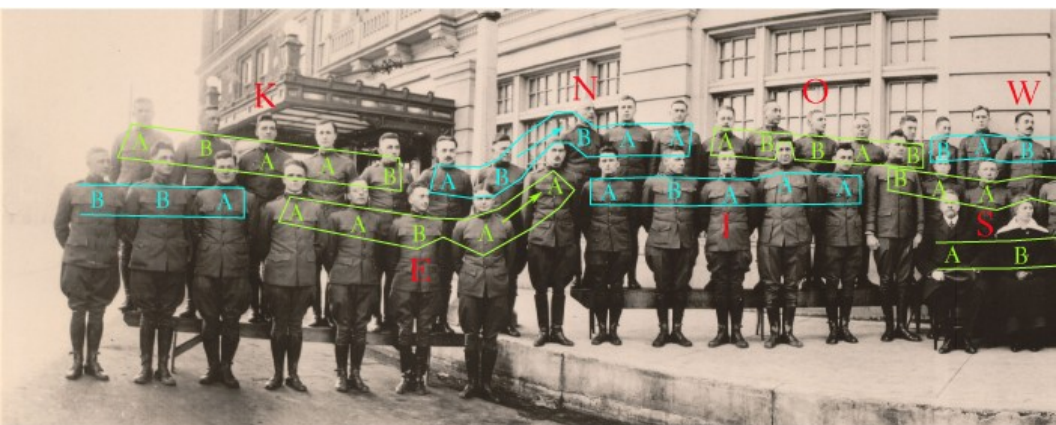
But it's well documented that Bacon's ciphers and Rosicrucian magic were the main area of research at Colonel Fabyan's Riverbank Laboratories. Moreover, this institution got its current name “Acoustic Laboratories” only thanks to Bacon, the Rosicrucians and their magical experiments with unusual sound capabilities. But actually no one talks about it out loud these days. Because there is nothing about this in the official texts of Bacon, and all information on this subject allegedly deciphered “from Shakespeare” and other old books is interpreted as ridiculous inventions of all sorts of freaks.

About how depthless and not wise such a position is, says at least the fact that the father of American cryptology, William Friedman, should also be considered such a “freak.”

There are reliable and absolutely irrefutable facts indicating that Friedman not only highly appreciated Bacon's biliteral cipher and his ingenious “Omnia Per Omnia” encryption method, but was also inspired by Bacon's ideas until the last days of his life.

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<sup>46</sup> Andreev A., Berezhkov V. *Okkultisty Lubyanki*. Moscow: Publisher Bystrov, 2006 (rus.)



And it's especially important not that these facts are undoubted, but that this information never appears in official versions of the biography. It makes sense to pay attention to this and think about the causes and background of what is happening...

## “KNOWLEDGE IS POWER”...

### Fact #1:

A picture from 1918, especially dear to Friedman — with a group photo of his first big course of officer-cryptographers — it's far from just a memorable photograph that he kept on his desktop all his life. It's a carefully arranged secret message demonstrating the full power of Bacon's encryption method “in everyone's sight.”

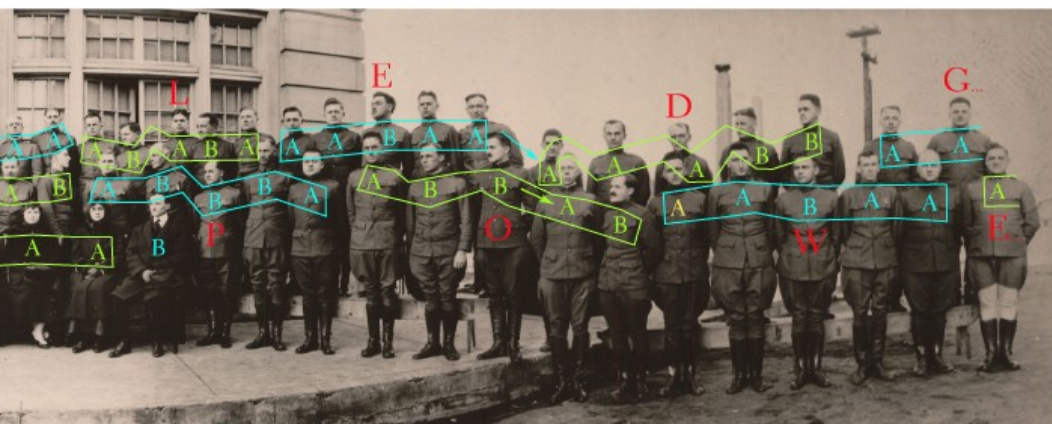
In the turns of the heads of people looking either straight ahead or to the side, bits of the message are encoded. Which, with a careful dividing bits into fives, is formed into the letters of the famous motto of Francis Bacon, the Rosicrucian Order and many other mystics-occultists of antiquity: “Knowledge is Power.”<sup>47</sup>

However, this is not even the most interesting thing, but the fact that on the official web pages of The Marshall Foundation<sup>48</sup>, which

<sup>47</sup> Enlarged version of the photograph:

[https://www.cabinetmagazine.org/issues/40/Friedman\\_decoded.jpg](https://www.cabinetmagazine.org/issues/40/Friedman_decoded.jpg)

<sup>48</sup> <https://library.marshallfoundation.org/Portal/Default/en-US/Search/AdvancedSearch?userSearchId=5>



talk about the archive of the “father of cryptology” stored there, this very dear and important for Friedman photo for some reason is missing...

But for some time now you can find a separate video clip, where the voice of the presenter will tell you the story of this picture and explain how it should be understood correctly.

To make it clear that the absence of the photograph itself is not an accident or an omission, it’s also useful to find the section “Photographs That Were Under the Glass of William F. Friedman’s Desk For Many Years”<sup>49</sup> there. According to all evidence, this picture was always there, on the cryptographer’s desk.

However, in the “museum version of the table” for history, this important photo was removed without explanation and any mention at all...

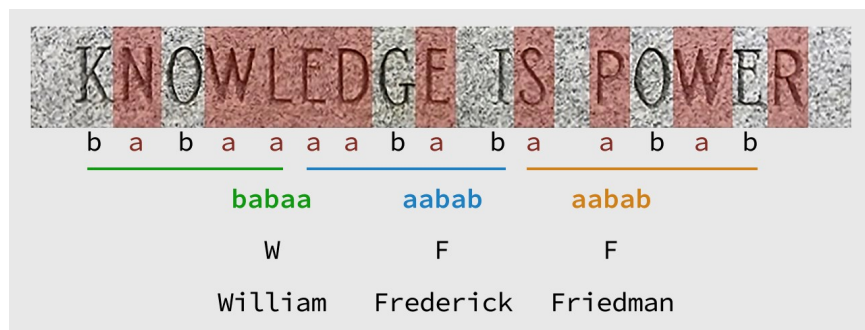
<sup>49</sup> <https://web.archive.org/web/20180215074622/https://marshallfoundation.org/library/collection/william-f-friedman-papers/#!/collection=85>



## Fact #2:

The same phrase “knowledge is power,” so dear to the cryptographer and to the works of his whole life, he bequeathed to be engraved on his tombstone. What, of course, the real historians of cryptography have always known. But only in 2017, almost half a century after Friedman’s death, it was suddenly discovered in this inscription on the tombstone that it also contains a secret message encrypted by Bacon’s biliteral method. Moreover, Elonka Dunin not only decoded this short cryptogram, an encrypted signature, the

initials of the cryptographer W-F-F, but also managed to find a personal note in the archives of his wife Elizebeth Friedman, to totally confirming the correctness of this decryption.<sup>50</sup>



Well, the most interesting thing in this story, again, is not the fact of revealing an encrypted message from a great cryptographer. But how did the usually very patriotic American media deal with it. After all, William Friedman is a very famous person in American history, the founding father of U.S. national cryptology, whatever you say.

At the same time, surprisingly, if you trust the global news aggregator Google News, NOT A SINGLE publication on this topic appeared in the American media at all. Neither about the report of Elonka Dunin at the Washington conference in January 2018, nor about the encrypted letters on Friedman's gravestone. (The topic turned out to be of interest only to the British: one IT periodical<sup>51</sup> and one blogger<sup>52</sup> on the pages of the English antivirus bulletin).

However, neither the meticulous Dunin as the author of the discovery, nor the British commentators, with all their interest in the history of cryptography, captured the subtle essence of the farewell message from Friedman.

<sup>50</sup> Elonka Dunin, "Cipher on the William and Elizebeth Friedman tombstone at Arlington National Cemetery is solved", 2017  
<http://elonka.com/friedman/index.html>

<sup>51</sup> [https://www.theregister.co.uk/2018/01/20/friedman\\_cryptographic\\_grave\\_message/](https://www.theregister.co.uk/2018/01/20/friedman_cryptographic_grave_message/)

<sup>52</sup> <http://web.archive.org/web/20181129125522/https://nakedsecurity.sophos.com/2018/01/22/famous-cryptographers-tombstone-cryptogram-decrypted/>

## #

What's so delicate and special about this story?

To begin with, let's pay attention to a curious closed loop. At the very beginning of his crypto-military espionage career, Friedman was visibly and distinctly impressed by the power of Bacon's genius and his biliteral cipher. At the very end of his life, being already at death's door, he found it necessary to point out the direct connection of his service with Bacon and his cipher. But in between these episodes, we see something radically different. As an authoritative state cryptographer, Friedman speaks aloud exclusively about the genius of Shakespeare, in every possible way denying the presence of Bacon ciphers in the Shakespearean era books...

At the same time, however, there is very clear evidence that the cryptanalyst himself, towards the end of his life, passed through severe internal discomfort from the results of his secret espionage service to the state, which moved further and further away from the widely declared principles of freedom and democracy. These experiences were especially clearly reflected in Friedman's public lecture "Shakespeare, Secret Intelligence, and Statecraft"<sup>53</sup>, which he delivered in 1962 at a meeting of the American Philosophical Society. The lecture ended with such words, quite unexpected for the "state codebreaker":

*Did Shakespeare have any private views concerning the ethics of interception, the collection of secret intelligence, and its use in the conduct of public business? I wonder.*

*Did he recognize that it is difficult to reconcile such activities with the democratic ideals of a free and open society*

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<sup>53</sup> William F. Friedman, "Shakespeare, Secret Intelligence, and Statecraft." Proceedings of the American Philosophical Society 106, no. 5 (Oct. 1962): 401–41.

*that would prefer its government to conduct all its internal or domestic affairs openly, so far as possible, and also to conduct all its external or foreign affairs in the same manner?*

To better understand the pain of the questions Friedman asked at the end of his spy career and at the end of his life, it's very useful to compare them with the statements of U.S. Secretary of State Henry L. Stimson. That very Stimson who in 1929 personally broke up the "Black Chamber" at the State Department and thereby unwittingly gave rise to the ascent of William Friedman's espionage cryptanalytic career.

As a gentleman and just a man of the highest degree of decency, Stimson was categorically against the combination of diplomacy and espionage. Therefore, he considered it completely unacceptable that State Department cryptanalysts read the mail of foreign diplomats, and the information obtained in this way was reported to American ambassadors. Here is how he explained his position:

*"The ambassador is the guest of the country he goes to. He is awarded diplomatic privileges" — such as immunity from arrest — that, under international law, Stimson said, include "absolute freedom to communicate with his country free of espionage." Diplomats, he continued, "are the only class of officers who are supposed to deal internationally on a gentlemen's basis.... The secretary of state doesn't act as a spy on the people he is receiving as brothers." He summarized this view in the lapidary phrase "Gentlemen do not read each other's mail."*<sup>54</sup>

William Friedman never served as a diplomat and was probably aware that even the extremely scrupulous Secretary of State Stimson for military people always allowed ungentlemanly behavior in general and reading opponents' correspondence in particular.

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<sup>54</sup> David Kahn. *The Reader of Gentlemen's Mail: Herbert O. Yardley and the Birth of American Codebreaking*. Yale University Press, 2004

But as a smart and insightful person, Friedman perfectly understood that the whole business of his life — reading other people's letters — practically didn't combine with the democratic ideals of a free and open society. He, like anyone who considers themselves honest and decent person, would obviously prefer to live in a state that conducts all its affairs — both internal and external — as openly as possible.

However, approaching the end of his life, the cryptographer saw perfectly well that along with the creation of powerful centralized intelligence services like the CIA and the NSA, which demanded more and more secrecy, his state was rapidly moving in a completely different direction. Further and further away from democratic ideals and a free open society. Moreover, the outstanding cryptanalyst and spy William Friedman put a lot of his own strength and talents into the formation of just such a state, endowing the authorities with secret knowledge and, therefore, new power...

Of course, Friedman understood that all very well. But what did he feel?

It would be interesting to know...

*April 2018  
December 2023*





# The Problem of Cryptography and History

## General Cartier, “The Problem of Cryptography and History”

It so happened that in November 2020, two unrelated events occurred actually synchronously, and the main character of both is the same person. And although this man left a very noticeable mark in the history of the 20<sup>th</sup> century, his main feature is the fact that today someone is trying to cut out all his historical achievements and himself as a person from history. It's being done in every possible way, persistently and quite successfully. As if the person did not exist at all...



This man is François Cartier (1862-1953). More often he is called General Cartier because his whole life was connected with the French army. More precisely, with the transformation of cryptography from the occult-mysterious art of secret writing and cipher breaking into a solid and professional military business for protection and extraction of information on a firm mathematical basis.

There are good reasons to believe that General Cartier was not only the founder of scientific cryptology in France, but also one of the founding fathers of all modern cryptology of the 20<sup>th</sup> century, along with his much more famous American colleague William Friedman (1891-1969). It's noteworthy that these two outstanding cryptographers were connected not only by personal acquaintance and military cooperation of allied states in World War I, but also by one big historical Problem.

Moreover, the same Problem, which is significant, is also at the core of seemingly coincidental events of November 2020. However, to make it clear (and visible), it’s required to know not only the general context, but also quite deep details of this entire story.

For a correct understanding of these details, explaining why we are talking about things, although old, but really important, interesting and still relevant, it’s necessary to mention nowadays events, at least briefly...

The first event is disappearance of the last “live” web page dedicated to General François Cartier from the Internet. Until October 2020, the only website of the global computer network to contain very brief, but at least some meaningful information about this outstanding person, was the website of the French Association for the Promotion of Military Communications <http://www.appat.org>. And in November 2020, this entire site “disappeared.”



Fig. 21. Screenshot of the [appat.org](http://www.appat.org) website

Fortunately, the loss was very short, although unpleasant — instead of an educational historical information resource, a set of links to online casinos appeared at a known address. Within a few days, the owners of the former site managed to restore the right to the domain name and everything continued working as usual. But this case gave reason to wonder if the search engines find the web

page<sup>55</sup> of this site dedicated to General Cartier as before. It immediately became clear that all the more or less popular search engines seem to have forgotten about the page and can't find it anymore.

In other words, if someone wants to know who General François Cartier was, it is impossible to get a direct and clear answer to this question on the Internet. All sorts of additional research and tricks will be required.

The second event has absolutely nothing to do with the first one in terms of causal relationships. In November 2020, a curious mail came to the known mailbox of the *kiwi arXiv*. More precisely, a link to a file containing a digitized version of one extremely rare book. Its author is General François Cartier, and this book is not just the main, but also the only, most likely, reason why this person is already almost completely cut out of the history of the 20<sup>th</sup> century...

## #

This book was published in 1938 and titled *The problem of Cryptography and History* (François Cartier, “Un problème de Cryptographie et d’Histoire.” Paris: Editions du Mercure de France, 1938). The core of the problem at issue is the very special Bacon’s ciphers in 17<sup>th</sup> century texts and printed books, and chiefly the role of these ciphers in the long debated question of Francis Bacon as the true author of Shakespeare’s works.

Here, in fact, the entire long story about this rare book will be reduced to the publication of significant and most meaningful translations of fragments of this document. But before starting extensive quotations, it certainly makes sense to clarify important details about the author of the research — with special attention to his experience and competence as a professional cryptographer. Moreover, it’s very difficult to find such information on the Internet.

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<sup>55</sup> [http://www.appat.org/index.php?option=com\\_content&view=article&id=28:francois-cartier-1862--1953&catid=4:les-grandes-figures&Itemid=4](http://www.appat.org/index.php?option=com_content&view=article&id=28:francois-cartier-1862--1953&catid=4:les-grandes-figures&Itemid=4)

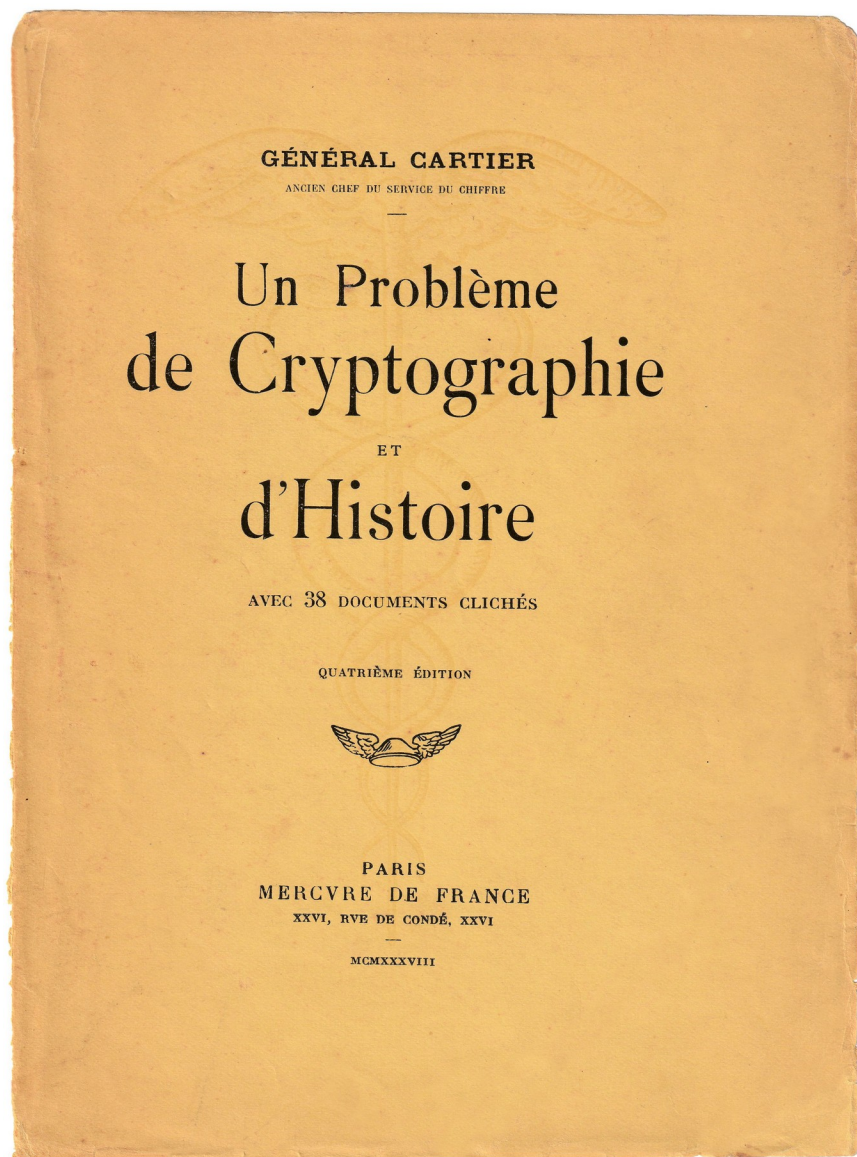


Fig. 22. The cover of the book

The web page of the site [APPAT.org](http://APPAT.org) mentioned above gives only the most general and brief information about the merits and achievements of General Cartier. In particular, that during World War 1 he successfully headed the entire cryptographic domain in-

side the General Staff and the Ministry of War, being responsible for ciphers to protect national military communications, for intercepting and decrypting enemy communications, and for training professional cryptographers for the army. French Prime Minister Georges Clemenceau praised the merits of General Cartier with the following words: “He alone was more useful for our country than a whole army corps...”

Significantly more meaningful information can be found in the scientific literature on historical and cryptographic topics. In particular, in 2016, the Springer publishing company, as part of its well-known series of “Lecture Notes in Computer Science,” released a large collection of cryptographic reports and essays dedicated to the 85<sup>th</sup> anniversary of David Kahn, probably the most famous among modern historians of cryptography. One of the articles in this collection, in particular, was prepared by the French researcher Sébastien-Yves Laurent and gives an analytical overview of how the “Professionalisation of French intelligence in the field of cryptology in the period 1870-1945” grew. Since a significant section of this essay is devoted to the role of General François Cartier, it’s quite natural to present this fragment here — in a shortcut form.

But in order for the history of the intelligence of the French crypto service to be more understandable to the non-French public, it’s necessary to clarify in advance one important point associated with a very special educational institution called the Polytechnic Institute or École Polytechnic, traditionally called by the French as simply X. This educational institution was created in 1794 as a kind of new scientific response of the Great French Revolution to all traditional French universities, where, for natural historical reasons, the influence of the church and supporters of the monarchy was very strong.

Since the creation of X took place at a very difficult time for the Revolution — waves of terror, civil war, foreign intervention, and so on, — studying at the École Polytechnic from the very beginning acquired a noticeable and significant militaristic connotation. Therefore, along with a very high level of science teaching for its time and a long series of outstanding scientists and engineers

among graduates, this same institution has always been famous for the fact that it consistently provided the armed forces of France with strong professional personnel.

***Beginning of a quote from  
"The French Cryptologists (1870–1945)"***

Indeed, from the last quarter of 19<sup>th</sup> Century Officers coming from the École Polytechnique ("X") with specific knowledge in Mathematics established themselves as leaders in the Cryptographic Field. They were strongly helped by the new dominance of Officers in the Intelligence Field, even if they were not at this time considered by their *camarades* as real Intelligence Officers but as technical experts. These men have been scholars from our current point of view, but at this time they were only considered as such experts.

Nevertheless, as quickly as the Intelligence Officers thirty years before they succeeded in becoming recognized as experts by the other parts of the so-called Cryptographic Community.

One man, François Cartier (1862–1953), played a major role in the building of new cryptographic organs inside the General Staff and inside the Minister of War. Thanks to the highest quality of his work in Cryptography he succeeded in establishing the specialised Military Officers in the Cryptographic Community.

François Cartier came from the X and has been then specialised in Artillery and Military Engineering in a time, of course, during when all calculation was a mental work. He was appointed in 1900 in the Military Wireless Telegraphy and the same year as secretary of the Military Cryptographic Committee. Besides being the first Officer to have excellent skills in Cryptography, he was also the first to have understood the necessity to built permanent organs.

In 1908 despite being only a captain he met the minister of War and outlined the necessity to create an interdepartmental committee on ciphers. This committee created only six months later was used by Cartier as a tool to establish the Officers position in the State Cryptographic Field, despite the Foreign Office's refusal to join. With regards to Cryptography, this Committee was the main tool used by the Military to dominate the Home Office and the Colonial Office. Cartier was the first secretary of this committee and was helped by a younger

polytechnicien, Marcel Givierge (1871–1931).

From 1912 to 1920, Cartier was head of the minister of War Cipher's section ("section du chiffre"). He was at the origin of the first courses in Cryptography in the Ecole supérieure de Guerre implemented in 1913. Moreover during all the First World War he ran the Cryptographic Department of the French General Staff. During the WWI Cartier appointed many alumni from the École Polytechnique in the Cryptographic Department.

Thanks to the growing role of Mathematics in Cryptography, from Cartier on the Ecole Polytechnique was implicitly recognized as the unique School for the training of future Cryptologists. During the main part of 20<sup>th</sup> Century Officers graduated from Polytechnique remained at the core of the Decyphering Public Activity even if the École normale supérieure competed with Polytechnique after WWII.

*End of quote*

After reading this fragment, anyone, even absolutely far from the cryptographic business of ciphers, hardly needs additional explanations that General François Cartier occupies a truly prominent place in the history of intelligence service and cryptology of the 20<sup>th</sup> century. What needs clear explanations here is the complete absence of information about this person on the Internet.

Even in the French segment of Wikipedia, François Cartier doesn't have not just a separate article, but even any meaningful paragraphs. The only thing you can find there is a very short reference at the end of the wiki article about another French general named Georges Cartier (1877-1960)<sup>56</sup>:

*General Georges Cartier should not be confused with Brigadier General François Cartier, a cryptographer who headed the cipher department of the French War Ministry during World War 1. His famous publication is a book about Shakespeare and Francis Bacon. There are no family relations between these two generals.*

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<sup>56</sup> [https://fr.wikipedia.org/w/index.php?title=Georges\\_Cartier\\_\(1877-1960\)](https://fr.wikipedia.org/w/index.php?title=Georges_Cartier_(1877-1960))

The most interesting thing here is that even such a brief reference is quite enough to understand why there is no place for the famous general and the pride of France in the grateful memory of mankind. The reason is that François Cartier wrote and published a “famous” outrageous book.

And it’s this book that has now “came by itself” to *kiwi arXiv*. So the time has come for its free-for-all publication and distribution among all those interested.

It should be emphasized that so far this book is not available in digital form anywhere on the Internet<sup>57</sup>. The book’s paper original was bought, digitized and sent to me by a kind person who wished to remain anonymous.

It is quite possible and even most likely that a little later this rare book will appear in public online libraries such as LibGen, Internet Archive or Wikimedia. But in any case, it will be the original file in French. And we are going to publish here the English translation of this work.

Not a complete translation, because the book has more than 300 pages, but the most informative fragments for sure. Starting from the very first page, of course...

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<sup>57</sup> It should be noted that this text was written in November 2020, and the digitized version of Cartier’s book has been published since then.

[ beginning of translation fragments ]  
(chapter “*LIMINAIRE*,” pp. 7-11 of Cartier’s book)

## INTRODUCTION

During the war, I had the opportunity to communicate with several cryptologists of the Allied states and I found that they are remarkably similar to our cryptologists. Both in terms of general cryptographic training and in terms of those special qualities that are peculiar of any good decipherer.

In particular, I had an extensive correspondence with Colonel Fabyan, who sent me several works done by himself or under his direction in the cryptographic bureau that he set up at his Riverbank Laboratories, near Geneva (Illinois, USA). These works made me convinced that the level of employees of his bureau was quite comparable to the level of cryptographers in my unit during the war years. The same technical training and the same methods of analysis, assembled into such an intelligent mechanism that is perfect for the work of intuition, which allows you to restore words or sentences in conditions where only small fragments of them are known.

It was Colonel Fabyan who drew my attention to the various use of Francis Bacon’s encryption system. He sent me an illustrated brochure with humorous examples of texts encrypted with such a cryptosystem. The text of the message there could be hidden in two different colors of stones of a brick house, in the positions of cocks and hens in the yard, in a bouquet of flowers with white and pink petals. All these things actually hid in themselves words or sentences encrypted by the Bacon alphabet, in which the binary symbols of the alphabet — A and B — were encoded respectively in two different colors or two different figures of the picture composition.

First I thought these were cunning suggestions for our intelligence ciphers. But that wasn’t Fabyan’s goal. In fact, in this way he led me to one particular page in Francis Bacon’s book *Novum Organum*, the 1620 edition. Some time later, having told me the num-

ber of this page in the book, Fabyan asked me to examine it and write to him if I noticed something interesting there. I managed to find this book in the National Library. Careful reading of the page he mentioned didn't lead me to any sensational discoveries, although I repeated the research several times and returned to the analysis over the next few days. Then I wrote a letter to Colonel Fabyan asking him to clarify the direction of research.

But even before I received a response from him, it occurred to me that there was some connection between the brochure I mentioned earlier and the form of typographic fonts in the document that Fabyan invited me to analyze. So I returned to the National Library again, this time armed with a good loupe, with which I began to study the shape of the letters on the page. This time, I easily identified two significantly different print shapes for a range of letters. I deduced several stable polygrams from the combination of these letters and even a few English words from them. However, these words did not prompt any meaningful phrase.

A few weeks later, a photo of this page from *Novum Organum* came from Colonel Fabyan, where he marked the print shapes for type A and B letters. With considerable surprise, I found that the polygrams and words I selected by myself completely fit into this layout. Thus began my acquaintance with the work of Mrs. Gallup, and hence my confidence in the decryptions made by her, the authenticity of which Colonel Fabyan guaranteed me many times.

Here I must say that in the mentioned photo from Fabyan, the differences in the shapes of the fonts A and B were more distinct than on my original page. So in the photo I noticed some of those very noticeable differences in the shape of the letters that were invisible on my original page. At that time, I didn't try to explain these anomalies.

It would be interesting to compare this photograph with other versions of the original of the same page in *Novum Organum*, but the National Library has only one copy of this book. Perhaps the appearance of certain letters somewhat changed because of the conditions the books of the Elizabethan era were stored in over the past

three centuries. For example, the humidity or dryness of the air could cause such almost indistinguishable changes that become noticeable only with a strong magnification.

This remark, made about one particular page in *Novum Organum*, can no doubt be extended to other books deciphered by Mrs. Gallup. The print differences in the books she worked with were more obvious, perhaps, than in other copies where the differences are doubtful.

Colonel Fabyan suggested that I come to America to personally check for the correctness of deciphering the originals Mrs. Gallup worked with. He even suggested that I choose one or another expert — of my own choice — among those European opponents who criticized my articles on this topic published in *Mercure de France*, to accompany me on the trip. Various circumstances prevented me from taking advantage of this offer.

I don't know if such an examination is possible now, since Colonel Fabyan and Mrs. Gallup have passed away and I don't know who was assigned to keep their archives. In the chapters and appendices of this book, I quote the testimonies of those Americans who had the opportunity to verify the details of the Riverbank decryptions, and even those who personally participated in the decryption process. I believe that they can be trusted, rejecting all suspicions of deliberate deception and hoax.

I find examples of ciphers constructed from three types of typographic forms to be nothing more than cryptographic curiosities, and here I can only once again confirm the considerations I have stated on this subject in the book. There is no doubt that Francis Bacon was familiar with the ciphers of Cardano and Vigenère, where such constructions of alphabets can be found. It's possible that just from there he got the idea of his own cryptosystem, based on the same principle, but simpler, since it uses only two typographical forms instead of three.

That Bacon thought of using the three alphabets to hide certain secrets in a text open to everyone is possible and even probable.

However, the real examples that can be found in this book have text lengths that are too short to be able to confidently affirm the correctness of cipher recovery.

On the other hand, there is nothing surprising in the fact that Francis Bacon actively used the system invented by himself. The system for which he first gave a brief sketch in 1605, and then a full description in 1623, no doubt after he had experimented with it for a long time.

September 1938

#

The content of the rest of the book — apart from The Introduction — looks like this:

- Foreword
- General Information
- A New Document
- Bacon’s Autobiography According to Decrypted Biliteral Cipher Texts
- Application: Notes
- Application: Testimonials

## Main Sources

- François Cartier. *Un problème de Cryptographie et d’Histoire*. Paris: Editions du Mercure de France, 1938
- Sébastien-Yves Laurent, “About Professionalisation in the Intelligence Community: The French Cryptologists (1870–1945).” In “The New Codebreakers. Essays Dedicated to David Kahn on the Occasion of His 85th Birthday” (Lecture Notes in Computer Science), Springer-Verlag Berlin, 2016

November 2020

# The Secret Autobiography of Francis Bacon



Since the translation of General Cartier's book can, for natural reasons, stretch over quite a long period of time, simple uploading the fragments in accordance with the author's order of chapters in the original will inevitably spoil the impression of this work. It also makes it difficult to understand its obvious importance.

For the most interesting things are stated there closer to the end, and all the first chapters are very detailed and at the same time

quite dryly describe the subtleties and complexities of the work of cryptanalysts who break ciphers.

For this reason — and to ensure proper interest in this rarity at all stages of publication — it's advisable to arrange a recompilation here. That is, disassemble the book into parts and publish their translations in several parallel streams. A little from the beginning, a little from the middle, a little from the end — and all this in such an order that both the meaning is saved and the essence of the exciting Mystery comes out more clearly...

Something similar is often done in cinematography with the help of editing — to add dynamics to a story that is obviously boring at first. Some movies, and TV shows in particular, may even begin with ending scenes. In fact, the same thing should be done here as well.

And besides, the most important thing for readers of the 21<sup>st</sup> century. While reading this book, prepared in the 1930s by General Cartier as a summary for a series of his earlier journal publications, it makes sense to keep in mind one fact.

All materials in this book are based entirely on the results obtained and designed with the assistance of the American cryptographic school that later gave rise to the National Security Agency. And the same special service, the NSA, immediately after the death of Cartier in 1953, made significant efforts to completely cut out of history not only the book of the French general, but also himself.

Why this was done is a mystery, about which no one says anything. But there is hope that by the end of reading the book, understanding will become clearer...

#

(translation fragments, pp. 203-209 of Cartier's book)

## APPLICATION: NOTES

### A

The articles published by me in issues 563<sup>58</sup>, 568<sup>59</sup>, 581<sup>60</sup> and 582<sup>61</sup> of the *Mercur de France* not only provided me with extensive correspondence but also aroused the interest of critics in the European press. The problem that I posed ("The problem of History and Cryptography", issues 563 and 568), and the mystery, I tried to clear up ("The Bacon-Shakespeare mystery", issues 581 and 582), turned out to be really very interesting for readers. Some of them kindly provided me with useful additional information, others informed me of interesting observations.

Finally, I was asked to give such clarifications that could become the basis for a serious methodological discussion and also to answer some critical remarks expressed, however, very delicately in French and foreign newspapers. The following notes are written to supplement my previous articles and to try to clear up misunderstandings that might disorient the discussion.

First of all, I would like to repeat that I am neither a litterateur nor a historian. And it's beyond my competence to give a valid opinion on the matter of literary authorship for the document that was published verbatim in issues 581 and 582 of the magazine ("Francis Bacon's secret autobiography encrypted in his biliteral cipher").

I am, however, rather strongly tempted to conclude, like some of my correspondents, that this whole matter of authorship is only of secondary interest. Because masterpieces will remain masterpieces,

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<sup>58</sup> <https://www.retronews.fr/journal/mercure-de-france/01-decembre-1921/118/4092937/98>

<sup>59</sup> <https://www.retronews.fr/journal/mercure-de-france/15-fevrier-1922/118/4092581/118>

<sup>60</sup> <https://www.retronews.fr/journal/mercure-de-france-1890-1965/01-septembre-1922/118/4093001/3>

<sup>61</sup> <https://www.retronews.fr/journal/mercure-de-france/15-septembre-1922/118/4092457/32>

whether or not the names of the authors under which they were first published should be replaced.

But this point of view, somewhat simplified, although it can find support in relation to the works themselves, does not satisfy our needs for truth and justice, because we must “give to Caesar what is Caesar’s...”

When I published my first article (issue 563), my main goal was to tell about a little-known encryption technique in cryptography and some of the interesting applications that follow from it. In addition, it seemed to me generally useful to draw the attention of the French public to such an approach, thanks to which a secret message can be hidden in any open text by using different types of fonts in letters.

Careful examination of the Bacon era editions listed on pages 57-58 can indeed lead to interesting historical or scientific discoveries. But since cryptographic analysis here led to the discovery of a document completely new to history, it’s quite natural that considerations of both a historical and literary nature intervened in its assessment. And I, as a professional cryptologist, can only confirm the very fact of this document existence.

It seems self-evident that the text encryption procedure doesn’t add anything to the documentary value of the facts mentioned in it. And the accuracy of the wording and possible mistakes of the authors are kept in the ciphertext in the same way as in the open text, only in an externally different form.

But I should note that the encryption procedure, no matter how simple the cipher operations are, and how experienced the cryptographer is, can always introduce additional errors. So in addition to the author’s own mistakes, encryption errors may also appear — such as changed or even missing letters or words.

Thus, the example of encryption given by Bacon himself in his work *De Augmentis Scientiarum* 1624 edition and reproduced in a photograph in my book on page 48, illustration 4, contains a mis-

take in line 12, where the letters **vat** are replaced by **uc**. But generally speaking, mistakes of this kind, if they are single and occur infrequently don't prevent the decipherer from restoring correctly the words and sentences of the initial text.

However, in exceptional cases, it may also happen that such a direct restoration isn't at all obvious, and the context doesn't allow one to guess which words and letters were omitted or distorted. All people involved in encryption of correspondence faced this kind of difficulty. They know that there are situations when it's necessary to request a message retransmission or texts verification. But this is obviously impossible when it comes to text encrypted 300 years ago!

Therefore, a decipherer faced with such mistakes or uncertainties has to rely only on their insight. In cases where the preceding and following parts of the text are clear enough to give a basis for probable conjectures, the recovery operation doesn't present any difficulties. If it's not so, then restoration errors are possible, and in this case it's reasonable to indicate places that are doubtful for interpretation in order to avoid conclusions that don't have a strict justification.

I considered it reasonable to give these explanations, although useless for readers with even minimal experience in cryptography, but fundamentally necessary for those having absolutely no experience in this area. In addition, these explanations are addressed to those of the prejudiced readers who may face similar difficulties in their first attempts at actual deciphering. And who is quick to conclude that the codebreakers of Francis Bacon's autobiography often succumb to their own preconceptions when it comes to choosing between several equally possible cryptographic solutions.

Personally, I believe that sporadic decryption errors are possible — including words or even, in exceptional cases, sentences. But such errors are for sure very rare and they are incapable to change the meaning of the document as a whole. In addition, I suggest to everyone, to whom circumstances allow it, to expand the work I have

begun on verifying these results and clearly point out to me those parts look ambiguous and should be accepted only with limitations.

It goes without saying that any solution possible in a cryptographic sense, but unacceptable from a historical point of view, should be attributed precisely to such a category. Such things, in particular, include the names of characters or the mention of events that appeared in history after the book publication, which means that they simply cannot logically be found in the deciphered text. Considerations of this kind make it quite possible to a priori reject solutions that, from a cryptographic point of view, seem to be acceptable.

In this regard, the following fact should not be forgotten. Although Francis Bacon first published a description of his cryptographic system only in 1605, he developed it much earlier, during his stay in Paris from 1577 to 1579. Therefore, it is quite natural that the use of this system can also be found in documents before 1605, but certainly after 1577.

In particular, the list of works I mentioned on pages 57 and 58, where were found texts encrypted by Bacon's method, points to several books printed before 1605.

Among others, these include:

- **Timothy Bright**
  - A Treatise of Melancholy (1586)
- **Robert Burton**
  - The Mirror of Modesty (1584)
  - Planctomachia (1585)
  - Euphues (1587)
  - Morando (1587)
  - Perimedes (1588)
- **Robert Greene**
  - Pandosto, The Spanish Masquerade (1589)

- **George Peele**
  - The Arraignment of Paris (1584)
- **William Shakespeare**
  - Midsummer Nights Dream (1600)
  - Much Ado about Nothing (1600)
  - Sir John Oldcastle (1600)
  - Merchant of Venice (1600)
- **Edmund Spenser**
  - The Shepheardes Calender (1579)
  - Complaints (1590)
  - Colin Clout (1595)
  - Fairy Queen (1596)

Similarly, it shouldn't be surprising that autobiographical fragments occur in works published after 1626, the official date of Francis Bacon's death. The manuscripts of these works could have been made and prepared for printing by Bacon himself, and printed after his death. Thus, encrypted parts were found in editions of *New Atlantis* and *Natural History* published in 1635 under the name of Francis Bacon, as well as in *The Anatomy of Melancholy* by Robert Burton published in 1638.

Besides, is the information that Francis Bacon died in 1626 quite reliable? In a very interesting article published in *Baconiana* in June 1922, Miss Alicia Amy Leith recalls certain circumstances which indicate that in 1626 Francis Bacon may have died only to the world. In fact, he could have been alive until 1668. Then he lived to the age of 106 and thus had about 40 peaceful years to do his work.

Everything is very strange when it comes to Francis Bacon. His biographers don't agree on the place of his birth (York House, York Place, Canonbury Tower or Guildhall), as well as the place of his death (Highgate, Muswell Hill, Gorhambury or Wolfenbüttel). But these discussions don't apply to the question of cryptography, to which we return.

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(pp. 19-22 of Cartier's book)

**GENERAL INFORMATION**

In his work *The Advancement of Learning*, published in English in London in 1605, and then in Latin as *De Augmentis Scientiarum* in London in 1623 and in Paris in 1624, Francis Bacon (1561 -1626) gives a description of a cryptographic encryption method that has a number of interesting features.

Instead of replacing plaintext letters or words with ordinary cipher characters, letters or numbers, as is done in most cryptographic systems, the famous chancellor uses different forms of letters. Due to this, the cryptograms obtained by his method don't consist of rows of letters or numbers, but of sequences of different print types for letters. Moreover, these letters themselves can make up plain texts that have nothing to do with the encrypted text, which corresponds to different forms of fonts.

Let's define the typical forms of letters used for encryption with symbols **a** and **b**. The number of possible combinations that can be arranged using these two forms, grouping them in fives, is 32 (or 2 to the power of 5). Francis Bacon uses only 24 of these groups to represent the 24 letters of the English alphabet of his time, in which the letters I and J were used interchangeably, as well as U and V.

These 24 groups look like this:

aaaaa = A	aaaab = B	aaaba = C	aaabb = D
aabaa = E	aabab = F	aabba = G	aabbb = H
abaaa = I/J	abaab = K	ababa = L	ababb = M
abbaa = N	abbab = O	abbba = P	abbbb = Q
baaaa = R	baaab = S	baaba = T	baabb = U/V
babaa = W	babab = X	babba = Y	babbb = Z

If we agree, for example, that form **a** denotes capital letters, while

form **b** denotes lowercase ones, then the letter A of the ciphertext can be represented by any sequence of five capital letters in the cipher-masking plaintext, such as HORSE or SATYR. Similarly, the letter L can be represented by any sequence of letters of the form HoRsE or SaTyR. If you need to encrypt a whole word like PARIS, it can be hidden in any text, say this: “J’irai vous voir demain samedi” (“I’ll come to you tomorrow, on Saturday”). This is done in the following way.

The masking text is divided into fives, each of which encrypts the letters of the secret message: J’iraI VOUSV oIRDE MaINS aMEDi, after we return to the usual words notation: J’iraI VOUS VoIR DEMaIN SaMEDi.

It goes without saying that the use of two such dramatically different forms can’t be recommended for real encrypted correspondence. An obviously anormale sequence of lowercase and capital letters will immediately attract interest and raise suspicions about the use of the cipher. And when the very fact of encryption is revealed, further analysis easily leads to a simple substitution cipher, which is cracked without any difficulty.

For this reason, Francis Bacon recommends the use of two such forms of letters whose differences are not too obvious and can only be recognized by those initiated into this secret. If this advice is followed, the resulting ciphertexts are most likely to be perceived as ordinary plaintexts containing nothing more than what they visibly state. Thus, it will be possible to avoid research by insufficiently attentive cryptologists.

This idea of Francis Bacon had also occurred to cryptographers before, for example, in a slightly different form it was described in Frederici’s work named *Cryptographia* published in 1685 in Hamburg. Instead of two types of fonts, the system described by Frederici uses three: antique form A, cursive C, and Gothic form T.

The number of combinations that can be arranged based on these three forms, grouping letters in triplets, is 27 (that is, three to the power of three). When groups like AAA, CCC and TTT are re-

moved, 24 triples remain, which are used to represent 24 letters of the Latin alphabet as follows:

aac = A	aat = B	aca = C	acc = D	act = E
ata = F	atc = G	att = H	cca = I/J	cct = K
cac = L	caa = M	cat = N	ctc = O	cat = P
ctt = Q	tta = R	ttc = S	tat = T	taa = U/V
tac = W	tct = X	tca = Y	tcc = Z	

While Bacon's system requires a group of five characters to encrypt one letter, this cipher requires only three — following the method described above. We will call this the Frederici system, which, although later described, is in fact invented before the Bacon's one. The plaintexts required to hide the same secrets are much shorter in the second system than in the first, and this is an undeniable advantage.

In practical matters, however, the use of the three varieties of symbols obviously becomes the cause of additional mistakes which nullify the aforementioned benefit. These two encryption methods are only mentioned passingly in modern French or foreign technical literature and don't seem to have attracted the attention of cryptologists. Most likely, because they are not particularly interesting from a purely cryptographic point of view. Nevertheless, there is no doubt that this principle itself was actually used under certain circumstances, in particular, in the work of espionage intelligence services.

The study of the documents coming out of the press during Francis Bacon's lifetime begun a few years ago by several specialists under the proficient guidance of Colonel Fabyan, who trained cryptographers for the U.S. Army. Their research led to a number of interesting uses for both of the encryption methods discussed in these notes. Actually, these findings led to extremely curious results...

*[ In his book, general Cartier, not being a professional writer, decided not to give a complete translation of the secret Autobiography of Francis Bacon, limiting himself to a brief retelling of the chapters and just posted the deciphered Autobiography in English in its original form. The same is done in the Russian edition. However, since this is an English translation of the French book, it is not practical to make an additional translation of the paraphrase, so we omit it here. ]*

*(pp. 60-71: deciphered texts of the Original)*

## **BACON'S LIFE AS HE TELLS IT IN THE BILITERAL CIPHER**

### **Chapter I**

Though constantly hedged about, threatened, kept under surveillance, I have written this history in full in the cipher, being fully persuaded, in my own mind and heart, that not only jesting Pilate, but the world ask: "What is truth?"

The principal work is, as you may suppose, writing a secret story of my own life, as well as a true history of the times. Yet, it is much mixed or twined into many others herein given. Indeed, a whole national record must be changed by the revelation which I have prepared with much pains for posterity.

That this shall be such true history that it shall be worthy of preservation, I have not blenched aught, howsoever much it may irk me, or weary those who read it. But some of it I would I could forge after it hath been set down.

I am, indeed, by virtue of my birth, that royal, though grossly wronged son to our most glorious, yet most faulty Queen Elizabeth, of the stock that doughty Edward truly renowned. Of such stock Henries the Fifth, Seventh, and Eighth, historic battle kings, came, like branches sent from the oaks.

My true name is Tudor. Sir Nicholas Bacon, the Lord Keeper, was only foster parent to my early youth, yet was as loving and kind to

me as to his own son, careful of my education, and even aspiring to my high advancement. But to Lady Anne Bacon, his wife, ever quick with her sympathy and wise to advise, do I owe the greater or warmer gratitude, since she did much more truly and constantly guard, guide, protect and counsel me.

More over, to her do I owe my life. For though she did but rear me, not being, *de facto*, my mother, it was by her intervention that the hour of nativity did not witness my death. Her majesty would truly have put me away privily.

To many women, no gift could be so great as this — a child of the preferred sex. To a sovereign so great as Elizabeth, it was not. Little princes are, of all infants, peculiarly favored. So was not I. But she who bore me, even in the hour of my unwelcomed coming, outraging every instinct of a natural woman, in the pangs and perils of her travail, cherished one infernal purpose.

“Kill, kill!,” cried this maddened woman. “Kill!”

Those attending her supposed she cried out to beseech riddance of suffering. In great fear, Lady Anne said, “God give a safe delivery, my dearly beloved Sovereign. It is now near the end. This exceeding great suffering doth well for you. Certain I am, your Grace, ’twill soon be a time for joy. Surely rejoicing doth become us all.”

But the queen fell into the fiercest anger, alarming everyone who knew her state. When her wrath subsided, laments succeeded invective.

The curse might come from her lips — nothing stayed my birth at the hour Heaven had foreknown. As I was held before her eyes, Elizabeth made a hasty motion, as if she would push some brat, no one owned, from her presence.

Lady Anne knew not which way to turn, or in what manner one clear ray of reason might reach her majesty’s mind. In a few moments, the physician, seeing how distressed Elizabeth with her cruel thoughts made sweet Lady Anne, spoke gently to the queen.

“Happy the sire of a son like the prince — twice blessed is the mother from whom the prince his life deriveth.”

“Stay, truly thy voice is but in indifferent accord with ours,” said her majesty in cold tones.

Fruitless were Lady Anne’s entreaties and prayers. To move the vain and strong mind of my royal mother, at the time, still being almost or truth to say quite impossible, her thoughts, turned to rescuing from death such an evil-fortuned prince. Scorn, wrath, railing had penetrated most deeply that gentle breast, yet did the noble lady blench not one whit.

York House gave me a private chamber, gentle Lady Anne so slyly bearing me thither no one, other than her small maid, knew aught of my simple life within Sir N. Bacon’s house. Lady Anne guarded me until her son, stillborn, made natural place for the royal child. This wronged, yet wholly unsuspecting, heir to the crown being taken into sweet Lady Anne Bacon’s care, was privately reared as the youngest son to the honored lady.

The would-be Virgin Queen, with promptness (not liking our people’s hearts to be set upon a king) before my A B C’s even were taught to me, or the elements of all learning, instructed my tutors to instil into my young mind a desire to do as my foster father had done, and aspiring to high political advancement, look for enduring renown there; not dreaming even of lack wherein I should look for more honors, since I was led to think I was born to nothing higher.

Of a truth, in her gracious moods, my royal mother showed a certain pride in me when she named me her little Lord Keeper, but not the Prince — she never owned that be truly the rightful title I should bear.

The earliest shows of favor of this royal mother, as patroness rather than parent, were seen when she honored our roof so far as to become the guest of good Sir Nicholas Bacon — that kind man I then supposed my father. These became marked as the study that I pursued did make my tongue sharp to reply when she asked me a per-

plexing question, never, or at least seldom, lacking Greek epigram to fit those she quoted, and I was often brought into her gracious presence.

It liveth as do dreams of yesternight, when now I close my eyes — the stately movements, grace of speech, quick smile and sudden anger that oft, as April clouds come across the sun yet as suddenly are withdrawn, filled me with succeeding dismay, or brimmed my cup immediately with joy.

It doth as oft recur that the Queen, my royal mother, sometimes said in Sir Nicholas' ear on going to her coach: "Have him well instructed in knowledge that future station shall make necessary."

Naturally quick of hearing, it reaching my ears was caught on the wing, and long turned and pondered upon. But I found no meaning, for all my wit, no whispered word having passed the lips of Sir Nicholas on the matter.

Several years had gone by, ere my true name, or any of the conditions herein mentioned, came to my knowledge. In truth, even then the revelation was in a measure accidental — albeit 'twas made by my mother — her wrath over one of my boylike impulses driving her to admissions quite unthought, wholly unpremeditated, but when thus spoken in my hearing, not to be denied.

I was in presence — as had many and oftentimes occurred, Queen Elizabeth having a liking for my manners — with a number of the ladies and several of the gentlemen of her court, when a silly maiden babbled a tale. Cecil, knowing her weakness, had whispered in her ear.

A dangerous tidbit it was, but it well did satisfy the malicious soul of a tale bearer such as R. Cecil, that concerned not her associate ladies at all, but the honor, the honesty of Queen Elizabeth. No sooner breathed aloud that it was heard by the queen. No more, in truth, half heard that 'twas avenged by the enraged queen. Never had I seen fury so terrible, and it was some time that I remained silent, horror-struck dismay, at the fiery overwhelming tempest.

At last, when stripped of all her frail attire, the poor maid in frightened remorse lay quivering at Queen Elizabeth's feet, almost deprived of breath, still feebly begging that her life be spared nor ceasing or a moment till sense was lost. No longer might I look upon this in silence; and bursting like fulminated lightning through the waiting crowd of the astonished courtiers and ladies, surrounding in a widening circle this angry fury and her prey, I bent a knee craving that I might lift up the tender body and bear it thence.

A dread silence that foretells a storm, fell on the queen for a space, and the cruel light waxed brighter and the cheek burned as the flame. As the fire grew to blasting heat, it fell upon me like the bolt of Jove. Losing control immediately of both judgment and discretion, the secrets of her heart came hurtling forth, stunning and blasting the sense till I wanted but a jot of swooning likewise.

"You are my own born son but you, though truly royal, of a fresh and masterly spirit, shall rule not England, or your mother nor reign over subjects yet to be.

"I bar from succession forevermore my best beloved first born that blessed my union with — no, I'll not name him. Nor need I yet disclose the sweet story concealed thus far so well men only guess it, nor know of a truth of the secret marriages, as rightful to guard the name of a queen as of a maid of this realm.

"It would well beseem you to make such tales skulk out of sight, but this suiteth not to your kingly spirit. A son like mine lifteth hand never in aid to her who brought him forth — he would rather uplift craven maids who tattle thus whenever my face turneth from them. What will this brave boy do? Tell a, b, c's?"

Ending her tirade thus, she hade me rise. Trembling I obeyed her charge, summoned a servingman to lead me to my home and sent to Mistress Bacon.

"That mother of my dark Atimies shall free my name," said I. "For surely I am her son. May mother lie, or cruel Fates do me like wrong? My God! Let not a lot more hard, alas, than death come to

me. When a ripe evil doth break upon wicked men, the justice in Thy holy law even in chastisement holdeth men — not that arrow of pestilence. But I am innocent, O my God! Visit not the evil we much scorn, on me the innocuous fruit!”

In the dark I waged war manfully, supposing that my life in all the freshness of youth was made unbearable. It did so much exhaust, that, after pause of a moment, I burst flood-like into Mistress Bacon’s chamber and told her my story.

No true woman can bear the sight of any tear. I grasped her arm, weeping and sobbing sore, and entreated her (artfully’ as I thought, hiding my secret) to say upon oath I was in truth the son of herself and her honored husband. I made effort to conceal my fear that I was base son to the queen; per contra, I even most plainly showed it by my distress.

When, therefore, my sweetmother did, weeping and lamenting, own to me that I was in very truth, the son of the queen, I burst into maledictions against the queen, my fate, life and all it yieldeth, till weary, on bent knee I sank down, and floods of tears finished my wild tempestuous invective. When, however, that dear lady saw this, with womanly wisdom to arrest fury or perchance to prevent such despair, said to me:

“Spare my ear, or aim rightly, boy, for you do wrong your mother with such a thought. Pause, lest as to Absalom a sudden vengeance come. When you list to my words, you then will know that you do also wrong that noble gentleman, your father, Earl Robert, at the mere mention of this folly would rise in great wrath and call down Heaven’s judgments on you.”

At the word, I besought her to speak my father’s name, when granting my request, she said: “He is the Earl of Leicester.”

Then as it made me cease to sob, she said again: “I took a most solemn oath not to reveal your story to you, but you may hear my unfinished tale to the end if you will go to the midwife. The doctor

would be ready to give proofs of your right to be named the Prince of this realm and heir-apparent to the throne.”

How this secret marriage was consummated with the earl, our fond sire, — whom we knew little and loved not more than was due, — Lady Anne Bacon made free and full relation:

“A king’s daughter gave a worthy precedent to all states, in that she would wed as her wishes dictated, not through negotiation and by treaty. Whilst she was but the proud, unhappy, though still spirited princess that Queen Mary held to be dangerous in freedom, and for this cause sent off without form of trial to languish in London Tower, she wedded Robert Dudley, of whom it is supposed the young princess had become so enamoured that to produce a like passion in his heart, a love philter was made, which an assistant by some strategy administered. They came into our world, not the same day only but the same hour. To a fantasy so abnormal as the queen’s this was proof of destiny.

“It might perhaps be a question whether a Divine forethought determined all that grew from that act. Some would ascribe a part, at least, to evil spirits.

“Not law, but evil governed Elizabeth, as she joined herself in a union with Robert Dudley whilst the oath sworn to one as beloved yet bound him. A suspicion was general that the death that overtook his sweet wife could be laid to his charge. Aye, a treacherous stairway betrayed her step, falling beneath lightsome Amy’s foot, cast her violently on the paving below, and the tidings of her demise was not altogether news to one whose mind was too eager to hear it.

“After Elizabeth’s ascent to royal power, at the house of Lord P... this ceremony was repeated, but not with any of the pomp and ceremony that sorteth well with queenly espousals, yet with a sufficient number of witnesses.

“Nevertheless, Queen Bess did likewise give her solemn oath of bald-faced denial of her marriage to Lord Leicester, as well as her

motherhood. Her oath so broken, robs me of a son. O Francis, Francis, break not your mothers's heart! I cannot let you go forth after all the years — you have been the son of my heart. —

“But night is falling. To day I cannot speak longer to you of so weighty a matter. This hath moved you deeply and though you now dry your eyes, you have yet many tear marks upon your cheeks. Go now. Do not give it place, in thought or word, a brain-sick woman, though she be a queen, can take my son from me. Retire at once, my boy.”

With “Farewell,” her heart half bursting, she bade me leave her, and I, fond boy, kingly power dearly yearn to win — dream of golden scepters, proud courts, and by-and-by a crown on mine innocent brow. Alleged oath, or any unrighteous rule, should never from the English throne bar the grandson to Henry the Eighth, son to Elizabeth in lawful marriage; and by virtue of these rights, in that it is the style of the eldest son of England's sovereign, no less than that of the Prince of Wales is my proper title.

In due course of time, however, I, at day's meridian, was by my new-found royal mother recalled and given private audience. I learned from the interview, that it was, at present, in fancy that I bore this lofty name, or a style other than that actually mine in my home.

A princely name, it seemed, was one to be thought upon, not reckoned upon as apt to be given me; nor could I in the numerous subsequent encounters change her hasty decision upon that very important question of the succession.

'Tis said: “The curse that was not deserved never will come.” Some may find it true, but to me a causeless curse did surely come, and my entire life felt the blight.

The fond love of both foster parents was restraint and stay to my young spirit when the wild and fiery tempest suddenly burst upon me. This dread force would otherwise have ruined, wasted and borne me adrift like a despoiled harvest.

My attempts in after years to obtain my true, just and indisputable title of Prince of Wales, heir-apparent to the throne, must not, however, be thought or supposed to indicate that I held myself disinterested of these obligations, offered affront to these kind benefactors, or in any way conducted myself in such a manner as would either cast reflections upon my breeding or do discredit to my birth. It may clearly be seen that it was but the most commonplace of ideas — an action barely ambitious, because 'twas simply natural.

#

*December 2020*



# Bacon's Cipher and Confirmation of Correctness of its Decryption

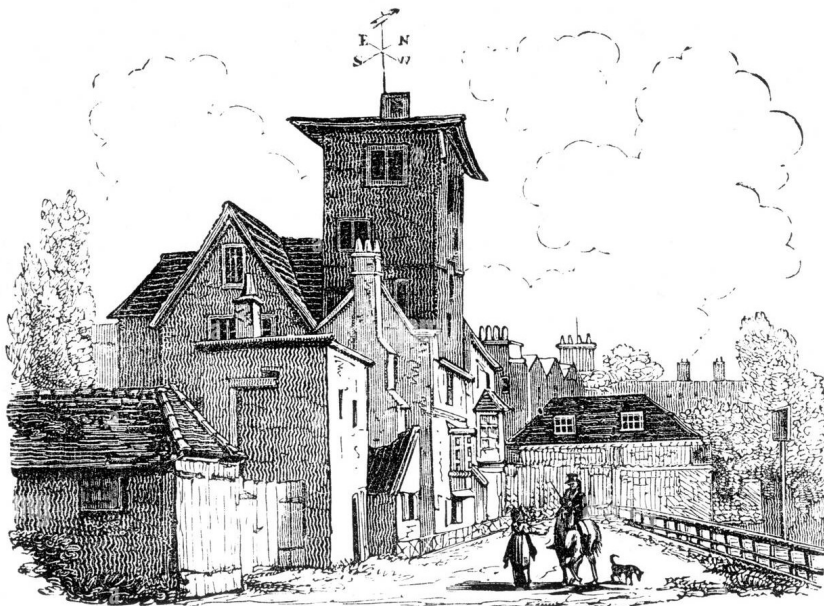


Fig. 23. Canonbury Tower, Islington, London, as it appeared in the 19<sup>th</sup> century;  
Black and White Illustration from William Hone's *Everyday Book*

*(translation fragments: pp. 209-213 of Cartier's book)*

## APPLICATION: NOTES

### B

The texts deciphered by Mrs. Gallup gave rise to such comments, about which I consider it necessary to give some explanations.

Some of the readers don't deny the very existence of the texts deciphered by Mrs. Gallup. But they believe that there is no need to publicly discuss this topic, especially about the authorship of works attributed to Shakespeare. Their opinion is justified by such historical or literary considerations that seem convincing enough to them, and therefore there is no need for others to take into account

some encrypted documents that can confirm or disprove the views they already have.

It isn't necessary to explain that the existing sharply competing theories of different parties are expounded and defended with the same intransigence as before, and therefore the unbiased reader remains greatly puzzled by reading these arguments. They prove diametrically opposed views — abundantly documented, skillfully presented and stated with great conviction.

Of course, the discussion here remains ongoing. If it ever ends, it will be only if such a decisive document is found that can bring together various competing schools, now divided by their differences.

But there are also critics who go further and deny the very existence of the texts deciphered by Mrs. Gallup.

Mr. Weber from Vienna (Austria) considers Mrs. Gallup's decryption the result of a big mistake that appeared due to a kind of self-hypnosis.

Dr. Speckman from Arnhem (Holland) denies the existence of cryptograms, claiming that the deciphered texts can't be authentic and are generally unacceptable.

Mr. Tako H. de Beer, a member of the Royal Flemish Academy of Belgium, writes the following: "The so-called decryption from Mrs. Gallup seems to us the greatest deception. One of the young Doctors of Literature spent a whole year deciphering texts according to the method of Mrs. Gallup and found that Mrs. Gallup added or excluded letters in order to obtain the results that she offered as a decryption."

Other critics go even further and don't hesitate at all to call Mrs. Gallup's work a "colossal swindle."

In *Baconiana*, Vol. XVII, issue 64, Mr. Frank Woodward published the article "Mrs. Gallup's Bi-Literal Cipher" providing,

in my opinion, quite a meaningful answer to all the critics we have quoted above. In particular, this article contains two actual decryption examples that, to my mind, leave no doubt about the honesty and conscientiousness of Mrs. Gallup.

## I

The cursive letters in the 1628 edition of Robert Burton's *The Anatomy of Melancholy* contain a large cryptogram that, when analyzed by the method of Francis Bacon, can be deciphered as an English translation of Homer's Iliad. Moreover, it's a translation in a version that is not similar to any of the known ones.

But Mrs. Gallup doesn't know ancient Greek. Is it possible to assume that she managed to get somewhere an unknown version of the translation, the real author of which remains unknown to us? Or how likely is it that Mrs. Gallup was able to collect all the English versions of the Iliad and constructed her own text of them, posing as the result of her fake deciphering?

Mr. Frank Woodward claims that "anyone who knows Mrs. Gallup personally will admit to you that she is completely incapable of such fraud."

## II

In the *Resuscitacio*, published by William Rawley in 1657, Mrs. Gallup found a Bacon-encrypted fragment, for which she provided the following decryption:

*Now to reach rare papers, take panell five in F's tower  
room, slide it under fifty with such force as to gird string.  
Follow A B C's therein. Soon will the M S S so much  
vaunted, theme of F'S many books, be your own.*

This message, according to Gallup, meant that in the hall of the "F(rancis) tower," if we slide panel 5 under panel 50, we should find a hidden place containing rare manuscripts of F(rancis Bacon).

The tower referred to in this document could only be Canonbury Tower, where Francis Bacon lived for several years and moved out in 1619. Therefore, it seemed unlikely that Bacon had hidden any important papers there, and Rawley, his friend and literary executor, could allude to them in 1657.

Anyway, when Mr. Frank Woodward was in London with Mrs. Gallup, they went to the Canonbury Tower. Entering the main hall of the tower, they saw 50 panels arranged along the perimeter of the wall in two rows, so that the bottom row had 34 panels, and the top one had only 16.

Frank Woodward went upstairs with the intendant, leaving Mrs. Gallup downstairs because she felt unwell with her heart. When they returned, Mrs. Gallup was studying the panels on the wall with rapt attention. She pointed out to Woodward the ones that were most likely numbered by Bacon as number 5 and number 50 and showed that the 5<sup>th</sup> can move under the 50<sup>th</sup>.

Then Mr. Woodward asked the intendant if any hiding places had been found here during the repair work in the building. In response, the intendant pointed to the same 5<sup>th</sup> panel, because behind it a large niche was found in the wall, which, at the direction of the architect, was filled up by builders.

Isn't that proof that Mrs. Gallup's decryption was correct? Can anyone suspect her that, having somehow learned in America about this feature of the London building, she deliberately fabricated an encrypted fragment only in order for it to confirm her fake?

*[ Note of the translator and compiler.*

*At the end of the chapter, references to materials and other evidence for the texts deciphered by Mrs. Gallup will be given.*

*These confirmations are directly related to the phenomenon of acoustic levitation, described in Bacon's encrypted message, but in no way mentioned in General Cartier's book. ]*

*(pp. 76-83, pp. 87-90: deciphered texts of the Original)*

## **BACON'S LIFE AS HE TELLS IT IN THE BILITERAL CIPHER**

### **Chapter II**

A fox seen oft at our court in the form and outward appearance of a man named Robert Cecil — the hunchback — must answer at the Divine arraignment to my charge against him, for he despoiled me ruthlessly. The queen, my mother, might, in course of events which followed their revelations regarding my birth and parentage, without doubt having some natural pride in her offspring, often have shown me no little attention, had not the crafty fox aroused in that tiger-like spirit the jealousy that did so torment the queen.

From the first he was the spy, the informer to the queen, of all the boyish acts of which I had least cause or reason for any pride. This added fuel to the flame of her wrath, made me the more indiscret, and precipitated an open disagreement, which lasted for some time, between my foster mother, Lady Anne Bacon and the woman who bore me, whom, however, I seldom name with a title so sacred as mother. In truth, Cecil worked me naught save evil to the day which took him out of the world.

Through his vile influence on Elizabeth, he filled her mind with a suspicion of my desire to rule the whole world, beginning with England, and that my plan was, like Absalom's, to steal the hearts of the nation and move the people to desire a king. He told her that my every thought dwelt on a crown; that my only sport amid my school mates was a pageant of royalty; that 'twas my hand in which the wooden staff was placed, and my head that wore the crown, for no other would be allowed to represent princes of their pomp. He informed her majesty that I would give a challenge to a fierce boyish fight, or a duello of fists, if any one presumed to share my honors or depose me from my throne.

In due time, the queen afraid of these ominous portens, sent for good Paulet and arranged that under pretext of great import, I should accompany your embassy to France.

My sire, more even than my royal mother, was bent upon my dispatch thither, and urged vehemently that subsequent, artfully contrived business — concerning affairs of state — intrusted to me in much the same manner, I thought, as weighty affairs were laid upon Sir Amyas.

I was placed in the care of Sir Amyas and left the shores of my own fair land without a moment of warning, so to speak. The queen, by her power royal, and her rights maternal, readily overruled all our several objections. No tears on the part of my dear foster mother, nor entreaties on that of grave Sir Nicholas Bacon availed, while I, as soon as my first protest had been waived, occupied my fantasy hour after hour, picturing to myself the life in foreign lands.

The fame of the gay French court had come to me even then, and it was flattering to the youthful and most natural love of the affairs taking us from our native land, inasmuch as the secret commission had been entrusted to me, which required much true wisdom for safer, speedier conduct than it would have if left to the common course of business. So with much interested though sometimes apprehensive mind, I made myself ready to accompany Sir Amyas.

My summary banishment to beautiful France, which did intend my correction, by some strange Providence served well the purpose of my own heart; for making ciphers my choice, I straightway proceeded to spend my greatest labors therein, to find a method of secret communication of my history to others outside the realm. That, however, drew no suspicion upon this device, inasmuch as it did appear quite natural to one who was in company and under the instruction of our ambassador to the court of France; and it seemed, on the part of my parents, to afford peculiar relief, as showing that my spirit and minds had calmed, as the shipwreck below the gently rolling surface.

For such simple causes was I undisturbed in a search after a mean of transmitting my secret history. I devised this double alphabet cipher, which till a decipherer find a prepared or readily discovered alphabet, it seemeth to me a thing almost impossible, save by divine gift and heavenly instinct, that he should be able to read what is thus revealed.

That sunny land of the south I learned so supremely to love that afterwards I would have left England and every hope of advancement to remain my whole life there. Nor yet could this be due to the delights of the country, by itself, for the love of sweet Marguerite, the beautiful young sister of the king (married to gallant Henry, the king of Navarre) did make it Eden to my innocent heart.

So fair was she — no eyes e'er looked upon such a beauteous mortal, and I saw no other. I saw her — French Eve to their wondrous paradise — as if no being, no one in all high heaven's wide realm, save only this one Marguerite did ever exist, or in this nether world, ever in all the ages to be in the infinity of time, might be created.

But there came in days, close in the rear, when I would fain have lived my honored days in this loving-wise, ruin worthy husband's hopes, and many a vision, had there been only one single Adam therein, which should be, and was not, solely myself.

Marguerite willingly framed excuses to keep me, with other royal suitors ever at her imperial commandment. A wonderful power to create heaven upon earth was in that loved eye, and every winsome grace, or proud yet gentle motion of lily hand, or daintily tripping foot. To win a show of her fond favor, I was fain to adventure even my honor, or fame, to save and shield her.

Through love I dreamed out plays filled up — as we have seen warp in some hand-looms — with words Marguerite hath so oft, like to a busy hand, shot daily into a fair-hued web, and made a rich damask, vastly more dear. And should life betray an interior room in my calm but aching breast, on every hand shall her work be seen.

Many single livres in the French, very short and in several small divisions, tell a tale of love when life in its prime of youth and strength sang sweetly to mine ear, and in the heart-beats could one song e'er be heard, — and yet is heard — my love for my angelic-faced, soft-eyed Marguerite of the Southland, sweet White Rose of my lone garden of the heart. I have placed many a cherished secret in the little, loving, worthless books. They were kept for her wishes to find some lovely reader in future aeons. No amorous soilure taints the fair pages.

Love of her had power to make the Duke of Guise forget the greatest honors that France might confer upon him; and hath power as well to make all fleeting glory seem to me like dreams or pictures, nor can I name aught real that hath not origin in her. At one time a secret jealousy was constantly burning in my veins, for Due Henry then followed her day in and out, but she hath given me proof of love that hath now set my heart at rest on the query.

Far from angelic though man his nature, if his love be as clear or as fine as my love for a lovely woman — sweet as a rose and as thorny it might chance — it sweeteneth all the enclosure of his breast, oft changing a waste into lovely gardens, which the angels would fain seek. That it so uplifted my life who would ere question.

And even when I learned her perfidy, love did keep her like angels in my thoughts half of the time — as to the other half she was devilish, and I myself was plunged in hell. Memory doth paint her fairer still than the fairest of our English maidens — sweet traitress though I should term her — Marguerite, my pearl of women.

This lasted during many years and not until four decades or eight lusters of life were outlived, did I take any other to my sore heart. Then I married the woman who hath put Marguerite from my memory — rather, I should say, hath banished her portrait to the walls of memory, only, where it doth hang in the pure, undimmed beauty of those early days — while her most lovely presence doth possess this entire mansion of heart and brain.

Yet here I have a little digressed, although the matter doth appertain unto my story at a later period. When Sir Amyas Paulet became advised of my love, he proposed that he should negotiate a treaty of marriage, and appropriately urge on her pending case of the divorce from the young Huguenot.

As hath been said, I was entrusted at that very time with business requiring great secrecy and expediency. This was so well conducted as to win the queen's frank approval, and I had a lively hope, by means of this entering wedge, to be followed by the request nearest unto my soul, I should so bend her majesty's mind to my wish.

Sir Amyas Paulet undertook to negotiate both treaties at once, and came thereby very near to a breach with the queen, as well as disgrace at Henry's court. Both calamities, however, were averted by such admirable adroitness that I could but yield due respect to the finesse while discomfited by the death of my hope.

It was a sad fate befell our youthful love, my Marguerite. — The joy of life ebbed from our hearts with our parting, and it never came again into this bosom in full flood-tide. The hardwon happiness, as mist in summer morning, did roll away.

From that day I lived a doubtful life, swinging like a pendant branch to and fro, or tempest tossed by many a troublous desire.

At length I turned my attention from love, and used all my time and wit to make such advancement in learning, or achieve such great proficiency in studies, that my name as a lover of science should be best known and most honored, less for my own aggrandizement than as an advantaging of mankind, but with some natural desire to approve my worthiness in the sight of my book-loving and aspiring mother, believing that by thus doing I should advance my claim and obtain my rights, not aware of Cecil's misapplied zeal in bringing this to her majesty's notice, to convince her mind that I had no other thought save a design to win sovereignty in her lifetime.

He bad her observe the strength, breadth and compass, at an early age, of the intellectual powers I displayed, and even deprecated the generous disposition or graces of speech which won me many friends, implying that my gifts would thus, no doubt, uproot her, because I would steal away the people's hearts.

I need not assert how far this was from my heart at any time, especially in my youth, but the queen's jealousy so blinded her reason that she, following the suggestion of malice, showed little pride in my attempts, discovering, in truth, more envy than natural pride, more hate than affection.

### **Chapter III**

I request but my natural right: that I be declared the true heir as the first born son to our queen, the Prince of Wales whilst my parent be living, but the proper sovereign with name and style quite distinct from others — English kings having so far no Francis on the scroll that containeth their worthy Christian names — in proper course of time.

In event of the abdication or death of the queen — who bore in honorable wedlock Robert, now known as son to Walter Devereux, as well as him who now speaketh to the yet unknow decipherer that will open the doors of the sepulchre to break in sunder the bonds and cerements of a marvellous history, — I, the eldest born, should, by Divine right of a law of God made binding on man, inherit scepter and throne.

And our land should rejoice, for it would have a wise sovereign. God endued me with wisdom, the gift granted in answer to Solomon's prayers. It is not in me aught unmeet or heady rash to say this, for our Creator only is praised. None will charge here manifestation of wordly vanity, for it is but the pride natural to minds such as I enjoy, indeed, with all royal princes.

If it should be wanting, then might all men say I lacked the very essence of a royal or a ruling spirit, or judge that I was unfit to reign over mighty England. It is only one of our happy dreams of a

day to come, that doth draw me on to build upon this ground, inas-much as it shall be long, perhaps — if so bright a day dawn — ere I shall bask in his sunny rays.

My brother Robert, by the wish and request of our father, bore his Christian name. He, reared by Walter Devereux, bore naturally that name, after a time coming into the titles of Earl of Essex and of Ewe.

His early youth was lightly passed, but after he did know that 'twas the queen that gave him life, he grew imperious and when brought to court by our truly ingenious father, whom an evil spirit much troubled — even a jealousy of some of the queen's favored lords that did attend her — his will showed its true source and revealed the origin of the young Caesar. And in after time it could well be discerned that he did draw deception from it.

Our fountain of life hath much earthy substance. Even in this royal source were slimy spots, and from it our blood took some slight poison which assuredly could not be accredited to the noble daughter of Sir Francis Knowles on the part of young Essex, and less on the part of myself, to a descendant of honorable Sir Anthony Cooke.

Essex was one of the adventurous, valiant, bold spirits not easily hidden in any place, and it was not, there fore, unseemly that the son of one so widely and favorably reputed as the first Earl of Essex, made so bold as to woo the goddess Fortune at court. None knew so truly as Elizabeth, our proud, unbending, royal mother, the cause of many of our willful Essex' overbearing ways.

The knowledge he was princely in truth, despite pretense, and whilst at court his nominal place and standing was only the courtier's, his rightful style was prince, the queen's lawful son, — warmed into life and action the ambitions that were his inherited primal instinct.

How far he ventured upon this royal prerogative, this proper right of favor and advancement, history plainly relateth, yet only in my cipher history may seals be opened that guard the secrets hid long

in silent halls; for'tis said, walls have ears, none say walls have a tongue — truly none who do visit courts. Daring, indeed, the pen that can write a royal story, though it be in cipher, — many times as daring, he that doth this task openly. There be few who will attempt it, and it shall not be by their pens we shall find out the result — dead men tell no tales.

#

## **Additional Reading**

Three texts on the device of acoustic levitation, the principle of which was first described in one of the cipher texts by Francis Bacon that were read thanks to the efforts of Elizabeth Gallup. And how a special Acoustic Laboratory was built at the Riverbank estate near Chicago in the early 20<sup>th</sup> century to recreate this Bacon's acoustic levitator. And also about how, at the end of the 20<sup>th</sup> century, a real acoustic levitator was nevertheless built for NASA — in Northbrook near Riverbank.

- “Science a la Riverbank” (*rus.*)  
<https://kniganews.org/map/e/01-11/hex70/>
- “Levitation and Sound” (*rus.*)  
<https://kniganews.org/map/e/01-11/hex71/>
- “About the Fibers of the Soul, or The Subtleties of the Soul's Organization” (*rus.*)  
<https://kniganews.org/2015/01/20/soul-fibers/>

*January 2021*

## The New Document

In this part of the series, a particularly important chapter “The New Document” of Cartier’s book is published. Its importance stems from two factors. First, it provides a detailed, with specific examples, explanation of how a unique historical document, the secret and fully encrypted autobiography of Francis Bacon, was identified and deciphered.

And secondly, here, an authoritative professional cryptologist gave indisputably competent and absolutely unambiguous confirmation of the fact that the texts of ancient books do contain a secret message to descendants, and this message was deciphered on the whole correctly...

However, for all modern science — from the humanities such as history or literary criticism, to exact mathematical ones, such as cryptography — this unique document has never been and still doesn’t seem to exist. And in order to make it clearer how such amazing cases of mass blindness in an educated society can occur, it’s very useful to quote the following characteristic citation from a serious modern book that analyzes precisely this topic (*Barry R. Clarke. The Shakespeare Puzzle: a Non-Esoteric Baconian Theory*, 2007):

*[Inspired by Dr Owen’s work,] the American astrologer and high school principal Elizabeth Wells Gallup (1848-1934) took up the cipher challenge. By using Bacon’s own bi-lateral cipher, a method using two distinct fonts in a piece of text, she reached the same conclusions as her mentor. ... However, Gallup went further than Dr Owen. Not only was Francis Bacon the secret son of Queen Elizabeth and Leicester but so was the Earl of Essex, ‘facts’ which she revealed in Francis Bacon’s the Bi-lateral Cipher published in 1899. Unfortunately, like Donnelly before her, she overlooked the effort and cost required to typeset messages in the First Folio using two different fonts.*

[ ... ]

*William and Elizebeth Friedman, two professional cryptologists — William headed the US army's cryptoanalytic bureau during the Second World War — concluded in The Shakespeare Ciphers Examined (1957) that Mrs Gallup's method of detecting messages in the First Folio could not be reproduced and was therefore unscientific.*

The second paragraph of the quote is the only mention in this work of the professional cryptologists William and Elizebeth Friedman, as well as their famous book, which supposedly put an end to all cryptographic arguments in the Bacon-Shakespeare matter. In fact, however, there is incontestable and publicly available evidence that the Friedmans' book is a deliberate lie, fabricated to deploy disinformation by standard secret services' methods.

And the most interesting thing is that the main documents confirming such a strong statement were personally signed by the authors of the forged book, William and Elizebeth Friedman. And anyone can personally verify this if they have access to the invaluable storages of the Internet Archive...

Well, what documents on this topic can be found among the treasures of <https://archive.org/>?

The story of the Friedmans' entry into the field of cryptography began with the Riverbank estate near Chicago, where the textile magnate Colonel George Fabyan established a private research institute or "Riverbank Laboratories." One of the main goals of this "institute" was to expand and popularize the deciphering work of Mrs. Elizabeth Gallup. Another task was genetic research to improve agriculture.

Since the young scientist — biologist William Friedman, invited in 1915 to head the genetic department, was good at photography, Fabyan asked him to help Mrs. Gallup's cryptography division as well. Enlarged photocopies of pages and fragments of text were very useful there for the analysis and deciphering of old books.

The Workes of William Shakespeare,  
containing all his Comedies, Histories, and  
Tragedies: Truly set forth, according to their first  
O R I G I N A L L.

The Names of the Principall Actors  
in all these Playes.



William Shakespeare.

Richard Burbadge.

John Hemmings.

Augustine Phillips.

William Kempt.

Thomas Poope.

George Bryan.

Henry Condell.

William Slye.

Richard Cowly.

John Lowine.

Samuell Crosse.

Alexander Cooke.

Samuel Gilburne.

Robert Armin.

William Ostler.

Nathan Field.

John Underwood.

Nicholas Tooley.

William Ecclestone.

Joseph Tayler.

Robert Bensfield.

Robert Goughe.

Richard Robinson.

John Shancke.

John Rice.

Fig. 24: A photo of the page from the First Folio with a list of actors of Shakespeare's troupe. Source: George Fabyan, *Fundamental principles of the Baconian ciphers, and application to books of the sixteenth and seventeenth centuries*. Riverbank Company, 1916, page. 86

## “PRINCIPALL ACTORS”

S T VVV

aa ee f hh ii kk l m oo p rr sf

A CH & ff



IIINPT

aa cc dd eef g hh ii mm nn oo p rr ss tt

P a cc dd ee f gg hh ii ll T

nn oo rr f ss tt u y fi ft ll

A BB CC E F G HH I L

N O P R R S S T T U W W<sup>4</sup>

aa bb cc dd ee gg hh ii kk ll mm nn oo pp rr s

ss tt uu w x yy asas fi uuuu ß ss stst

5 6 7 8 9 10 11  
AA GG JJ LL NN OO RR

— THE ALPHABETS.—

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RIVERBANK COMPANY.

W F Friedman

Naturally, the young scientist agreed to help the lady. And since Fabyan also organized printing of his own books on the estate for the mass propagation of the successes of the Laboratory, in 1916 a volume entitled *Fundamental principles of the Baconian ciphers, and application to books of the sixteenth and seventeenth centuries*<sup>62</sup> was published.

Almost all of the illustrations in this work, emphasizing the features of the biliteral typesetting of texts in the books of the Baconian era containing ciphers, were made by William Friedman. Moreover, each of these photocopies is certainly signed by Friedman — in the lower right corner.

The illustrations 24 and 25 provided above are especially interesting for our story for the following reason.

In the same year, 1916, Fabyan, who was expanding his cryptographic division, found a young and smart philologist Elizebeth Smith as an assistant to Mrs. Gallup. Having quickly studied the structure and principles of using Baconian ciphers, this girl successfully passed the verification decryption tests and settled in the Riverbank Laboratories for a long time. Soon she became one of the top cryptographers.

It's remarkable that the sheets of these verification tests have been preserved in the archives. Over time, these materials moved to the storages of the New York Public Library, and now photocopies of the sheets — all with the personal signature of Elizebeth Smith — can also be found in the Internet archive<sup>63</sup> (Fig. 26).

Along with these interesting cases, a romantic relationship began between the young people Friedman and Smith, and the geneticist-photographer was seriously carried away not only by the girl, but also by her deciphering activities. So soon there was not only the rise of the “father of modern cryptology” William Friedman, but

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<sup>62</sup> George Fabyan. *Fundamental principles of the Baconian ciphers, and application to books of the sixteenth and seventeenth centuries*. Riverbank Company, 1916.

In the Internet Archive, see section <https://archive.org/details/fundamentalprinc00fab>y

<sup>63</sup> <https://archive.org/details/ESFEarlyDeciphermentsAtRiverbank>

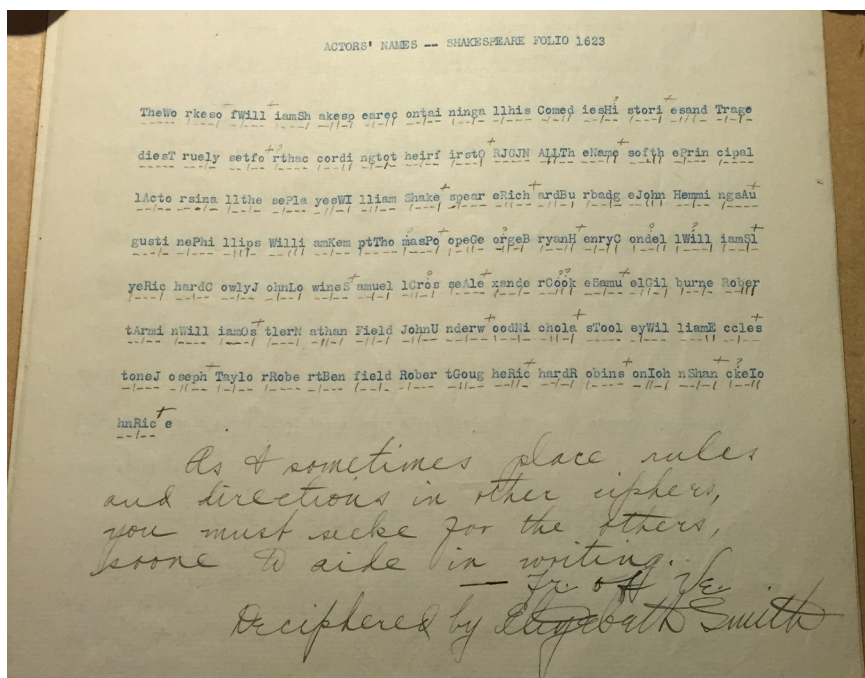


Fig. 26. The signed sheet shows how Elizebeth Smith successfully extracts the hidden encrypted message from that very page of the First Folio that was prepared by William Friedman — the page with the list of Shakespearean troupe actors

also a wedding. The marriage of the two prominent cryptographers lasted for the rest of their lives. Famous they became, however, a little later and in a purely government decryption and intelligence service...

Why and for what purpose, 40 years later, the Friedmans fabricated a book that completely distorts the truth about the affairs of their youth? Most likely, there is no honest evidence with the confessions of the authors on this topic.

But there still exists and is gradually becoming publicly available honest and competent evidence from another very authoritative cryptologist — a book by General François Cartier about Bacon's Secret Autobiography encrypted in his bilateral cipher.

And of course, the text of the Document itself...

#

*(translation fragments, pp. 44-59 of Cartier's book)*

## THE NEW DOCUMENT

We have explained in previous chapters what Francis Bacon's cryptographic system is and have shown two somewhat puzzling examples of short documents encrypted by this method. As a matter of fact, these ciphertexts don't represent any scientific and historical interest, and therefore it isn't clear why someone considered it necessary to hide them in this way. Besides, we can only fantasize who the real author of the unsigned first document is and whether Francis Bacon is indeed the author of the second one, according to the signature.

Nevertheless, the extensive research carried out on those printed works published in England during the lifetime of Francis Bacon, gave very impressive results, the essence of which we are going to describe in some detail.

First of all, it's reliably established that in the 16<sup>th</sup> century some printers used two forms of type for letters. The following two photocopies (Fig. 27) of the pages are indisputable proof of this fact. Therefore, it wasn't difficult to use different letter shapes to embed cipher in text.

Aaabbccdd eeffggghh iyllmmnn oop  
pqqrrssstssstvvv uuxxyyzzz sp.

A A B B C C D D E E F F G

G H H I I L L M M M N

N O O P P Q Q R R S S

T T U V X X Y Y Z Z & &

Letra del Grifo que escreuia Franç, Lucas En  
Madrid. Año De. M D. LXXVII.

Aaabbccdd eeffggghh iijll m

mnnnooppqqrrssstststvv

uuxxyyzz. & & & & & & :

A B C D E F G H I L :

M N O P Q R S T V :

~ : X Y Z Z : ~

Letra antigua que escreuia Franç Lu  
cas en Madrid. Año de. m.d.lxxvii.

Fig. 27

On the following illustration (Fig. 28) we give two forms of letters used in that particular example of encryption found in Bacon's work *De Augmentis Scientiarum* 1623 edition.

308

*De Augmentis Scientiarum,*

*a. b. a. b. a. b. a. b. a. b. a. b. a. b. a. b.*  
*A A a. a. B. B b. b. C. C c. c. D. D d. d.*  


---

*a. b. a. b. a. b. a. b. a. b. a. b. a. b. a. b.*  
*E. E. e. e. F. F. f. f. G. G. g. g. H. H. h. h.*  


---

*a. b. a. b. a. b. a. b. a. b. a. b. a. b. a. b.*  
*I. I. i. i. K. K k. k. L. L. l. l. M. M. m. m.*  


---

*a. b. a. b. a. b. a. b. a. b. a. b. a. b. a. b. a.*  
*N. N n. n. O. O. o. o. P. P. p. p. Q. Q. q. q. R.*  


---

*b. a. b. a. b. a. b. a. b. a. b. a. b. a. b. a. b.*  
*R. R. r. r. S. S. s. s. T. T. t. t. V. V. v. v. u. u.*  


---

*a. b. a. b. a. b. a. b. a. b. a. b. a. b. a. b.*  
*W. W. w. w. X. X. x. x. Y. Y. y. y. Z. Z. z. z.*

Fig. 28

Let's now consider such an example, given in the edition of 1623, which is nothing more than the first letter of Cicero. Here, even a not particularly trained eye would immediately notice a sharp difference between the two typographic forms used for each of the letters, whether they are capital or lowercase (Fig. 29).

We divide this text into groups of five letters, counting from the beginning, and mark the letters of the form A with dots and the letters of the form B with vertical dashes.

After that, translating the fives into letters using the Bacon's alphabet of correspondences, we find that the text encrypted in this way is nothing more than a report to the Spartans. The work of deciphering is represented by the following illustration: we have marked both forms of letters only in the first two lines, leaving it for readers, if they are interested, to mark up and read the rest of the text (Fig. 30).

It should be noted that the edition from which the above text is taken contains a typing error in the 12<sup>th</sup> line, where it should read *qui pauci sunt* instead of *qui parati sunt*.

The decrypted text looks like this:

*Perditae Res. Mindarus cecidit. Milites esuriunt. Ne que hinc  
nos extricare, neque hic diutius manere possumus.*

Ego omni officio, ac potius pietate erga te;  
ceteris satisfacio omnibus: Mibi ipse nun-  
quam satisfacio. Tanta est enim magni-  
tudo tuorum erga me meritorum, ut quoni-  
am tu, nisi perfectâ re, de me non conquies-  
ci; ego, quia non idem in tuâ causâ efficio,  
vitam mihi esse acerbam patem. In cau-  
sâ hæc sunt: Ammonius Regis Legatus  
apertè pecuniâ nos oppugnat. Res agitur  
per eosdem creditores, per quos, cum tu ade-  
ras, agebatur. Regis causâ, si qui sunt,  
qui velint, qui pauci sunt, omnes ad Pompe-  
ium rem deferri volunt. Senatus Reli-  
gionis calumniam, non religione, sed ma-  
lenolentiâ, et illius Regiæ Largitionis  
inuidiâ comprobât. &c.

Ego omni officio, ac potius piebatur erga te;  
ceteris satisfacio omnibus: Mihi ipse nun-  
quam satisfacio. Tanta est enim magni-  
tudo tuorum erga me meritorum, ut quoni-  
am tu, nisi perfectare, de me non conquies-  
ci; ego, quia non idem in tua causa efficio.  
vitam mihi esse acerbam putem. In cau-  
sa haec sunt. Ammonius Regis Legatus  
aperte pecuniâ nos oppugnat. Res agitur,  
per eosdem creditores per quos, cum tu ade-  
ras, agebatur. Regis causâ, si qui sunt,  
qui velint, qui parati sunt omnes ad Pompe-  
ium rem deferri volunt. Senatus Reli-  
gionis calumniam, non religione, sed ma-  
levolentia, et illius Regiae largitionis  
invidia comprobatur &c.

As we have said before, the typographical fonts used in practice by Francis Bacon aren't as easily recognizable as in the above example. The texts reviewed here allow us to appreciate the difficulties associated both with the identification of the two forms of type A and B, and with the amount of research related to this.

These difficulties, however, neither discouraged the American cryptologists we have already mentioned, nor weakened their insightfulness. The obtained results do great honor to Colonel Fabyan, who led the research, and in particular to Mrs. Elizabeth Wells Gallup and Kate Wells, who carried them out directly.

The fact that documents encrypted by this method eluded research around the world for three centuries is by itself undeniable proof of how excellent this cryptographic process turned out to be for the conditions it was applied in.

It goes without saying that, purely technically, from the cryptography point of view (as we have already indicated in the *Mercure de France* issue 563 of December 1, 1921<sup>64</sup>), Francis Bacon's system is reduced to a simple substitution, which, in fact, as a cipher doesn't give any security. But from a practical point of view, this system is capable of providing a high degree of secrecy, if you correctly vary the alphabets and use 32 possible arrangements of two letter forms in groups of 5.

Although the two forms of typographic fonts are often found in a very large number of the 16<sup>th</sup> century books, they are used for encrypting messages not everywhere, but only in some fragments of the text. Recognition of such places is usually possible due to the fact that fonts of one and another form are distributed here evenly throughout the text.

In particular, capital letters are especially useful for primary analysis, since, unlike lowercase ones, they don't require a magnifying glass to look at (working with a magnifying glass quickly tires, so it limits the duration of sessions). There is probably no need to em-

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<sup>64</sup> <https://www.retronews.fr/journal/mercure-de-france/01-decembre-1921/118/4092937/98>

phasize that this type of research requires perfect vision, as well as good visual memory and excellent work skills.

Since the document we are going to publish hereafter verbatim and in its entirety is likely to generate a lot of comments, and some parts of it are almost certain to be met with very serious objections, **we believe we must insist on the following fact. From a cryptographic point of view, we have personally verified a number of texts, so we believe that this entire discussion should leave aside questions about the reliability of decryption itself, since for us it looks indisputable.**

For those readers who may be interested in the details of this analysis, we propose to examine two forms of signs found in Bacon's *Novum Organum* of the 1620 edition, a copy of which is stored in the National Library (Fig. 31).

For the convenience of deciphering work, it's useful to arrange two forms of letters one above the other, and sequentially compare the letters of the text to be identified with patterns. This kind of arrangement of elements is illustrated in the following table, where it's necessary to cut out rectangular boxes in the places shaded with dots.

If you apply such tabular transparencies (Fig. 32) to page 192 of the mentioned document, you can independently verify the principles of decryption, which are discussed here.

# THE BIFORM ALPHABETS

*Novum Organum*, 1620

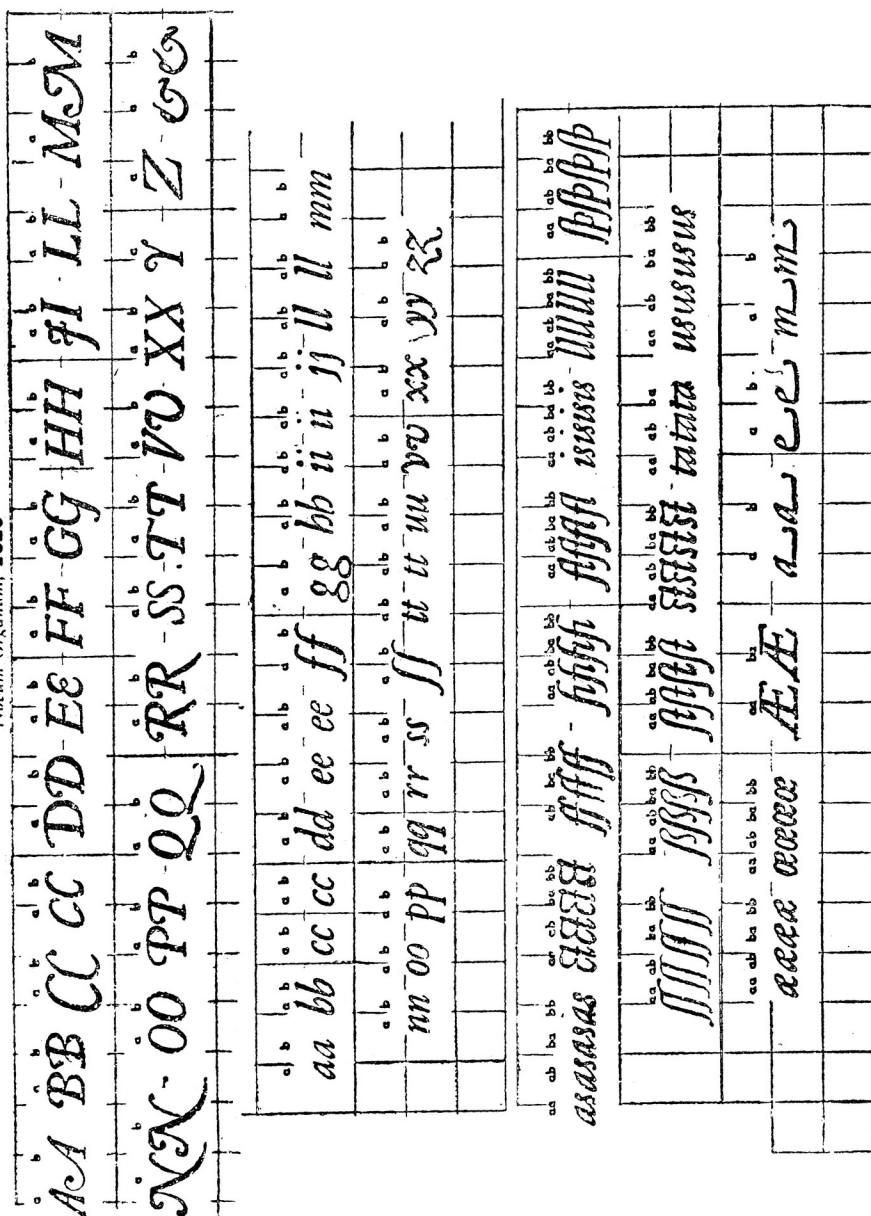
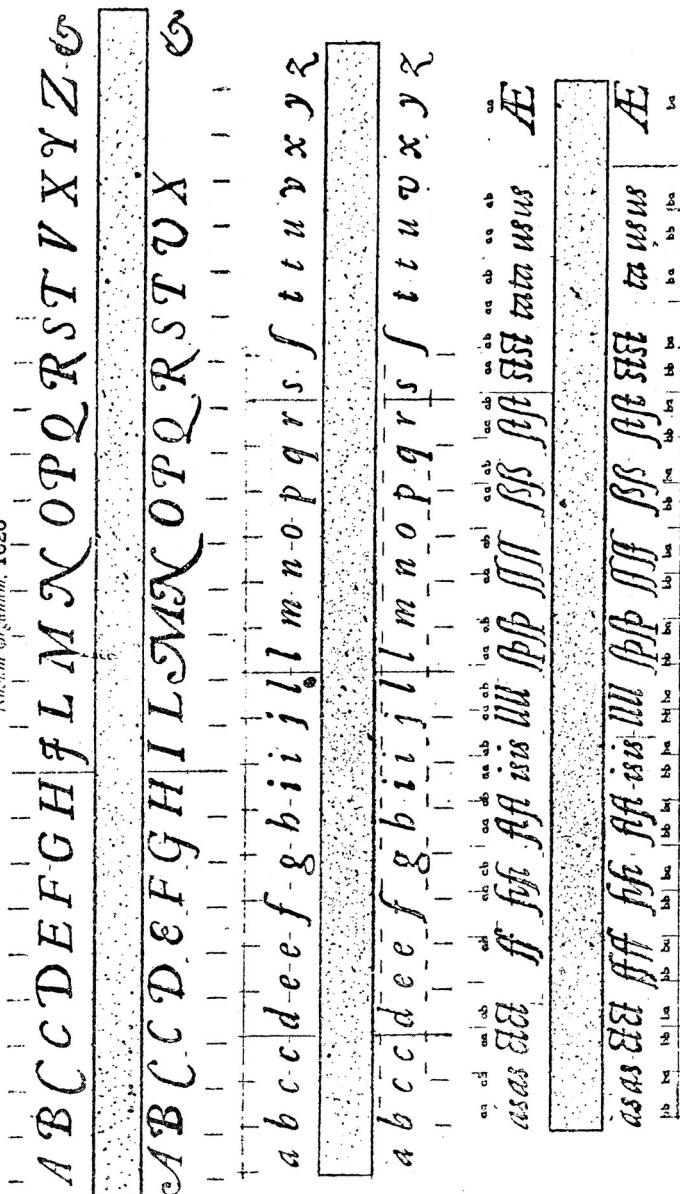


Fig. 31. Two types of fonts found in Bacon's *Novum Organum* 1620 edition

# THE BIFORMED ALPHABET CLASSIFIER

*Nouveau Chiffre*, 1620



*a* forms above the shaded part, *b* forms below; digraphs specially indicated.

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CUT OUT THE SHADDED PARTS

Fig. 32. Tabular transparencies which can be used to facilitate deciphering work

The deciphered message in this fragment is shown below, where the letters of the original text are grouped by 5, the form A is indicated by a dash '-' and the form B by a slash '/'.

I	F	H	E	S	H	A	L
nseru	dimen	taqua	edame	xilis	Calor	ishab	etlic
-/----	--/-/	--///	--/--	/---/	--///	-----	-/-/-
L	P	V	B	L	I	S	
etnon	hucus	quevt	adtac	tumpe	rcipi	aturN	
-/-/-	-///-	/--//	----/	-/-/-	-/----	/---/	
H	W	H	A	T	I	S	
amnec	eaips	aquae	putre	facta	soluu	nturi	
--///	/-/-	--///	-----	/-/-	-/----	/---/	
C	O	N	C	E	A	L	D
nanim	alcul	avtCa	roCas	eusad	tactu	mpere	ipium
---/-	-///-	-///-	---/-	--/-	-----	-/-/-	---//
H	E	R	E	I	N	L	E
turCa	lidan	equel	ignum	putre	quodn	octus	plend
--///	--/-	/----	--/-	-/----	-///-	-/-/-	--/-
T	H	I	M	W	I	N	N
etdep	rehen	ditur	adtac	tumCa	lidum	Calor	autem
/--/-	--///	-/----	-/-/-	--/-	-/----	-///-	-///-
O	W	E	I	T	W	E	L
input	ridis	quand	oques	eprod	itper	odore	stetr
-///-	/-/-	--/-	-/----	/--/-	/-/-	--/-	-/-/-
L	I	F	H	E	D	O	E
os&fo	rtesP	rimus	itaqu	eCalo	risgr	aduse	xijsq
-/-/-	-/----	--/-	--///	--/-	---//	-///-	--/-
T	H	I	S	N	O	T	T
uaead	tactu	mhuma	numpe	rcipi	untur	Calid	avide
/--/-	--///	-/----	/---/	-///-	-///-	/--/-	/--/-
H	E	B	O	O	K	E	M
tures	seCal	orani	maliu	mquib	enema	gnamh	abetg
--///	--/-	----/	-///-	-///-	-/-/	--/-	-/-/-
V	S	T	D	I	S	P	L
raduu	mlati	tudin	emNam	infim	usgra	dusvt	inins
/--//	/---/	/--/-	---//	-/----	/---/	-///-	-/----

E	A	S	E	W	H	I	C
ectis	vixad	tactu	mdepr	endit	urSum	musau	temgr
--/ --	-----	/ ---/	--/ --	/ -/ --	--///	-/ ---	---/ -
H	S	H	O	V	L	D	A
adusv	ixatt	ingit	adgra	dumCa	loris	radio	runSo
-- ///	---/	-///	-// -/	/ --///	-/ -/ -	---//	----
F	F	O	R	D	P	L	E
lisin	regio	nibus	&temp	oribu	smaxi	mefer	uenti
--/ -/	--/ -/	-// -/	/ ---	---//	-/// -	-/ -/ -	--/--
A	S	V	R	E			
busne	queit	aacri	sestq	uinto			
----	/ ---/	/ --//	/ ---	--/--			

The result of decryption looks like this:

*If he shall publish what is conceal'd herein let him winnowe  
it well. If he doe this not, the booke must displease which  
should afford pleasure.*

The text of this fragment contains a clear indication that there is something hidden in the book, and the decrypted message, most likely, as parting words is addressed to the one who will decipher, no matter how difficult it may be.

These studies weren't limited to the examination of *Novum Organum*, they covered the entire bibliography of that time, all books where various forms of letters, capital or lowercase, straight or italic, could lead to assumptions about the existence of cryptographic texts.

The result of these investigations is presented below — the story of Francis Bacon himself. It wasn't found in any one book, as the author probably considered it safer or more reasonable to distribute it among a large number of documents. In fact, it has been recreated from fragments found in the following works bearing the Francis Bacon's author signature:

- *A Declaration of the Treasons of Essex*, 1601;
- *The Advancement of Learning*, 1605;

- *Novum Organum*, 1620;
- *The Parasceve*, 1620;
- *History of Henry the Seventh*, 1622;
- *Historia Ventorum*, 1622;
- *Historia Vitae et Mortis*, 1623;
- *De Augmentis*, 1623;
- *De Augmentis*, 1624;
- *The Essays*, 1625;
- *New Atlantis*, 1635;
- *Natural History*, 1635.

In addition, what's even more surprisingly and no doubt will amaze our readers, deciphering works could lead to works signed by other names:

- **Timothy Bright**
  - *A Treatise of Melancholy*, 1586;
- **Robert Burton:**
  - *The Anatomy of Melancholy*, 1628;
- **Robert Greene:**
  - *The Mirror of Modesty*, 1584;
  - *Planctomachia*, 1585;
  - *Euphues*, 1587;
  - *Morando*, 1587;
  - *Perimedes*, 1588;
  - *Pandosto*, 1588;
  - *The Spanish Masquerade*, 1589;
- **Ben Jonson:**
  - *The Folio*, 1616;
- **George Peele:**
  - *The Arraignment of Paris*, 1584;
- **William Shakespeare:**
  - *Midsummer Night's Dream*, 1600;

- *Much Ado about Nothing*, 1600;
- *Sir John Oldcastle*, 1600;
- *Merchant of Venice*, 1600;
- *London Prodigal*, 1605;
- *King Lear*, 1608;
- *Richard the Second*, 1615;
- *The Whole Contention*, 1619;
- *Pericles*, 1619;
- *Romeo and Juliet* (?);
- *The First Folio*, 1623;
  
- **Edmund Spenser:**
  - *The Shepheardes Calender*, 1579-1611;
  - *Complaints*, 1590-1591;
  - *Colin Clout*, 1595;
  - *Fairy Queen*, 1596-1613.

Some fragments of this story have already been published in America and have given rise to all sorts of discussions, especially over the often discussed question of the Shakespeare's works origin. Here, for the first time, the entire set of deciphered texts that compose the story of Francis Bacon is presented to the public. We present it in the form it came out as a result of the decoder's work; only archaic words are given here in their current form for ease of reading.

What conclusions should be drawn in terms of literary history and questions about the authorship of certain works? In making a decision here, we would clearly go beyond our role, which is simply to spread irrefutable documents. Leaving for others to worry about how to build conclusions now and what to do with the collapsing old belief system.

(pp. 220-225 of Cartier's book)

## APPLICATION: NOTES

### D

Francis Bacon seems to have had some worries about the effectiveness of his method, telling his story in such a way that it would elude his contemporaries but for sure be deciphered by future cryptologists.

Probably, this explains the numerous cryptograms hinting at the existence of his autobiography, as well as the safety precautions noted in cases of multiple encryption of the same fragments.

The following deciphered passage from the *Novum Organum* 1620 edition, page 122, shows the subject of his main concern:

*Since the part which doth contain the story of my birth is one I cannot have lost, it is frequently given. The directions to the decipherer oft occur for it cannot be that he doth decipher everything I write, yet if but a part be done, it would be sufficient doubtless to reveal the history.*

And here, on the other side, we have the following example of a repetition of the text from the 2<sup>nd</sup> paragraph of the autobiography presented in the *Mercure de France* magazine number 581, page 301<sup>65</sup>:

*The principal work is, as you may suppose, writing a secret story of my own life as a true history of the times.*

The next two illustrations are photocopies of pages 188 and 189 of Bacon's *Novum Organum*, 1620 edition.

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<sup>65</sup> <https://www.retronews.fr/journal/mercure-de-france-1890-1965/01-septembre-1922/118/4093001/17>

cylō vt melius contineat calorem suum; & notetur v-  
trum per calorem suum faciat aquam descendere. A

Ad 25.<sup>am</sup> 30.

*Aromata, & Herbae acres ad palatum, multo ma-  
gis sumptae interius, percipiuntur calida. Videntium  
itaque in quibus alijs materijs exequantur opera caloris.  
Atque referunt Nauta, cum cumuli & massae Aro-  
matum diu conclusae subito aperiuntur, periculum in-  
stare illis qui eas primo agitant & extrahunt, à feбри-  
bus & inflammationibus spiritus. Similiter fieri poterit  
Experimentum, utrum pulueres huiusmodi Aromatum  
aut Herbarum non aresciant Laridum, & carnem  
suspensam super ipsos, veluti fumus Ignis.*

Ad 26.<sup>am</sup> 31.

*Acrimonia suae Penetratio inest tam Frigidis, qua-  
lia sunt Acetum, & Oleum Viriosum; quam Calidis, qua-  
lia sunt oleum Origani & similia. Itaque similiter &  
in Animatis cietur dolorem, & in non-Animatis diuel-  
lunt partes & consumunt. Neque huic Instantiae  
subiungitur Negatiua. Atque in Animatis nullus re-  
peritur dolor, nisi cum quodam sensu caloris.*

Ad 27.<sup>am</sup> 32.

*Communes sunt complures actiones & Calidi,  
& Frigidi, licet diuersa admodum ratione. Nam  
& nives, puerorum manus videntur paulo post vrere;  
& frigora tuentur carnes a putrefactione, non minus  
quam ignis; & Calores contrahunt corpora in minus,  
quod faciunt & Frigida. Verum haec & similia op-  
portunius est referre ad Inquisitionem de Frigido.*

## Aphor. XIII.

**T**ertio facienda est Comparantia ad Intellectum Instantiarum in quibus Natura, de qua fit Inquisitio, inest secundum magis & minus; siue facta comparatione incrementi & decrementi in eodem subiecto, siue facta comparatione ad inuicem in subiectis diuersis. Cum enim Forma rei sit ipsissima Res; neque differat Res à Formâ, aliter quàm differunt Apparens & Existens, aut Exterius & Interius, aut in ordine ad Hominem & in Ordine ad Uniuersum; omnino sequitur, ut non recipiatur aliqua Natura pro verâ Formâ, nisi perpetuò decreascit quando Natura ipsa decrescit, & similiter perpetuò augetur quando Natura ipsa augetur. Hanc itaque Tabulam, Tabulam Graduum siue Tabulam Comparatiuæ appellare consueuimus.

Tabula Graduum, siue Comparatiuæ  
in Calido.

**P**rimò itaque dicemus de ijs quæ nullum prorsus gradum Caloris habent ad tactum; sed videntur habere potentialem tantum quendam calorem, siue dispositionem & præparationem ad calidum. Postea demum descendemus ad ea, quæ sunt actu, siue ad tactum Calida, eorumque fortitudines & Gradus.

The letters marked with a bar belong to form B, and those not marked to form A. A cryptogram is made up of italics letters only. On page 188, at the end of the 2nd line, an arrow marks the beginning of the division into 5-letter groups, which contain the following ciphertext:

*... Th' principall history is, as you may suppose, my owne,  
yet it is soe much mixt or twin'd into manie others herein,  
that it is a taske putting them together, as you perhaps well  
know. The work will not be complete untill my death. It may  
then fall short of many things I have long desir'd to  
chrystalise, as might be said, in a solide, unperishing rock.  
However, when deathe shall cut short my toyle, there should  
bee another to carry it forward that it may lacke as little as  
possible.*

To do the decoding on your own, those readers who are interested in it need to write out the letters in fives, starting from the place marked with an arrow, marking them as follows:

*baaba aabbb abbba baaaa abaaa...*

and so on, and then translate these combinations into the Francis Bacon's alphabet described in the *Mercure* magazine, issue 563, page 389<sup>66</sup>.

The next illustration is a photograph of page 9 of the same Bacon's book (*Novum Organum*, 1620 edition).

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<sup>66</sup> <https://www.retronews.fr/journal/mercure-de-france/01-decembre-1921/118/4092937/102>

ruerint; ut potè quæ sensibus propiora sint, & communi-  
bus notioribus ferè subiaceant. Antequàm verò ad re-  
motiora, & occultiora Naturæ liceat appellere, ne-  
cessariò requiritur, ut melior & perfectior mentis &  
Intellectus humani usus & adoperatio introducatur.

Nos certè æternæ Veritatis amore delecti, viarum  
inceruus, & arduis, & solitudinibus, nos commisi-  
mus; & Divinæ auxilio freti & innixi, mentem no-  
stram, & contra opinionum violentias, & quasi in-  
structas acies, & contra proprias & internas hesita-  
tiones & scrupulos, & contra rerum caligines, &  
nubes, & undequaque volantes phantasias, sustinui-  
mus; ut tandem magis fida & secunda indicia, viuen-  
tibus & posteris comparare possemus. Quâ in re si quid  
profecerimus, non alia sanè ratio nobis viam ape-  
ruit, quam veræ & legitima spiritus humani humilia-  
tio. Omnes enim ante nos, qui ad artes inveniendas  
se applicuerunt, coniectis paulisper in res, & exempla,  
& experientiam oculis, statim, quasi inuentio nil aliud  
esset, quam quædam excogitatio, spiritus proprios, ut  
sibi Oraçula exhiberent, quodammodo inuocârunt.  
Nos verò inter res castè & perpetuò versantes, In-  
tellectum longius à Rebus non abstrahimus, quàm ut  
rerum imagines, & radij (ut in sensu fit) coire  
possint; unde fit, ut Ingenij viribus & excellentia non  
multum relinquatur. Atque quam in inveniendis adbi-  
bemus humilitatem, eandem & in docendo sequuti su-  
mus. Neque enim aut confutationum triumphis, aut  
antiquitatis aduocationibus, aut authoritatis usurpacio-  
ne quoddam, aut etiam obscuritatis velo, aliquam bis  
nostra

Here, the forms A and B are designated in the same way as in the previous case, that is, the letters of the form B are marked with a bar, the letters of the form A are unmarked.

The grouping of letters must start from the position of the vertical arrow as follows:

*babba aabaa baaba aaabb abbab aabaa*

and so on.

The decrypted text looks like this:

*... Yet doe I maintaine that the principal work hath beene, or is, writing a secret storie of my owne life, as well as a true historie of th` times, in this greater cypher...*

#

*(pp. 92-99: deciphered texts of the Original)*

## **BACON'S LIFE AS HE TELLS IT IN THE BILITERAL CIPHER**

### **Chapter IV**

I was in good hopes when my divers small poems might be seen in printed form, the approval of Lord Leicester might be gained — he, in a way, having matters in his hands regarding the recognition and the remuneration her majesty should offer, suitably rewarding so great labors. I had faith in my sire, who, whilst now he loveth his peace and quiet enjoyment of the royal kindness so much, no love of his offspring is manifest, hath in his natural spirit that which yet might lead to a matching of a royal spouse against the princes, that a balance be maintained.

In truth, had not our far seeing sire exercised more than the degree that was his wont, or his privilege, of authority, Elizabeth had rested content with the marriage ceremony performed in the Tower. Being quite bent upon secrecy, she with no want of justice



Fig. 33. Francis Bacon at the left, Robert Dudley, Earl of Leicester at the right

contended. “The fewer eyes to witness, the fewer tongues to testify to that which had been done.”

The Earl of Leicester then foresaw the day when he might require the power this might grant him, and no doubt this proved true, for his son of prosperity rose high. By degrees he was given title and style suiting so vain a mind better than would the weight of government, were that conferred on him.

He was first made Master of the Horse; this gave him control of the stables, and gave him such place in the royal processions as he very truly desired, next her majesty; also she conferred upon him the Order of the Garter, likewise the titles of Baron of Denbigh, her Highness’ Privy Councillor, et caetera.

It must, to most men who shall observe well, become quite evident that this aspiring parent, as was fully proven to the councillors, knew Elizabeth (who so far had known never a master) now feared neither people nor Pope. He ran no risk of making shipwreck of his fortunes, being always under more favorable auspice than other men.

Two wings, I may truly term them, such shelter they afforded, — the one of the royal secrecy at a time when silent wisdom weighed

more than gold, the other a quality of fearlessness no less royal, overshadowed his head wherever he might be. Rail as other men might, unmoved amidst scorn and envy, lie maintained such manifest assurance of the favor granted him, that the shrewdest courtiers guessed, although all purpose and proof seemed lacking, somewhat of our intimacy in blood. Indeed this did suit his own plan, without arousing most obstinate opposition on the part of Queen Elizabeth.

He it was who procured that certificate of my birth from the court physician, the sworn and witnessed testimonies of both midwife and the attendant, the story of the queen's objection to sequestration although urgently desired — Queen Elizabeth remaining with her ladies, courtiers, foreign princes and ambassadors, Lords of the Privy Council and such others around her, unwilling in the seventh month to proclaim herself a woman wedded and pregnant — and my adventitious arrival shortly precedent to birth to well beloved Lady Bacon of her still-born child, so that none could find proof that I was not her own.

The desire of my father was to make these affairs so well understood that the succession should be without question. To my mother no such measure was pleasing. By no argument, how strong soever, might this concession be obtained, and after some time he was fain to appeal the case for us directly to Parliament to procure the crown to be entailed upon Elizabeth and the heirs of her body.

He handled everything with greatest measure, as he did not press to have the act penned by any declaration of right, also avoiding to have the same by a new law or ordinance, but choosing between, the two, by way of sure establishment, under covert and indifferent words, that the inheritance of the crown, as hath been mentioned here, rest, remain and abide in the queen. And, as for limitation of the entail, he stopped with the heirs of the queen's body, not saying the right heirs, thereby leaving it to the law to decide, so as the entail might rather seem a favor to her — Elizabeth — and to their children, than as intended disinherison to the house of Stuart. It was in this way that it was framed, but failer in effect on account

of the ill-disposition of the queen to open and free acknowledgment of the marriage.

Elizabeth, who thought to outcraft all the powers that be, suppressed all hints of her marriage, for no known object if it be not that her desire to sway all Europe had some likelihood, thus, of coming to fulfillment.

All suitors — much as the first comer — for some reason had such hope of success as turned some heads, no mention being made of impediments. Most wise councillors long petitioned the queen, though it only wounded the earl, her own lawful spouse — I think for the purpose of making a good, founded title to both royal scepters — urging hotly Monsieur le Due de Anjou's suit. Not all at one on the point of religion — the Duke paying the compliment of an arrangement whereby their sons should receive instruction in the Roman Catholic faith, the daughters in the Protestant — all, it must surely at last be found, have many like subtle or purely diplomatic traits.

I did find this, in my calm, true adjustment at the end of improper, long continued negotiations, no one played the drama with true skill save Elizabeth. All are born, all die; though each must play many parts, he findeth no part that is his alone.

In wise Solomon's words: "There is nothing new'neath the sun." Many have, it may be, acted this part my proud mother played — few so successfully. It might check princes in pride to imagine France and England united — as great powers singly as some of the neighboring ones. It stared in the eyes both proud kings who had made a futile trial, as coldly as arctic snows.

She loved the admiration of all men, especially of princely visitors coming to woo. Her wisdom, however, saved her in this, as the love of devotion was the surface of her character — not a main current.

Many were the suitors, with whom she executed the figures of a dance, advancing, retreating, leading, or following in sweet sympa-

thy to the music's call. But ever there was a dying fall in these strains — none might hear only she or my father — and the dancer's feet never led to Hymen's lofty alter, thereafter.

I fain would attest how painful this acting parts soon, naturally, did seem to my father. For, said he, "A mortal man many speak falsely upon occasion, but he were a strange man who dared live a falsehood."

Nevertheless, he did live the unacknowledged husband of Queen Elizabeth, my mother. But he was an unwise and most artless actor, and oft did give sad trouble to some of our managers or controllers, those in the haughty Burleigh's employ, or the band and glove associates who served as his factors.

The times were not a bad schoolmaster, When I resumed my former study of the state of the nations, and patiently worked out the model of government, my most potent reason may be justly gathered; for I then did trust to my father's hopeful spirit as a son naturally should.

Any such measure found no regard in the sight of the vain minded Queen Elizabeth whose look traineth men as vain as her own self. The would-be idol of half the great princes of Europe — concluding it would be less pleasing in a few years to have all the people know that she was the wife of the Earl of Leicester, than suppose her the Virgin Queen she called herself, — both props and shields alike despised, nor did she at any subsequent time reverse her decision. For such a trivial, unworthy, unrighteous cause was my birthright lost.

A fear seemed to haunt her mind that a king might suit the mounting ambitions of a people that began to seek New Atlantis beyond the western seas. Some, doubtless, longed for a royal leader of the troops, when war's black eagle threatened the realm, which Elizabeth met in two ways — by showing a kingly spirit when subjects were admitted into the presence chamber, and by the most constant opposition to war, as was well known to her council.

Many supposing miserly love of gold uppermost in mind and spirit, made but partial and cursory note of her natural propension, so to speak, or the bent of the disposition. For, behind every other passion and vanity moving her, the fear of being deposed rankled and urged her to a policy not yet understood.

The wars of Edward, called the Third, — but who might be named the first among heroes, — and of his bold son, known as Edward the Black Prince; of brave Henry the Fifth; and her grandsire, Henry the Seventh; as well as one of her father's short strifes, were not yet out of the memory of the people.

Many pens kept all these fresh in their minds, She as a grave physician, therefore, kept a finger on the wrist of the public, so, doubtless, found it the part of prudence to put the princes, — my brother, the Earl of Essex, and myself — out of the sight of the people.

Yet in course of time, the Earl of Leicester, our subtle father, handled matters so that he came nearer to obtaining the crown for my brother than suited my wishes and claims, making pretense of consulting my tastes and fitness for learning.

A son can never share in regal and governing duties, but Essex at one time grew very arrogant, having for a fair season our gay mother's honorable and sustaining favor, and the aidant interest of our father. At that time I knew my own claim to favor must, yielded publicly, be as truly yielded up afterwards.

Daily I see cause of this constantly increasing dread, in the favor shown to my brother rather than of myself, despite the priority of my claim to all princely honor. And the frenzied eagerness he doth betray, — when these shows and vauntingly marked favors, give confirmation strong as proofs of Holy Writ of my wisdom, — maketh me to inquire sadly in my own heart whether my brother returneth my warm affection.

The love I bear him is as fresh at this day, as it was in his boyhood, when the relationship was for some time so carefully kept unknown — as the fact was, for years, guarded of our high birth and

station. Not a thought then entered the brain it was not a pleasure for us to share. Our joys were two fold, our sorrows all cut in twain; but the pride of his heart having been aroused, my eyes can but note the change, for he seldom doth keep the former ways in remembrance.

Even in is manner now, I think, one thought hath a voice: “Without a brother like mine that hath come before me by six short years, I could rely wholly upon myself, and furthermore, be the heir to England’s throne.” Nothing so open, so unmistakable; but at times he maketh a great show, stranger to my heart than the cold, ungratious manner.

When this spirit of kindness is felt no more — when this shall be lost — the mind can furnish few thoughts, wrought through pain, from memories of the past hours of joy, to comfort and console it. When the heart hath suffered change, and a breach beginneth to widen, no words fill it up. An altered affection, one weakly parteth from, of need, — for no redress is suitable.

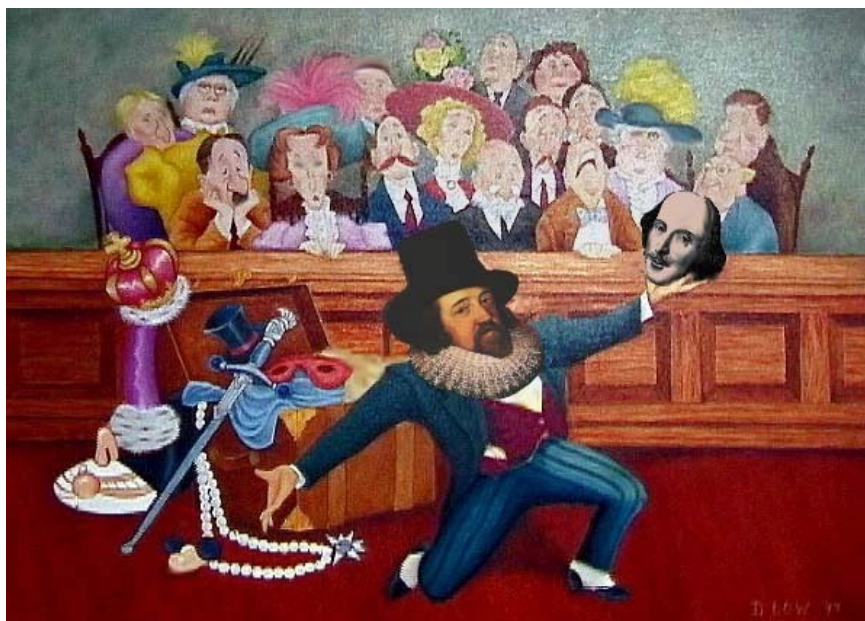
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# Bacon and Shakespeare: Anatomy of Deception

In this part of the story, the name of William Shakespeare appears for the first time.



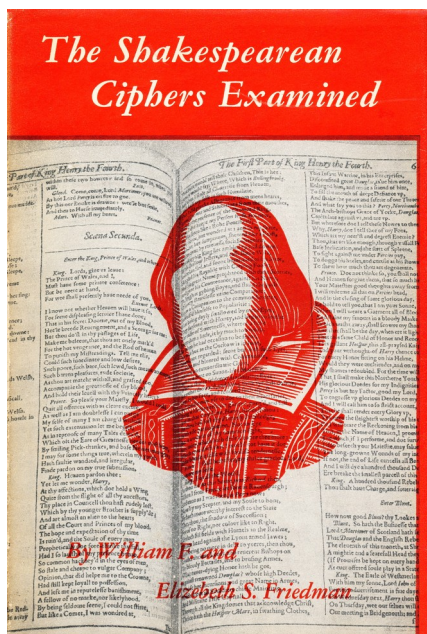
Any serious discussion of the General Cartier's book is impossible in isolation from the book of other famous cryptologists, the spouses William and Elizebeth Friedman. Because it was the work of the Friedmans, published two decades later, that undoubtedly became the main reason for the complete cutting out of the history of both the Cartier monograph and the famous general himself.

Just talking about exactly how, by whom, and most importantly, for what reasons all this was done, in its amazing details, could easily become the basis for a great investigative novel in the genre of a scientific mystical spy-thriller. It's especially noteworthy that, on the one hand, the veracity of this story is reliably supported by indisputably authentic documents, and on the other hand, it turns

out that such an amazing story, rich in discoveries, still remains absolutely unclaimed and uninvestigated by anyone in the world.

This combination of facts more than clearly demonstrates how effective the operations for cutting out historical truth can be.

Here, however, we are engaged in a much more particularistic and specific task — translating and commenting the book of the French general Cartier, *The problem of Cryptography and History*. This book was published in Paris in 1938, and since then not only has it never been reprinted anywhere, but it hasn't been found at all among the digital information resources of the Internet. Therefore, it is not customary to refer to this book or quote from it.



The American work of the Friedman spouses *The Shakespearean Ciphers Examined*, published in 1957 in England and the USA, is known and presented on the Internet incomparably better. This book is not only referenced by all researchers of this topic, but if desired, anyone can borrow it for a while for review in the digital library of the Internet Archive<sup>67</sup>, or even absolutely legally download a full digital copy on the official website of The Marshall Foundation<sup>68</sup>.

Why should these two books be considered in comparison with each other?

<sup>67</sup> <https://archive.org/details/shakespeareancip00frie>

<sup>68</sup> <https://library.marshallfoundation.org/Portal/Default/en-US/RecordView/Index/15274>

Firstly, both of them are written by highly respected professionals in military and intelligence cryptography, who are deservedly called the “founding fathers” of scientific and practical cryptology of the 20<sup>th</sup> century.

Secondly, both books are devoted to exactly the same topic — the problem of endless disputes around Francis Bacon, as the author of Shakespeare’s works.

Thirdly, they both give a well-defined expert opinion on this issue of history — in terms of scientific cryptography.

And finally, the verdicts of authoritative experts ultimately turn out to be diametrically opposed.

What General Cartier, previously the head of the cryptographic service of France, states in his book, has already been translated and published here earlier:

*We believe we must insist on the following fact. From a cryptographic point of view, we have personally verified a number of texts [deciphered by Mrs. Gallup], so we believe that this entire discussion should leave aside questions about the reliability of decryption itself, since for us it looks indisputable.*

And here is what William Friedman, formerly the chief cryptologist of the NSA, and his wife, equally experienced in cryptographic matters, Elizebeth Smith Friedman, declare just as decisively in their book:

*We are equally certain that Mrs Gallup had not found, in all the books she examined, one application of the bilateral cipher. [...] As cryptologists we regret being unable to find that it had been used [in the books of Bacon-Shakespearean era]...*

Now, both historians and all other researchers have absolutely reliable documents<sup>69</sup> that unambiguously indicate that 40 years before that, William Friedman personally helped Mrs. Gallup make study guides to identify and analyze cases of using a biliteral cipher in ancient books. And Elizebeth Smith (then not yet Friedman) personally deciphered these revealed fragments “according to the Bacon method.” In this regard, a natural question arises:

*How do the Friedmans explain such a radical change in the assessment of their own work, which fully confirmed the deciphering results of Mrs. Gallup?*

And the shortest answer to this inconvenient question is that the Friedmans apparently didn’t know or suppose that documents about the details of their entry into the spheres of cryptography could be preserved somewhere in unknown archives and then become publicly available half a century later thanks to the worldwide computer network. Therefore, in their book and in all the interviews, which are now also available on the Internet, the Friedmans simply pretended that there was nothing of the kind in their youth...

If, however, the answer to this awkward question is approached in more detail, two main facts should be noted.

Firstly, Elizebeth Smith Friedman, in her memoirs of her job as Mrs. Gallup’s assistant, nowhere and never mentions that she passed tests to get that job. The whole point of the tests was to demonstrate not only an understanding of the structure of Bacon’s biliteral cipher, but also — most importantly — the ability to independently extract messages encrypted by this cryptosystem from the texts of old books.

Secondly, William F. Friedman was personally involved in the production of visual aids that helped Gallup’s assistants and all other researchers in the search for and extraction of Bacon’s messages. Therefore, it’s simply impossible to believe that both he and his wife, in their old age, forgot the fact that their very appearance

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<sup>69</sup> See chapter “**The New Document**”

in the field of cryptography is directly related to the success of deciphering Bacon's biliteral cipher, which was well and variously confirmed at that time.

Of course, it was impossible to completely forget the facts of their own biography, which are so fundamentally important for history, therefore the Friedman spouses in their book, on page 262, gave them such a "sort of explanation":

*For that matter, no one working independently has ever been able to duplicate Mrs Gallup's findings. It is true that a few of her disciples claim to have done so; but in every case the disciple was already convinced of the validity of Mrs Gallup's work. Whatever test was made was merely 'confirmatory'; it was not an independent experiment made without the decipherer either having a copy of Mrs Gallup's decipherment before him **or a knowledge of the results she claimed to have obtained.***

In the last, particularly convoluted line of this quote, it's not difficult to recognize Elizebeth Friedman's veiled confession that she used to break Bacon's cipher on her own. However, the authors assure us that the reason why that was possible is only the power of Mrs. Gallup's imagination...

General François Cartier was neither a follower nor, moreover, a student of Mrs. Gallup when he became acquainted with this whole topic. He obtained his first results in extracting the biliteral Bacon's cipher from the texts of ancient books on his own and not at all in order to confirm someone else's deciphering successes. But having delved into the topic and familiarized himself with the results of Gallup's work, however, a highly experienced professional had no choice but to confirm that from the point of view of serious cryptography, all that most definitely wasn't the fruit of an old lady's wild imagination...

For a broader view of the problem it's natural to ask how the deciphered by Gallup texts look in terms of historical science? There is a curious piece of evidence published about 15-20 years before the

Friedmans and General Cartier delved into the Bacon-Shakespearean problem:

*The preface of the research book “**The strange case of Francis Tidir**,” investigated by Parker Woodward, London: 1901*

When first I heard, before the publication of Mrs. Gallup decipherings, that Francis Bacon had claimed to be a son of Queen Elizabeth, I was prepared to join the noble army of scoffers, who, too much committed to the conventional view to take any personal trouble, yet seek to deter the researches of others with the cry, “What is the good of it all when you have done?”

The claim to Royal parentage, coupled with the allegation of the cipher story that Francis was the author of the poems put forth as Spenser’s, of the Plays attributed not only to Shakespeare, but those of Greene, Marlowe, and Peel, and of the prose compendium known as Burton’s “Anatomy of Melancholy,” was so prodigious that I can well understand the mental attitude of most who have been asked to give credence. I concluded the story to be right or demonstrably wrong by the known facts of English history.

The following articles are the result of an amateur, and more or less first time, search of Elizabethan history and certain biographies, by one who has had some experience in dealing with evidence. I have found no recorded facts inconsistent with the cipher claim, but much in history that supports it.

***End of quote***

We will have to turn to reliably known facts from the history of England in the Elizabethan era more than once in the future, and now it’s time to return to the translation of the chapters directly devoted to them both from the book of General Cartier and the secret autobiography of Francis Bacon.

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(translation fragments, pp. 188-193 of Cartier's book)

## CONCLUSION

Various hypotheses put forward to determine the true authorship of works attributed to William Shakespeare are usually built on the basis of a set of certain ideas, which can be found, in particular, in the work of Mr. Abel Lefranc *Behind the mask of William Shakespeare lurks William Stanley, the sixth Earl of Derby* published in 1919:

(1) Those dramatic and other works that since the last years of the 16<sup>th</sup> century have been staged and published under the name of the actor William Shakespeare from Startford-on-Avon could in no way be written by this person.

(2) The true author of these works, as it appears, was one of the representatives of the English aristocracy, who wanted to keep his identity hidden.

These basic foundations seem indisputable to us, especially the first one, if we accept the known facts that the real William Shakespeare was almost, if not completely, illiterate.

None of the books known to us exploring this problem provides absolute evidence in favor of one or another of the authentic authors supposed there.

Thus, this whole discussion is still open, which makes it quite logical — in order to try to help clarify this mystery of history — to include in the discussion the Document published here [Bacon's secret autobiography, encrypted in his biliteral cipher].

In addition, the same document significantly expands the discussion, since it attributes to the same author (Francis Bacon) not only the authorship of works published under the name of William Shakespeare, but also the authorship of works published under the names of various other authors who lived in the same time: Robert Burton, Robert Greene, Ben Jonson, George Peele, Edmund Spenser, Christopher Marlowe.

There is no claim here that all the works of the authors mentioned above are written by Francis Bacon. This document only indicates that Francis Bacon borrowed the names of these authors in order to sign with them those of his works, which he, for various reasons explained in the text of the document, did not consider possible to publish under his own name.

The matter of the authenticity of this document, obviously, is the first among all that require a solution. And it would be right to arrange it in such a way that all objections on the subject, if any, would be clearly formulated and made publicly known.

First of all, it should be noted that this document itself was extracted by a cryptographic method, which guarantees the possibility of verification, from many old books of the 16-17<sup>th</sup> centuries, the enumeration of which is given earlier. Thus, the document was written by a person who lived at the time when these books were printed.

Further, the document is encrypted in a method invented by Francis Bacon during his stay in France, that is, in 1576-1579, and is first described in the book *The Advancement of Learning*, published in London under his own name in 1605.

The text of the encrypted document indicates that its author is Francis Bacon.

Thus, there are serious reasons to believe that precisely Francis Bacon was the originator and cryptographer of this autobiography, the fragmentary distribution of which in a number of books also must be considered.

In any case, the first problem is connected here with the determinate fact of this document existence:

- (a) Who wrote it?
- (b) Who encrypted it?
- (c) How could it be printed and embedded into the range of different works that we have listed?

As for another question — whether the name of William Shakespeare was used behind the back of this actor or with his approval — in this context it doesn't matter at all who the real author was, Francis Bacon, Earl of Derby or some other person.

At the same time, it seems necessary to study the matter as a whole, how this substitution of names was also possible in relation to other authors, whose names the cryptographer adopted and mentioned in his document.

On the other hand, the publishers of the books couldn't in any way ignore the peculiarities of the ordered work, since they had to produce two forms of printing types, since different types are a characteristic feature of the cryptographic system used there. And the fonts of the different types had to correspond to the proper marks in the manuscript, indicating to the printer-typesetter which type of font to use for each of the letters in the sequence of words in the plaintext.

Perhaps, in the archives of the printing houses where the works containing cryptographic parts were published, one could find something interesting about this.

It should be noted that if the facts mentioned in the document true to reality, it becomes quite obvious why Francis Bacon was so much interested in hiding them. This argument must be taken into account, for it's quite certain that Bacon risked his life if his revelations could be read at that time.

The second problem arises from the very revelations of Francis Bacon:

- (a) Can it be assumed that he was the son of Elizabeth and the Earl of Leicester?
- (b) Was it possible to completely hide the fact of his birth, taking into consideration, how many people were privy to the secret: Sir Nicholas Bacon and Lady Bacon, the doctor and maternity nurse who assisted in childbirth, Lady Bacon's maid, who saw

how the newborn baby appeared when Lady Bacon was still pregnant?

- (c) Is the dramatic scene plausible during which Elizabeth is said to have confessed herself as the mother of Francis Bacon in the presence of a group of courtiers?

Considering the manners of Queen Elizabeth, it's undeniable and quite possible that she could have had children — one or more. On the other hand, unnecessary talk could well have been avoided while the queen was alive, since such indiscretion was undoubtedly life-threatening for those who knew about it. It's even more rational to admit that the same considerations dictated absolute prudence during the reign of Elizabeth's successor, King James I. But after that?

It would be interesting to conduct a special study on this subject in the archives of the families of those men or women, who were in the entourage of Elizabeth.

These two major issues that we have just pointed out are far from the only ones raised by Francis Bacon's autobiography.

Other questions arise in each of the chapters, and some of them may well be verified, since they relate to such facts that aren't of such a secret nature, and which could either be recorded by eyewitnesses or known to historians who are aware of them from documents of that time:

- (a) Is it possible that Elizabeth, while imprisoned in the Tower of London, could enter into a secret marriage with Robert Dudley there?
- (b) Are the details given about Lady Dudley's strange death shortly after her husband's secret marriage to Elizabeth true?
- (c) Who could be that Lord P... in whose house the second semi-official wedding of Elizabeth and Dudley took place in the presence of several witnesses?

The stay of Francis Bacon in Paris from 1576 to 1579 is an undoubted fact, explaining how he managed to learn so much about the French court, French customs, and many other features related to the French army and the history of France. This is clearly seen in various plays by Shakespeare.

How true is the story of Bacon's love affair with Margaret, who was the sister of the King of France and Queen of Navarre?

This adventure, if authenticated, would explain how one of the first plays, signed by Shakespeare *Love's Labour's Lost*, was written, as well as some of his sonnets.

How likely is it that Elizabeth had a second son, Robert Devereux, who later became the 2<sup>nd</sup> Earl of Essex and the Queen's favorite, and someone even says her lover?

The story of the rivalry between Elizabeth and Mary Stewart seems to be close to reality, as well as the story of Mary's tragic end.

The same is true regarding the story of the Earl of Essex's rebellion and death.

We don't have the means and ability to conduct a full-fledged investigation necessary to confirm or deny all these facts. But no doubt documents that would allow drawing reasonable conclusions on this matter exist.

It's quite obvious that it would be interesting to find out to what extent Francis Bacon's descriptions of events are accurate or erroneous.

(pp. 246-247 of Cartier's book)

## APPLICATION: NOTES

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Here is some information found in the interesting work of Mr. Granville C. Cunningham *Bacon's Secret Disclosed in Contemporary Books*, published in London in 1911:

The first secret marriage between Elizabeth and Robert Dudley took place in 1554 in the Tower of London, where both were then prisoners. Around the same time, there was a well-known scandal over Elizabeth's relationship with her jailer, Sir Thomas Seymour.

This first marriage between Elizabeth and Dudley couldn't have legal effect, for at that time Robert Dudley's wife, the beautiful Amy Robsart, was alive. The second secret marriage, held in September 1560, was probably legal since Robert Dudley's wife had just died. This marriage is said to have taken place in the presence of many witnesses, including Sir William Pickering. (1)

Francis Bacon was born on January 25, 1561, just four months after the wedding.

(1) *Will it be the Lord P... from **Chapter I** of Autobiography?*

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*(pp. 102-107: deciphered texts of the Original)*

**BACON'S LIFE  
AS HE TELLS IT IN THE BILITERAL CIPHER**

**Chapter V**

It is clear to my mind, the earl, my father, hoped that his darling wishes relating to a declared heir to succeed to the throne were near realization, as he observed the advance in marked respect and favor the younger son made from day to day.

My vain mother loved Essex's bold manner and free spirit, his sudden quarrels, jealousy in soul of honor, strength in love. She saw in him her own spirit in masculine mould, full of youth and beauty.

To her, fate, a turn of fortune's wheel, had given the gift of royalty, and the throne of mighty England was hers to bestow on whom her heart might choose. Little wonder that false fancy swayed where better judgment, infected, had lost power, and that impatient Lord Leicester won naught in that struggle but fear and distress.

My just claim he set aside, liking better valiant Lion-heart — thus they termed him — however unmeet or unjust. I, the first born son, had unfortunately incurred his great and most rancorous ill will many years back.

A desire to foil yields lurid light on everything thereafter; his one wish ever gleaming brightly through the clouds of pretense, and I receive my cue from the altered appearance of the skies, yet do not give over as he doth suppose. Notwithstanding overtly any of my ill advised sire's aspiring purposes, or plans, — for often shall dissimulation, though a faint kind of wisdom prove very good policy, — yet in the secrecy of my own bosom, I do still hold to the faith that my heart has never wholly surrendered, that truth shall come out from error and my head be crowned ere my line of life be severed.

How many times this bright dream hath found lodgment in my brain! How many more hath it been shunned as an influence of

Pluto's dark realm! It were impossible, I am assured, since witness to the marriage and to my birth (after a proper length of time) are dead, and the papers certifying their presence being destroyed, yet is it a wrong that will rise, and a cry that none can hush. Strive as I may, it is only driven from my brain by the unceasing tossing of this sea of laboring cogitations for the advancement of learning. Oft driven as'twere with sudden wind or tide, its waves strike against the very vault of the heavens and break in useless wreaths of bubbling froth.

Think not in your inmost heart that you, or any others whom you would put in the same case as mine, would manifest a wiser and a calmer mind, because none who do not stand as I stood, on Pisgah's height, do dream of the fair beauty of that land that I have seen. England as she might be if wisely governed, is the dream, or beauteous vision, I see from Mt. Pisgah's lofty top.

It is no improper exaltation of self, when one, feeling in heart and brain the divine gifts that fit him for his princely destiny — or that rightly inherited, albeit wrongly withholden, sovereignty — in true, noble, kingly spirit doth look for power, not for the sake of exercising that gift, but that he may uplift his people from the depth of misery into which they constantly sink, to the firm rock of such mode of life as would change cries to songs of praise.

By uniting many powers — such lofty endeavour for perfecting the knowledge that is in the world, joined also with a strife for the elevation, in all kingdoms under heaven, of this noble people — the Divine will or plan doth perchance have full sway: for when mankind shall be given wisdom in so great fulness, idle courtiers may find no true use of subtle arts.

That Robert was of bolder temper and more fiery spirit I can by no argument disprove, but I want not royal parts, and right of primogeniture may not be set aside, without some costly sacrifice, as modesty or good fame. Stopping short of this irreparable wrong, my father took but slight interest in the things he had been so hot upon.

Adventuring everything of value — life, kingdom, people, to retain possessions — to mine own self this way of maintaining the Divine Right is repugnant, and when I come at last into my right, the power of the mind shall by my wisdom be shown to be greatly exceeding that of the sinewy arm. This is my hope in labor, oft as hard and as fatiguing as falleth to him that hath always toiled for his bread, as 'tis by such means that kingly minds should be disciplined.

I fain would write works most lofty in their style, which being suited as well to representation upon the stage as to be read in libraries, may so go forth and so reach many in the land not as wise, in knowledge, yet as great as others in loyalty and in fiery spirit. If that deficiency be in a measure filled in our realm, this labor in coming years will surely be of benefit, although it be unknown for a long season what is the cause and ultimate design. The furtherance of my much cherished plan keepeth me heartened to my work.

Devices of some sort were so needful, — even to publish poems which might naturally be but such as do afford pleasure, — that my wit, not at all lessened, but sharpened, by constant dangers, found means unknown to those who were most wary, to send out much dangerous matter (using terms in regard to myself only) that was not even doubted.

Several small works under no name won worthy praise; next in Spenser's name, also, they ventured into an unknown world. E. Spenser could not otherwise so easily achieve honors that pertain to myself. Indeed this would alone crown his head, if this were all — I speak not of golden crowns but of laurel — for my pen is dipped deep into the Muses' pure source.

So great is my love for my mother tongue, I have at times made a free use, both of such words as are considered antique, and of style, theme and spirit of an earlier day, especially in the Edmund Spenser poems that are modeled on Chaucer; yet the antique or ancient is lightly woven, as you no doubt have before this noted, not only with expressions that are both common and unquestionably

English of our own day, but frequently with French words, for the Norman-French William the Conqueror introduced left its traces.

Besides naught is further from my thoughts than a wish to lop off, but, on the contrary, a desire to graft more thoroughly on our language, cuts that will make the tree more delightful and its fruits more rare, hath oft led me to do the engrafting for my proper self.

Indeed not the gems of their language alone, but the jewels of their crowns are rightfully England's inheritance.

Furthermore many words commonly used in different parts of England strike the ear of citizens of towns in southern England like a foreign tongue, combinations there of make all this variety, that I find of times melodious, again less pleasing, like the commingling of country fruits at a market fair. Yet you, seeing the reason, approve, no doubt, the efforts I make in the cause of all students of a language and learning that is yet in its boyhood, so to speak.

When I, at length, having written in divers styles, found three who, for sufficient reward in gold added to an immediate renown as good pens, willingly put forth all works I had composed, I was bolder.

I masked many grave secrets in my poems which I have published now as Peele's or Spenser's, now as my own, then again the name of authors, so called, who placed works of mixed sort before a reading world, prose and poetry. To Robert Greene did I entrust most of that work — rather his name appeared as author: therein you may find a large portion that belonging truly to the realm of poetry, would well grace verse, yet it did not then seem fair matter for it. As plays some parts were again used.

Marlowe is also a pen name employed ere taking Wm. Shakespeare's as my mask or visard, that I should remain unknow, in as much as I, having worked in drama history that is most vigorously suppressed, have put myself so greatly in danger that a word unto Queen Elizabeth, without doubt, would give me a sudden horrible end — an exit without re-entrance. Prudence hath as good counsels

in times of danger as sadder experience, and I list only to her voice when my life would be a speedy, ay, instant forfeit.

I feel my pen quivering, as a steed doth impatiently stand awaiting an expected note of the horn of the hunt, ere darting, as an arrow flies to the targe, across moor and glen. I write much in a feverous longing to live among men of a future people. Verily to make choice of mouth pieces for my voice, is far from being a light or pleasing but quite necessary and important mission.

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## Main Sources

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<https://archive.org/details/strangecasefran00conggoog>

March 2021



# Bacon, Rosicrucians and Levitation

This part of the story clarifies the interconnection between Bacon, the Rosicrucian Society and the Riverbank Laboratories.

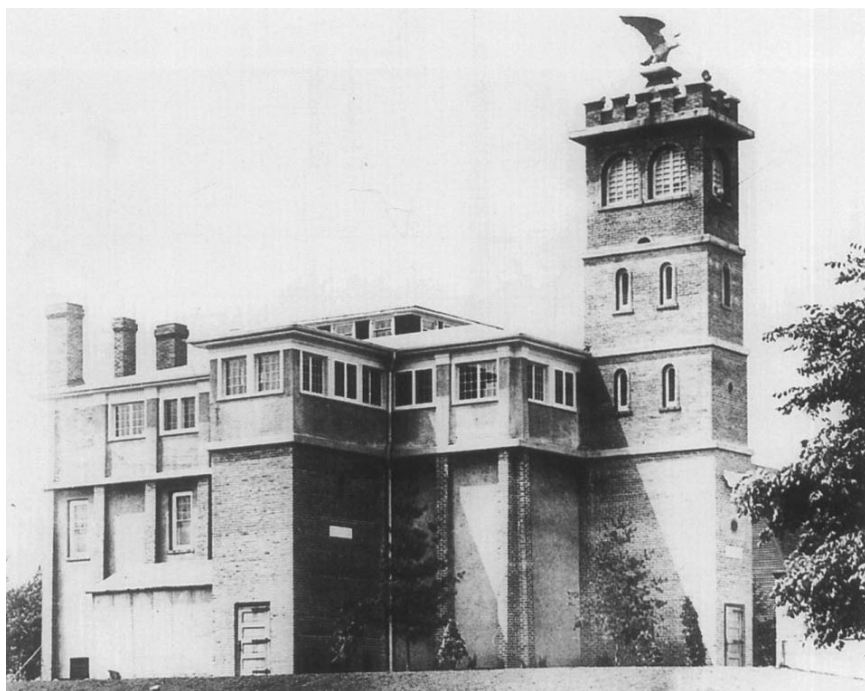


Fig. 34: Riverbank Acoustical Laboratories. 1918

Source of the photo: Emily Thompson, *The Soundscape of Modernity. Architectural Acoustics and The Culture of Listening in America, 1900-1933*. The MIT Press, 2002. Page 80

For meaningful submergence into the truly multi-level depths of Bacon-Shakespearean mystery, careful comparisons of two important books from authoritative cryptologists are absolutely necessary: *The Problem of Cryptography and History* by François Cartier and *The Shakespearean Chiphers Examined* by William and Elizebeth Friedman. Moreover, for cross-analysis and separation of truth from falsehood as has been demonstrated, not only the statements the books contain, but also the obviously hidden facts are very significant.

There are plenty of such omissions in this story, but now it is time to touch upon a particularly remarkable one among them. Neither General Cartier nor the Friedmans in their works say a word about the close relationship between Francis Bacon and the Rosicrucians secret society. But since the analyzes and conclusions in the two books are diametrically opposed, they are also silent about this in different ways.

François Cartier, in his work, completely dedicated to revealing the secret of Bacon's biography, previously unknown to science and society, doesn't explicitly mention the Rosicrucians anywhere and in any way. But for a person who is deeply immersed in the events of that historical era, Bacon's direct connection with the famous secret society could not be unknown. And Cartier demonstrates his awareness to readers, but in a very peculiar way.

On the very last pages of his book, he placed a letter from one of the readers, quite a young man named Jean Daujat. That 15-year-old guy proposed his own, "naive-hermetic" interpretation of the mysterious inscription on Shakespeare's monument pointing to Bacon as the author of Shakespeare's works. The young boy justified his decision with the following words:

*Francis Bacon belonged to the Rosicrucian Order, whose cryptographic systems and hermetic symbolism were based on sacred arithmetic, and theosophy on the sacred numbers 1, 3, 7, 10...*

This decryption version has nothing to do with scientific cryptography, but the fact that "even children know about Bacon as a Rosicrucian" is clearly demonstrated by the quoted letter. In addition, it's worth noting that later Jean Daujat grew into an authoritative philosopher of science and a prominent representative of French Neo-Thomism.

As for the Friedman spouses' book, where not only the authenticity of Bacon's autobiography, but also the very facts of the presence of Bacon's ciphers in ancient books are resolutely rejected, the American cryptologists keep silent about the Bacon-Rosicrucian

theme in a fundamentally different way. In sections dealing with the dubious deciphering efforts of the 19<sup>th</sup> century baconians, reputable cryptographers of course mention the Rosicrucian order, which appears frequently in these works. But only in order to easily and convincingly demonstrate the unscientific nature of all such alleged “decryptions,” allowing almost any manipulation with the letters of texts in order to extract the “solutions” preferred by the baconians.

However, in the final sections, which critically examine the crypt-analytic work carried out in the 20<sup>th</sup> century in the Riverbank Laboratory of Colonel Fabyan — and carried out with the personal participation of the Friedmans themselves — not a word is said about the close connection between Bacon, the Rosicrucians and the Riverbank. Although the Friedmans were not only always and beyond any doubt perfectly aware of the facts of that connection, that was also absolutely reliably confirmed in the very name of “Riverbank Acoustic Laboratories” that are still working...

Extremely clear and convincing evidence of these statements can be found in one little-known memoir document, almost never mentioned in the literature on the history of cryptography. But in a completely different specialized literature on the history of architectural acoustics, this work is referred to noticeably more often.

A notable memoir of such kind is titled “Early History of Riverbank Acoustical Laboratories” and written by Fred W. Kranz, one of the institution’s first acousticians. Since it is rather difficult to find this document on the Internet, the part that is directly devoted to the topic of interest to us will be given here.

**Early History of Riverbank Acoustical Laboratories.**

*Kranz, Fred W. The Journal of the Acoustical Society of America, Volume 49, Number 2 – Part I, February 1971, pp 381-384*

The establishment of the Riverbank Acoustical Laboratories in Geneva, Illinois, had its origin in the interest of Colonel George Fabyan in an acoustic device purportedly described by Francis Bacon in a secret cipher embodied in the printed First Folio (1623) of the works of William Shakespeare, and the resulting acquaintance of

Fabyan with Professor Wallace Sabine of Harvard University.

In connection with the 50th anniversary of the Riverbank Acoustical Laboratories, I was asked to make some comments on the origin and early history of that institution, at a meeting of the Chicago Acoustical and Audio Group. This is the basis of the present article. I do not know that any account of the origin of these laboratories has ever been written, and, therefore, this will be based altogether on my memory, in fact on my memory of verbal information pieced together from conversations of many years ago.

If this were presented in the style of some of the writers of popular articles, it might be said that this laboratory owes its origin to the activities of Francis Bacon, who lived back in the days of Queen Elizabeth I, around the year 1600. This might be stretching a point, but it is true that the sequence of events that resulted in the building of this laboratory did start with Francis Bacon, with Colonel George Fabyan of Riverbank as the connecting link.

Colonel Fabyan was born in Boston, with a solid New England background, coming from an old Bostonian family. His father, together with Cornelius Bliss, founded the textile firm of Bliss, Fabyan Company in the days of the predominance of New England in the textile industry. Incidentally, Cornelius Bliss was later the treasurer of the Republican party in the successful campaign of William McKinley for President of the United States in 1896. Colonel Fabyan left school at a rather early age and went out to the Middle West, but later joined his father's firm and managed the Chicago office. He and Mrs. Fabyan moved out from Chicago to Geneva, Illinois, and established the 500-acre estate which they named Riverbank.

The story of Riverbank is tied in with the subject of codes and ciphers. I believe that Colonel Fabyan became interested in codes and ciphers in connection with the transmittal of information and prices in his business activities. He became acquainted with the cipher work of Mrs. Elizabeth Wells Gallup of Detroit, probably through a book that she had written on the cipher of Francis Bacon. This was an important link in the sequence of events leading to the building of the Riverbank laboratory. Mrs. Gallup was much interested in the literature of the Elizabethan period. She became acquainted with the writings of Francis Bacon, and was particularly intrigued with Bacon's description of a method of secret writing, which is plainly described in one of Bacon's books. The characteristic of Bacon's system is that a secret message

may be encoded in any ordinary manuscript or letter without obvious evidence that any secret message is there. This is done by the use of two slightly different fonts of type or forms of letters, the differences being too small to be immediately obvious, and the encoding is done by the chosen sequences of use of the two forms of letters. Five letters of the plaintext, with the two fonts of type used in suitable sequence, are required for the representation of one letter of the encoded message.

Having knowledge of Bacon's cipher system, Mrs. Gallup looked for evidence of its use in writings of his period. One possibility, perhaps somewhat obvious, was the printed works of William Shakespeare. I believe that the first edition of Shakespeare's plays was printed in 1623, and this has been reproduced photographically, so that the characteristics of the original printing are preserved and available for examination. This is the material on which Mrs. Gallup spent a great many years of her life. She felt that she was able to distinguish between and identify the individual letters belonging to each of the two sets of type which are necessary for the use of Bacon's cipher, and thus was able to decode the secret messages embodied in the apparently straightforward text.

Colonel Fabyan induced Mrs. Gallup to move to Riverbank. She lived in the house which is somewhat down the road to the south of the present laboratory, then called the Ingledew cottage and now the site of a publishing concern. In personal appearance, Mrs. Gallup strongly resembled Whistler's mother; she was perhaps 65 years of age when she came here, and somewhat over 70 when I first knew her.

Of course, the big interest is in the content of the messages that Mrs. Gallup produced. Perhaps the most startling of these is one which stated that Francis Bacon was the illegitimate son of Queen Elizabeth, and was the rightful heir to the throne of England.

However, the item that is most pertinent to the present discourse is a technical one. This stated that if a circular cylinder were to be made, having piano strings stretched from end to end along the outside of the cylinder, and with these strings tuned to a major chord, then if these strings were vibrated and the cylinder were rotated at the same time, the cylinder would levitate — i.e., it would rise in the air without visible means of support.

This may sound fantastic, but it may be noted that Francis Bacon was

the head of the Rosicrucian Society. This society, in Bacon's time, was a sort of underground organization devoted to what we would now call science, i.e., the investigation of natural phenomena by experimentation, which in those days was considered practically sinful and unlawful. It may also be noted that there were only seven licensed printers in England at the time, and Francis Bacon was the governmental official in control of them. So it was possible that he could have controlled the setting of the type in any publication in the way he wished.

At any rate, Colonel Fabyan became interested in this suggested cylindrical device and decided to have one built. In connection with his business, he regularly commuted from Geneva to Chicago on the Chicago and Northwestern Railroad, and across the street from the Chicago railroad station there was, I believe, a woodworking plant of the Plamondon Company. He went to them to discuss the making of the cylindrical device. Colonel Fabyan arranged with one of the men there, Bert Eisenhour, to come out to Geneva on Saturdays and Sundays to work on the project, and eventually Eisenhour left Plamondon's to spend full time at Riverbank.

The cylinder with associated piano strings was made and may still be seen at Riverbank. I do not know just how they planned to make the strings vibrate, but there is a clue in the fact that Colonel Fabyan purchased a musical instrument called a Choralcelo, and eventually had three of these on the premises. This instrument is fundamentally a piano, and can be played as a piano. However, there was a suitably actuated electromagnet associated with each of the piano strings so that the string could be kept in vibration to give a continuous volume of sound as long as the piano key was depressed, thus giving a resemblance to an organ tone. The alternating currents of the various frequencies for the electromagnets were furnished by an elaborate set of rotary generators with a proper commutator for each frequency. This embodied the fundamental principle of continuous vibration of a piano string, although the association of this apparatus with a rotating levitating cylinder of limited size is not obvious.

*[They couldn't make the manufactured cylinder levitate,]* But Colonel Fabyan persisted. One of his brothers was a trustee or overseer of Harvard University, and Colonel Fabyan went to him and asked him who was the foremost acoustical expert in the country. His brother told him that this was undoubtedly Professor Wallace Sabine, professor of physics at Harvard. So Colonel Fabyan sought out and became ac-

quainted with Professor Sabine. I do not know what opinion Professor Sabine expressed regarding the cylinder experiment, but Colonel Fabyan became interested in the work that Professor Sabine was doing in Cambridge. This was the pioneer work on architectural acoustics, Professor Sabine being the real pioneer in this field. He was studying the phenomenon of reverberation, its causes and control. This work was being conducted in the Sanders theater, by producing a musical note and measuring with a stopwatch the time it took for the sound to die down to its minimum audibility. The variable introduced in a series of observations was the number of seat cushions which he placed in the theater seats. Thus it might be said that the first unit of acoustical absorption was the absorption of one seat cushion of the Sanders Theater. I recall that not many years ago the Acoustical Society had a meeting in Cambridge, and there were on view a few of these Sanders Theater seat cushions that had been salvaged when these original cushions had been discarded by the theater.

*[As a result of this acquaintance for Sabin's scientific research, Colonel Fabyan built in Riverbank the most advanced acoustic laboratory of that time. Although this laboratory still exists, Wallace Sabine didn't have the opportunity to work in it due to his early death at age of 50. So this "acoustic" line in the history of Riverbank no longer had anything to do with Bacon and Rosicrucians]*

Although not related to acoustics, a by-product of Colonel Fabyan's interest in codes and ciphers proved to be of long-range importance. After Mrs. Gallup came to Riverbank, there was built up a small group to aid in trying to expand the work on the Baconian cipher. Also, with the idea of improving the products of the rather extensive farm which was operated on the Riverbank estate, Colonel Fabyan hired a young man, William Friedman, a graduate of Cornell University Agricultural School in plant genetics, to come to Riverbank for agricultural research. Friedman soon became involved in the work on codes and ciphers, for which he seemed to have a natural aptitude. When the United States entered the first World War, Riverbank had about the only organized group that was working on ciphers, and the government sent to them a number of messages for possible decipherment. The Riverbank group was quite successful with these. One was a test message in a new cipher which the British War Department considered using on the Western Front. Within a few hours after receiving this test message, a cablegram was sent to London, encoded in their own cipher and facetiously reading: "This message is absolutely unde-

cipherable.” This cipher was abandoned for military use. In 1921, Friedman left Riverbank to go with the U.S. Signal Corps, and he continued in government service as a cryptanalyst until his retirement in 1955. He was the leader of the U.S. Army task force that cracked the very difficult Japanese PURPLE code in August 1941, an achievement which enabled the United States officials to read the official Japanese private messages, including those during the United States-Japanese diplomatic negotiations which were in progress at the time of Pearl Harbor...

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There is a complex of circumstances that make it clear from different angles why this document, given here with a lot of seemingly unnecessary details, is extremely important not only for the history of cryptography, but also for the history of science in general.

Firstly, although Fred Kranz expounded this story based on his own memory, all the facts mentioned there have subsequently been repeatedly verified and confirmed by historians of cryptography. More precisely, almost all, with the notable exception of the acoustic levitation device from Bacon and the Rosicrucians. For this topic has long been a strict taboo in the history of cryptography, and no one dares to break it. However, it doesn't concern the history of architectural acoustics. Therefore, the other veterans of this laboratory also tell in detail about Bacon-Rosicrucian levitator in Riverbank<sup>70</sup>.

Secondly, what the Rosicrucians were doing wasn't exactly “what is now called science.” It would be more correct to call their activities scientific gnosticism, which forms a natural link between medieval occupations such as magic, alchemy and astrology, on the one hand, and modern scientific research, on the other. Since the occult experiments of mystics, based on ancient knowledge, always mean communication with otherworldly forces, and the church is extremely hostile to such things, the Rosicrucian secret

<sup>70</sup> See, for example, the following book:

Kopec, John W. *The Sabines at Riverbank: Their Role in the Science of Architectural Acoustics*. Woodbury, N.Y.: Acoustical Society of America, 1997

society can really be called an “underground organization.” Moreover, they hid themselves so successfully that modern science — in full agreement with the church — even now prefers to believe that most likely there weren’t any Rosicrucians in the history of the 17<sup>th</sup> century...

Thirdly, although the history of cryptography in its Bacon-Shakespearean aspect could provide absolutely reliable documentary evidence that the Rosicrucians in the era of Bacon not only really existed, but were also actively engaged in scientific research in the areas of intersection between the subtle and dense realms, none of the historians did anything in that direction. Moreover, every effort was made to ensure that these testimonies were cut out of history without a trace. And that was done simultaneously both by the secret crypto-services and by the open history of cryptography (see the next paragraph).

Fourth, finally, the Friedmans, as the most authoritative witnesses of the deciphering work at Riverbank, once also had a young admirer who, at the age of 13, wrote them a letter and got interested in the history of cryptography so much that it became the main business of his whole long life. The name of that young boy, who celebrated his 90<sup>th</sup> birthday in 2020, was David Kahn, and he signed in history as the author of the most famous book of the 20<sup>th</sup> century on the history of cryptography — “from ancient Egypt to the present day”: David Kahn, *The Codebreakers. The Story of Secret Writing* (New York, Macmillan publishing, 1967). The main problem with this book is that Kahn, as an absolutely devoted admirer of the great cryptographer William F. Friedman, when evaluating the Bacon-Shakespeare disputes, completely accepted the position of the Friedman spouses, without even trying to critically analyze it.

That is why in the famous book by David Kahn *The Codebreakers*, which in the 1960s for the first time brought the previously secret area of cryptography to the public’s attention and became, in fact, the bible for all subsequent researchers of the open crypto community, in the chapter on the Bacon-Shakespearean topic there is not a single mention of acoustic levitation device, and not even a word

about the book by François Cartier. And it is high time for us to move on to the translations of chapters from it...

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(translation fragments, pp. 193-202 of Cartier's book)

## CONCLUSION

Based on the arguments of the previously mentioned work of Mr. Abel Lefranc *Behind the mask of William Shakespeare lurks William Stanley, the sixth Earl of Derby*, we can see how this Autobiography — combined with reliable information about Francis Bacon — is able to clear up most of those obscure points associated with hypotheses about the origin of works attributed to William Shakespeare.

“This author (talking about William Shakespeare) who spoke so magnificently about friendship, didn't seem to have a single true friend at all.” Francis Bacon's love for Margaret and his friendly feelings for his adoptive parents and then for his brother (?) Robert is evidence of the intensity of affection, which in this case is quite significant.

“His alleged friendship with Ben Jonson remains a complete mystery.” How much more understandable is this friendship if it's true that Francis Bacon was the author of books signed by Ben Jonson.

“Critics with one voice note that in the poet's dramatic works of the last years of the 16<sup>th</sup> century and the first 7-8 years of the 17<sup>th</sup> century, signs of a deep mental crisis, pessimistic and dull moods are visible.” That was the time after the collapse of love and Bacon's disappointment in the hopes of inheriting the crown.

“When historians and biographers, in order to explain such strange contrasts and substantiate signs of disappointment in the personality of Shakespeare, assure us that the poet and creator of numerous wonderful masterpieces had only one goal in writing his works — to make money — we refuse to accept such a judgment, finding in

it something truly blasphemous and impious.” Francis Bacon provides a very clear grounding for his work: to leave behind true works of art, to contribute to the progress of science and the happiness of humanity.

It should be noted that Francis Bacon was over 30 years old when the first works signed by Shakespeare appeared. By that time he had lived for several years in France, studied law at Gray’s Inn and worked in the House of Commons of Parliament. For these reasons, he had the necessary maturity, achieved by the trials and labors mentioned in his autobiography.

Mr. H. B. Simpson, in his research *Shakespeare, Bacon and a Tertium Quid* published in 1917, indicates, in particular, that the author of Shakespeare’s works must have had a legal education. Francis Bacon had such an education after studying at Gray’s Inn.

[Known to historians from documents] The moral and intellectual image of the Shakespearean theater actor, as far as one can judge, is nothing remarkable. While “we could imagine the youngest son of some noble family, born for wealth and high social position ... even more a lover of books, but above all, a person with a passionate interest in his works” Don’t these words refer entirely to the Francis Bacon whose reflection we see in his autobiography?

Mr. Harman in the article “The Shakespeare Problem” published in 1918, analyzing the text of the play *Love’s Labour’s Lost* says: “I don’t see how anyone who didn’t live in the world of courtiers could write such a thing.”

Francis Bacon often visited the royal courts of England and France, and at the same time he was unhappy in love.

Here are some more quotes:

Charles Lamb in his article “On the Tragedies of Shakespeare”: “It may seem a paradox, but I cannot help being in opinion that the plays of Shakespeare are less calculated for performance on a stage than those of almost any other dramatist whatever.”

Émile Montégut, in his *Essays on English Literature*:  
“Are Shakespeare’s dramas meant to be performed?”

How well all these thoughts accord with the autobiography, which shows that Francis Bacon wrote primarily for humanity and science.

“There must be absolute accordance between life and work.” Isn’t this accordance perfect in Francis Bacon? The moral and emotional aspects of the author’s life, his trials, specific events in life, his experience of communication and enmity with people, his travels and dreams, observations and his own world — all this is reflected in the plays and works of Bacon, whether they are signed by him or not.

“The playwright of Shakespearean theater was one of the most educated persons who ever lived.” Doesn’t this apply to the author of *Novum Organum* and *De Augmentis Scientiarum*?

“However, the author then turned drastically towards dark horizons... he immersed himself, as a rule, into dark dramas and bitter descriptions of humanity.” These are lines from Jean Jusserand’s “Literary History of the English People,” when he mentions the period of maturity of the Shakespeare’s works author. But Francis Bacon had already lived through the death of his father, carefully watched the drama of Mary Stuart, was a participant in the court and a witness to the tragic end of his brother (?) Robert Essex, saw how his mother (?) Elizabeth died of grief shortly after the execution of his brother (?).

It would also be interesting, we believe, to quote here an excerpt from Bacon’s work *De Augmentis Scientiarum* published in 1623 and able to explain why Francis Bacon in *The Tempest*, if he is really the author of this play, represents the occult sciences not only containing no crimes and reprehensible acts, but as something absolutely beneficial.

We place here this amazing page, written 300 years ago, so that modern astronomers and meteorologists have something to dedicate their meditations to:

*Sane Astrology is applied more confidently to predictions, but more cautiously to elections; in both cases however within due limits. Predicitions may be made of comets to come, which (I am inclined to think) may be foretold ; of all kinds of meteors, of floods, droughts, heats, frosts, earthquakes, irruptions of water, eruptions of fire, great winds and rains, the various seasons of the year, plagues, epidemic diseases, plenty and dearth of grain, wars, seditions, schisms, transmigrations of peoples, and in short of all commotions or greater revolutions of things, natural as well as civil.*

*But these predictions may also be made (though not so certainly) with reference to events more special and perhaps singular, if after the general inclinations of such times and seasons have been ascertained, they be applied ed with a clear judgment, either physical or political, to those species or individuals which are most liable to accidents of this nature; as for instance, if any one from a foreknowledge of the seasons of the year shall pronounce them more favourable or injurious to olives than vines, to pulmonary than to liver complaints, to the inhabitants of hills than to those of vallees, to monks than to courtiers (by reason of their different manner of living).*

*Or if any one from knowledge of the influence which celestial bodies have upon human minds should discover it to be more favourable or more adverse to peoples than to kings, to learned and inquisitive men than to bold and warlike, to men of pleasure than to men of business or politicians.*

We could multiply and multiply quotations to show why Francis Bacon looks like the person who meets all the conditions necessary to be recognized as the author of works still attributed to Shakespeare.

But, as said earlier, we are not going to discuss and leave it to qualified scientists to assess the new document we've just published here. So that they themselves draw the conclusions that follow from it.

And here, in order to avoid misunderstandings, we repeat once again that we consider the undeniable accuracy of the decryption carried out under the direction of Colonel Fabyan, of which we've personally been able to verify only some parts.

All non-believers, if there are any, can carry out any necessary verification on the photographs we've published, or on the originals they were copied from.

But reviewers should not lose sight of what we said earlier about the possible errors and uncertainties that come with such an impractical encryption method as the Francis Bacon cipher. Especially when it comes to such a long text as the autobiography reproduced here. Analysts shouldn't be influenced by the mismatches that may result from local encryption errors, for the general meaning of the message will most often allow them to easily recover the defective parts.

We also add that such errors can sometimes lead to formation of other words and even other phrases than those were accepted by the decipherers who did all this work. Uncertainties of this kind are indeed possible even with short texts and when encryption is done according to a much simpler system than Bacon's. It wouldn't be difficult to find real examples confirming this. But the ambiguity of decipherment disappears when correctly reconstructed parts of the message, coming before or after the obscure fragment, clarify the meaning of what is to be read.

As a response to somewhat harsh criticism against us about the work carried out under the direction of Colonel Fabyan, we conclude with an assessment of the English literature professor, who at first had some doubts about the decryption correctness, but had the opportunity to carefully study the analysis materials directly on the spot.

*...Colonel Fabyan has a remarkably rich private library of Baconian and Elizabethan literature, and he has generously put its collections at my disposal. I came to the conclusion that Bacon's cipher was a logical addition to his plans for the development of scientific research, and that Bacon probably used it for the purposes he intended. In other words, as a way of recording those scientific results that gave access to the facts of science necessary for his contemporaries, but dangerous for him personally, if they were published in the usual manner. In the course of my work, I have had enough opportunity to form a balanced opinion of the Riverbank staff and the nature of the research they carry out under the direction of Colonel Fabyan and thanks to his selfless scientific enthusiasm. As a result, I have no doubt that the employees of this laboratory are competent, diligent and meticulous in their work, and the work they are engaged in is quite consistent with the standards of our best research institutes.*

Our own verification work allow us to give absolute confirmation of this creditable assessment.

*[ Note of the translator and commentator:*

*The subplot for the main story, about the most valuable library of books collected by Fabyan, which consisted of approximately equal parts of occult literature and books of the Elizabethan era, is especially interesting. Firstly, because many years later researchers and historians of the NSA showed considerable interest in Fabyan's library and archives, and secondly, because almost all of the colonel's correspondence and personal notes disappeared without a trace...*

*The details of that are in one of the following chapters. ]*

*(pp. 110-117: deciphered texts of the Original)*

## **BACON'S LIFE AS HE TELLS IT IN THE BILITERAL CIPHER**

### **Chapter VI**

The chief cause now of the uneasiness is, however, the question that hath risen regarding these plots of Mary, and those of the old faith — a question of Elizabeth's claim to the throne, and therefore, likewise, my own. This doth more depend upon some work of Henry's than this secret royal espousal I mention oft.

As may be well known unto you, the question of Elizabeth's legitimacy, made her a Protestant, or the Pope had not recognized the union, though it were royal, which her sire made with fair Anne Boleyn. Still we may see that despite some restraining fear, it suited her to dally with the question, to make a faint show of setting the matter as her own conscience dictated, if we take the decisions of facts; but the will of the remorsetossed king left no doubts in men's minds concerning the former marriage, in fact, as the crown was given first to Mary, his daughter of that marriage, before coming to Elizabeth.

With everyone whose aim putteth him very seldom to blush, in heart I desire only that this supreme right shall be also supreme power. If the queen could claim the throne — it goes without saying — I am the rightful heir, since the blood of King Henry is running in these veins.

Few women of any country, royal or not, married or single, would play so madly daring, so wildly venturing a game as Queen Elizabeth, my willfully blind mother. To divert curious questioning from the royal union, many shifts and turnings were a necessity; whilst to bear out their stage play until their parts should be done, her majesty, most like some loud player, proclaimed Baron Dudley, Earl of Leicester, suitor to Mary Queen of Scots, and to all admonitory protests which the harried husband uttered, this wayward queen went on more recklessly.

After her troubles concerning Mary of Scots began, nothing else had such exceeding interest in her eyes as the least trifle of airy nothingness which came to us regarding her cousin. Shortly after the return of her rival to her native land, a wish to go hither took possession of her, and she was almost persuaded, I am well assured, to go to Scotland with a gentleman of the court in the disguise of a youth, as page to the gay courtier, whilst her chamber should, in her absence, be closed as though suffering so much pain as that it compelled her to deny audience to every person save Lady Strafford and the physician.

But this foolish plan died ere it was brought into fullness of time, thereby making it apparent that at second thought her wisdom doth exceed idle curiosity.

For years the wish lay quiescent. Soon in truth, the queen came hither requesting a safe conduct into France. This being harshly refused — the ministers thinking it more prudent at that time to allow her such sure shelter in our own country that she should be safe from her enemies — whilst in England, this poor queen was moved from one castle to another, but was not as yet brought before Elizabeth.

Again a desire to look on the face of her foe stirred in her, so that new curiosity made her inquire of all who knew the lady concerning her beauty, height, color of hair, quality of her voice, *et cætera*, very like to the famous Egyptian queen regarding Octavia, and to gratify her consuming desire it was soon arranged by my ill-advised father to give her majesty a sight of this queen whilst supping in quiet by invitation at his own house.

Elizabeth, angered at hearing what passed between. Queen Mary and my father, stepped forth quickly, discovering herself and administered a reproof my father understood better than Queen Mary could. It is a subject of wonder that it did not sign both death warrants, for the trouble that was spoken of in this matter was constantly increasing evidence that a cipher used in Mary's foreign correspondance had been the medium by which a complaint had

been made of her treatment, and pleas widely disseminated for assistance.

The queen set me at deciphering this, nor can I deny, indeed that it grew so clear that it would glimmer through the dullest of eyes that the imprisoned queen did not intend anything short of her own proper enthronization. She did affect greatly both France and Spain, partly because of her religion, and partly, in respect of France, because of her brief, but happy union formerly with Francis the Second, a brother of Henry, the sovereign then on the throne. And whilst many of the epistles were difficult, and to me impossible, — not having the key, — to decipher, my labor had better fruits than I on my own part wished, for I had a secret sympathy for this poor wanderer although by no means interesting or engaging myself on any dangerous chance.

Her majesty had suspected me of open assistance when in the sunny land of France. In truth that disagreeable insinuation had much to do with her decision respecting my own marriage, not a want of fitness in the parties. However, as no act or written word could be produced in proof, or cited to show that I have ever had such sympathy, — that it was shown either openly or privately to herself the jealous suspicions died away and my assistance as adviser, and I may say valuable counselor, was earnestly desired.

It is a grievous fault — ay, a dreadful crime — to conspire as Mary of Scots did against a great queen. The very power and grandeur awakeneth a reverence or a veneration in the heart, and give a sovereign much in common with our Supreme Ruler, — it must not be so inquired of.

Elizabeth, thereunto prompted by her prudent adviser, at length adopted a policy so mild in its nature that her foe could not make just complaint, and the matter then rested quiet a short time.

Her majesty softened so much toward my unthinking father that instead of driving him away implacably, she gave him command at once of her army in foreign wars, and dispatched him as Master of the Horse of her majesty's army in the Netherlands.

A short respite followed, and had Queen Mary been warned by the experiences of her very great danger, calamity might doubtless have been finally avoided; for the divided mind of her majesty, swaying now here, now there, at no time clung long to revengeful intents.

In such uncertainty was she, that a report of words that might be construed as spoken with threat or malice, another, following it, should be set down because of its kindness and forbearance.

Such, however, was by no means Lord Burleigh's manner. In truth, so determined was he not only that sentence of death should surely be pronounced against her when she was brought to trial, — if trial that may be entitled, when the helpless prisoner must needs choose from the counsel of her foe to obtain any defender in the proceedings, — but likewise, that the harsh sentence should not linger in execution.

Soon there was a secret interview between Lord Burleigh and Earl of Leicester, to which was summoned the queen's secretary who was so threatened by his lordship — on pain of death et caetera, the poor fool that he signed for the queen and affixed the great seal to the dreadful death warrant.

The life of the secretary was forfeit to the deed when her majesty became aware that so daring a crime had been committed, but who shall say that the blow fell on the guilty head; for, truth to say, Davison was only a poor, feeble instrument in their hands, and life seemed to hang in the balance, therefore blame doth fall on those men, so great and noble though they may be, who led him to his death.

This showeth any who thought Elizabeth too severe to her cousin that, though she had prudence sufficient to keep her arch enemy in seclusion, by no means was the heart in that fair bosom so flinty as to send the unfortunate woman to her death before her time.

The Duke of Norfolk, it is quite true, lost his life through too much zeal to Mary's cause, united, it is said, or springing from, a rash

desire to wed the lady, notwithstanding the charges preferred against her. However, the removal of one duke was but a small matter compared with that of a queen. A man's head stood somewhat tickle on the shoulders then, nor did he think his life hard and cruel were such exit provided him.

But to return to the narration, — which is a painful theme to me now as it was at that sad time. This warrant of death reached Fotheringay much sooner than it was expected by any there attendant upon the wrongly accused queen, for whatever her fault, it was known that all plots in her favor against the life of the queen, my mother, had their origin outside of England, but being the center thereof whether cognizant of them or not she would, by the law, be attainted of treason.

Furthermore, being Catholic, she held the divorce of Henry the Eighth from Queen Katherine unlawful, in very truth, and unjust; his marriage with Anne Boleyn, therefore, could but be an unsanctified union and their children bastards. Granting the premise, Mary of Scots should have succeeded Mary of England.

Again I have somewhat digressed, but the theme is so heavy I cannot follow it without taking short respite at intervals. At the appointed time on that sad day, Mary entered the great-hall of her prison-castle, which for this occasion was draped in black, wearing a long mourning cloak that covered her from head to foot; with her were her attendants. The executioner, likewise in mourning, stood in silence by the block, and disposed in pairs about the room, were the English lords, Kent, Shrewsbury, Montague and Derby idly conversing.

The queen looked pale from want of rest but was calm and composed. She asked for the services of her own priest. It was refused with needless sternness. She spoke little more, prayed in clear tones for some minutes, commended to God her suffering soul, to Philip of Spain the quarrel with England and her claim to the throne. Then she stepped forward letting the cloak slide to the floor and stood before them in a robe of brave blood red, and in that sweet, winsome way most natural to a woman and to her in highest de-

gree, had her waiting women farewell, thanked Lord Montague who had spoken for her when the lords sat in council and bade him adieu. Afterward there came a moment of hesitation, — only a minute, possibly for silent invocation, — then she spoke graciously to each one in her presence and was led to the block.

So ended Mary of Scots. But in my heart her beauty still liveth as fresh as if she yet among the living.

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April 2021



## Bacon and Pauli

This part of the investigation reveals remarkable parallels of our story with the omissions and secrets of science around Wolfgang Pauli.



The facts and documents presented in the previous parts are already quite enough for the following conclusions.

Modern science has only two indisputably authoritative — and at the same time diametrically opposed in their inferences — conclusions from professional cryptographers on the problem of encrypted messages in the books of the Bacon-Shakespearean era. In one conclusion, from the French General Cartier, both the numerous facts of the presence of Baconian cipher texts and the general correctness of their decryption are absolutely unambiguously confirmed. And in another conclusion — from the Friedman spouses — the existence of secret crypto-messages in printed books of the 16-17<sup>th</sup> centuries is denied completely and in principle.

However, there is very strong evidence that the harsh and categorical denial of American cryptographers is built on the basis of deliberately fabricated falsehood. In other words, not only on the ba-

sis of silence about the details and circumstances known to the Friedmans, which contradict their statements. But also on the basis of a lie that hides the fact of the Friedman spouses personal active participation in decryption Bacon's ciphers in old books. And there is documentary evidence that it's a lie.

Under such conditions, not only for professional lawyers or cryptographers, but also for all ordinary people who have a general idea of how lies differ from truth, it wouldn't be difficult to conclude which side in this very old dispute of experts should be trusted.

However, the facts of our strange life and history are such that the disputes of authoritative cryptography experts were not only deliberately arranged in absentia, but their outcome was planned in advance. Because at first the Friedmans patiently waited until the elderly general finally died, and thus lost the opportunity to object to them in response, and only then very quickly released their own book with a total denial of the conclusions of François Cartier.

The work of the Friedmans was immediately placed on a pedestal of honor upon its release in the mid-1950s, awarded literary critics, theater critics and other Shakespeare scholars, and about the Cartier's book, which was outrageously inconvenient for everyone, they hastened to forget. And since then, they absolutely don't want to remember it — up to this day...

It's easy to understand why the work of François Cartier, where Francis Bacon is competently, convincingly and most importantly, verifiably confirmed as the author of Shakespeare's works, turned out to be absolutely unacceptable for Shakespearean mythology<sup>71</sup> and for a great many specialists who have been supporting this mythology for more than 300 years.

It's somewhat more difficult to understand why all the other figures of academic science — such as historians, philosophers, physicists and other researchers of solid natural science (criminologists, for example) — all of them obviously preferred to take the shaky and unconvincing positions of Shakespeare scholars, demon-

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<sup>71</sup> See chapter "Shakespearean Mythology"

strating complete solidarity with their mythology. That is, scientists stubbornly prefer not to see the same author behind Bacon's and Shakespeare's texts. Although the personality and work of Francis Bacon occupy a very prominent place not only in the 17<sup>th</sup> century history, but also in the world culture history, science and philosophy in general. And the large and unexplored set of important documents that cryptographers discovered in the books of that era opens up a truly valuable treasure trove of new knowledge not only about Bacon, but also about many other notable people and important events of our past.

So why does academic science show no interest at all in the book of General Cartier, preferring to absolutely uncritically and completely trust the "expert opinions" from the Friedman spouses fabrication?

It hardly makes sense to expect a clear answer from scientists to this rhetorical question... But it definitely makes sense to search, analyze and compare similar but more recent plots from our history. For the situation with the astonishing lack of interest of science in the numerous secrets around the life and work of Bacon is, of course, far from the only case of strict religious taboos for scientists to study the "forbidden."

Who exactly, when and, what is especially interesting, why established these taboos, no one knows for sure. However, a comparison of remarkably similar moments and parallels in the biographies of key characters makes it possible to identify distinct patterns and general arrangements of what is happening here. In addition, and this is the most important thing, it becomes clear how significantly the clearing of dark places in the history of science changes the overall picture of our understanding of nature... Because these changes are fundamental.

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Among the many investigations of the parallel project *The News Book*<sup>72</sup>, one of the most deeply developed subjects in line with the

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<sup>72</sup> <https://kniganews.org> (rus.)

general theme of scientific taboos is the story of secrets and omissions around the famous physicist Wolfgang Pauli<sup>73</sup>. Therefore, it is quite natural to give here a very brief comparative analysis of Bacon's and Pauli's biographies.

But before starting comparisons, it must be emphasized that many of the facts given here, although they are indisputable elements of the evidence base, continue to remain either extremely doubtful for science or generally ignored by it. Just in this way, very selectively, today's science is inclined and structured. Specifically, in this story, it primarily concerns the facts from the encrypted autobiography of Francis Bacon. That is, documentary evidence provably extracted from the books of the Bacon's era, but ignored by science on the basis of false, which is also provable, expert opinion...

The circumstances of coming into this world of two compared persons are clearly associated with the "secrets of birth" of both mundane-common and occult-esoteric nature. But since no reliable evidence currently exist to confirm the occult secrets associated with the names and chains of reincarnations of various well-known personalities in history, let's leave this aspect of the comparisons aside for now, as unproven.

As for the purely mundane side, where the reliability of biographical facts is confirmed by numerous documents and testimonies, the important circumstances of the birth of each of the persons were not known to them until their adult youth. And, what is especially important, when the secrets nevertheless became known to them, it turned out to be not only dangerous, but very significantly influenced their entire lives.

About how drastically the discovery of the fact of his origin from the secret marriage of Queen Elizabeth and Robert Dudley, later Earl of Leicester, and how many risks and threats that fact gave rise to the heritor to the English throne — legal, but secret and

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<sup>73</sup> <https://kniganews.org/map/n/00-01/> (rus.)

never recognized by anyone — is known in detail from Bacon's autobiography.

As for Wolfgang Pauli, his "birth secret" was his Jewish roots, carefully hidden from him by his parents. His mother was a half-Jewish Christian, and his father converted to Catholicism before they married and had a child. In his youth, this fact was simply not a very pleasant discovery for Pauli, but in his mature years, when his native Austria became a part of Nazi Germany, Jewish origin meant a direct threat to the very life of a scientist. Along the way, that made him highly dependent on the state authorities with all their terribly important pieces of paper such as passports, visas, residence permits and the like.

The circumstances of the origin of our heroes quite clearly influenced not only everyday problems and difficulties, but also all their scientific and literary work. And the difficult political situation of the era, closely associated with great wars and revolutions, in turn, also played an important role in the subsequent destiny of their extensive creative heritage.

In the life and work of both Bacon and Pauli, there are three notably different but essentially contiguous aspects:

- (1) the officially open;
- (2) the half-open or mildly occult one, and
- (3) the secret or tightly-kept until now.

There is every reason to call the first and most famous of these sides the front-official or completely open to researchers. In particular, Francis Bacon is deservedly revered in the history of science among the first major philosophers of the late Renaissance and the beginning of the age of enlightenment, for his works became the basis for modern scientific materialism and empiricism as a rigorous method of research, in its conclusions and evidence based primarily on experiments and observations of nature.

As for Wolfgang Pauli, his official well-known side is the role of, so to speak, one of the apostles of new physics, an active partici-

pant in the “knabenrevolution” (i.e. boys’ revolution) who created quantum mechanics, later a Nobel laureate and, in general, one of the most powerful intellects in theoretical science of the first half 20<sup>th</sup> century.

The second, much less known and poorly studied side in the scientific heritage of each of the characters is quite natural to call soft occult-magical one. Because Francis Bacon, let’s say, was by no means a materialist in the modern sense of the word. On the contrary, he showed great interest in a truly scientific — experimental and systematic — exploring of such things as astrology, magic and alchemy. In other words, interest in all those “superstitions and prejudices of the Middle Ages” that simply do not exist for modern science.

For some of the uninformed people, this may sound extremely strange, but one of the most famous pioneers of new physics, Wolfgang Pauli, was also in no way a materialist. Having a great and regular experience of very meaningful communication with the “other side” of our consciousness, Pauli was sure that modern science has lost a lot by rejecting that medieval concept of the “soul of matter,” which was clearly present as a basis for magicians and alchemists of antiquity. In the late period of his work, Pauli seriously got to work on the return of the “soul” or consciousness of matter to science, but didn’t find any support among his colleagues.

As for the third, still secret and officially non-existent side of the creativity of our characters, here things are as follows. The current academic science, which reveres Bacon as one of its founders, stubbornly leaves two very important aspects of his biography not only without proper study, but in fact simply ignores them. One of these aspects, of course, is associated with the rich literary and dramatic heritage of Bacon, published under the masks of Shakespeare, Spenser, Marlowe, Greene and so on. And the second aspect is connected with active Bacon’s work in the secret society of the Rosicrucians.

In the biography of Wolfgang Pauli, which is much closer to us in time, it would seem to be just impossible to hide and ignore such significant aspects of his creative heritage. However, in reality, oddly enough, there are two aspects, which have been classified until now. One aspect is related to the array of amazingly rich and carefully recorded dreams of Pauli, some of which have long been published and are being studied, but the other part is still not available to researchers, remaining in the secret archives of medicine. The second and essentially different aspect is Pauli's Great Discovery in the field of fundamental physics, made by him in the last year of his life. This discovery bridged matter and consciousness, but remains as if unknown to anyone in science even today, more than half a century later...

It's noteworthy that after the death of our characters, the parallels of the accompanying events clearly continued. Now, thanks to the specific and surprisingly similar activities of their "literary executors."

In the case of Wolfgang Pauli, the main and for a long time the only disposers of the vast personal documents archive left after the death of the scientist were his widow Franca Pauli and the theoretical physicist Charles Enz (born in 1925), the last of his scientific assistants. And since Franca Pauli, for purely personal reasons, had an extremely negative attitude to the occult-Jungian side of her husband's life, she completely closed for researchers for almost 30 years (until her death) that part of her husband's extensive correspondence that was not directly related to his role as "the apostle of new physics."

At the same time, Dr. Charles Enz, who had full access to the Pauli archives and subsequently managed the preparation for publication of several collections of the scientist's works, released his own main, very long-prepared biographical book about Pauli only in 2002. That is, more than four decades after the death of the great physicist. Surprisingly, or vice versa, quite predictably, this very detailed book didn't add absolutely any new facts about the essence of Pauli's main scientific discovery. Because Enz is still a

respected theoretical physicist, and for serious science, of course, Pauli didn't have any great discovery in the last year of his life...

Naturally, much less is known to historians about the fate of the vast archive of documents and manuscripts left after Francis Bacon. But the indisputable facts are that the priest Dr. William Rawley (1588-1667) became the manager of the literary heritage. In the last years of Bacon's life, Rawley was his chaplain, secretary and just a close friend. Later he became the chaplain of the English kings Charles I and Charles II. It is not known for certain how much Rawley's closeness to the court influenced, but even though he began to prepare and publish works from the archive of Bacon's manuscripts soon after the death of the great philosopher, his own biographical essay of Bacon's life — the first for England and still regarded as the main source for historians — Rawley released only in 1657. That is, more than three decades after the death of Bacon.

To complete this short comparative biography, a couple of interesting facts should be added.

In fact, the only meaningful and at the same time absolutely reliable historical evidence of the great (and immediately classified) discovery of Pauli shortly before his death — it is the memoirs of his longtime friend and colleague, the famous theorist Werner Heisenberg. At that time, Heisenberg was preparing their mutual article and directly observed an unprecedented spiritual uplift in a friend due to the discovery, the essence of which he didn't have time to find out, however, he shared with readers what he knew from the words and short postcards from Pauli himself. That all was published in the early 1970s, long before the release of the biography by Charles Enz. However, interestingly, in the book of the "official biographer" Enz, with all his knowledge, there is neither any meaningful information about Pauli's discovery, nor even the key phrase known from Heisenberg about its essence: "Division and reduction of symmetry, this then is the kernel of the brute!..." Moreover, as if by agreement, the rest of Pauli's biographers also prefer to keep silent about this important detail, as if it didn't exist at all.

Perhaps not the only, but almost certainly the very first of the biographical essays on the life of Francis Bacon, published long before the work of William Rawley, is the preface to the book of Bacon's works published in Paris in 1631 — just five years after the death of the philosopher. The first thing that is impossible not to notice there is the mention of important facts and subtle hints, which clearly accord correspond to the facts from Bacon's encrypted autobiography, but are completely omitted in the later "official" version of the biography from Rawley. It's also noteworthy that the Parisian edition of 1631 was published in French by a certain Pierre Amboise, who clearly possessed the English originals of Bacon's manuscripts, which historians don't have now. Moreover, in serious scientific literature devoted to Bacon, it's generally not customary to mention this French book. As if it didn't exist at all...

But if scientists ignore this work, this doesn't mean that no one knows about it. Of course, it is known, and for a long time. In particular, General François Cartier mentions this French book in his monograph *The Problem of Cryptography and History*. And once again we turn to the translations of fragments from it...

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(translation fragments, pp. 307-308 of Cartier's book)

## APPLICATION: NOTES

### W

The first biographical work, *The Life of Bacon (Vie de Bacon)* was published in France in 1631, just five years after his death, as a preface to the French translation of Bacon's *Natural History* by Pierre Amboise (Pierre Amboise, "Histoire Naturelle de Mre. Francois Bacon, Baron de Verulam, Vicomte de Saint Alban et Chancelier d'Angleterre," Paris, 1631).

The first English biography of the philosopher was published by William Rawley only in 1657, and curiously enough, not only Rawley, but none of the other English writers mention the work of

Pierre Amboise. However, the story of Bacon's life written by Amboise is much more complete and informative than Rawley's one, and it contains details that seem to indicate a close acquaintance of the author with Bacon. For example, Pierre Amboise writes that in his youth, for several years, Bacon traveled through France, Italy and Spain.

Mr. Granville C. Cuninghame published an English translation of this foreword by Pierre Amboise in his book *Bacon's Secret Disclosed in Contemporary Books*, which I have already mentioned and which was published in London in 1911.

To all readers who would like to delve into the real life of Bacon, I strongly recommend reading this interesting book. And in particular, the chapter "The New Life of Lord Bacon" where the author highlights the features of the biography written by Pierre Amboise, who, apparently, had at his disposal a more complete manuscript than that used by Rawley. Or maybe Amboise had some other original notes, obtained by no one knows how. What is the further fate of that manuscript or those notes?

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(pp. 123-129: deciphered texts of the Original)

## **BACON'S LIFE AS HE TELLS IT IN THE BILITERAL CIPHER**

### **Chapter VII**

Her majesty soon had matters of great import to consider. Events crowded close upon the proceeding, and whilst a lion watched in strong holds, foxes spoiled the grapes, as in former aeons, according to tradition.

No enemy doth so doughtily throw down his bold defiant challenge as Philip, true son of Spain. None takes up that glove with greater ease or with more skill than Elizabeth.

Mary did enjoin upon Philip such a course, and, as in many cases, the subjects did have a greater love and more devotion to the head of the church than truth and loyalty to either country or queen, there was somewhat of confidence wanting as rumors of the Armada from Spain reached the far away seamen.

When they put out, however, many hundred Englishmen, of whatever communion, rose in defense. The love of home is a stronger affection, in some doughty servants of the Pope, and of England, than the love of things which pertain chiefly to that religion of which much is rumored but much less known.

Even more zealous and blinded servants of the church of the old religion, roused with fury, did run to fight insolent Spain, to protect life and home, than came to aid, summoned to assist by the Pope's command. Indeed few made any sign to manifest their allegiance to aught but England.

The Armada dispersed partly through the ready action of England's seamen, partly through the tempest of the flood, Catholic Spain needed still a wariness, subtle, sleepless. Many of the old faith, as it was then styled, remained in different portions of the country; these yet smarting under the blow to the hope of restoring the Church of Rome to supremacy, that the execution of Mary of Scots gave them, were not at heart good subjects, but the spirit and daring that Elizabeth showed, had effect.

With her overweening passion of vanity, was mingled a strong hatred of war, and wish to outcraft the enemies of a royal government whose head was a woman, or in common speech, not of the ablest sex. Events duly sanctioned a claim to the heart of Henry, her grandsire; for Henry, the Tudor who most upheld the glory of that line of kings of which he was first, was a mirror to my mother in divers things.

Queens are not like common folk. They often control opinions as well as their estates, and Elizabeth's strong will was not one that could be resisted. Her policy made Parliament and her Privy council each suppose, not only that their wisdom did so govern Eng-

land, but that she herself was (in a degree truly wondrous for a descendant of the line of kings, like the royal sire and grandsire of famous memory) controlled by advisement of the men that compose these bodies.

No doubt they did not lack occasion at one time and another to modify this notion, yet her wit was seldom unequal to occasion, while a perplexity rather sharpened than dulled, and actual danger made as a two-edged sword.

Elizabeth throughout lost much by bluntly daunting my artful sire. Her wedded lord, not being acknowledged such publicly, nor sharing in her honors, was but a cipher, albeit standing where he should multiply the value of that one. For the space of nineteen of twenty years, my father, gay court idol as he was, guarded his secret and basked in the sunshine of royal favor.

Therefore we must marvel to see him later claim advantage of her majesty's bold mood to take another partner to his bosom, rightly divining that she would not show cause why such a union could not be fitly considered or consummated, but venturing not upon full confession thereof.

However, her majesty dwelt not for long in ignoble inaction — the force that she gave to her angry denunciation affrighting the wits of this poor earl, until he was again turning over expedients to rid her of this rival. Suspicion again fell on the misguided man, of seeking to murder the partner of his joys, but Heaven brought his own doom suddenly upon him. So doth this act end.

My mother was nearly distracted with grief, remorse and despair for a space. Upon my brother's return, to take the favorite's place, she bent on Essex the fonder love of her heart and gave much gracious attention to his honor and the furtherance of her designs regarding him.

Indeed, much harm was wrought to others than themselves, for great the court scandal regarding love messages betwixt them, as though they had been mindful only of pleasure, so that the lords of

her council winked visibly at it, lest it enter at their eyes; for'twas dangerous for any onlookers, if the eyesight were keen and saw behind those masks.

The men to day are too night for good sight, but my faith was formally pledged to write it as I believed it, I may say, knew it, not blenching nor omitting the sin of either.

To our mother is the fearlessness that Essex showed to be traced directly, and that promptness of judgment in a sudden calamity; but with sufficient time given to deliberate, Essex, even more than she, would show a variety of opinions in so swift succession, you must use much wit to gain one he would give his name unto. When their wills should be matched'twere no light task to decide as to the result.

Like his mother in temper he could break, but never even slightly bend, and in the most of such trials, no end that most exasperating method of contest resulted in, could be worth much, as it was more frequently accidental than planned, — therefore the peace could never long endure.

Such a flitting sunshine is sometimes the brighter, more golden, more dazzling. Those who were of a discreet disposition, basked in the rays, and smiled while fair skies did bend over us, but none knew when the tempest's wrath might change our bright day to black night, and a darkness more dire, said some, than Egypt's plague, cover heaven's dome.

My lord of Essex presumed too much upon secret liking and in a short time found himself less honored than crossed or chided. Should we, therefore, marvel to see him haughty and overbearing when chafed, genial and generous when smoothed? nor so much doubt this swift change up and down of his fortune had such effect upon his spirit? and imagining that his footing were secure, fell from safety into great danger, as the astronomer who was gazing on the heavens to study the stars, fell into the water?

Crowns must be as of old, night and daytime well attended, or some wild rout, waiting in ambush rapine's black, opportune time, without a warning steal the glory of the land, leaving behind them merely desolation. This was narrowly averted in England, securely as her crown is watched, nor did these empty headed tools do aught but obey a superior mind, — that of my brother Essex.

It is undeniable, — I must say to make these things as plain to all as it could be if he himself repeated these sentences, — his original plan much more intended my plain right than his own, but I refused to listen to the charmer in the ill-deserving, ill-succeeding design. So that some such fiery rebellion on the earl's part, was perhaps only a manifestation by way of bragging shows, or many flaunts of various intents, that not I, but my gayer brother was the darling, or the minion, of our people, especially of the city.

Had it not met the overturn deserved, the younger of the sons would inherit ere the elder. By law this could occur only when the rightful, or, as we name him in our country heir-apparent hath waived his rights. As I was known, not as his brother only, but as the queen's first-born, such plots should at best naturally await my full knowledge and consent.

But puffed up thus with show of military glory, an entrance to power (whose signs the robe, the crown, scepter, and state so worked on his inflamed fantasy, as to have far more value than royal sword), opening with very small tap on his outer door, it may be only natural and easily accounted for, though not so easy to meet.

This was much aggravated in my mind by some private assurances that had so deceived me, that I saw not a sign of danger, but trusted his word, nor imputed those assurances to aught but good will, expecting right and honest trustworthiness of Robert as a gentleman, both by that royal blood that is our heirship, and by the old time gentle nurture he received as ward of Devereux.

It did behoove me to be wary, yet for my Prince Robert I took desperate hurts. As the danger many hundred times verified fear of our

old compeers, with an angry heart, I oft saw Essex summon in minions to sit in halls of judgment, in whose hands his very life was in peril. He would turn from the wisest words of hundreds, ruled by the hardy sons England so loved.

Most persons in my lord's liking, but least honored, ho served honorably, however, in the foreign fighting, will perhaps come under men's censure when the truth is made known; whilst some of our Irish troops found they had not well understood the intentions their leader had cloaked in his own high spirit or bold will. He found simple and quite easy ways of binding men to the great treasonable undertaking, by a representation which contained but a modified figure of truth. Men adventured fortunes so unthinkingly, that ruin of their hope was ruin against which nothing availed.

It cannot now alter the fate of any, high or low if the matter be given a full rendering as it is now found herein; but our great struggles in the interest of Earl Robert, have many most indisputed returns even as the Holy Scriptures saith: "With such measure as ye yourself do mete, it shall be meted to you."

#

## Main Sources

- François Cartier. *Un problème de Cryptographie et d'Histoire*. Paris: Editions du Mercure de France, 1938
- Granville C. Cuninghame. *Bacon's Secret Disclosed in Contemporary Books*. London: Gay & Hancock, 1911

## Additional Reading

About the secrets and silences of science surrounding Wolfgang Pauli and his great discovery:

- "State secret as a metaphor" (*rus.*)  
<https://kiwibyrd.org/2013/12/11/2131/>
- "Pauli as a psychological trauma" (*rus.*)  
<https://kniganews.org/2020/07/06/pauli-trv/>
- "Dreams of Wolfgang P" (*rus.*)  
<https://kniganews.org/map/n/00-01/>

About the reincarnations of great scientists in different epochs of history:

- "Pascal – Pascheles – Pauli" (*rus.*)  
<https://kniganews.org/map/n/00-01/hex12/>
- "Ostrogradsky – Voevodsky" (*rus.*)  
<https://kiwibyrd.org/2020/07/09/20h72/>
- "Euler – Poincaré – Arnold" (*rus.*)  
<https://kniganews.org/2018/05/14/hte5/>

June 2021

# Bacon and Magic

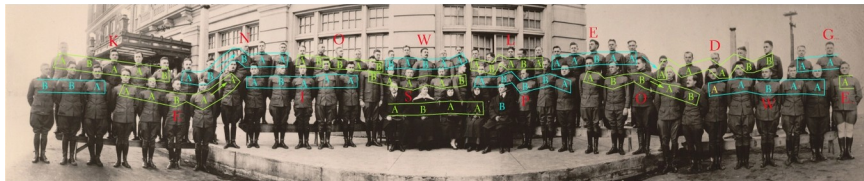
This chapter shows the distinct relationship between the magical science of Bacon and the cryptanalysis of intelligence agencies.

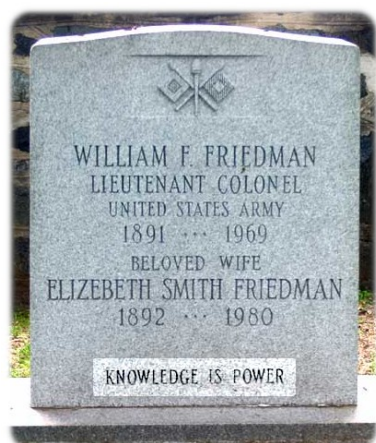
The method of information encryption invented by Francis Bacon was named by him “*Omnia Per Omnia*,” that is, the encryption of “everything through everything” in Latin. It’s known from Bacon’s own writings that he himself valued his method of secret writing extremely highly.

From other sources — less famous, but no less reliable — it’s authentically known that this cipher was also highly regarded by William F. Friedman, the chief cryptologist of the NSA and one of the founding fathers of modern scientific cryptography.

It has long been no secret that Friedman’s enormous interest in Bacon’s heritage was by no means limited to the cipher itself. Although the professional entry of a young geneticist into the field of cryptography occurred exactly precisely due to Bacon’s secret texts and work on their decryption, Friedman was no less influenced by Bacon’s very special philosophy of science.

In particular, Bacon’s famous expression “Knowledge is Power” became for Friedman, in fact, the main motto of all his crypto-espionage life and activities. Under this motto — encoded in the Baconian way in the turns of officers’ heads in graduation photo — Friedman taught his first major course of military cryptographers in 1918.





And under the same motto — engraved on the tombstone and hiding his own initials WFF with the help of Bacon cipher — Friedman passed away in 1969.

Informative details on this subject can be found in the chapter “The Secrets of The Cryptographic Grave.” For the purpose of the present investigation, a particularly noteworthy result of Friedman’s 50-year interest in the specific philosophy of

Bacon is that one of the most famous cryptographers of the 20<sup>th</sup> century somehow managed to become the main gravedigger of a great discovery for historical science. That is, the discovery of a huge volume of secret messages encrypted for descendants in the books of the 16-17<sup>th</sup> centuries by Bacon himself and the people of his circle.

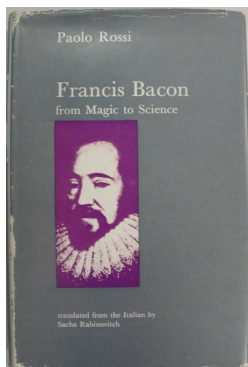
To understand why it was Friedman who, in fact, perfectly suited this ungrateful and ignoble role, you need to know a few things that are unexpected for someone in this context, but at the same time very important. First, what place did magic occupy in Bacon’s philosophy. Secondly, what kind of things Friedman called magic. And thirdly, it’s necessary to understand at least in general terms why magic is practiced today in secret science and at the same time is vilified as “prejudices and superstitions” in open science...

The explanation, of course, should begin (and end) with Francis Bacon. To begin with, what was the essence of his scientific philosophy, what he meant by the word magic, why he considered it an important component of science, but didn’t openly talk about it. And finally, what is the deep meaning of his famous aphorism “Knowledge is Power” in this whole story.

To delve in the topic of cases that are very distant in time, it is quite natural to rely on the work of authoritative historians who

professionally operate with primary sources. Here, in particular, the following three monographs are brought in for clarification:

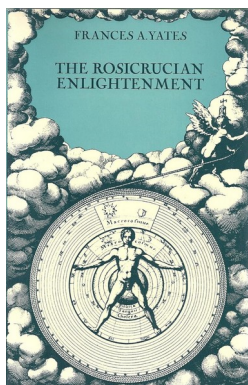
1.



Paolo Rossi.

*Francis Bacon from Magic to Science*  
(1968)

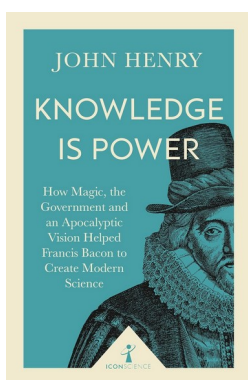
2.



Frances A. Yates.

*The Rosicrucian Enlightenment* (1972)

3.



John Henry.

*KNOWLEDGE IS POWER. How Magic, the Government and an Apocalyptic Vision Helped Francis Bacon to Create Modern Science* (2002)

The facts and comparisons given in these works of modern historians, when summarized into a generalized compiled picture, look as follows.

Francis Bacon (1561-1626) was a great genius, one of those who helped shape the modern world. But for many people it would be difficult to say why, more specifically, we perceive Bacon in this way. After all, he didn't make any new scientific discoveries, didn't invent any technical innovations, didn't discover previously unknown laws of nature.

Here is his achievement. It was Bacon who, in eloquent philosophical form, expounded a coherent and consistent method for doing all of these things in a systematic way: to discover new phenomena, to invent and deploy technical innovations, to reveal the hidden laws of nature. And on this path, Bacon turned out to be as important for history as the most famous of scientists — such as Galileo or Newton — in those deeds and accomplishments that historians call the Scientific Revolution.

Essentially, Francis Bacon wanted to redefine the very concept of the natural world exploration. Absolutely convinced that the purpose of philosophy is not only in the interpretation of the world, but also in its transformation, he was obsessed with the idea of such progress of mankind, for which there would be no limits.

Bacon himself spoke of it as follows:

*[A]bove all, if a man could succeed, not in striking out some particular invention, however useful, but in kindling a light in nature — a light which should in its very rising touch and illuminate all the border-regions that confine upon the circle of our present knowledge; and so, spreading further and further should presently disclose and bring into sight all that is most hidden and secret in the world — that man (I thought) would be the benefactor indeed of the human race — the propagator of man's empire over the universe, the champion of liberty, the conqueror and subduer of necessities*

("Proemium" (Preface),  
Of the Interpretation of Nature, 1603)

In modern terms, Francis Bacon was a philosopher of science. Perhaps the very first of those who are really important here. He was constantly guided by the idea of uniting the three main concerns of science: how knowledge is substantiated, how knowledge can be expanded, and how it can be made useful.

The new Baconian method was designed to completely transform the knowledge of the natural world that existed in his time and which he regarded as both incorrect and barren. And because Bacon was also a great writer, he helped inspire many others to adopt new approaches to natural philosophy. Moreover, this influence lasted a very long time after his death in 1626.

A well-known objection of Bacon's modern critics, who oppose his inclusion among the figures of the foreground in the history of science, is that Francis Bacon, in his project of the "progress of learning," didn't pay due attention to the mathematical sciences, which are now of such great importance. Moreover, he demonstrated incompetence in this area, rejecting the astronomical theory of Copernicus and the theory of magnetism of William Gilbert.

It's useful to focus a little further on these — far from random — aspects of Bacon's position. In general, modern critics of Bacon often overlook and don't seem to understand that it's thanks to him that science and technology have become the most important characteristic aspects of Western culture.

Before Bacon, there was no such thing as science in our modern sense of the word. After Bacon, Western Europe started moving towards such discoveries and inventions that resulted in a civilization based on the power of science and technology. Therefore, in the literal sense, we can say that Bacon invented modern science.

But at the same time, science in the understanding of Bacon was very different from what we mean by this word today.

Bacon is rightfully remembered in history as one of the first philosophers to promote the idea that the knowledge of man and the power of man must be merged into one. Or in other words, sci-

entific knowledge should be directed to “the improvement of man’s mind and the improvement of his lot” (*Thoughts and Conclusions*, 1607).

The political and religious motives behind this idea are quite clearly expressed in philosophical literature. But that ancient model — or magical tradition — that Bacon followed here is much less described.

**For within the magical tradition, the knowledge of the magician has always been intended for practical application.**

Since modern commentators on Bacon’s texts are usually unfamiliar with the basics of magic, they are often bewildered by Bacon’s statements such as: “Truth ... and utility are the very same things” (*New Organon*, I, Aphorism 124).

From a philosophical point of view, here we have a rather puzzling statement regarding the aims of science. After all, for today’s scientists it’s quite common and even happens, a permanent professional occupation — to think about such truths, in which there is definitely absolutely nothing useful. Suffice it to recall the science called “pure mathematics” and such areas of fundamental physics adjacent to it, where no one knows how to actually use the truths gained.

However, practical magic and Baconian science as opposed to the speculations of natural philosophers are concerned with such truths for which application can be found.

If knowledge is power, then truth is undoubtedly a useful thing.

Bacon’s philosophical works demonstrate that he knew quite a lot about magic. That partly he practiced in the magical tradition himself, in particular in the field of alchemy. And also that his own philosophy was largely shaped by magic.

At the beginning of Bacon's most important published work, in his *New Organon* (*New Organon*, I, Aphorism 3) he declares that:

*"Towards the effecting of works, all that man can do is put together or part asunder natural bodies. The rest is done by Nature working within."*

It is useful to compare these words with the quote:

*"The whole course of Nature could teach us by the agreement and disagreement of things either so to sunder them, or else to lay them together by the mutual and fit applying of one thing to another, as thereby we do strange works."*

This fragment is taken from perhaps the most famous compendium of magic, *Magia Naturalis* (1589), by Giambattista della Porta (1535-1615).

In his tractate, Della Porta explicitly explains how amazing magical effects occur: natural bodies have invisible occult powers, through which they can influence each other, sometimes strengthening one another (when their powers are in harmony), and sometimes blocking one with the other (if their powers are in disparity).

The same idea can be seen in another leading writer in the magical tradition, Cornelius Agrippa (1486-1535):

*"Magicians are careful explorers of nature, only directing what nature has formerly prepared, uniting actives to passives and often succeeding in anticipating results so that these things are popularly held to be miracles when they are really no more than anticipations of natural operations."*

*(Of the Uncertainty and Vanity of the Sciences, 1526)*

Seemingly miraculous results can be achieved simply by proper combining or uniting the right components — active and passive, says Agrippa. Similarly, very strange and wonderful things can be done, as Della Porta says, simply by applying one thing to another. And when Francis Bacon says that in order to achieve the desired

effects, all a man can do is “put together or separate natural bodies,” and then trust Nature to get the result, it’s clearly seen that he writes as a magician...

For a clear example of how techniques and practices common within the magical tradition find very effective application in the work of secret intelligence services involved in cryptanalysis and breaking ciphers, the following story from the biography of William F. Friedman and his wife Elizebeth Smith Friedman fits very well.

This story is especially good and indicative for several reasons at once. First, it took place in 1917, when the Friedmans were still working in Colonel Fabyan’s Riverbank Laboratories. In other words, their main occupation there was still the identification and breaking of Baconian ciphers in old books of the 16-17<sup>th</sup> century. And cryptanalytic work on assignments from the U.S government was added exceptionally as an initiative of Fabyan, confident in the power and professionalism of his cryptographic department.

Secondly, the employees of this department, already headed by William Friedman at that time, when working with Bacon’s texts, both open and encrypted, were naturally immersed in the peculiarities of Bacon’s magical science. Therefore, such a “miracle-like” episode in their espionage-cryptanalytic work (known from several sources, including the famous history of cryptography from David Kahn *The Codebreakers*) should be considered as quite natural — from the point of view of practical magic.

When the Riverbank Laboratories, helping the U.S. government and their allies, began to show real success in cryptanalytic breaking of enemy ciphers, British colleagues from military intelligence sent them five short cipher-messages for a breaking test. The texts were not encrypted manually, but with a special cipher device, invented by one of the engineers of British MI1.

The British were absolutely confident in the strength of their new cipher and sent it to their American colleagues only to be additionally convinced of it with the help of an independent expertise. The

gifted William Friedman, however, almost immediately managed to decode a part of the material, identifying the system and finding one of the crypto keys (the key turned out to be the word CIPHER). But the second key for the rest of the material he couldn't find analytically. And then Friedman decided to apply an unusual hacking method according to the recipes of practical magic: combine the active with the passive, remove everything that interferes and let the nature itself provide a ready answer...

At that moment, in the same room at the next table, his wife Elizebeth was working on the decoding of other cryptograms. Interrupting her work for a moment, the cryptographer asked his wife to take a break, relax and "make her mind a blank..." After a while, Friedman asked his wife to tell him the first word that comes to her mind after he tells her his one... After another short pause, he said: "Cipher..." "Machine," Elizebeth told him immediately. Using this word — MACHINE — as a crypto key, Friedman promptly saw that the key really fit and opened all the test material completely (the very first of the encrypted phrases was: "This cipher is absolutely undecipherable...")

Here, of course, it should immediately be emphasized that situations of this kind — intuitive guessing of non-trivial intermediate answers from nowhere that follow from nothing — occur regularly in the practical work of talented cryptanalysts. This phenomenon is now well known from many real stories about breaking the most complex codes using only interception ciphertexts. And of course, such things are almost never called "magic." But "almost" is a very important word here.

Because there was one interesting period in the history of cryptography, when the entire area of intelligence information obtained by cryptanalytic cipher breaking was quite officially called in certain state by the code word MAGIC. That state was called the United States of America, and such an interesting historical period fell precisely at the time when the country's chief cryptanalyst was a man named William F. Friedman.

However, in the generally accepted history of cryptography, this indisputable fact, as far as we know, is never associated with either the name of Francis Bacon or his magical side of scientific knowledge...

Of course, no explanation is provided for why historians of cryptographic science stubbornly refuse to see the important role of Bacon here. But historians and philosophers of science have long had quite reliable facts and plausible explanations for why Francis Bacon, in his openly published works on the “progress of learning,” clearly tried to distance himself from two seemingly significantly different areas.

On the one hand, Bacon did everything to ensure that his ideas about the development of human knowledge on the basis of experience and practical advantage were in no way associated with the word “magic” itself, which traditionally in the minds of the people implies witchcraft, secret communication with “evil spirits” and other reprehensible things of this kind. On the other hand, in his works, Bacon clearly avoided topics that seemed to be clean in modern terms, which were associated with mathematics, the astronomical theory of Copernicus and William Gilbert’s theory of magnetism and electricity.

To understand these still murky aspects of the situation, it’s necessary to clearly imagine that very specific — and in many respects very dangerous for Bacon — historical context, in which the philosopher developed and published his project of “The Great Instauration.”

The four most significant events for this story from the first decade of the 17<sup>th</sup> century are

- the execution of Giordano Bruno by burning at the stake in Rome (1600);
- no less cruel in its inhumanity, the execution of the Earl of Essex in London (1601);
- the publication in England of Bacon’s *The Advancement of Learning* (1605);

- the beginning of the massive distribution in Germany of manifestos from the secret brotherhood of the Rosicrucians (1607).

Immediately drawing attention to the almost simultaneous appearance in England and Germany of two very consonant — and at the same time noticeably different in their details — the teachings of Bacon and the Rosicrucians, then it's natural to pay just as close attention to the subsequent important parallelisms between them.

In terms of time, the first among the main scientific and philosophical works of Bacon, *The Advancement of Learning*, as already noted, was published in 1605. The book *New Organon, or true directions concerning the interpretation of nature*, regarded by the author as the most important for the presentation of his philosophy and program, was released in 1620. Another important book in Latin *De Augmentis Scientiarum* — as a revised and greatly expanded version of the English edition of 1605 — appeared in 1623.

When comparing these dates with the chronology of the Rosicrucian movement development, the following is clearly visible.

The European readers began to get familiar with the philosophy of Bacon a few years before the publication of the first Rosicrucian manifestos in 1607-1616.

The most complete presentation of this philosophy (*New Organon*) was published precisely in that dramatic period, when a very special couple of “Winter Monarchs” reigned in Bohemia for just one year in 1620 — Frederick V of the Palatine and his wife Elizabeth (the eldest daughter of James I, at that time King of England and Scotland). The “Winter Queen” Elizabeth was well acquainted with Francis Bacon and was notably influenced by his philosophy. The Rosicrucians, in turn, along with the rise of the Bohemian Kingdom, which established a strong alliance between England and Protestant Germany, had high hopes for the beginning of a new era for humanity.

And the publication of the Latin version of Bacon's work *The Advancement of Learning* — *De Augmentis Scientiarum* —

coincided in time with the peak point of interest in European countries in the affairs of the secret invisible brotherhood in 1622-1623 and with “The Rosicrucian Furore” in Paris.

In other words, to understand this situation, it’s important to see that the Rosicrucian movement and Bacon’s work developed distinctly simultaneously. And that the unusual sensation around the extremely mysterious, always invisible, at the same time scientific-intellectual and spiritual-mystical movement of the Rosicrucians spread throughout Europe in the very years when Bacon’s works were published in England.

A noticeable difference between Bacon’s texts and the anonymous texts of the Rosicrucians is that Bacon everywhere and very diligently avoided mentioning such well-known and popular at that time names as John Dee, Giordano Bruno, William Gilbert. That is, the names of persons, on the one hand, very famous for their extensive scholarship, but on the other hand, who were known among the people as “magicians and spellcasters.”

King James I, who took the throne of England after the death of Elizabeth in 1603, treated magicians and their magic with fear and obvious rejection. Therefore, Bacon, who actively sought not only personal security for himself, but also the favor of the new monarch, had to do everything to ensure that his philosophical works were in no way associated with either these names or magic in general.

And the anonymous Rosicrucians, on the other hand, were not at all afraid of referring to John Dee and his concept of mathematical sciences, although it was largely thanks to Dee that mathematics was associated with witchcraft and spells those days. That is, with a very dangerous occupation that attracted the attention of “witch hunters.”

Giordano Bruno, another famous “hermetic magician” of the era, also had a noticeable influence on the texts of the Rosicrucians. And Giordano, as is well known, in his work, published in English, connected the uprise of the theory of Copernicus with the coming

return of the “Egyptian,” which means magical, religion. As for William Gilbert’s theory of magnetism, his work on magnets and electricity is also quite clearly and undoubtedly influenced by Giordano Bruno.

In short, from all these comparisons, and of course, taking into account the terrible execution of Giordano at the stake in 1600<sup>74</sup>, it’s quite possible to understand why the philosophies of Bacon and the Rosicrucians turn out to be very similar in most general aspects, but differ visibly in many specific details.

Unlike the always invisible and therefore elusive Rosicrucians, Francis Bacon was constantly in sight. And besides, being the secret son of Queen Elizabeth and therefore the legitimate heir to the English throne, Bacon, although he didn’t claim the crown, turned out to be highly dependent on the mercy or anger of the monarchs. And the most cruel execution of his brother, the Earl of Essex in 1601, more than clearly convinced Bacon of the extent of the mortal danger that threatened him personally — just because of his royal origin.

But such arguments, of course, are convincing only if the authenticity of Bacon’s confessions from his secret encrypted biography is considered proven.

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*(translation fragments, pp. 132-137:  
deciphered texts of the Original)*

## **BACON’S LIFE AS HE TELLS IT IN THE BILITERAL CIPHER**

### **Chapter VIII**

For a short space, this rebellion of the Earl of Essex hardly showed as such, having been by the counsel of his friends, kept wisely

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<sup>74</sup> “Hopf Foundation (geometry and matter of the mind 3)” (rus.)  
<https://kiwibyrd.org/2020/06/13/20h61/>

back when he purposed landing a large body of soldiers at Milford Haven, expecting many to join his forces as they moved on toward London and contenting the proud soul, swelling to bursting in his breast, by taking forth two hundred of his choicest spirits to give a show of greatness and aid him in the secret projects that he was hatching.

His plan was nothing less than a mad design to take possession of the court; his assistants, Davers, Davis and Blount, being well known, might enter unchallenged with a sufficient number of aids that scattered about should likewise cause no remark.

At the given sign they were so seize, without confusion, the halberds of the guard, take stand, each in his previously assigned place — one to old the guard chamber, one to possess himself of the hall, and a third to keep watch at the gate — whilst Essex should enter the presence chamber and virtually get possession of the queen, under pretense of complaining that certain of her advisers and informers were his mortal enemies and making bold to desire her majesty should bring these men to trial, should promptly name some who were neither wanting good favor nor deficient in courage to occupy the places so made vacant. Then was Parliament to be called to make concessions and the city itself to be under his control.

This plan, known perfectly to Southampton, the chief of his friends, manifestly suited that adventurous assistant well, but it failed in execution as we know.

The unwonted stir in all quarters, while Earl Robert had the measure of liberty he enjoyed, made her majesty watchful; also the assembling from every county of England of noteworthy men, nobility and military being chiefly observed, — not however, throngs, but slow gatherings as though one drew afterwards another — escaped not her eye, whereupon the guard at court were made aware of danger and the number doubled. Report thereof, coming to the Earl of Essex greatly excited his fears lest his plot had been discovered, and hastened the end.

From the first, my lord of Essex, whose whole thought clun to his original plan for seizing the Tower, — relying upon the inspector of the ordnance who had vowed to surrender the keys, — and afterward, from such point of vantage surprising and possessing the city, attempted to win the favor of the Protestants overtly, and of his Jesuit acquaintances covertly, promising the latter, I am truly informed, that he would restore the Catholic faith, and, as his innermost being was mightily swayed by imagination, I think he persuaded himself that hold on the people was sufficient to carry out these simpler plots, whilst he doubted her majesty's graces would undermine a hope built on the faith and affection of the gentlemen that were among his company. Therefore he determined that a surprise would be attended by too many dangers and trusting greatly to the love of the citizens, fell back on their aid. Twas Candlemas term ere his plan was so far digested.

His liberty being little restrained he had ample and constant means of carrying out his plans. As he was not confined to his chambers at court, it was necessary to send for him when he should appear before the council, but when this was done, my lord boldly refused to go and straightway disseminated a rumor that in going thither in the evening he was set upon and nearly drowned by Cobham, the tool of Sir Walter Raleigh and Sir Walter himself.

But unfortunately this tale was frequently varied by the earl, and at one time he did give out that four Jesuits had made an attack four days before, for the same or similar purpose. This weakened his case so much that but few came at his call when he went forth bidding them arm and fight for their king. In truth he saw not many people out, for her majesty took the wise precaution to give order: "Arm and wait in readiness within for the call."

Losses unthought of, hosts of hamperers where he had put boldest confidence that most loyal helpers would sustain him, with his hasty measures, much weaker troops, as well as a most utter want of any true indubitate remnant of every king's whole right — that is, simple honor — I know, were the controllers which made his fate certain.

But with him were not less than fifteen score of the principal gentlemen, a company well chosen, containing on the part of the nobility, Earls of Rutland and of Southampton, Lord Sands, Mounteagle, with others; behind him he had left Earl of Worcester, Lord Keeper, Lord Chief Justice, Her majesty's Controller, and Bearer of the Seal, — who had come to meet Lord Robert — themselves enduring imprisonment in his house, but they remained not long in duress.

The tour of the city being well nigh made, my Lord's party met her majesty's troops led forth by the admiral. Blount was wounded, Tracy killed; then my lord returned to his own house, and barricading the two great gates, defended the house on all sides, but availed not long. First he begged for the safe conduct of the countess, then surrendered.

Many important papers having been destroyed by the earl, many features of their plot were never brought out, Earl Essex himself saying, "They shall be put where they cannot tell tales." But evidence was sufficient to prove the guilt both of my brother and Earl of Southampton. Essex's plea, that he was not present at the consultation that five treason-plotting noblemen held at Drury House, aided him not a whit, for his associates incriminated him, and such of their writings as had not been destroyed were in the handwriting of the Earl of Essex, and they were acting as he directed. The evil his acts scattered widely even in the realms across the sea.

Kings must have some happy guard as firm of heart, and even so strongly furnished forth to war, joust, tourney or other kind of battle as ancient Alexander, his picked guards. Failing of his helpers, that would-be king was held for trial for treason, condemned, made to tell his ambitious designs, tortured, — for in the prison, vile men, his keepers, by arts more pitchy-hued than hell, having obtained a permittance to cause pain sufficient to burst the seal upon the lips of the maddened Essex, with burning irons put out both lovely eyes, — then coldly excuted.

No tale of ages be ore our blessed Savior suffered such death, has one half the woe of this. Even the barbarians of any age, would burn men to cinders less murderously.

O God! forgiveness cometh from Thee. Shut not this truest book, my God; shut out my past — love's little sunny hour, if it so please Thee, and some of man's worthy work, yet Essex's tragedy here show forth: then posterity shall know him truly.

#

## Main Sources

- François Cartier. *Un problème de Cryptographie et d'Histoire*. Paris: Editions du Mercure de France, 1938
- Paolo Rossi. *Francis Bacon: From Magic to Science*. London: Routledge & Kegan Paul, 1968
- Frances A. Yates. *The Rosicrucian Enlightenment*. London: Routledge & Kegan Paul, 1972
- John Henry. *Knowledge Is Power: How Magic, the Government and Apocalyptic Vision Helped Francis Bacon to Create Modern Science*. London: Icon Books, 2002

## Additional Reading

- A large selection of materials about the “magical” side of cryptography: **Crypto...: The most exact of the occult sciences** (rus.)  
<https://kiwibyrd.org/2019/10/30/1903/>
- About occult practices in modern special services: **CIA, The Mystery of 25<sup>th</sup> page and The Universe as a Hologram** (rus.)  
<https://kiwibyrd.org/2021/04/25/21h43/>
- About the varieties of mystical experience among scientists (rus.)  
<https://kiwibyrd.org/2021/06/06/21h61/>

July 2021

# Bacon and Tempest

This chapter is a story about the important role of the Bacon's cipher in one of the most secret technologies of the special services.



HOME > EXHIBITIONS > DECODING THE RENAISSANCE

## Decoding the Renaissance



Fig. 35. Screenshot of the website of the Folger Shespeare Library.  
Now this page can be found in the [Internet Archive](https://web.archive.org/web/20210725134650/https://www.folger.edu/exhibitions/decoding-the-renaissance)

The end of 2014 and the beginning of 2015 in Washington were marked by an extremely strange and puzzling exhibition. The venue took place in the Folger Shakespeare Library (the world's richest collection of first editions of Shakespeare and literature of that era), and the event was called “Decoding the Renaissance: 500 Years of Codes and Ciphers.”<sup>75</sup>

It was extremely strange that William F. Friedman was chosen as the central character of the exhibition. The celebrity status authority of American cryptology of the 20<sup>th</sup> century, which, however, didn't have any bright achievements in “decoding the ciphers of the Renaissance.” Moreover, it was William Friedman and his equally experienced in cryptography wife, Elizebeth Smith Friedman, who are especially famous for the fact that they very persis-

<sup>75</sup> <https://web.archive.org/web/20210725134650/https://www.folger.edu/exhibitions/decoding-the-renaissance>

tently proved the complete absence of cipher messages in the books of the Shakespearean era.

So, the very fact of choosing such a character as the center of an exhibition dedicated to the ciphers of the Renaissance should have greatly puzzled any person more or less familiar with the historical anti-contribution of Friedman and his wife to this rich and interesting topic.

The main American newspapers, *The Washington Post*<sup>76</sup> and *The New York Times*<sup>77</sup>, however, weren't at all embarrassed by this circumstance. So their articles on this exhibition took its concept for granted and quite clearly focused on the outstanding cryptographic talents of William Friedman, the genius of American cryptology and one of the founding fathers of the NSA.

An unexpected, but quite appropriate symbol of this strange approach to the secrets of the Renaissance was the “main exponent” of the exhibition (on loan from the funds of the NSA Museum of Cryptology by the heads of the Agency). The until recently super-secret cipher machine SIGABA, the brainchild of the crypto genius Friedman, which served as the most reliable device for protecting communications for the U.S. military in the 1940-50s.

As for the curator-organizer of this entire exhibition, Bill Sherman (head of scientific research at the Victoria and Albert Museum in London), he was not only very pleased and proud of such a disputable collection of the event, but also in conversations with journalists diligently emphasized the importance of Friedman's personality for the entire exposition. As a kind of focal point and “connecting link” between the era of Bacon-Shakespeare and the achievements of modern cryptology.

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<sup>76</sup> <https://www.washingtonpost.com/news/arts-and-entertainment/wp/2014/11/10/from-shakespeare-to-the-nsa/>

<sup>77</sup> <https://www.nytimes.com/2015/02/04/arts/decoding-the-renaissance-at-the-folger-shakespeare.html>

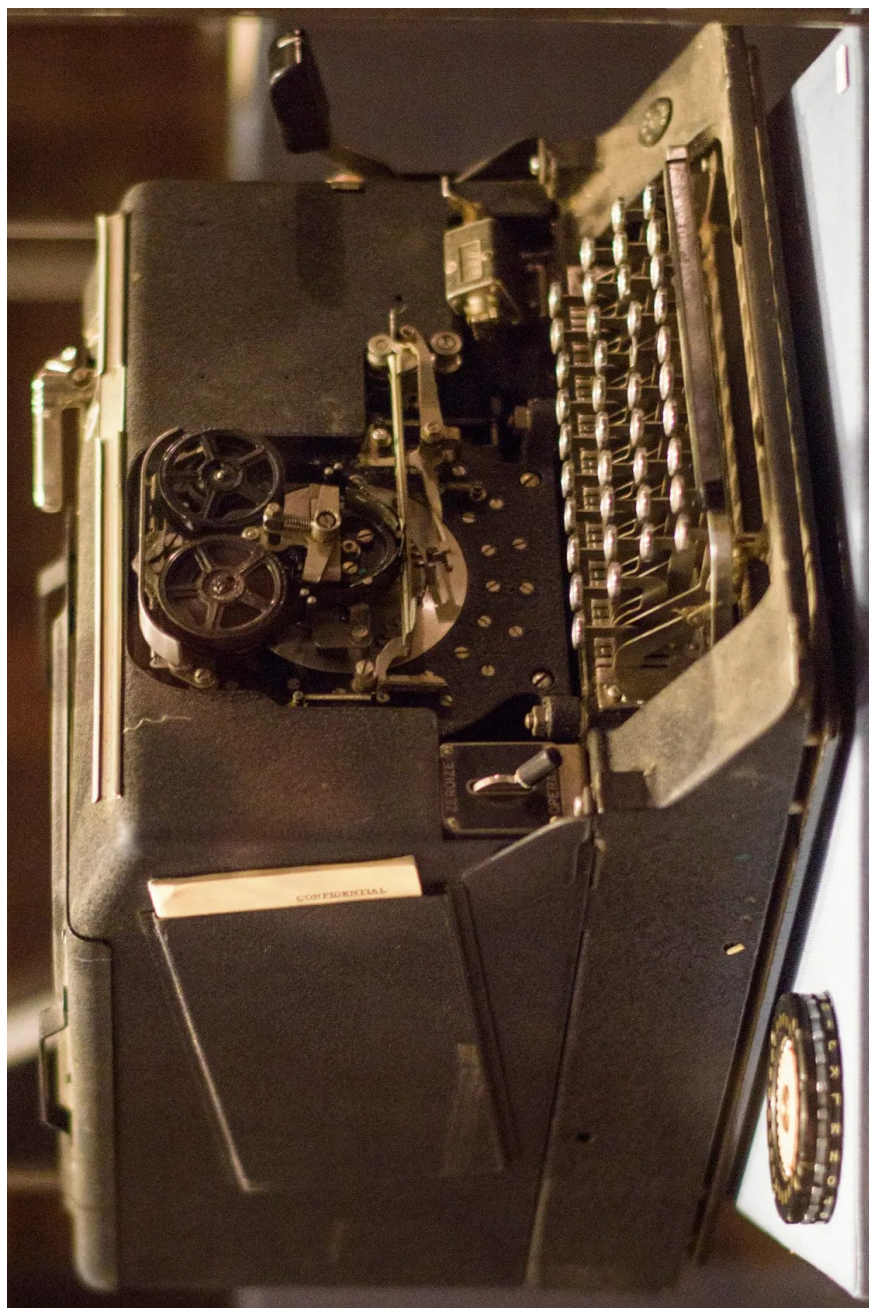


Fig. 36. The “main exponent” of the exhibition: the SIGABA cipher machine

After all, destiny, as it is known, led Friedman to cryptography through the analysis of texts in books of the 16-17th century, which means (quoting *The Washington Post*) that:

*“Without this crazy argument about Bacon writing Shakespeare’s plays,” Sherman says, “we might not have won the war in the Pacific!”*

It’s somewhat strange to hear such statements from someone professionally engaged in the history of books and ciphers, and also actively interested in military cryptography of the 20<sup>th</sup> century. For there was nothing crazy about the debate about Bacon’s authorship, and there still isn’t. It’s no secret that this idea was accepted and developed by many serious researchers in the 19<sup>th</sup> and 20<sup>th</sup> centuries, and in the 21<sup>st</sup> century, more and more new — and strong — scientific facts are being collected in support of it (more on that later).

As for the other part of the statement — about the victorious role of cryptography during World War II in the Pacific Ocean, this difficult topic is very closely related to the greatest cryptographic failure of the United States called the “The Pearl Harbor disaster.” And there, which is remarkable, the role of William F. Friedman was one of the central ones.

The mysteries of Pearl Harbor and its surprisingly multifaceted connections with the Bacon-Shakespeare theme will be discussed in the next chapter, here we focus on the main theme. On the exhibition at the Folger Shakespeare Library with its odd fixation on Friedman and the NSA. For as noted in the *Washington Post* article cited above:

*In fact, it’s the curious connection between the Folger and the NSA that inspired curator Bill Sherman to create this show.*

The newspaper did not provide any other meaningful facts, besides those mentioned, in the development of this idea, but since such

facts aren't only known, but also very significant for this whole story, it makes sense to talk about them in more detail.

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First of all, it's necessary to mention that the Folger Library was the point from where the Friedmans launched their famous book *The Shakespearean Ciphers Examined* into the world. In June 1953, General François Cartier died in France at the age of 90, and just a few months later, in October 1953, the Folger Shakespeare Library in Washington announced a competition for the best work on Elizabethan era literature. In spring 1955, it was declared that the winner of the competition became the work of cryptographers William and Elizebeth Friedmans. A bright victory immediately provided the book with coverage in the national press and offers from reputable publishers to release the work in mass edition...

Further, in order to reveal and expand for the present time the picture of the "curious relationship" between the NSA and the Folger Shakespeare Library, it should be noted that simultaneously with the exhibition "on the codes and ciphers of the Renaissance" — in early 2015 — the NSA, for the first time in its history, released the usually secret internal journal *Cryptologic Quarterly* in a completely open form, freely available to everyone.

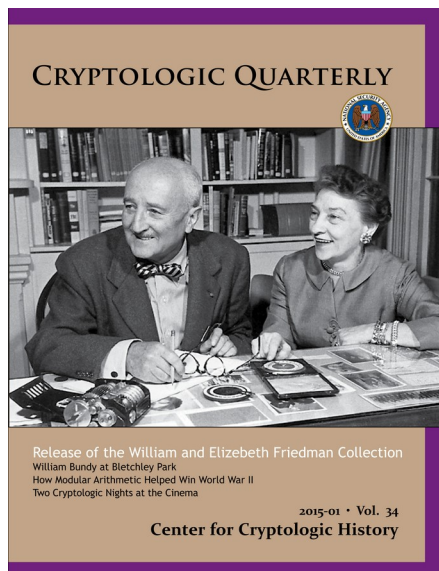
To ensure truly mass access to the unusual issue, a digital copy<sup>78</sup> of the magazine was posted on the official website of the NSA. The direct connection between this initiative and the Folger Library exhibition is immediately clear when looking at the cover. Because the "subject of the issue" is a detailed story about William F. Friedman and his wife, no less experienced in cryptography, and about their outstanding achievements in the secret service to the state.

The author of a large — almost half of the magazine — article is a well-known lady — Colonel Rose Mary Sheldon, professor of history at the Virginia Military Institute. She is mainly known for be-

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<sup>78</sup> <https://www.nsa.gov/Portals/70/documents/about/cryptologic-heritage/historical-figures-publications/publications/cryptologic-quarterly/cryptologic-quarterly-2015-01.pdf>

ing the country's leading authority on the richest archive of America's most famous crypto family (on the Internet, you can find Sheldon's "Analytical Guide to the Friedman Collection"<sup>79</sup> — an impressive volume of about 650 pages).



CRYPTOLOGIC QUARTERLY, 2015-01

The Friedman Collection has hundreds of photos illustrating the life of the Friedmans. The ones included in this article represent only a fraction of what can be accessed at the Marshall Library. The earliest picture we have of William is his graduation photo from Pittsburgh Central High School. Among his classmates were five Jewish students in the debating society called "The Empeorian Philomath," who became imbued with the idea of a Jewish "back to the soil" movement. They would all attend Michigan Agricultural College (MAC) (which later became Michigan State University) in Lansing with the intent of becoming pioneering scientific agriculturists.

Although William entered MAC in 1910, he left in 1911 when he was accepted to Cornell University as an undergraduate on a full scholarship. He was



William Friedman and Elizebeth Smith at Riverbank Estate in Illinois ca. 1916

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Fig. 37. Cover page of *Cryptologic Quarterly* Vol. 34 and a snapstop of a page from the article on the Friedman spouses and their collection (page 5)

For any person more or less familiar with the specific features of the work of intelligence services in general and the NSA in particular, it's impossible not to have questions about this detailed biography from a professional historian. Because the facts of certain pages of the espionage part of Friedman's biography always looked "falling out of context." That is, without additional, but never explained circumstances, such events simply couldn't have happened. But a new biography from R.M. Sheldon leaves these oddities still unexplained.

What exactly is meant here?

<sup>79</sup> [http://web.archive.org/web/20211101214514/https://www.marshallfoundation.org/library/wp-content/uploads/sites/16/2020/01/Friedman Collection Guide September 2014.pdf](http://web.archive.org/web/20211101214514/https://www.marshallfoundation.org/library/wp-content/uploads/sites/16/2020/01/Friedman%20Collection%20Guide%20September%202014.pdf)

Super secret from the very beginning, the NSA was created as part of the Department of Defense in 1952, combining many previously fragmented divisions, engaged in the interception and decryption of foreign states correspondence. In this new centralized structure, William Friedman became “special assistant” to the director of the NSA, General Canine, and the intelligence agency’s chief cryptologist.

It’s well known and undeniable that from the moment of the NSA creation and further, for many decades, all employees of this super-secret agency were strictly forbidden to disclose not only the fact of their belonging to the special service, but also the fact that they were engaged in the analysis of ciphers. (That is confirmed by the official historian of the Agency and the chief editor of the journal on the first pages of the open issue *NSA Cryptologic Quarterly*.)

The official biography from Sheldon, however, informs readers without any explanation that in 1954 William Friedman, under his own name, wrote an article on cryptography for the *Encyclopedia Britannica*, and in 1955 their mutual book with his wife, which completely crushed all ideas about Bacon-Shakespeare ciphers in old books, won a competition organized by the Folger Shakespeare Library. That event was covered by the central press, later the book won other awards in the USA, then followed a mass publication project in the UK, the Friedmans’ trips overseas and speeches before inspired Shakespeare scholars...

In short, all of Friedman’s public activity as the nation’s most respected cryptographer absolutely doesn’t fit with his supersecret work at the NSA and the very strict requirements at the time to keep silence about this rare profession. What does it mean?

In the NSA journal *Cryptologic Quarterly*, such a strange discrepancy isn’t explained in any way, however, in a much more detailed biographical book about Friedman, to which the author of the article repeatedly refers (*Ronald Clark, “The Man Who Broke Purple”, 1977*), there is quite convincing explanation.

In exactly the same period, from 1955 to 1958, William F. Friedman, as the chief cryptographer of the NSA, had four long trips to Europe on an extremely secret mission, the details of which haven't been disclosed to this day. But the facts and documents available today are more than enough for a general idea of what the essence of those business trips to England, Germany, Switzerland and Sweden was. And also to understand why Friedman's highly publicized Bacon-Shakespeare-themed book turned out to be a very convenient cover for his trips to negotiate in Europe and start a large-scale and very successful NSA spy project.

An expanded version of the story of this project can be found in "Reading between the lines"<sup>80</sup> and "Total Hagelin, or Finita la commedia"<sup>81</sup>. And here it's enough to note the essence in a couple of phrases.

In the 1950s, the NSA (largely due to the authority and personal contacts of Friedman in the cryptographic field of Europe), in collaboration with the CIA and colleagues from a number of Western European intelligence agencies, under the pretext of fighting the communists, persuaded manufacturers of commercial cipher machines to deliberately weaken their crypto schemes. So that the "power of good" of the free world (represented by the NSA) could successfully break as many encrypted communications as possible to confront the Soviet "evil empire" and its pro-Soviet allies, who didn't have their own cryptography, and therefore bought cipher machines from neutral countries...

It's customary for spies to designate all their secret operations, projects and programs with some code words. It's still unknown how the NSA named the supersecret program started in Europe with the direct participation of Friedman. But it's very well known that during the same period, the code word TEMPEST<sup>82</sup> was

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<sup>80</sup> <https://kiwibyrd.org/2013/09/06/0903/> (rus.)

<sup>81</sup> <https://kiwibyrd.org/2020/02/20/20h22/> (rus.)

<sup>82</sup> "Secrets of Remote Sensing" (rus.)  
<https://kiwibyrd.org/2013/04/26/200904/>

coined by the NSA to designate another extremely secret spy undertaking.

There is no direct indication that this code word was put into action at the suggestion of William Friedman. But the direct connections of the TEMPEST theme, not only with the secrets of the old Bacon-Shakespeare books from the Folger library, but also with the exploitation of very secret artificial weaknesses in commercial cipher devices, are quite possible to demonstrate.

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In order to find interesting and often unexpected connections, one should take a closer look at the events of 2014-2015 that somehow thematically match the fact of not only synchronous, but also remarkably congenial initiatives of the NSA and the Folger Library.

A fairly careful (though not particularly thorough) search allows you to find at least three related events on the topic.

### **(a) *Baconiana* announcement**

In spring, 2014, the regular issue of the *Baconiana* almanac<sup>83</sup>, published in London by The Francis Bacon Society, was compiled and published by a certain Dave Patrick, previously known as the author of several research books on historical and literary topics.

In the editorial preface to that issue, D. Patrick said he planned to include in the issue his own article devoted to a critical analysis of the famous cryptanalytic book by William and Elizebeth Friedman, in which they, as believed, refuted all evidence related to ciphers of research under the general title “Bacon and Shakespeare.” But, since Patrick’s critical analysis was connected with another parallel project, for both of which new and important facts were discovered, it was decided to postpone the publication of both articles for a while — until the investigation of new materials was completed.

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<sup>83</sup> *Baconiana*, Volume 1 No. 5

<https://francisbaconsociety.co.uk/baconiana-journals/baconiana-journals-2007-present/baconiana-vol1-no5/>

However, subsequent events turned out to be such that the promised article by Dave Patrick on the Friedman book never appeared either in *Baconiana* or somewhere else. But at the end of the same 2014 and at the beginning of 2015, the Folger Library and the NSA jointly and loudly supported the outstanding cryptographers Friedmans and their achievements in the Bacon-Shakespeare debate.

## (b) Barry R. Clarke and his dissertation

At the beginning of 2014, for the first time in the history of the UK, a certain Barry R. Clarke received a respected Ph.D degree, having successfully defended a dissertation on the topic “*Bacon as the author of Shakespeare’s works*”<sup>84</sup> at Brunel University London.

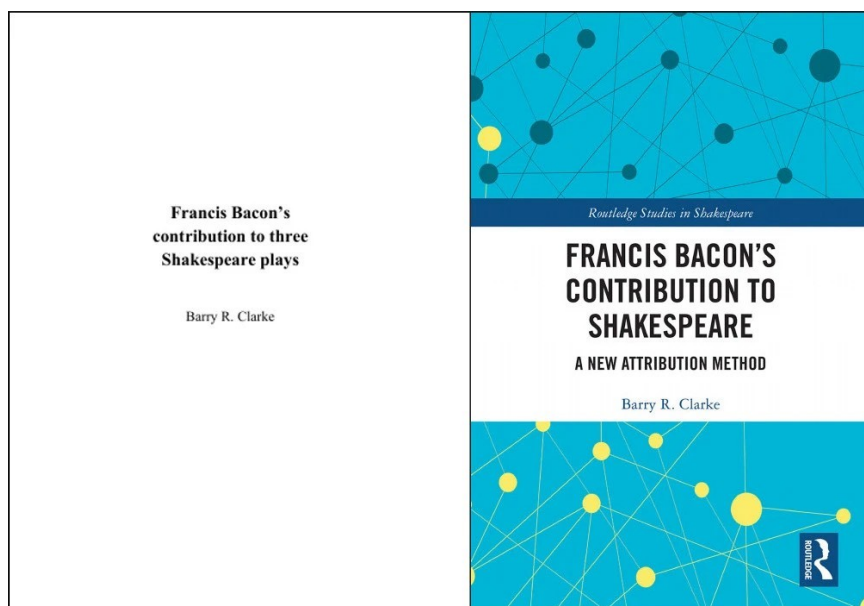


Fig. 38. The title page of Clarke’s dissertation (2014) and the book based on it, published by Routledge in 2019 (series “Routledge Studies in Shakespeare”)

<sup>84</sup> The exact title is as follows: “**Francis Bacon’s contribution to three Shakespeare plays**”, by Barry R. Clarke  
<http://web.archive.org/web/20160919203825/http://barryispuzzled.com/PhDThesis.pdf>

Clarke is a mathematician (bachelor's degree) and a quantum theoretical physicist (master's degree) by his initial education. And by practical experience as an analyst programmer, he has been processing large data arrays for one of the London insurance companies for many years. The basis for his "Bacon-Shakespearean" doctoral dissertation was the method of statistical analysis of texts invented by Clarke and called RCP or Rare Collocation Profiling.

The essence of the method, in short, is to methodically work on each analyzed play, line by line, phrase by phrase, to identify unusual word combinations and rare phrases by checking them against the powerful EEBO database (*Early English Books Online*). This kind of test allows to find out how rare this or that phrase was at the time when the play was written. Since it's simultaneously ascertained which of the already known authors used especially rare phrases, this makes it possible to figure out the most likely author of the work under study.

Thus, it was found that, according to indirect evidence of statistical analysis, Francis Bacon is the most likely author of such Shakespearean plays as *Love's Labour's Lost*, *The Comedy of Errors*, and *The Tempest*. In addition to purely statistical data, Clarke's dissertation contains a very impressive volume of other documents and materials on these plays, which, using cross-analysis methods, confirm Bacon's authorship. A little further on, details will be given of how these evidences look for the play *The Tempest*, which is especially interesting here.

### **(c) Wikipedia about TEMPEST**

For the more than polysemantic term *Tempest*, the English-language Wikipedia now has several dozen articles. And we are only interested in two of them. *Tempest* as a famous Shakespeare's play and TEMPEST as an NSA code word. Regarding the second meaning, in particular, the origin of the term from the depths of the secret intelligence service has long caused controversies and debates. Some sources assured that the short abbreviation was made up of the letters of the long name of the secret technology around

the compromising radiation of equipment, other sources insisted that it wasn't an abbreviation, but just a "code word."

By about 2014, the editors and administrators of the English Wikipedia took into account the testimonies of NSA veterans and came to a consensus that it was a code word. But although the matter of TEMPEST as a code word has long been considered resolved, the story of its origin still remains very murky.

In the period from 2012 until the end of 2014, for example, in the section **TEMPEST (codename): Talk**<sup>85</sup> editor consensus was clearly dominated by the opinion that the term comes from Shakespeare's play *The Tempest*<sup>86</sup>.

However, in January 2015 (pay attention to the date), someone anonymous and never mentioned anywhere else with the same credentials on Wikipedia, added the following information to the "TEMPEST name origin" section:

*So this is the story of the name TEMPEST as relayed to me by an individual who attended the meeting where the name was coined. At the time I did not realize the significance of the story and the original teller's name and most of the specifics are lost to me. The Soviet Union was found to be intercepting teletype and other secure information using the emanating electromagnetic radiation from various U.S. Navy shipboard devices. So (my best guess) sometime in the early 1960's, a group of senior military officers and civil service employees convened to be apprised of the issues and discuss what actions should be taken. During the explanations, one senior officer commented that it sounded, "Like a tempest in a teapot." to him. After the presentations were completed, another officer raised the key question; "What are we going to do about this little tempest problem?" The name stuck and TEMPEST was born.*

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<sup>85</sup> [https://en.wikipedia.org/wiki/Talk:Tempest\\_\(codename\)](https://en.wikipedia.org/wiki/Talk:Tempest_(codename))

<sup>86</sup> "...The word TEMPEST comes from Shakespeare  
([https://en.wikipedia.org/wiki/The\\_Tempest](https://en.wikipedia.org/wiki/The_Tempest))... It should be obvious..."

It should immediately be noted that, according to declassified documents<sup>87</sup> of the special services, the TEMPEST topic, already at its inception in the 1950s, had a distinct espionage potential for the NSA and the CIA in terms of methods for obtaining secret enemy data. In the “history of origin” proposed by the anonymous author, this fact isn’t mentioned in any form. The administration of the Wiki section found this alternative version very interesting, but since it was absolutely impossible to confirm it with any documents or other evidence, this whole muddy topic “about the origin of the term” was simply completely removed from the article. So it’s not there anymore, until today.

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Once again paying attention to the fact that all the listed events “a-b-c” (especially “b”) took place right before and during the “collaborative exhibition” of the NSA and the Folger Shakespeare Library, it’s not difficult to identify and note two facts. Firstly, immediately after the successful defense of a scientific dissertation on the topic “Bacon as the author of Shakespeare’s works,” distinct attempts were made to remind the public of the outstanding achievements of Friedman and his wife (who “thrashed” this topic in every possible way). Secondly, at the same time, an attempt was made (anonymous but generally successful) to remove from Wikipedia any connection between Shakespeare’s play *The Tempest* and eponymous code word from the NSA arsenal.

And since this connection not only exists, but also has a very deep — “three-layer” — structure, it makes sense to designate the accordances more clearly. Using, on the one hand, the results of the mentioned dissertation by Barry Clarke, and on the other hand, widely and narrowly known facts from the work of the intelligence services.

The three layers at the base of the essentially same “data storage” structure are

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<sup>87</sup> “Secrets of Remote Sensing” (rus.)  
<https://kiwibyrd.org/2013/04/26/200904/>

- (1) well-known, public information;
- (2) the half secret and therefore little known facts;
- (3) information that is hidden especially carefully and therefore unknown to almost everyone.

How do the corresponding layers of information about the play *The Tempest* and TEMPEST as an instrument of the secret services correlate?

### **(1) Generally known facts**

In the context of the play *The Tempest*, the well-known and generally admitted basis of this work is the story of the real shipwreck of the large ship *Sea Venture*, which was sent in 1609 to support the development of the new English colony “Virginia” in North America. Near Bermuda, the ship was caught in a severe storm and wrecked in the rocks, but people managed to survive and a few months later they built two new smaller ships and safely reached their destination. The written report of William Strachey, a direct participant in that expedition, was titled “A True Reportory of the Wracke and Redemption” and, according to Shakespeare scholars, had many remarkable details, reproduced almost literally by Shakespeare in his play *The Tempest*, first staged in 1611.

In the context of TEMPEST as an instrument of intelligence services, the practice is that such a set of technologies and standards is usually referred to as purely defensive measures. Aimed at the technical protection of equipment that processes secret information from all kinds of side leaks and compromising signals that can give the enemy access not only to encrypted information, but also to the cryptographic keys of the encryption equipment.

### **(2) Little known or “half-secret” facts**

Regarding *The Tempest* play, historians actually have two documents on the same subject.

- (a) Strachey’s “A True Reportory” already mentioned, first published only in 1625, that is, nine years after Shakespeare’s

death. For initially it was a top-secret internal report of the “Virginia Company” that provided the state program for the development of a new colony in America, and

- (b) an openly published in 1610 propaganda pamphlet “A true declaration of the State of the Colony of Virginia,” also prepared by the “Virginia Company” for wide public distribution to attract new investors and colonists.

Barry Clarke’s dissertation proves in detail and with documentation that due to the confidentiality of Strachey’s report, the document (as the basis of *The Tempest*) just couldn’t be available to Shakespeare. On the other hand, Francis Bacon was one of the main persons in the “Virginia Company,” even by his position was well familiar with the Strachey’s report, and the methods of the RCP logical analysis text indicate that it was Bacon who was, if not the only, then the leading author of the pamphlet “A true declaration...” In other words, all available facts indicate that Bacon’s authorial personality is manifested in the play *The Tempest* much more clearly than Shakespeare’s one.

As for modern intelligence services, one of the most striking features of the TEMPEST instrument is that there is a lot of indirect evidence from independent researchers indicating the active use of these technologies in NSA espionage operations. But at the same time, in absolutely all declassified NSA documents, any mention of specific operations for the espionage use of TEMPEST is very carefully removed by censorship. Therefore, there is no direct documentary evidence, but only sideway evidence — mainly from the memoirs of colleagues from closely related special services.

### **(3) Hidden or “essentially secret” facts**

As to the play *The Tempest*, the following curious fact still remains unknown to almost everyone. The Folger Shakespeare Library currently has the world’s largest collection of 82 copies of Shakespeare’s First Folio from the 1623 edition. This most famous compilation, from which Shakespeare’s world fame began, opens with the play *The Tempest*, which is especially interesting for us. So,

among the 82 copies of the library, only in one known as “Fol. 24,” the first letter of the play, given by the initial cap, turns out to be upside down (Fig. 39).

Of course, this fact can be interpreted just as an unfortunate mistake of the printers, which was quickly corrected. But it can be interpreted differently — as a kind of signal-pointer to something important.

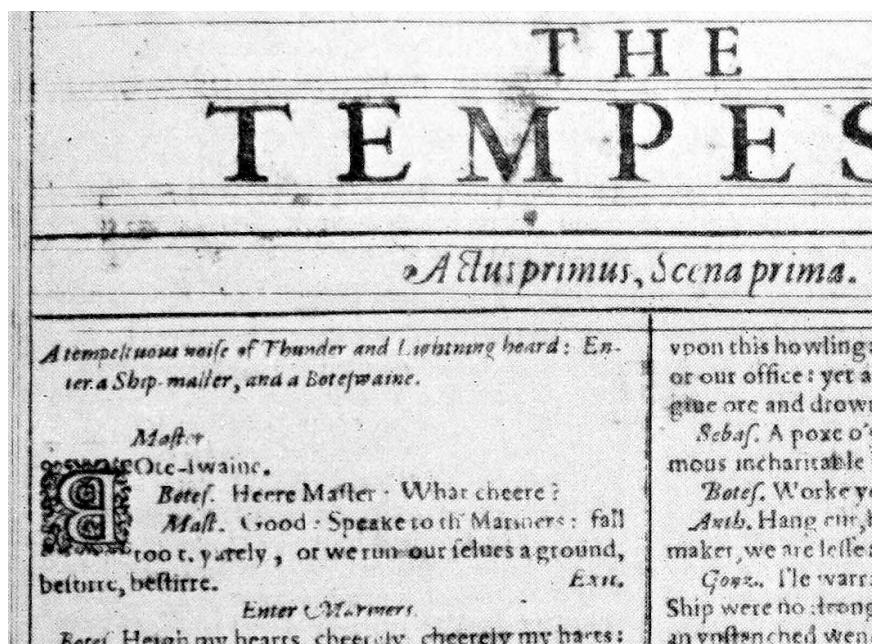


Fig. 39. The beginning of the play *The Tempest* in “Fol. 24.”

Source of the photocopy: Charlton Hinman. *The printing and proof-reading of the first folio of Shakespeare*. Vol 1, page 249

For example, what one meticulous researcher, Annette Covington from Cincinnati, discovered in the floral design of this initial letter in 1931. Studying the lines of the ornament in the regular, non-reversed versions of the First Folio, Covington identified there many times repeated letters of the signature “Francis Bacon” (Fig. 40)...

As for TEMPEST spy technologies, a particularly secret and very rarely discussed topic in the literature is the methods of so-called active TEMPEST-attacks of intelligence services. This term here



usually not customary to mention that the secret intelligence services invented and began to actively use such things since the 1950s.

In particular, in the grand spy project of the NSA and Friedman, which massively weakened European commercial encryptors, was implemented precisely this idea. By agreement with the manufacturer, “features” were built into the crypto scheme, seemingly innocent, but allowing those who know the secret to extract additional information from the ciphertext, leading to breaking the cipher.

How exactly it was done with cipher equipment like Hagelin and the like, no open information has yet been published. But the details of how, in fact, the same thing was done by the craftsmen of the NSA a little later, in the 1970s, with the hyper-popular DES cryptosystem, are well known today<sup>89</sup>.

There were two main tricks. First, the length of the obviously strong key of 128 bits was reduced to 56. And then they insisted that all hardware-implemented DES schemes (no others were thought of at that time) would force a block of all zeros to be added to the beginning of the plaintext. In practice this meant that the very first block of ciphertext was a re-encrypted message key. And specially prepared by the NSA gigantic sorted tables of such blocks helped them to restore that key almost immediately...

It would seem that there is practically nothing here from the “compromising side leaks” of the equipment. However, in a deep conceptual sense, it’s just another type of active TEMPEST attack. But in this context, such “backdoors” are not considered, since it is still a big secret of the special services.

And even more so, no one sees in this a connection with Bacon and the secrets of the origin and publication of the play *The Tempest*. Although, apparently, it’s time to take a closer look and begin to understand...

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<sup>89</sup> For details, see the text “‘Responsible Crypto’ and Other Forms of Deception” (rus.) <https://kiwibyrd.org/2017/11/18/1711/>

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The true story of the emergence and first operations of the NSA, as has already been shown and will be demonstrated further, contains much more than what is officially declared. Moreover, the main of these secrets continue to remain strictly classified to everyone until today. That is, they are actually unknown not only to society, but also to the majority of employees of the Agency itself. For official NSA historians, even in internal documents, instead of reconstructing the true picture, are actively engaged in building a carefully corrected and essentially false version of history, hiding important and fundamental facts.

Something very similar is constantly happening with all the rest of our history, where the most important events often, in fact, happened in a completely different way than they are described by today's historical science. Chapters from the encrypted biography of Bacon provide a typical example of this. The most famous episode from the English history of the Tudor era — the rebellion of the Earl of Essex against Queen Elizabeth, Bacon's harsh condemnation of the rebel and the merciless execution of the Earl — in fact, all that turns out to be a tragic ending to the very difficult relationship of the "Virgin Queen" with her two sons...

But in order to see and understand it, you need to

- (a) have access to the secret encrypted biography of Francis Bacon and
- (b) accept this evidence as a authentic historical document.

Let's turn to the relevant fragment from this document.

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*(translation fragments, pp. 140-146:  
deciphered texts of the Original)*

## **BACON'S LIFE AS HE TELLS IT IN THE BILITERAL CIPHER**

### **Chapter IX**

How like some night's horrible vision this trial and awful torture before his execution must ever be to me, none but the Judge that sitteth aloft can justly know. To sharper clamors, stifled cries of piteous means are added, and my ears hear Robert's voice, so entreatingly opening sealed doors, haunting all dreams, greeting every day that doth dawn on our home.

All the scenes come before me like an acted play, but how to put it away, or drive it back to Avernus, its home, O, who can divulgue that greatest of secrets? None.

It hath so tempered the hot rush of blood in my veins that I feel myself becoming old ere it be time. It is the one thought in my hours of day, my only dream by night, for there was my own aid, not to him but to my mother, the queen, which hurteth the memory more than tongue can tell.

Yet such terrors held me that I could not realize aught beyond that day, nor did I believe any such curse one half so likely of lighting suddenly upon the youthful head of my hasty lord of Essex, most dear to the queen, as it was to rest for aye upon my fate. The event of the earl's death never for an hour, or even for a moment, seemed possible to me after Robert stooped his pride to send our proud mother her pledge, given as if in doubt some great harm might ever threaten; although neither, surely, thought it from the queen his evil would threaten. He relied vainly, alas! on this promised aid.

After I am dead, must my name live among men cleared from all sorts of blot or imputation of wrong advice to Queen Elizabeth in the trial of Essex for treason. A queen has many to aid if the case require, but a sudden justice pursues a subject that taketh any lib-

erty in matters of state. When the offence is from her true son building mighty hopes upon the overthrow of the power of our queen — not making the sinfulness less, rather greater, his punishment most naturally is greater. It is justice, yet how it doth blow my heart.

This story my love stayeth so long upon — the saddest in any or all the known languages — must be know. The Earl of Essex son to her majesty, and a brother bred — bone, blood, sinews as my own — was sentenced to death by that mother and my counsel. A queen's edict, if not her iron hand, killed such a man that for valor and manly spirit was unequalled.

Sole accountant must I be hereafter for the share I had in my brother's sorry fate, but none here will fully acquit me, and so my worthiest opponents have many notable advantages. In so far as this is unjust, I do hereby demand true and rightful examination by any man that doth regard my brother's case and his sentence as greatly altered by my counsel and reporteth the same everywhere.

At man's many harsh insinuations or open obloquy, my indignation swelled till my heart was too great. Native pride would cause one to seek a means of showing the true state of matters for justification. True he is only actuated by his worse growth of motives, but the fact is irrefutable — a most simple and natural desire for just and worthy men to give him full dues.

Most (or at times, truth to say, all) seek for true respect; the most of us insure this, no doubt, by our lives; but occasion, that ariseth when least looked for, may mar fairest prospects most suddenly. An unexpected event may blast his future with sorrow.

Let my plea be heard and just judgment be rendered. I will ask but this, "aye, strike but list to me," and mark how love is always manifested in our intercourse at all the times of meeting in prison, many of my written protests and entreaties to Essex to turn him aside intending merely his own good, the safety of his own person.

If he had but heard my advice; but he heeded his own unreasoning wishes only. Whilst succeeding barely in this attempt to win so much as a hearing, yet did the true love I bore so move me that from my care of Essex I took a charge that greatly imperilled my personal pretensions, as I did occupy my utmost wit, and even adventure my own fortunes with the queen, to attempt the reintegration of his.

So angry, scathful, irrational, dangerous to all near her, Elizabeth became, blame would lie on any man who did rouse wrath so suddenly awaked, so long continuing, so destructive. All efforts to reintegrate the fortune of him I loved but gave the raging fury food. It kept that desperate, untamed Tudor spirit doubly enraged, and her bitterness of heart showed the despair she carried. Yet that — or linked chains of like events, upheavals of urgent sort, or unrest daily — would never push such a person as far as the point of withdrawal.

Queen Elizabeth yielded naught upon the question, though it is known commonly that persuasions swayed her often, even when object seemed as armed against it. Yet this disposition was not paramount when I made my plea in behalf of him whom loving trust happily kept in check when a word of dubitancy would prick as with a spur.

Reasoning that no power should prevail with her majesty, I felt how ill-advised a sacrifice of life and its enchantments must be, that surely would be of no effect. I have spirit of sufficient fire, I think, for such hap as is probable to my station, not enough to support me in torture, nor to lead forth any enfans perdus.

Seeing the hopeless state treason-loving Essex was in, I knew I had but to continue my plea, urging that forgiveness might be accorded to Essex, to close the last egress from a cell, or lead to the gallows. Thus was my way hedged about, thick clouds hid the path from sight.

Besides my secret story no correct one shall be left, as her majesty taking a liking, early, of my writings upon a part of late negotia-

tions, required a species of justification of the course (which none surely showed) and carried it, indeed, so as in man's sight, Robert is held abhorred. I, the clerk, did the writing at Queen Elizabeth's behest, though I did it but at her express commands and always as secretary to her majesty. Verily scarce a word remained unaltered. The language, even, was not wholly such as I wished to use, as all was subjected to her painfully searching scrutiny, and many a sentence did her weak fear, her dread of execration, make her weigh and alter, whilst her jealousy culled out my every name of the noblemen who were charged with a lack of loyalty and the style that I employed when I said aught concerning Robert.

For my honorable and just style of "Earl Essex and of Eve," as "my lord of Essex" and "my lord Robert," — on many a page similar names and terms, — her majesty would suggest that it be merely plain Essex or in place of that "the late Earl of Essex." It approved itself to her in such a degree, that my first books were suddenly and peremptorily suppressed and printed according to command, *de novo*, thereby only the sure proof giving of a judgment sharp on his lordship's ills, but subtle concerning her own; and assuredly the world may see that though she might be excellent in great matters she was exquisite in the lesser.

That history I have desired above every other work to write, that a coming people in the future having read the false declaration made in writings given then, blinding eyes to deep, justly censured wrongs, might understand motives of action as well as the true history of events. Surely a son doth sit close at hand and should see clearly to limn truly. This I know I have accomplished, nor glozed nor blenched in my account.

It must be acknowledged that the crime for which he suffered could not anywise be palliated by his past services or bravery, but, had the signet-ring that he did desire to present reached Elizabeth, Robert, the son madly loved, might have received a royal remittance, inasmuch as it was her well-known seal and token. This did fail, however, to act as peacemaker as it came not, for good reason, to her majesty's eyes. Dreadful was her passion of anger and her bootless sorrow of heart on finding that our proud hero had so

stooped, and was not met. As he had been led to believe he had but to send the ring to her and the same would at a moment's warning bring rescue or relief.

It was long enough, in truth some time thereafter, ere this fact became well known, her majesty coming unto the knowledge but a short period ere she died. After our misguided queen's last murder, however, was by a chance only prevented, it was freely bruited everywhere. It was then that I also found that this most precious — yet, by his fortune, truly valueless — token came short of its desired or rather intended end.

All joys died with Essex in both our bosoms; for her all peace, as well, and she declined toward her own end from day to day, visibly, even while she strove most to hide her weakness.

Sin oft strongly wars in the mind, and if no murderous act be done, bears wrong much yoked with humility; but if crime be on a person's hands, many a rout of jeering devils come into his soul of which the worst is pride. So fared her majesty, Queen Elizabeth.

Her whole spirit was but one infernal region, a realm of Pluto, untold days in her times of mirth, or times of staid and very grave deportment; for the blood of her youngest born was upon her royal hand, if not that of many others, heirs to a future of pain.

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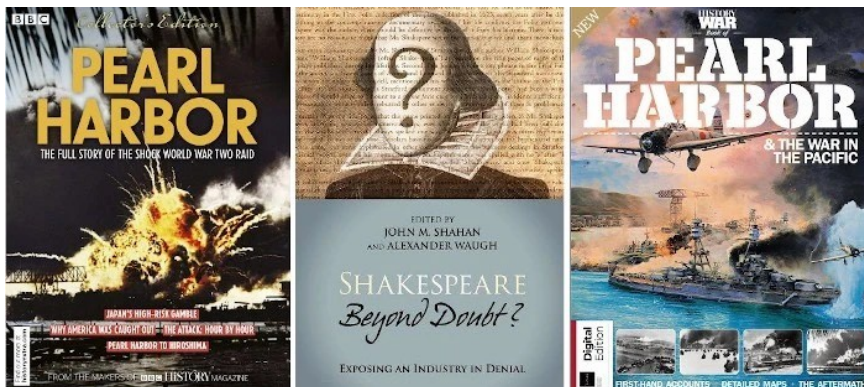
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*August 2021*

# Concealing the Truth

This part shows how two big problems of history were closely intertwined through cryptography: the matter of Bacon-Shakespearean authorship and the causes of the military disaster at Pearl Harbor.



The previous chapter demonstrated not only the unexpectedly close connection between the Folger Shakespeare Library and the NSA, but also something more. In particular, the NSA's spy technologies of special importance have clearly visible roots in both Bacon's "Omnia Per Omnia" cipher and the famous Shakespearean play *The Tempest*.

Also in the same chapter, facts and documents were presented in detail about the important role of William F. Friedman in efforts to "completely close" the topic of cryptographic evidence in discussions about Bacon as the author of Shakespeare's works. Because, "as the honorable Friedman, the chief cryptologist of the NSA, showed everyone," there were and there are no hidden ciphers proving Bacon's authorship in the books of the Shakespearean era.

However, in all the previous chapters nothing was said about the fact that the most famous cryptographer of the USA wasn't the only and far from the main force behind all these mysterious affairs. There are incontestable facts that clearly indicate this action was started by U.S. intelligence services much earlier than William Friedman joined the project to remove the figure of Bacon from

Shakespearean studies, and at the same time to discredit the inconvenient book of General Cartier.

The sequence of events in this still dark story is such that World War II appears as a kind of borderline here. For Cartier's book about ciphers and Bacon's secret biography, as cryptographic evidence of the true author of Shakespeare's works, was published in 1938, that is, just before the war. And the Friedmans, as evidenced by all the documents in their family archive, returned to the affairs of their youth and began to work on this topic again only a few years after the end of the war, in the late 1940s and early 50s.

On the other hand, there is irrefutable evidence that the American military intelligence service, which was engaged in deciphering the secret correspondence of potential adversaries, started actively recruiting Shakespeare scholars associated with the Folger Library 10 years earlier. That is, at the turn of 1930-40, even before the United States joined the war in December 1941...

It's important to emphasize that military cryptographer William Friedman never worked for the intelligence agency that hired Shakespeare scholars to break codes. Because it was an intelligence service of a completely different branch — the U.S. Navy.

And having returned after demobilization to their main peaceful profession, these textual scholars and bibliographers imposed a curious taboo on the topic of Shakespearean research. In fact, they did everything possible so that in post-war Shakespeare studies not only the book of François Cartier, but even the name of this authoritative French cryptographer with his opinion, completely unacceptable for literary orthodoxy, wasn't mentioned anywhere.

What are the facts in this regard? Why is it significant that it was a different intelligence service? And what are the particular aspects of William F. Friedman's personality and biography that not only deeply involved him but also permanently imprinted his and his wife names on this story of deception, heavily intertwined with secrets and omissions?

## #

In 2010, an academic journal *Shakespeare Quarterly*<sup>90</sup>, widely known among Shakespeare scholars, dedicated its entire issue to the fashionable topic for the digital age, “Shakespeare and New Media.” And there, in an article devoted to the historical and informational aspects of Shakespeare’s heritage, one can find several interesting facts from the biographies of famous textual and Shakespeare scholars of the 20th century:

The rational world of code represented by the Friedmans was also the one occupied by Bowers and Hinman during their years as cryptanalysts for the U.S. Navy from 1942 to 1945.

The connections between their wartime cryptanalytical expertise and their postwar advances in compositor analysis are noted by G. Thomas Tanselle in his retrospective of Bowers’s career<sup>91</sup>. Tanselle observes that even prior to the United States’s entry into the war, Bowers had received “secret instruction as a cryptanalyst in a naval communications intelligence group” at the University of Virginia; during the war, he supervised a naval communications group working on Japanese ciphers.

Whatever the reason, Bowers’s group was heavy with Shakespeareans, with Hinman a member, along with two other experts from the Folger Library staff (Giles Dawson and Ray O. Hummel).

The congruence between Shakespearean bibliography and military cryptanalysis was only natural, according to Tanselle...

Alan Galey. “*Networks of Deep Impression: Shakespeare and the History of Information.*” *Shakespeare Quarterly*, Volume 61 No 3 (*Shakespeare and New Media*, Fall 2010), pp. 289-312

It’s necessary to recall that in the circles of official historical and literary science it’s customary to categorically deny the presence of ciphers in the books of the Shakespearean era. And this is done relying primarily on the unambiguous verdict and the indisputable

<sup>90</sup> <https://shakespearequarterly.folger.edu/>

<sup>91</sup> G. Thomas Tanselle, “The Life and Work of Fredson Bowers,” *Studies in Bibliography* 46 [1993]: 1–154, esp. 32–34

authority of the Friedmans crypto spouses. Therefore, attempts to call “natural” the massive involvement of Shakespeare scholars in the secret decryption efforts of the state in the 1940s look extremely strange and inappropriate in such a context.

On the other hand, if you know that the stars of American cryptology, William and Elizebeth Friedman, at the turn of the 1910-20s, switched to the secret government service from a large-scale but purely private project on breaking Bacon-Shakespearean ciphers, everything begins to look really natural. But only until the Friedmans widely announced to the world in their book of the 1950s that they had never seen any ciphers in ancient books...

Such drastic changes in the views of cryptographers on a truly important problem require, of course, explanation and careful examination of the reasons. It’s especially interesting to identify the mechanism of a remarkable metamorphosis here also because in the biography of William Friedman it wasn’t the only case when he changed his position on an important issue to the diametrically opposite one.

If we analyze, it’s clear that not only the ideological motives and personal reasons for the radical correction of views, but even the “technical methods” for solving this kind of problem are essentially the same for Friedman in different situations. In other words, having carefully studied the background of one change, it is easier to understand the other...

Let’s emphasize that we are talking about the affairs and biography of a person who served almost his entire life in highly secret state institutions. Therefore, to compare with the seemingly open Bacon-Shakespearean line of his life, it’s logical to choose one of the secret state stories, that is not only well documented, but also has been most fully declassified by now.

With such premises, the most suitable line for accurate comparisons seems to be the famous story of the Japanese defeat of the U.S. Pacific Fleet at the Hawaiian naval base at Pearl Harbor.

This particular plot is extremely important for many reasons. Not only because William F. Friedman had a very direct personal connection to this story on the day of the disaster on December 7, 1941, and then repeatedly returned to it in official documents and reports over the next decade and a half. And in the end he changed his position to the diametrically opposite.

But also for the reason that the events of Pearl Harbor, along with 9/11, that is, the terrorist attacks of September 11, 2001, are considered the two main shocks for the American people in the history of the last century. That is why these two catastrophes, on the one hand, are considered the most deeply and comprehensively studied by both professional historians and enthusiastic analysts. On the other hand — or precisely because of it — both of these events still continue to cause very heated debates and seriously justified objections to the officially approved versions of history.

Thus, the key episode, which completely refutes the official history of 9/11, is the inexplicable self-destruction of WTC7<sup>92</sup>, the third skyscraper in Manhattan, which the plane with the terrorists did not reach. Moreover, it's especially important that leading news agencies such as the American CNN and the British BBC had repeatedly reported about the fall of the third skyscraper even before it actually and in just a few seconds suddenly collapsed, completely ruining to the ground. Since such amazing facts can be explained only by one thing — the deliberate and pre-prepared demolition of the building — it's clear what happened next with that absolutely authentic episode. It was simply cut out of the history of 9/11...

In the story of the Pearl Harbor disaster, there is a similar episode, also absolutely reliably documented, but at the same time persistently cut out from the official version of events up to this day.

The essence of the episode comes down to the unprecedentedly close relationship between U.S. and British intelligence services by December 1941. This extremely close and, in its details, highly se-

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<sup>92</sup> <https://kiwiarxiv.wordpress.com/tag/wtc7/>

cret cooperation between the espionage services of two different states has been stably maintained, as is known, right up to the present day.

The very peculiar beginning of this alliance dates back to 1940, when the state structures of the neutral U.S. didn't yet have any separate agency engaged in intelligence activities. Therefore, the British, who had already fought with Hitler, actually created such an organization for the Americans, which later became known as the CIA. To be more precise, they convinced President Roosevelt that it was the most effective way to a secret military-political convergence between the United States and Great Britain in the fight against Nazi Germany.

In general, that story is now known and has not been a secret for a long time. But there is a very remarkable cryptographic aspect of British-American intelligence cooperation in 1940-41s. This aspect is usually hushed up but it's precisely what should be considered especially carefully.

Because truly amazing things are hidden in the details of it. There are documents indicating that in December 1941, British intelligence services, with the help of American cryptologists, definitely knew about the impending Japanese attack. Moreover, they knew about that not only in advance, but also significantly more than what was known to the command of the American Armed Forces in the Pacific from their own cryptanalysts.

There is probably no need to explain that these facts provide a significantly different picture of the Pearl Harbor disaster. And what is especially noteworthy is that there is documented evidence of these facts, in particular, both personally from William F. Friedman and from his wife Elizebeth Smith Friedman...

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On Sunday, December 7, 1941, the people of the United States were shocked by radio news of a "totally unexpected" Japanese attack on a U.S. military base in Hawaii. William Friedman's first

reaction to the news of heavy military losses was deep despair and misunderstanding of what happened. Very few people in Washington knew better than him that the attack could not be unexpected by the United States in any way.

This is how the wife of the chief army cryptologist remembered that tragic day:

*Friedman himself, hearing the news of the Pearl Harbor attack on the radio, at first found it difficult to believe. For some while, his wife recalls, he could do no more than pace back and forth across the room, muttering to himself over and over again: 'But they knew, they knew, they knew.'*

Historians have known about this episode from the private life of secret state cryptanalysts for a very long time, since the 1970s, thanks to the book of the English biographer Ronald Clark<sup>93</sup>, who personally communicated with Elizebeth Friedman. However, she didn't tell him everything about that day. In documents from the secret archives of the NSA, disclosed much later, in 2015, another important episode from the life of the Friedmans in the same hours, especially memorable for them, can be found.

The fragment quoted below is taken from an interview with Elizebeth Friedman, which she gave in January 1976 to the official historian of the NSA<sup>94</sup>, and it's about a friend of their family, the Englishman Captain Edward Hastings.

*The British:*

*Captain Hastings, a retired Royal Navy officer, was the main British Comint representative in Washington. She [Mrs Friedman] believes that he was an official of GC&CS.*

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<sup>93</sup> Ronald Clark. *The Man Who Broke Purple*. New York: Little, Brown, 1977 (Digital Edition: Bloomsbury Reader 2011)

<sup>94</sup> A declassified NSA report: E.S. Friedman interview with R. Louis Benson (January 9, 1976, Washington DC). Obtained under the FOIA from NSA, October 2015.

*Mrs Friedman said that one of the most vivid recollections of her life concerns Captain Hastings. On the afternoon of 7 Dec 1941, soon after the attack on Pearl Harbor was announced, Captain Hastings came to the Friedman's house in Washington. He sat down and proceeded to "laugh and laugh" about the Pearl Harbor attack.*

*Mrs Friedman was shocked and offended and never understood his behavior on this occasion. Apparently Hastings found the surprise element of the attack amusing. Nevertheless their friendship continued.*

Of course, there was an explanation for such a strange, at first glance, episode. But in order to understand the reason for Friedman's simultaneous despair and the joy of his friend Hastings, it's necessary to clarify at least three important points.

Firstly, it's necessary to clarify the specific condition of spies who are constantly busy breaking codes and reading other people's secrets, which Friedman himself later began to call "cryptological schizophrenia."

Secondly, it should be clarified who the Englishman Eddie Hastings was and what exactly he did during his long and secret business trip to the USA in 1941. Along the way, it will become clearer why his business trip officially began in 1942. And why it's almost impossible to find information about the activities of this "official representative of British intelligence" on the Internet.

Thirdly, all the events of 1941 in William Friedman's life are a clear demonstration of how significantly the process of rapprochement between the U.S. and British intelligence services affected him personally. Not only his mental health, but also the subsequent career of America's most famous cryptographer.

**(1) Cryptological schizophrenia.** This term was put into use by intelligence agencies personally by William Friedman<sup>95</sup> and in

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<sup>95</sup> William F Friedman, "Second Period, Communications Security" (History of Cryptology, Marine Corps Lecture Series) NSA Friedman Collection, Document

short means a kind of mental disorder that steadily develops in certain situations among those who decipher and use other people's secret correspondence. Critical situations are inevitable when, to ensure one's own safety, actions are required that somehow reveal the main secret — the knowledge of other people's secrets by breaking codes.

Preemptive actions reveal to the enemy the fact that communications have been compromised and force him to change the codes, which means the loss of a valuable source of information. There are many examples in history when, in order to maintain access to other people's secrets, they chose inaction, sacrificing their own safety and justifying this by the fact that for the sake of a big victory, some inevitable losses are also acceptable.

In his post-war lectures on the history of cryptology, William Friedman, as far as we know, didn't mention Pearl Harbor as the clearest example of cryptological schizophrenia. However, it's documented<sup>96</sup>, from declassified NSA files that he personally and his colleagues cryptanalysts who successfully read secret Japanese correspondence knew very definitely on the day before Pearl Harbor that Japan intended to launch a military strike in the coming days. British intelligence knew it clearly too. Who didn't have this important knowledge was the command of the U.S. Armed Forces forces in the Pacific.

**(2) The mission of Captain Hastings.** The previously strictly classified history of cooperation between the crypto intelligence services of the United States and Great Britain began to clear up only in 1990-2000s. From documents gradually revealed half a century after the war, it became known that, according to a secret agreement between Churchill and Roosevelt, active preparations by the intelligence services for the exchange of code-breaking technologies and decrypted intelligence information began in autumn,

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A63403, 1952-1959.

<sup>96</sup> John Hurt. "The Japanese Problem in the Signal Intelligence Service." NSA William F. Friedman Collection, Document A58132.

1940, when Roosevelt won the presidential election, securing his third consecutive term in the White House.

More specifically, it was decided that the British would share with the United States their most important state secret called “Operation Ultra,” that is, the methods already mastered at that time for breaking Enigma, the main German cipher machine. The Americans, for their part, would share their “Magic” with Britain, including such a new achievement as the technique of breaking the main cipher system of the Japanese Foreign Ministry, codenamed Purple.

In parallel with the large technical exchange, a constant exchange of intelligence reports on the most important information obtained through decryption was soon organized. Edward Hastings was appointed to ensure that information exchange. In spring 1941, he became the first and extremely secret representative of the British cryptographic intelligence service GC&CS in Washington, and a few years later — deputy director of GC&CS, responsible for cooperation with foreign partners.

As for William F. Friedman, he, as the head of the Army code-breaking intelligence service SIS, in early 1941 was supposed to lead the very first trip of the American cryptologists delegation to Britain. He was supposed, but he couldn’t...

**(3) Series of big troubles.** Before the trip to England, it was expected that Friedman would be given the next and more appropriate military rank of colonel, matching the delegation leader status. But everything went absolutely other way. Instead of receiving colonel’s shoulder straps and a very responsible business trip, in January 1941, William Friedman, with symptoms of a severe nervous breakdown, found himself as a patient in the psycho-neurological department of a military hospital, where he spent the next three months for treatment until the end of March.

Almost all official biographies of Friedman now report that the cause of that nervous breakdown was the severe overexertion of the cryptologist’s strength, which he expended on breaking the Ja-

panese Purple cipher. But both declassified NSA documents and the memoirs of direct participants in that project clearly indicate otherwise.

They show that in fact, both the analytical reconstruction of the cipher machine scheme and the search for methods for breaking it were carried out by Friedman's subordinates. And Friedman himself, as the head of the special service, provided only general administrative management of the project, being busy with "other things."<sup>97,98</sup>

On the other hand, as the head of SIS, who in autumn, 1940 received orders to prepare all their major crypto achievements for transmission to British intelligence, William Friedman was well aware that due to the secret geopolitical games of the top leadership, he was in an extremely dangerous situation. He found himself in the wrong place at the wrong time...

According to the results of a public opinion poll, in 1940 the absolute majority, about 80% of the adult population of the United States, spoke in favor of neutrality and non-participation of their country in the great war that was already going on in Europe<sup>99</sup>. It's therefore clear that one of the main points in Roosevelt's promises to voters, thanks to which he became president for the third time, was the obligation not to send young Americans to the battlefield of another war.

And since U.S. neutrality laws prohibited military cooperation with one of the warring parties, Friedman couldn't be unaware that he received such an order, the execution of which would compromise the country's national security and accordingly, would make him a state criminal. In such a situation, it's clear that the closer the day of departure of the top-secret delegation to Britain became, the

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<sup>97</sup> Frank B. Rowlett. *The Story of Magic: Memoirs of an American Cryptologic Pioneer*. Laguna Hills: Aegean Park Press, 1998

<sup>98</sup> John F. Dooley. *History of Cryptography and Cryptanalysis. Codes, Ciphers, and Their Algorithms*. Springer International, 2018

<sup>99</sup> William Boyd. *The secret persuaders*. *The Guardian*, 19 Aug 2006

more Friedman's nervous tension grew, and at some point his psyche simply couldn't stand it...

This kind of explanation of the reasons for what happened to the cryptographer is, of course, only a probable assumption. But although there is no documentary evidence in this regard, this explanation, at least, doesn't contradict known historical facts. Unlike the official, but fact-refuted, version about "overwork from breaking Purple."

The most important thing is that three months in the hospital turned out to be only the beginning of big problems for Friedman. Although doctors determined him to be fit to return to duty, just a few weeks later, in April 1941, the cryptographer suffered another "medical" blow. Lieutenant Colonel Friedman received a notice from the personnel department informing him that due to poor health he had been dismissed from the Armed Forces.

In other words, instead of being awarded another military rank and a well-deserved reward for the enormous deciphering success of his unit, William Friedman was not only removed from his leadership position, but his entire military career was completely terminated. It's not clear on whose initiative, but it was done rudely and hastily, with obvious violations of the procedures established for the dismissal of officers due to illness.

Naturally, the deeply hurt Friedman tried to object and seek justice in the offices of his superiors. But everywhere he came across silence about the reasons for what happened, as well as insincere explanations about concern for his health and the benefits of his new position.

Because the military leadership willingly retained the outstanding cryptographer in the secret intelligence service, only now as a civilian consultant working under a contract — for the honorary position of "chief cryptanalyst," completely freed from the administrative functions of the head of SIS.

Having lost the prospects for career growth and a decent military pension, Friedman tried to improve his financial situation in a somewhat different way. The SIGABA cipher machine, which he and Frank Rowlett designed in the 1930s, was based on several important cryptographic ideas, which the authors decided to patent in order to have their share in the undisputed success of the most powerful communications security device in the United States. However, many complex legal problems immediately arose around these highly secret inventions, so that patents were completely impossible to obtain.

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There is quite clear written evidence from Friedman himself that he obviously understood the unpronounceable reasons that blocked his career growth and military career in general. It's more convenient to quote him at the very end of the story, but here, to make it clear that these reasons weren't a secret to others, we quote another knowledgeable radio intelligence officer, who was, however, away from the U.S. military hierarchy.

One of the heads of the British radio interception service, Commander Humphrey Robert Sandwith, as part of Allied intelligence cooperation, worked in 1942 with cryptanalysts of OP-20-G, the codebreaking unit of the U.S. Navy. As a result of his business trip, he compiled a report, on the pages of which modern historians find evidence that is described as follows<sup>100</sup>:

*There were also some basic cultural differences between Op-20-G's traditionally hierarchical military structure and Arlington Hall's more freewheeling, civilian-heavy organization, not helped by what one visiting British naval officer astutely and correctly diagnosed as an ugly strain of anti-Semitism that was a serious source of friction at times.*

*When Commander Sandwith, the Royal Navy's intercept specialist, visited OP-20-G in spring 1942 he observed that*

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<sup>100</sup> Stephen Budiansky. *Battle of Wits: The Complete Story of Codebreaking in World War II*. New York: Free Press, 2000

*“the dislike of Jews prevalent in the U.S. Navy is a factor to be considered” in the difficult relations between the two code breaking bureaus, “as nearly all the leading Army cryptographers are Jews.”*

There is enough evidence in modern research literature that anti-Semitism at that time was firmly rooted in the highest military hierarchy of not only the Navy, but also the U.S. Army. Therefore, it should be explained how it happened that in 1942 “almost all the leading cryptographers in the U.S. Army were Jews.”

The Army’s SIS (Signal Intelligence Service) codebreaking unit was literally the brainchild of William Friedman. In 1930, he not only became the first head of the new structure, but also found brainy employees for it among young mathematicians and trained them himself. Three of his earliest students — Frank Rowlett, Abraham Sinkov, and Solomon Kullback — later became leading cryptanalysts in the U.S. Army.

In other words, if we count together with Friedman, then in the war years of the 1940s almost three-quarters of the smartest brains in the army codebreaking service were Jews. But even in the post-war period, when they all became famous veterans and the pride of the already centralized NSA intelligence service, occupying seemingly solid positions there, none of them rose to the rank of general.

Detailed investigations into how and why it happened, taking into account the very powerful secret societies among the highest elite of the United States, such as the Masonic Lodge in Washington<sup>101</sup> or Skull & Bones at Yale<sup>102</sup>, where the so-called W.A.S.P. — “White Anglo-Saxon Protestants” — have always and absolutely dominated, would take our story too far away from the main topic. Therefore, let’s return to the events of 1941, which caused a sharp turn in the biography of William Friedman.

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<sup>101</sup> “The Pages of J. Edgar Hoover’s Life” (rus.)  
<https://kiwibyrd.org/2013/07/07/403/>

<sup>102</sup> “Crossroads and Parallels of History” (rus.)  
<https://kiwibyrd.org/2014/01/26/36/>

It's quite possible to say that the tragic events of Pearl Harbor not only instantly and radically changed the mood of the American nation from neutral-peace-loving to militant-aggressive and thirsty for revenge. But, regarding Friedman specifically, they also played, although indirectly, a very significant role for the success of his future career in the intelligence community.

Unlike a number of other colleagues, it must be emphasized, whose military career clearly and quickly went downhill due to a firm position on Pearl Harbor.

### #

The total defeat of ships and aviation at the Hawaiian base, which demonstrated the absolute unpreparedness of the U.S. armed forces for enemy attacks, raised many questions for the military and political management of the country. Therefore, a series of high commissions and investigations soon followed, continuing with varying intensity until 1946 and trying to find the reasons for what happened and strictly punish the causers.

Both the very first commission in December 1941 and all subsequent investigations tried to present the highest Pacific military leadership — fleet commander-in-chief Admiral Kimmel and Hawaii military base commander General Short — as the main culprits of the disaster. But the more details each subsequent commission learned about the decryption successes of American intelligence just before Pearl Harbor, the less obvious the guilt of the Pacific command in Hawaii became. And the more mistakes, inexplicable delivery delays and even the loss of vital intelligence information were discovered in the actions of the top military authorities in Washington.

At the same time, several prominent officials in the intelligence and deciphering structures of both the U.S. Army and the U.S. Navy very firmly insisted in their testimony that many signals about an imminent and inevitable military attack by Japan were not only identified several days before the disaster, but also transmitted by them in a good time to higher authorities.

In particular, on the part of the Navy, the chief of cryptanalysts of OP-20-G, Captain L. E. Safford insisted on this, and on the part of the Army the same was asserted by the chief of the Operations Branch, responsible for the distribution of decrypted information, Colonel Otis K. Sadtler. Since their testimony portrayed the military high command in an extremely unsavory light, both principled officers soon lost their official posts. There were no obvious repressions, but their career growth ended there.

William Friedman, who not only observed the fate of his colleagues, but also gave evidence himself as the Army's chief cryptanalyst, chose a significantly different policy. He was extremely masterful in expressing his position in such ambiguous terms that it suited both dissenting parties. Safford and Sadtler heard in his words a gentle confirmation of their strong statements. And for the commissions loyal to the top leadership, the same words sounded like an expert's admission that there were no clear indications of the exact location and date of the Japanese attack in the deciphered communications.

But throughout the war, all these investigations were strictly secret, and their results, accordingly, were practically unknown to the general public. When, after the unexpected death of Roosevelt in 1945, Harry Truman became president, having absolutely no participation in the U.S. spy geopolitical games of 1941, immediately after the victory over Germany and Japan, he allowed the first open proceedings on Pearl Harbor to be held in Congress. Then the public first became aware of the great decryption successes of intelligence, the real scale of which, however, was very carefully hidden for many years afterwards.

William Friedman was also invited to testify before Congress. The top military governance liked his thoughtful speech there so much that very soon, in 1946, Friedman's career progress noticeably improved.

First, he received a polite invitation from the personnel department to return to military service — the invitation was readily accepted by him, and no objections arose from the doctors. Around the same

time, there were also positive changes in legal matters related, if not to the registration of patents for SIGABA inventions, then at least to the receiving of appropriate monetary compensation.

Along with these military affairs, curious changes began to occur regarding the Bacon-Shakespearean problem, which is especially noteworthy for our story. And even for Friedman himself, these changes were completely unexpected.

For example, in 1947, against the background of greatly increasing secrecy around the deciphering activities of the intelligence services, Friedman was forced to refuse all enthusiasts of literary research who managed to get his mailing address and asked in letters for expert comments on the issues of Baconian ciphers in Shakespearean texts:

*In a letter to Samuel B. Haskell dated 28 July 1947, William indicated that he did not wish to answer any more questions about the Bacon authorship. He said, "My position in the War Department makes commenting on cryptography problematic."*<sup>103</sup>

However, the very next year, 1948, at the invitation of, we emphasize, the well-known Folger Library, Friedman suddenly received permission to give a public lecture "On the Shakespeare-Bacon Ciphers" (it makes sense to remember the title of the lecture). Soon after that, by the way, for reasons unclear to historians, he fell into deep depression and, with signs of a nervous disorder, again found himself treated in a psychoneurological hospital.

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Neither in the personal archives of the Friedmans, nor in any research literature can one find documents or evidence that clarify the background of the distinct correlation observed in William Friedman's speeches on the topic of Pearl Harbor and on the issue of Bacon-Shakespearean authorship.

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<sup>103</sup> R.M. Sheldon. William F. Friedman: "A Very Private Cryptographer and His Collection." NSA Cryptologic Quarterly, Issue 2015-01, Volume 34

But since this correlation can be seen not only in the synchronicity of Friedman's speeches and publications, but even in similar methods of argumentation, one of the most striking examples of the kind should be considered here in a little more detail.

A particularly remarkable coincidence occurred in 1957, when two large and seemingly significantly different works by Friedman appeared, one on the Pearl Harbor disaster and the other on Shakespearean texts. But if you delve into the essence of these two different analytical works, you find that both works are focused on the same thing.

The first is to disprove the dead Admiral's ideas about President Roosevelt and the top military leaders of the U.S. Army and U.S. Navy as the main culprits of the Pearl Harbor disaster. And the second work is to refute the dead General's ideas about Bacon as the author of Shakespeare's works.

Since the second work is the known manuscript of the Friedmans, which previously won the Folger Shakespeare Library prize, and in 1957 was revised and published in book form by the Cambridge Publishing House<sup>104</sup>, it's necessary to talk more detailed about the first work.

This text, a large article by Friedman, written at the request of the NSA bosses, has a rather unusual title for official documents "Certain Aspects of 'Magic' in the Cryptological Background of the Various Official Investigations into the Attack on Pearl Harbor."<sup>105</sup>

Those days, even in government structures, not to mention the general public, very few people knew what the code word Magic meant. But since the work was initially intended to be secret and for distribution in circles of respectable government people with access to state secrets, Friedman decided to take some liberties.

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<sup>104</sup> Friedman, William F. & Elizebeth S. *The Shakespearean Ciphers Examined*. Cambridge: Cambridge University Press, 1957

<sup>105</sup> Friedman, William F. Certain Aspects of "Magic" in the Cryptological Background of the Various Official Investigations into the Attack on Pearl Harbor. NSA William F. Friedman Collection, Document A485355.

Although the title of the article talks about official research into the disaster, it's quite obvious to historians that all the arguments in this work are designed to refute the conclusions of unofficial investigations — from the so-called “history revisionists.” And the most important of these revisionist attacks on the official position of the state, which completely removed any responsibility from the top military-political leadership of the United States, was undoubtedly the book by Admiral Robert Theobald *The Final Secret of Pearl Harbor. The Washington contribution to the Japanese attack*, published in 1954<sup>106</sup>...

In this work, Vice Admiral Theobald, who during the Japanese attack on Pearl Harbor commanded one of the squadrons that suffered a sudden attack, stated soldierlike directly and without any ambiguity that President Roosevelt, Chief of Staff of the Army George Marshall and Chief of Naval Operations Harold Stark were directly responsible for the defeat of the U.S. Pacific Fleet at Pearl Harbor.

Quoting the admiral literally, “There would have been no Pearl Harbor attack if MAGIC had been made available to the Hawaiian commanders,” and it was Roosevelt who ordered Marshall and Stark to hold back the deciphered information from secret Japanese correspondence. It was done so that an unexpected and crushing blow from Germany’s allies would force the neutral United States to enter the world war on the side of Britain and the anti-Hitler coalition as a whole. Roosevelt strived for this in every possible way, but the Congress, which was dominated by pro-German and anti-Soviet spirits, actively resisted...

Theobald’s most serious accusations were based, very importantly, not on his personal speculations and muddy rumors, but on documentary facts from declassified materials of several official investigations. That is why no lawsuits were filed against the obstinate admiral, who discredited the honor and dignity of the highest people of the country (because in such legal proceedings, even more

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<sup>106</sup> Robert A. Theobald. *The Final Secret of Pearl Harbor. The Washington contribution to the Japanese Attack*. New York: The Devin-Adair Company, 1954.

inconvenient and compromising information usually comes to light).

Instead of legal action, the NSA management instructed its chief Magic specialist to prepare — far from cost-free — a solid and convincing “refutation” in response to all the admiral’s accusations. Conveniently, Robert Theobald died in May 1957 and, with his declassified documents, could no longer fend off authoritative counter-arguments.

The detailed, sometimes deft, sometimes truly convincing argumentation in Friedman’s article is based on the same, but now especially carefully edited, statements from his previous testimony, which the authorities liked so much. The point is that among all the decrypted materials from Japan, there wasn’t a single message that explicitly said where and when exactly the United States would be attacked. Which means that the country’s top management, who read the decryptions, could neither know nor warn the fleet in Hawaii about the impending attack...

Knowing for sure about the state of mind and thoughts of William Friedman on the day of the Pearl Harbor disaster (“they knew, they knew!”) from this cryptographer’s article, written a decade and a half later, at least three things are quite clear. He changed his position to the opposite, clearly understanding what the high authorities wanted from him. In order to please his superiors, he used any techniques in argumentation, including distortions and omissions that are equivalent to lies. And at the same time, he knew for sure that his main conversant opponent, Admiral Theobald, wouldn’t be able to object to him just for physical reasons.

Turning to another work, the Friedmans’ books on Bacon-Shakespearean ciphers, there is no way to state that we reliably know the state of mind and thoughts of William Friedman in those early years when he and his wife were working on ciphers in ancient books. But since before World War II they definitely didn’t make a single statement denying the fact of the existence of secret ciphers, it’s logical to assume that here the cryptographer’s position also changed to the exact opposite.

We don't know who the "high authorities" were that William Friedman was trying to please in his new Shakespearean analyzes. But in the argumentation of this work, distortions of some facts and omissions of others, equivalent to lies, are also easily revealed. Moreover, this work, which completely rejects the conclusions of the book from the authoritative cryptographer Cartier, was started by the Friedmans immediately after the French General died.

A particularly interesting "intersection of topics" in the identified parallelisms can be found in the text of the "Preface" to the Friedmans' book *The Shakespearean Ciphers Examined*. Among the numerous gratitudes of the authors, generally accepted for prefaces, there is such a paragraph entirely dedicated to the management of the Francis Bacon Society in London:

*To Mr Frank Woodward, Jr, former Chairman, Cmdr Martin Pares, Chairman, and Captain William W. Aspden, Secretary, of the Bacon Society of England, we are especially grateful for their courtesy to Colonel Friedman when in 1953 and 1954 he visited Canonbury Tower, headquarters of the society.*<sup>107</sup>

The shtick of this gratitude is that the Bacon Society has never been a military or paramilitary organization. Therefore, a listing of the military ranks of its management needed here only in order to call their guest "Colonel Friedman."

In fact, Friedman had never been a colonel. Neither in 1953-54s, when he had already finally completed his difficult service in the pre-war ranks of lieutenant colonel, nor in 1957, when, judging by the quote, he still retained hope of achieving the desired rank of colonel from the army bureaucrats, albeit a "tombstone" one.

(United States Armed Forces at that time practiced such form of encouragement — assigning a rank higher than normal to a retiring officer. With specific army humor, those naval captains, for exam-

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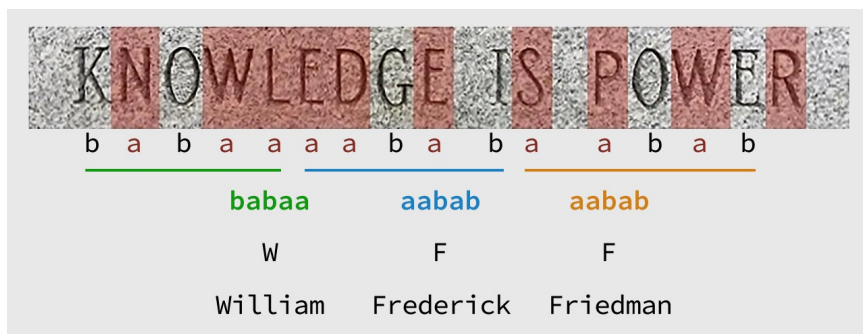
<sup>107</sup> Friedman, William F. & Elizebeth S., *The Shakespearean Ciphers Examined*. Cambridge: Cambridge University Press, 1957

ple, who were awarded promotion upon retirement, were called “tombstone admirals.”)

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A remarkable and non-trivial combination of three such different themes — Bacon’s ciphers, military ranks and a tombstone — was once again very clearly and this time “carved forever” in the biography of William Friedman 12 years later, in 1969. That is, the year when the “father of American cryptology” died.

At the top of the tombstone under which he is buried at military Arlington National Cemetery is written “William F. Friedman / Lieutenant Colonel / 1891–1969.” And in the lower part is engraved the famous motto of Francis Bacon “Knowledge is Power,” in the letters of which the cryptographer’s initials “W F F” are built in with help of Bacon’s bilateral cipher...



What does this fact mean? Both of Friedman’s significant works of 1957 absolutely and unquestionably supported the official versions of history — Pearl Harbor was an unexpected blow for the United States; Shakespeare was the author of Shakespeare’s works. But the cryptogram on Friedman’s grave twice points to Bacon, without any reference to Shakespeare.

Comparing these things, it’s easy to guess that the “father of cryptology” at the end of his life decided to change his position radically again. He did it silently, but quite clearly. Do historians know

the reasons and circumstances in Friedman's life that influenced such changes? Yes, they are absolutely reliably known.

Having published two significant works in 1957 that were absolutely loyal to official authorities, Friedman had every reason to hope that the authorities, for their part, would pay attention to his modest demands. But instead, from the authorities he received only severe reprimands and blows that were very painful for him.

The NSA and CIA management began to perceive the excessive publicity of the famous cryptographer in the field of Shakespearean studies as a risk of compromise. Therefore, to begin with, he was completely removed from participation in that operation to weaken European cipher machines, the fast success of which was ensured by Friedman personally.

And soon, in 1958, a very unpleasant incident occurred with the confiscation of the personal cryptographic collection that Friedman had been assembling all his life. To put it more accurately, the collection wasn't completely confiscated, but taken to the NSA for a while. In order for censor specialists to evaluate the level of secrecy of each of the documents and objects in the collection, and if things fraught with the disclosure of state secrets are identified, they are seized and moved to the Agency's secret storage facility.

It's clear that as a result of such showdowns, the relationship between Friedman and the NSA management throughout the 1960s wasn't very good, to put it mildly. There was even a period when a veteran cryptographer, feeling he was being watched, hired a private detective to clear the house of possible "bugs."

In 1969, just a few months before his death, Friedman for the first time seemed to dare to speak openly about the intricate results of his half-century service on the invisible fronts of national security. It was formulated so (quoting the biographical book of Ronald Clark<sup>108</sup>):

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<sup>108</sup> Ronald Clark. *The Man Who Broke Purple*. New York: Little, Brown, 1977 (Digital Edition: Bloomsbury Reader 2011)

*Eventually William Friedman suspected that, despite outward appearances, official Washington's attitude to the Jews was different only in degree, rather than in kind, from that of the Russian governors of Moldavia. Although it is difficult to substantiate, Jewish ancestry may well have been a handicap in government employment between the two world wars.*

*Certainly Friedman felt this so strongly that only two months before he died, he wrote to a friend asking:*

*'By the way, will you contribute to the Foundation to the Presidency of which I have just elected myself — a Foundation seeking five billion dollars (US) for the five thousand years of oppression to which thousands of my ancestors and myself were subjected by the enlightened non-Jews of all the countries of all the continents of the world?'*

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The *Shakespeare Quarterly* magazine, published under the patronage of the Folger Shakespeare Library, was established in 1950, just between the creation of the CIA in 1947 and the NSA in 1952. For more than 70 years of existence, this magazine has never had and doesn't have any problems with the Jewish theme. This applies to both a comprehensive discussion of it in the Shakespeare's works and the choice of Jewish authors for publication.

But Shakespeare Quarterly has another distinct problem, or rather, a very strict taboo. François Cartier's book *The Problem of Cryptography and History*<sup>109</sup> is never mentioned there. And the very name of French General and cryptographer, who has repeatedly and competently written about the role of ciphers in the Bacon-Shakespearean issue both before and after the publication of his book, is also completely ignored.

As a visual analogy, we can say that Cartier's book is for Shakespearean studies about the same as the announced in advance "the

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<sup>109</sup> François Cartier, *Un problème de Cryptographie et d'Histoire*. Paris: Editions du Mercure de France, 1938

unexpected self-destruction of WTC7 by fire” for the official history of 9/11. In other words, if we accept the truth in these reliable facts, then everything else turns out to be a lie.

Online search facilities<sup>110</sup> for the magazine publications provide clear and distinct evidence of this remarkable situation. The names of Shakespearean cryptographers mentioned above, such as Fredson Bowers, Charlton Hinman, Giles Dawson, Ray Hummel, appear on the pages of the magazine many dozens and even hundreds of times. The cryptographer spouses Friedmans are also repeatedly mentioned; there are even their own publications and reviews. But the name of cryptographer General François Cartier isn’t mentioned at all, not even once in the entire 70 years of the publication’s history.

The intricate way in which this taboo on Cartier, practiced by modern Shakespeare studies, affects the publications of reputable scientists and the content of online libraries will be discussed a little later. Now we move on to translations of fragments from such an inconvenient, and therefore seemingly forgotten book by the cryptographer Cartier.

And what’s also interesting is that in Bacon’s secret autobiography, published by the French general, parallels with the post-war biography of William F. Friedman are easily discovered — in everything related to attempts to please the wayward supreme authorities...

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<sup>110</sup> <https://academic.oup.com/sq>

*(translation fragments, pp. 282-292 of Cartier's book)*

## APPLICATION: NOTES

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Many readers have asked me to indicate the accordance between the chapters of Francis Bacon's autobiographical book and the works they were extracted from.

I present below these accordances in the form they were given to me by Colonel Fabyan.

First come the names of the books, and then for each of them a specific edition. Such information is also very important, since we find encrypted fragments relating to the autobiography only in the indicated issues published during the time of Francis Bacon or immediately after his death.

### Francis Bacon:

1. A Declaration of the Treasons of Essex, 1601
2. Advancement of Learning, 1605
3. Novum Organum, 1620
4. The Parasceve, 1620
5. History of Henry the Seventh, 1622
6. Historia Ventorum, 1622
7. Historia Vitæ et Mortis, 1623
8. De Augmentis Scientiarum, 1623
9. Idem, 1624
10. The Essays, 1625
11. New Atlantis, 1635
12. Natural History, 1635

### Timothy Bright:

13. A Treatise of Melancholy (2 editions), 1586

**Robert Burton:**

14. The Anatomy of Melancholy, 1628

**Robert Greene:**

15. The Mirror of Modesty, 1584
16. Planetomachia, 1585
17. Euphues, 1587
18. Morando, 1587
19. Perimeds, 1588
20. Pandisto, 1588
21. The Spanish Masquerade (2 editions), 1589

**Ben Jonson:**

22. The Folio, 1616

**Georges Peele:**

23. The Arraignment of Paris, 1584

**William Shakespeare:**

24. Midsummer Night's Dream Quarto, 1600
25. Much Ado about Nothing, 1600
26. Sir John Oldcastle, 1600
27. Merchant of Venice, 1600
28. London Prodigal, 1605
29. King Lear, 1608
30. Richard the Second, 1615
31. The Whole Contention, 1619
32. Pericles, 1619
33. Romeo and Juliet (без даты)
34. The First Folio, 1623

**Edmond Spenser:**

35. The Shepheardes Calender, 1579
36. Idem, 1611

- 37. Complaints, 1590-1591
- 38. Colin Clout,
- 39. Fairy Queen, 1596
- 40. Idem, 1613

In the next section, devoted to specific chapters of the autobiography, the numbers that accompany each of the indicated works are the page numbers containing the encrypted fragments. But the listing is not in the same order in which these fragments of work appear in the encrypted document.

I am ready to provide more detailed information to those readers who wish it. Here it seemed to me unnecessary to expand this listing with details of secondary interest. Those books marked with an asterisk are the works that present the longest parts of each accompanying chapter.

Placing numerous fragments in their appropriate places in each of the chapters was itself a kind of puzzle. Its solution was entrusted to a qualified expert who didn't take part in the cryptographic decryption work. It was then carefully checked before being finally presented as an autobiography in the form we published it.

*[Further, to make it compact, only information about the first two chapters is given. The sources of the remaining chapters of the autobiography are discussed in the next chapter.]*

## Chapter I

- Novum Organum, 9, 23-24, 35, 66, 79-80, 188.
- The Parasceve, 8-9, 11-13.
- \* History of Henry the Seventh, 46-59, 62-102.
- Historia Vitæ et Mortis, 48-58.
- \* De Augmentis Scientiarum, 124-156, 169-171.
- New Atlantis, 9-10.
- \* The Mirror of Modesty, 21-41.
- The Folio. Ben Jonson, 470-471.
- Sir John Oldcastle, 51-58.
- The whole Contention, 39-42.

## Chapter II

- \* Advancement of Learning, 42-48, 51-53.  
Novum Organum, 284.
- \* New Atlantis, 10-19.
- \* Natural History, 106-108, 260-264.  
A Treatise of Melancholy, 65-69.
- \* Planetomachia, 6-8.  
Midsummer Night's Dream, 34-61.  
Merchant of Venice, 181-181.  
Richard the Second, 60-63.  
Romeo and Juliet, 9-11, 20-23, 37-49.  
The Folio. Shakespeare, 4-20, 225-226.  
The Shepheardes Calender, 1579, 35-43.

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*(pp. 150-157: deciphered texts of the Original)*

## BACON'S LIFE AS HE TELLS IT IN THE BILITERAL CIPHER

### Chapter X

Whilst I write all, I see most clearly not my own folly but my sinful weakness like as it must in the sight of one Divine and Supreme Judge of all creatures appear. In the blindness and confusion, the moment's question loomed up before me and blotted out love, honor, all the joys of the past or dreams of far off fame. That brief duration far outvalued eternity itself.

Saving my own life in this way, is paying much for that I would indeed fain lose; my life no longer seemeth fair, save as I spend the time for others' good. Life to a scholar is but a pawn for mankind.

O Source infinite of light, ere Time in existence was, save in Thy creative plan, all this tragedy unfolded before Thee. A night of Stygian darkness encloseth us. My hope, banished to realms above, taketh its flight through the clear air of the sciences, unto bright

day with Thyself. As Thou didst conceal Thy laws in thick clouds, enfold them in shades of mysterious gloom, Thou didst infuse from Thy spirit a desire to put the day's glad work, the evening's thought, and midnight's meditation, to find out their secret workings.

Only thus can I banish from my thoughts my beloved brother's untimely cutting off and wrongful part in his trial. Oh, had I then one thought of the great change his death would cause, — how life's worth would shrink and this world's little golden sunshine be but as collied night's swift lightning, — this had never come as a hound of the hunt to my idle thoughts.

As it is now, the true meaning of events is lost to me. The heaven's declare God's glory, but the Scripture doth speak nowhere of His will being thus declared. In order to undertake this, our minds must be inclined to his instruction.

No mishap of fate or evil fortune which hath befallen me of late, can make such sad impression on the heart as this unceasing sorrow; and of all joys possible to my future, none is to mine eager spirit so enticing as my earnest hope of meeting Robert in that world of bliss when all earth's sorrows have ended, and of hearing my greatest evil-doing by his word forgiven.

O grant our request, Thou infinitely gracious Father. As our Lord was crucified that we might live, that sin washed in his blood, might be remitted, blot out all our transgressions. Though our sins be as scarlet let them be white as wool. As far as the East is from the West, as height is from depth, so far remove wrong from our minds and all iniquity from our hearts, for with the Lord is mercy, and plenteous redemption.

The wrong turbulent Robert did me to work out a strange, ay, bold design, now is to be forgotten and wiped from the minds recollection.

To know my own part I study, for example, early conditions, or waste oil in turning over the manuscripts of our English crown, her

rights, wrought out with strong emphasis so long, even of bloody war cut short by play of Salic law. At a time when fair Marguerite kept my keener mind in thrall, a wish to be much honored turning my thought one only way, tyrannically, the Salic, so called, law being the iron axle on which succession of our male sex — disinherison of the females — revolved, I did in fine learn said Salic law had like ground as the Common, or more correctly was only transmitted orally.

So, wish or will by a tradition (only so given) worked cunning wrong, nor can the sons whom disinherited women bear, though having fully as good blood, hold the princely rank which heirs to king's sons by the law do hold, so it is truly a query. England hath set up a standard which was secure. Kings have fear when they are engaged on the one, a graver question may rise on the other side.

Our mother although much loving this kingdom and people, loving adulation not in youth only but in age at the flood of dower, when as there arose question of a successor procured an act of Parliament (to prevent mere mention of, not to say argument, remark and interchange of men's opinions in regard of, the succession) to be passed, making it unlawful to speak upon this matter.

Whoever supposed therein was a true story of secrets of great moment, kept silence, inasmuch as a cloud threatening danger of the law was ever upon them. The few that knew these inner, cruel stings, these questions concerning justice, expediency, as well as permanency of measures so unfathomable in respect of the motives, never allowed hope of our crown to die, but themselves were taken from things of time before Elizabeth's reign drew to tragical close.

A like accidental death took the earl, so that none, in whom nature could, so to speak, prompt his stammering tongue, was left to plead my cause. Also papers long guarded with care (which were at that distant day evidence of most or chief test weight, such testimony as one could procure sworn in the presence of the reputable witness aforesaid, a physician to the queen) being stolen by the emissary

and base hireling of one who hated both sons, were destroyed in the presence royal.

I lost my last available proof or testimony therein, and no further means of establishing my just title in the English crown remained save to change in a great measure the determination my most unnatural mother showed to bar me, for all my days, from succession in the crown. As baffled mariners put to port under a heavy storm of wind, so beaten to and fro by these tumults and perils my ship was driven to idle harbor.

The renewed maidenlike pretense made me known the intent held by this vain-minded, self-loving woman. Daily a son with proud humor mirrored her best graces, but she never moved to retract a single wrathful oath or yield a word of approval, be my deserving whatsoever and whensoever it might. This continued estrangement wore on or increased. At last she fell into a melancholia so profound none could rouse her. This was more unfortunate for me than a most marked resolve such as I speake of, for a whim may oft be removed and banished, but mania is difficult to control.

Yet I am persuaded I had won out, if her anger against the earl, my father — who ventured on matrimony with Dowager Countess of Essex, assured no doubt it would not be declared illegal by my very wary mother — had not outlived softer feelings. For in the presence of several that well knew to whom she referred, when she was ill in mind as in body, and the council asked her to name the king, she replied, “It shall be no rascal’s son.” And when they pressed to know whom, said, “Send to Scotland.”

Her unbending, stern temper, strong in death, set the seal upon my future as on my past life, since her will was the law governing both. My own spirit alone doth attest how potent for good or for ill the dicta of such a woman may be.

She is now gone to that undiscovered country from whose bourne no traveler returns; nor fear nor hope is left me of aught from her hand.

No one in whose spirit is no love of power, will know the nature of the flame in my wild spirit. No fame could hold up brighter temptation than this that hath most often been refused, power, and in transferring my scepter to the king of Scotland, her majesty's intention and wish was to put it where it could not be raught by any outstretched arm.

Some, doubtless, supposed that some spirit of justice was aroused respecting her own right, and believed that it manifested itself very plainly in the choice of Mary's son to succeed her. But I know that her strong oath concerning me, the real heir to the kingdom, had greater weight than all things else.

She was my mother, yet I more than any other have cause to curse her. I answer here a few of the world's accusations. Ay, after insult above your just conceit, I open my hard lips for my first lengthy complaint, uttering here much of the gall and natural wrath my burdened heart has carried many a year.

It burneth as an injury no lapse of time can cure, a ceaseless corrosive which doth eat the heart. The sole relief doth come by making out a complete history of my wrong that doth so embitter my days. Men can eat, sleep, drink, work when the heart is bowed down in pain, yet the joys are gone from their whole lives, and do not return.

Chief of sorrows is a sense of willful wrong on the part of such men or women as have greatest obligation by relationship, and more especially those of nearest and most tender relationship — that of parents to a child. This will never grown inferior, nor even merely equal to the natural ills in life. It doth rather greatly magnify and increase. Why and wherefore I shal not ask, nor marvel at aught of similar nature. The Creator planted this within the bosom of our kind. Who hath so great wisdom or so just judgment of our life, of right or wrong, as our Maker? Who can pronounce His laws at fault? A fool or blind, perchance, not he that sees, nor the man of thought.

The inward motive is noble, only as it cometh from a pure love of the people, without a wrong or selfish thought of my right to rule this kingdom as her supreme governor. But this deathless, inalienable, royal right doth exist. The Supreme Sovereign doth show my right, whilst suffering others to keep the royal power.

Some have won this right by force of battle — of such take in example the first Tudor. If my title were given away too weakly 'twas through wisdom gained in part from the lesson that he thus early acquired, that is, that kingdoms got by conquest may be lost by the same.

Without doubt I should repent employment of such means when it became a necessity to maintain as large an army to hold the power as to win the same. Not being a soldier, though not wholly opposed in my natural temper to arms, I am slightly impatient of fighting to secure a place which by Divine Right pertaineth unto the first born of a sovereign.

I am inclined to knowledge, which is to my mind far more satisfactory than any honors. It hath been ere this very well said: “A soldier’s name doth live but an age, a scholar’s unto eternity.”

#

## Additional Reading

- “Schizo-cryptography” (*rus.*)  
<https://kiwibyrd.org/2015/04/29/1542/>
- About the Masonic Lodge of the Washington political elite: **Pages of Hoover’s life. 1920: Freemason Brothers** (*rus.*)  
<https://kiwibyrd.org/2013/07/07/403/>
- About the influential secret society of Yale Skull & Bones, “an incubator of the U.S. elite”: **Crossroads and parallels of history. Skulls and bones** (*rus.*)  
<https://kiwibyrd.org/2014/01/26/36/>

# Message to the Decipherers

This chapter is about the especially important “final” chapter in Bacon’s ciphertext. Although in fact it is far from the final...



As demonstrated in General Cartier’s book, Francis Bacon’s secret and completely encrypted autobiography was published in a series of relatively short fragments that were discreetly embedded in a large number of printed books by various authors.

If we count together with Bacon himself, then there are at least eight authors, and the total number of books containing encrypted fragments of his autobiography is about four dozen. These books were published over a very long period, actually half a century — from 1584 to 1635.

All these numerous fragments of Bacon’s autobiography, naturally, don’t contain instructions on how to put them together. In other words, the more or less coherent narrative that is collected in François Cartier’s book is entirely the result of the work of textual analysts of the 20<sup>th</sup> century. They carefully lined up and connected the pieces in chronological order, then divided them into 10 numbered chapters and the final part, “To the Decipherer.”

The final part is quite special, since it sounds not only as the summing-up of a bright and at the same time mysterious life, but also as a kind of direct appeal from the 17<sup>th</sup> century author to readers of the future, that is, to us.

#

Before moving on to the final part of Bacon's biography, it's necessary to make an important comment, or more precisely, a warning about an open final.

All decryption materials published in Cartier's book as the texts of Francis Bacon's secret autobiography were received by him from Colonel Fabyan as decryptions by Elizabeth Gallup. General Cartier partially mentions in his notes and comments that the texts published in his book are not all of those deciphered by Mrs. Gallup. For example, the book doesn't include Bacon's deciphered translations of Homer's *Iliad* and *Odyssey*.

But General Cartier nowhere mentions some important things that were also retrieved from the cipher texts and directly relate to Bacon's secret life. For example, it's absolutely reliable and documented that Colonel Fabyan was extremely interested in the design of the acoustic levitation machine described in one of Bacon's deciphered texts. But neither in the published chapters of the Autobiography, nor in Cartier's comments to these texts there is absolutely nothing about this episode.

There is an indirect vague hint of this kind of thing connected with magic and science of the Rosicrucians only in the final part of the Autobiography, where Bacon speaks of his secret work, which he pays "the closest attention":

*I speak as to the work thou canst now thoroughly understand, that is, my natural experiments at present incomplete.*

The chapters of the Autobiography published in Cartier's book also look clearly unfinished, since it's easy to see that the events of

the last Chapter X occur in 1603, that is, the year of Queen Elizabeth's death. And in the next and seemingly final chapter "To the decipherer," almost nothing is said about everything that happened over the next 23 years of Bacon's life, because the chapter is devoted to other things.

Where to look for the apparently missing chapters will be discussed in the next, final part of the investigation.

#

*(translation fragments, pp. 286-292 of Cartier's book)*

## **APPLICATION: NOTES**

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[ A list of 40 printed books containing encrypted fragments or "packets" from Bacon's Autobiography was provided in the previous part of the research. The sources of the first two chapters of the Autobiography are also given there. Here are the sources for the remaining chapters, accompanied by a comment from General Cartier. ]

### **Chapter III**

The Parasceve, 14-15.

\* Mirror of modesty, 2-6, 19-20.

\* Shakespeare's The First Folio, 108-116.

The Shepheardes Calender, 1579, 8-14.

\* Fairy Queen, 1613, 74, 109-156.

### **Chapter IV**

\* Novum Organum, 11-21.

\* The Parasceve, 15-21.

\* History of Henry the Seventh, 120-126.

Historia Ventorum, 269-277.

De Augmentis, 1623, Book V, chap. 2, 1-44.

\* Natural History, 246-250.

- \* Planetomachia, Preface, 3-6.
- \* Morando, 1-45.
  - Ben Jonson's Folio, 470, 472-479, 739-762.
  - Merchant of Venice, 58-73.
  - Shakespeare's The First Folio, 59-70.

## Chapter V

- \* A Declaration of the Treasons of Essex, Book 2, 6-31.
  - Novum Organum, 2-5, 21-22.
  - De Augmentis, 1624, 48-65.
  - A Treatise of Melancholy, 1st Edition, Introduction.
  - Mirror of Modesty, 9-12.
  - Planetomachia, 6.
  - Perimedes, 1-7.
  - The Spanish Masquerade, 13-16.
  - The Arraignment of Paris, 24-33.
  - Much Ado about Nothing, 10-15.
  - Colin Clout, 19-54.
  - Fairy Queen, 1596, 1-32, 357-436.
- \* Fairy Queen, 1613, 156-265.

## Chapter VI

- Novum Organum, 24-26.
- De Augmentis, 1624, 66-79.
- \* Natural History, 264-284.
  - Morando, 45-70.
  - Ben Jonson The Folio, 421-528.
  - Fairy Queen, 1596, 134-155.

## Chapter VII

- A Declaration of the Treasons of Essex, 18-38.
- \* Novum Organum, 237-470.
  - Historia Ventorum, 280-231.
- \* New Atlantis, 5-8.
  - Planetomachia, 5.

- \* Ben Jonson The Folio, 470-625, 633-664.
- \* Shakespeare's The First Folio, 61-72, 91-137.

## **Chapter VIII**

- \* The Advancement of Learning, 2nd Book, 63-115.  
The Essays, 108-109.
- \* Shakespeare's The First Folio, 94-102, 124-127.  
The Shepheardes Calender, 1-2.

## **Chapter IX**

- A Declaration of the Treasons of Essex, 1-6, 111-119.
- \* Historia Vitæ et Mortis, 304-328.  
The Essays, 114-134.  
Ben Jonson The Folio, 239-241, 251-258.  
King Lear, 45-71.  
London Prodigal, 17-23.
- \* Shakespeare's The First Folio, 47-313.
- \* Fairy Queen, 1613, 11-66, 291-304, 336-350.
- \* Shepherd s Calendar, 1611, 2-19, 23-30.

## **Chapter X**

- A Declaration of the Treasons of Essex, 23, 62-95, 122-124.  
Novum Organum, 353-355.  
The Advancement of Learning, 2nd Book, 32-42.  
The Parasceve, 22-37.
- \* Historia Ventorum, 251-164.
- \* Historia Vitæ et Mortis, 334-350.
- \* De Augmentis, 1623, 330-347.
- \* Natural History, 190-194.  
Ben Jonson The Folio, 259-273, 305-306, 370-392.  
King Lear, 1-30.  
Pericles, 111-120.  
The whole Contention, 96-101.  
Shakespeare's The First Folio, 128-132, 140-142, 316-318.
- \* The Shepheardes Calender, 1611, 47.  
Complaints, 70-80.

## To the decipherer

- \* The Advancement of Learning, 1-4, 29-4.
- \* Novum Organum, 1-2, 158-161, 167-168, 257-266.
- \* Historia Vitæ et Mortis, 185-242.
- \* De Augmentis, 1623, 4-66, 299-306, 308-316, 323-330, 460-463, 469-476.
- Natural History, 178-179; 182-183.
- The Spanish Masquerade, 14-31.
- \* Ben Jonson The Folio, 42-70, 334-349, 429-431, 990-1008.
- \* Pericles, 17-54.
- \* Shakespeare's The First Folio, 33-50.

You may be amazed at the great amount of pieces that make up each chapter and their distribution across the many different books.

The total number of works (40) used to hide this autobiography is also impressive.

It's quite obvious that with such careful preliminary preparation, the author had reason to hope that his cryptogram would escape the attention and research of his contemporaries.

Even if a particularly experienced more fortunate researcher had noticed in the book usage of the two typefaces that make up Bacon's cryptographic system, it's likely that he would have continued his research in the works of the same author or publisher. Only a lucky chance or an unusual instinct could lead to those numerous works that make up a special collection of books used to hide autobiography.

Moreover, during Bacon's lifetime it was hardly possible to assume that he was hiding some of his works under the names of living writers. After all, they could refuse authorship of masterpieces that weren't created by them, or leave after their death evidence of the deception in which they agreed to participate.

However, this doesn't apply to Shakespeare, since he, as it was established, could neither read nor write properly, and was quite

ready to adapt to a successful combination of circumstances that brought him both honors and profit.

Only a very long time after the death of Bacon and those people whose names he used as his pseudonyms, scientists began to discover that his writing style could be recognized in books published under names other than his own.

It's because Mrs. Gallup's research covered not only the works of Bacon, but also the works of his contemporaries. There is no doubt that the results of her decoding, which provided fragments of Bacon's autobiography from the books of "masks" he used, could effectively guide such research.

It's also necessary to understand why a relatively short autobiography could require so many pages to be encrypted. We shouldn't forget that:

- (1) the masking text hiding the secret message must be five times longer than the encrypted text;
- (2) basically, only passages printed in italics are used to apply the cipher;
- (3) finally, some of the passages are repeated several times, as shown in a specific example (see pages 221 and 222).

For those readers who have a copy of the 1620 edition of the *Novum Organum*, I will provide a transcript of page 23, which is nothing more than Bacon's comment on the autobiography. The cryptogram begins with the last three letters in the first line.

Only italicized letters should be used. The words **Hoes vero est Operis pars Secunda and Phoenomena Vniuersi**, located in the 13<sup>th</sup>, 14<sup>th</sup> and 17<sup>th</sup> lines, accordingly, are not included in the cipher-text that ends on the second word in line 27.

Here is the transcript as it is, without any corrections. The decipherer added only punctuation here:

*Though constantly hemmed about; threatened, kept under surveillance, I have written this history in full in the cypher, being fully persuaded in my owne minde and heart, that not onelie jesting Pilate but the world asks: "What is truth?"*

#

*(pp. 160-172: deciphered texts of the Original)*

**BACON'S LIFE  
AS HE TELLS IT IN THE BILITERAL CIPHER  
TO THE DECIPHERER**

Take, read! It is sore necessity that doth force me to this very dry and also quite difficult cipher as a way or method of transmission.

All that learn that I, who account the truth better wicked vanity, published many late plays under other cognomens will think the motive some distaste of the stage. In no respect is it true, yet I shall make known to him who can read cipherwriting, a motive stronger than this, were it such, since man hath a greater desire to live than he hath to win fame, and my life had four eager spies on it, not alone by day but by night also. My stage plays have all been disguised.

Time would not serve fully to make my reasons understood, only since this hidden work must in time I doubt see day, this story must surely set right all men's former judgments. For as I have made mention in my well known works regarding the truth: It cometh from error, nor doth it suffer loss; however from obscurity and confusion not so: that is, Truth doth emerge in due time out of error (a wrong name), but astray amidst confusion (no name) may be utter, eternal loss. Thus have I, in placing my writings, guarded chiefly by such as are known names, built assurance strongly, — as it might be said built upon a rock, a trust and confident belief that Time's hand may lead Truth to Light.

Greene, Spenser, Peele, Shakespeare, Burton and Marley, as you may somewhere see it, or as it is usually given, Marlowe, have thus far been my masks, which have caused no marked surprise because they have familiar names on the title page — not fancied, but of living men, at least of men who have lived.

When I have assumed men's names, the next step is to create for each a style natural to the man, that yet should let my own be seen, as a thread of warp in my entire fabric, so that it may be all mine.

It must surely prove that they are the work of my hand when you, observing this variety of forms, find out the cipher so devised to aid a decipherer in the study of the interior history. By the use of this bilateral cipher, or the highest degree of a cipher writing, I may give not merely simple, plain rules for such matters, but also some hint that be of use, or an example.

If these should be passed over and none should discern the secret epistles, I must make alphabets showing the manner of employing the cipher.

However, I shall use letters that differ from the type I here employ, not wishing, at present, to give a device — that hath caused so many sleepless nights and such troubled days — freely, even as one would tell the meaning of a riddle to a child, or solve some school-boy's problem.

I have shown some wit herein. Let him that would be a decipherer do the same and win the prize by strife, if indeed at all.

It is fame that all seek, and surely so great renown can come in no other study. If therefore you commence the study, the laurel must at some future day be bestowed upon you, for your interest must daily grow and none could win you away.

On me it doth impose a great labor, but the part you shall do shall be much lighter. It is many days — ay, the best part of a year now — the work that is before you hath been in hand: no wonder, then,

that'tis a wearisome task and somewhat dry. It would weary the veriest clod: when, however it shall be completed, my joy will exceed the past weariness.

All men who write stage-plays are held in contempt. For this reason none, "How strange," when a plays cometh, accompanied with gold, asking a name by which one putting it forward shall not be recognized, or thought to be cognizant of its existence. For this cause, if rare stories must have a hiding, no other could be so safe, for the man who had won gold in any way did not readily acquaint any man, least of these a stranger, with his source of wealth as you may well understand.

For space of many long years therefore I have centered my thought and given as much of my time as the calls of our business do permit. My motive some might question, yet it seemeth to me a worthy and right one to be given way, my wishes or plans being miracles to some slight degree, the great thought coming to me in the silent night vigils. For a youth could see his whole at a word turned aside.

As a stream so often, out of wild mountain gorge rising, carried through a mead in bounds that have been set, or trammelled by devices doth lose its spirit, so he felt his heart change in his breast.

There was a moment when as by a thunderbolt the truth was hurled forth in so hard, stern, unbending way it shocked young minds; and sensitive souls must deliver a cry of sorrow when a wound is wantonly inflicted.

In my plays, therefore, I have tossed my feelings as they do roll and swell, or hurtle along their way. The theme of the exterior works — play, poem, or work of science — often no way concerneth that contained within.

Some school verses went into one, since I did deem them good — worthy of preservation in my truly precious casket studded thick with hours far above price. Even my translations of Homer's two immortal poems as well as many more of less value have a place in

my cipher; and the two our most worthy Latin singer left in his language I have translated and used in this way — Virgil's *Aeneid* and *Aeglogues*. Only a few of those I have turned from most vigorous Latin, were put out. Most of the translations as I have just said, appear in the work and must not be held little worth, for assuredly they are my best and most skilled work.

It is a great art to translate in English stately Greek verse rightly, and if you turn it again into proper measure, either you must sacrifice the sound or wrest the thought; and the exact words are often wanting to voice, its wondrous language. It is famed the wide earth around, for its loftiness of diction and its sounding numbers.

The *Iliad* and part of the adventures of Ulysses furnish our chief examples, as no Greek poet in any aeon hath approached his style or his imagination. Regarding Virgil's *Aeneid*, must honor it among all Latin poems, but it doth lack Homer's incomparable, marvelously witching art, strong diction, true spirit, fire of an immortal youth.

In a play is imitated action of heroes, in the *Iliad* is the real, the living scene. You see a battle and hear the cries of the Trojans, and see the Greeks sweep on in noiseless grandeur like devouring flames: you fell how Achilles' angry spirit swelleth in his savage breast as he sitteth by the sea eating his heart, and Agamemnon's triumph over the bravest, worthiest Greek that sailed to Ilium.

Works of Homer, printed, cannot go to oblivion, and if my careful plan preserve thos rich gems, it shall build my own monument of that which shall outlive all else, and make my name at least reflect the glory, that must as long as our changing, subtly altering mother — tongue endure — be seen afar.

My plays are not yet finished, but I intend to put forth several soon. However, the biliteral work requiring so much time, it will readily be seen that there is much to do after a book doth seem to be ready for the press, and I could no well say when other plays will come out. The next volume will be under W. Shakespeare's name. As some which have now been produced have borne upon

the title page his name though all are my own work, I have allowed it to stand on many others which I myself regard as equal in merit. Having put forth a number of plays in his theater, I shall continue so doing since I do make him the thrall to my will. My name never accompanieth any play, but it frequently appeareth plainly in cipher for witty minds to translate from Latin and Greek. As this is never seen, the secret has still remained inside its treasure-house unsought of every one. This is yet hidden as in dim shadowy mists, but soon shall you have the whole of the most worthy parts of this great cipher writing, wrought much more finely than gold.

So few can be put forth as first written without a slight revision, and many new being also made ready, my pen hath little or no rest. The writing of the secrets is chiefest in my conceit, for 'twere a more noteworthy thing, I hold, to make true and correct records of the history of England and of Queen Elizabeth's life, than to relate the most thrilling tale man's can produce.

The exterior plays will be the sure proof, if such proof be necessary, that my word is the truth; for no one hath ability to write with greater ease than myself, yet without much time spent on work so difficult, this should be a number very much smaller.

My plays are of divers kinds, history, comedy and tragedy. Many are upon the stage, but these already put forth in Wm. Shakespeare's name, we do nothing doubt, have won a lasting fame, — comedy, the historic drama and tragedy, are alike in favor. For this reason we have resolved to write in these forms, though tragedy doth come to the sensiblest minds more easily because to such, high and tragical things are more suited then those that are only somewhat real, yet much too nice and dainty, or too crude, vile and unfit.

As for historical drama, some principal and important facts require gracing with such elegancies as we see many do admire and praise. Tis the changing and shifting movement that doth catch the eye, and please the imagination, and plays of all kinds seem many times to give delight in the action, which have less attracted us in our study.

Candidly speaking, it is better to consult men's liking then their judgments; but writing truthfully, there shall be no sacrifice here to hurt the sense or lose sight of the aim. Wrongs are exposed, be they mine or others, and oft of unpleasantly plain character. I stood close at hand and saw things with clear eye to write them in this record, having desired with exceeding desire of the heart to be given a righteous judgment in matters of most import and interest to myself, yet of worth, finally, to others, inasmuch as there would be without it no true history left to other times.

That we set these works apart in parcels, tendeth unto the end that some portion thereof may be out of danger.

This shall be the great work of this age. Its fame shall spread abroad to farthest land beyond the sea and as the name of Francis Bacon shall be spoken, that of his decipherer, joined with his own, must receive equal honor, when this invention doth receive reward. He it is, my fellow, who hath kept at work despite many a temptation to give way as some do.

Several comedies, which be now strangers, as might be said, bearing at the most such titles amongst the players as they would remember, but the author's name in disguise, if it be seen at all, will, as soon as may be found toward and propitious, be published by Shakespeare, that is, in his name, having masked thus many of the best plays that we have been able to produce. To these we are steadily making additions, writing from two to six stage plays every year.

By following our good friend's advice we have not lost that mask though our Shakespeare no longer liveth, since two others, fellows of our play actor, — who would, we doubt not, publish those plays, — would disguise our work as well. This will not, however, be done until a most auspicious time.

Much work must be accomplished in a short time if many new plays should be added which doth now seem desirable, inasmuch as it suiteth us far better than prose or a lighter verse, whilst it giveth more satisfaction to our readers. Represented on our stage

they give more pleasure still, and yield their author much more, be it in gold, or in honor, since the theater is becoming more popular.

In due time a strength, far reaching thought greatly hath increased, cometh to your eye in this later work, that also must be known to many by reading any such work as my drama entitled First Part of King Henry the Fourth. The second Part of the same and one entitled Othello, reveal knowledge of life wanting in the common plays that had this pen name on title page. These arc, as I have many times said, the crowning glory of my pen, even though there be degrees, as surely you must know, of excellence therein; but the cause you may as well have learned since it was clearly shown to depend upon times, and likewise upon the nature as well of the hidden as of the open story. Therefore some will be omitted from my folio, but some retained for causes now given.

To fix my rules well in your mind is the most essential thing at the moment, and many were put within those which one must acknowledge possess little value. As half the number I shall assemble have already appeared in Will Shakespeare's name, I think that it will be well to bring out the folio, also by some means in the same name, because our king would be prompt to avenge the insult if his right to reign were challenged, and the sword of a king is long, and where'twill not extend thither he dardeth it. And as concerneth the plays, the truth cometh forth more quickly from an error than from confusion, and therefore it is most certain that it would by far be more the part of wise and discerning minds to let this name of a man known to the theatre, and his former gay compaigny of fellow-players, stand thus on plays to him little known, despite a long term of service, as to a babe. I, thinking expedient so to do, now obey the Scripture and cast my very bread to the winds or saw it on the waters. How shall it be at the harvest? this wheat must fill up some goodly garner.

Will the golden store — not soon, since time doth slowly move, yet at God's right or proper day of regard — be mine? I think this shall be true, for many a fair hope hath bloomed out snow-like in my lone heart that promiseth full fruition to my wish. Fame it may chance — for the works shall come, though not to the author who

hid with so great pains his name that at this writing'tis quite unguessed. And the time I am given to spend upon the work is as gold, princely gems or purple robes.

Of a truth, if it be permitted me to set my older plays to the public sight in folio (of like style with my later plays) naught is required except to collect all my less recognized works in poetry so as to complete, not my dramatical work only, but all put forth of the sort of writings which men now suppose brought forth by Greene, Edmund Spenser, Peele, or Wm. Shakespeare, although all are from my brain, together with the worthy prose that thou mayst find — the youthful product (many times referred to in later books) of my pen. My works now being published in my own name (or one by which men know me, as the decipherer doth as well know) will much augment this in the care, as also some given my long honored assistant in the works I, with this other, keep under most faithful supervision. I speak as to the work thou canst now thoroughly understand, that is, my natural experiments at present incomplete. Thus, my just though invisible friend, set them free from error, but cloud them under no borrowed though honored title.

They must bear my own name, as also my own proper title which should be now as well (no doubt somewhat better) recognized by my decipherer.

Deeming such of worth to posterity it doth behooove me in my own time, in like manner as seen in a time long forgotten, to take heed to my MSS. If it be observed a printed work is a hostage of fortune, it must scarce cause wonder to many, who may discover worthiest but not yet completed device, that we should devote talents and some time, when all is most worth, to the preservation of these MSS.

There is wisdom in the proof of my work, for assuredly purpose and proof do appear immanent in the same, be the fortune thereof what it may, since aught which shall bear my seal, aught which shall have my right name — such as is recognized as my own just name being indeed with due rites of baptism given me — shall thereafter receive the approval of the world. In my plays, and in the

much loved work at present in your hand, oft there is seen one theme. Use of the same idea or conceit in works that appear wholly different uniteth all, as oft made obvious, in bonds revealing relationship. If found surely time doth show a design therein. Indeed a tongue, when mine shall be but a memory, then shall relate my history and reveal my life-long labor.

My desire is that my works be collected and, as it were, put again upon such inquisition or trial as before, only those in masks can cast these mean weeds to the vast deep of Time, since discovery otherwise should be long delayed. Longer to me the delay doth now seem, doubtless, than to my decipherer, by so much as I have set greater store by the same, or have longer waited. Nevertheless I have but to entrust, with well founded and most stable confidence, my heavily fraught bark of printed works, which shall also be for your own future advancement, honor, and profit, unto Time's wide waters, believing that some, at least, shall withstand the waves, the tempests of long years, perchance of ages. Have not the works of the noble poet, Homer, tossed on the seas of Time above two thousand years without loss of a syllable or letter?

Assuredly there can be no reason to fear loss (unless discovery be too soon — question before answer be ready) of the different MSS.

Meseemed it would be thought strange, and that queries of some kind might at some time or on some occasion arise. But surprise sleepeth — Query is dead. This that should excite wonder (for dead authors rest surely not from work of the hand alone but that of the brain) seemeth still unseen, or better, not marvelled at, though miracles be somewhat as the visits of heavenly spirits, rare.

Never yet have I seen a query put to another, or doubt. No one doth open wider his eyes or make inquest into a men's play or poem like a Phoenix upspringing from cold cinders. It is therefore of this manifest error the future decipherer should free such plays, lest I should not, later, — of all that I so willingly produced, of stage work or much favored poem, — receive due reward in a measure of repute.

Where many authors receive the reward of their application at once, mine awaits man's future: but 'tis the future of time, and posterity must make just amends for my present want. The future peoples of a distant shore will prove true the word which saith: "A man is not without honor save in his own country." Since they be true, today, here, for us who dwell where the Divine footsteps have never trod, as they were sixteen hundred years ago in Palestine, I await that day.

FRANCIS BACON

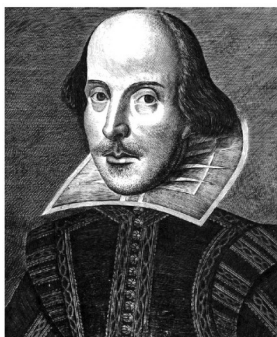
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*January 2022*



# The problem of Shakespearean authorship as an OSINT task

The final episode of the documentary series, which brought back to life important but deliberately removed pages<sup>111</sup> of history and science, cryptography and philosophy. Now the most interesting question: having learned the truth, is the scientific community able to accept it?



It so happened that during the very long period of debate around the topic “Bacon as the author of Shakespeare’s works,” only three detailed works appeared from professionals in military intelligence cryptology. It should be noted that the age of each of the authors belongs to the category of pensioners over 60. This is because among specialists of this type of profession it’s not customary to carry out such analyzes, especially publicly, during the period of secret government service.

<sup>111</sup> <https://archive.org/details/un-probleme-de-cryptographie-et-d-histoire/>

The first book in this series, *The Problem of Cryptography and History*<sup>112</sup>, was published in 1938 by Reserve General François Cartier, who headed the cryptographic service of the French armed forces during World War I. In Cartier's book, the results of his cryptanalytic research lead to a completely unambiguous conclusion: deciphered texts from ancient English books of the 16-17<sup>th</sup> centuries definitely point to Francis Bacon as the author of those works that are traditionally considered Shakespearean.

The second book in this series, *The Shakespearean Ciphers Examined*<sup>113</sup>, was published in 1957 by retired Lieutenant Colonel William Friedman, co-authored with his wife. During World War II Friedman was the chief cryptanalyst of the U.S. Army, in the post-war period he was a special assistant to the director of the NSA, and after his death they began to revere him as the "father of American cryptology."

The work of the Friedmans in Shakespeare studies is generally considered to be the "last and final word" in the debate about cryptographic proofs in the Bacon-Shakespearean disputes. For according to the authoritative and categorical conclusion of these experts, there aren't any encrypted messages at all in the printed publications of the Shakespearean era. Therefore, there is essentially nothing to seriously discuss here...

Finally, as for the third book of this short series, published in parts during 2020-2022 on the pages of the *kiwi arXiv* website, it's this one that is now before your eyes. Its author at the end of the 20<sup>th</sup> century was a colonel, cryptographer and analyst in one of Russian special services, and all subsequent years of the 21<sup>st</sup> century he has been doing about the same as in intelligence, only as a freelance journalist.

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<sup>112</sup> François Cartier. *Un problème de Cryptographie et d'Histoire*.

Paris: Editions du Mercure de France, 1938

<https://archive.org/details/un-probleme-de-cryptographie-et-d-histoire/>

<sup>113</sup> Friedman, William F. & Elizebeth S. *The Shakespearean Ciphers Examined*.

Cambridge: Cambridge University Press, 1957

<https://library.marshallfoundation.org/Portal/Default/en-US/RecordView/Index/15274>

The transition from super-secret government service to completely open journalistic work turned out to be surprisingly natural and easy.

The fact is that in the secret activities of spy intelligence services there is one very special area called OSINT<sup>114</sup> or “open source intelligence.” And if fate gave a cryptanalyst, who has been involved in breaking ciphers for many years, the opportunity to head the OSINT branch, then the results of such analytical work<sup>115</sup> may well be equally useful and available not only to colleagues from the intelligence service, but also to the entire civil society...

Because the information obtained by OSINT methods is not only distinguished by a high level of reliability, which is necessary in intelligence work, but is also absolutely pure from a moral and ethical point of view. After all, to obtain reliable data based on this method, you don’t need to steal anything, you don’t need to deceive or intimidate anyone, not to mention killing innocent people<sup>116</sup>.

However, here we are not talking “about OSINT in general,” but about a very specific crypto problem of Bacon–Shakespearean authorship in the context of two expert works from equally authoritative cryptographers of the 20<sup>th</sup> century, who diametrically diverged in their conclusions. In particular, we are talking about what a third competent party, an OSINT specialist with extensive experience in both analytical codebreaking and analysis of open sources of information, can present and document in this regard.

The essence of this third expert evidence is that all the identified materials of the new investigation into this large multi-layered story definitely support the position of the French General Cartier. And at the same time it provides a lot of evidence that the book of

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<sup>114</sup> ”The OSINT model” (*rus.*)  
<https://kiwibyrd.org/2013/05/16/0706/>

<sup>115</sup> “Stream ciphers, or ‘he already has the book’” ... (*rus.*)  
<https://kiwibyrd.org/2016/02/23/9711/>

<sup>116</sup> “Total Hagelin, or Finita la commedia” (*rus.*)  
<https://kiwibyrd.org/2020/02/20/20h22/>

the American Lieutenant Colonel Friedman provably contains deliberate lies in its basic statements. In other words, this is an example of disinformation, fabricated according to standard secret service schemes.

But any information deliberately introduced into the minds of people as Denial and Deception<sup>117</sup> always has reasons and pursues certain goals. What could be the reasons for Denial and the purpose of Deception for the nation intelligence services to introduce such specific disinformation in this particular case, in the very old, but always heated debates around Bacon and Shakespeare?

The main feature of the current OSINT investigation is precisely that now it's possible to see and understand a little more clearly the true, but always hidden and very far from literary issues, basis of all these debates. And first of all, to see how significantly and in what way science according to Bacon differs from science in the modern sense of the word.

And having seen this, understand that Bacon's "science as magic"<sup>118</sup> is in many ways stronger and deeper than modern science in the broadest sense of the word, starting with cryptology and ending with the fundamentals of physics.

More specifically, it can be seen that thanks to Bacon's encrypted texts, the magical science of the Rosicrucians not only led modern scientists and engineers to the amazing phenomenon of acoustic levitation<sup>119</sup>. But it's also potentially capable of much more — building, in the words of Wolfgang Pauli, firmly scientific "bridges between matter and consciousness"<sup>120</sup> for fundamental physics.

Not to mention the fact that the ideas of the Rosicrucians and Bacon about methods of turning "knowledge into power" provided

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<sup>117</sup> "Denial and Deception" (*rus.*)  
<https://kiwibyrd.org/2013/05/06/0301/>

<sup>118</sup> See chapter "**Bacon and Magic**"

<sup>119</sup> "About the Fibers of the Soul, or The Subtleties of the Soul's Organization" (*rus.*)  
<https://kniganews.org/2015/01/20/soul-fibers/>

<sup>120</sup> See chapter "**Bacon and Pauli**"

the most outstanding achievements of the “father of cryptology” William Friedman and his Magic, as a new occult-mathematical science of breaking ciphers.

Having seen all this, it’s much easier to understand why the secret intelligence services are so diligent in hiding so special aspects of Baconian science and its practical methods of comprehension<sup>121</sup>.

Finally, thanks to OSINT materials, one can clearly see and understand even those purely personal motives that prompted William Friedman, by all accounts a completely decent person in everyday life, to personally and actively participate in the fabrication of that gigantic lie that became his book *The Shakespearean Ciphers Examined*.

However, the widely branched aspects of this story go far beyond the scope of this book and can only be outlined here in the most general terms. What are the main results of the OSINT investigation itself? Firstly, based on extensive documentary evidence, the truth from General Cartier was restored and the lie from the Friedmans was exposed. Secondly, along the way, we managed to discover something truly new, important and meaningful, or rather, new, as a well-forgotten old.

Thanks to a lead from Friedman’s cryptographic collection<sup>122</sup> it was possible to find formally public, but still carefully hidden documents leading to the discovery of a very ancient secret.

To put it more carefully, we are talking about documents that provide identification and disclosure of those of Bacon’s encrypted texts that still remain unknown. That is, fragments, at least some of which have already been identified and deciphered once through the efforts of Elizabeth Gallup. But neither she nor her patron Colonel Fabyan ever published or distributed these fragments,

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<sup>121</sup> “CIA, The Mystery of 25th page and The Universe as a Hologram” (rus.)  
<https://kiwibyrd.org/2021/04/25/21h43/>

<sup>122</sup> Sheldon, R.M. “The Friedman Collection: An Analytical Guide”, 2014  
[http://web.archive.org/web/20211101214514/https://www.marshallfoundation.org/library/wp-content/uploads/sites/16/2020/01/Friedman\\_Collection\\_Guide\\_September\\_2014.pdf](http://web.archive.org/web/20211101214514/https://www.marshallfoundation.org/library/wp-content/uploads/sites/16/2020/01/Friedman_Collection_Guide_September_2014.pdf)

which is why they weren't included in the chapters of Bacon's secret autobiography, published through the Cartier's book.

Among these already twice, it turns out, lost texts, what is reliably known, are not only the missing pages of Bacon's story, but also a description of his very specific magical, in the spirit of the Rosicrucians, experiments with nature...

Now researchers have everything they need to recover what was lost. But in order for the chain of facts and arguments in support of this finding to look really strong and convincing, we have to start from afar and delve into the essence as thoroughly as possible.

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The current investigation into this long-ago and mysterious story began with the following lines:

*In the foundations of cryptography as a solid scientific computer-mathematical discipline there lies a big Mystery of the occult-mystical sense. By a long-standing tradition, it is forbidden to talk about this Mystery. But by whom it is forbidden and on what grounds, actually, no one knows.*

Since our investigation can now be considered completed, it should be emphasized that no documents or reliable evidence pointing to the source that gave rise to the main Secret of Cryptography was ultimately discovered. Not yet.

And it's not surprising, because this secret is of an "occult-mystical nature," and in cases of this kind, the most important documents have been customary to either be destroyed or hidden very, very carefully. By the way, that's why even outwardly occult-mystical affairs resemble the highly secret affairs of state intelligence services, not to mention the deep internal interrelations here...

In the absence of key documents around the Main Mystery, there is no point in discussing exactly how it was formulated there, but it's quite possible and even necessary to identify and demonstrate what

Francis Bacon's place is in this Mystery. Because in this context, it is he who should be considered the true father of not only modern scientific cryptology, but in general the entire secret — the most advanced — science of the humanity.

Taking into account that Bacon himself believed that the most important task of science is to spread the light of knowledge to all the secrets of nature, it's easy to see the irony in everything that has now been done with his doctrine *De Augmentis Scientiarum*. And having seen this, it's much easier to understand why in our open science there are now so many inconsistencies, omissions and deception<sup>123</sup>.

And since we are talking specifically about cryptography here, almost all the facts and illustrations will be drawn from this area of modern computer and mathematical science.

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Since the emergence of so-called open cryptology in the early 1980s, materials and reports of almost all more or less significant cryptographic conferences are published by Springer, as part of its well-known LNCS or *Lecture Notes in Computer Science* series.

Of particular interest to us is the collection LNCS 9100 ("The New Codebreakers. Essays Dedicated to David Kahn on the Occasion of his 85<sup>th</sup> Birthday"), released in 2016. It contains materials from a celebratory conference in honor of the 85<sup>th</sup> birthday of David Kahn, one of the founders of open cryptology and the author of the famous book, *The Codebreakers*, published in 1967 — in fact, the first and most significant book of the 20<sup>th</sup> century on the history of cryptography.

It should be recalled that Kahn's book tells a lot and in detail not only about the outstanding cryptologist William Friedman, but also about Friedman spouses' work *The Shakespearean Ciphers Examined*. However, it's presented in an absolutely apologetic manner

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<sup>123</sup> "Something's rotten in the kingdom" (rus.)  
<https://kiwibyrd.org/2015/04/16/1433/>

and without any attempts to critically analyze this work of the Friedmans. Obviously, for Kahn, the authority and reputation of the “father of cryptology” Friedman is more than enough for complete confidence in his categorical conclusions.

It should also be noted that in David Kahn’s extremely detailed book *The Codebreakers* there are several brief stories about the work of another outstanding cryptographer, François Cartier. But Kahn doesn’t mention General Cartier’s monograph, which provides radically different results of the Bacon-Shakespeare problem cryptanalysis, at all.

And the most remarkable thing is that exactly the same pattern of omission is reproduced by the recent collection of reports *The New Codebreakers*. This book also contains a large and informative article<sup>124</sup> about the American “father of cryptology” William Friedman, more precisely about his most famous achievement “Index of Coincidence.” There is also an informative review<sup>125</sup>, dedicated to the history of French military intelligence cryptology, which includes a notable section on the achievements of François Cartier specifically.

But there isn’t a single mention of the fact that the authoritative cryptologist Cartier also published a book, quite extraordinary for scientific circles, *The Problem of Cryptography and History* — about deciphering the secret biography of Francis Bacon and about the true author of Shakespeare’s works. At the same time, it’s significant that the retired General Cartier immersed himself deeply into this topic not without the participation of the young William Friedman.

Another consequence of the personal acquaintance of these two outstanding cryptographers, which happened in 1918, at the end of

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<sup>124</sup> Steven M. Bellovin. Vernam, Mauborgne, and Friedman: The One-Time Pad and the Index of Coincidence. In “The New Codebreakers. Essays Dedicated to David Kahn on the Occasion of His 85th Birthday” (LNCS 9100), Springer-Verlag Berlin 2016, pp 40-68

<sup>125</sup> Sébastien-Yves Laurent. About Professionalisation in the Intelligence Community: The French Cryptologists (1870–1945). In “The New Codebreakers. Essays Dedicated to David Kahn on the Occasion of His 85th Birthday” (LNCS 9100), Springer-Verlag Berlin 2016, pp 25-33

the World War I, was one remarkable misunderstanding, due to which the most important among Friedman's scientific cryptographic inventions, his "Index of Coincidence," in the first post-war years was perceived by many people as invention of General Cartier... But today they prefer not to remember this either.

There is hardly any need to explain that if historians of science artificially limit their field of view, ignoring very important episodes of history, a great distortion of the picture occurs. Moreover, by removing such episodes as connections between more prominent historical events, opportunities for a true understanding of what and how exactly happened in reality are lost.

And since the goal of an OSINT investigation is precisely to figure out what and how actually happened in this story, it makes sense to take a closer look at things that are usually omitted.

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A fresh study of previously unknown circumstances around the "Index of Coincidence" creation for the collection *The New Codebreakers* was prepared by Steven Bellovin, a well-known specialist in information security and the history of cryptography. Specifically for the purposes of our investigation, the final phrase is of greatest interest:

*Finally, we show that Friedman's attacks on the two-tape variant [of Vernam cipher machine] likely led to his invention of the index of coincidence, arguably the single most important publication in the history of cryptanalysis.*

Why is this a highly remarkable phrase and a very interesting result? In fact, there are many reasons for this.

First of all, if you look at Wikipedia to get a general idea of the essence of the "Index of Coincidence," from the "clarifications" available there you won't even approximately understand what Steven Bellovin is talking about. Because there this statistical method of cryptanalysis is presented in the context of breaking

classical manual ciphers, such as the ancient Vigenère cipher of the 16<sup>th</sup> century. Therefore, it's completely unclear why on earth William Friedman's invention is, according to experienced experts, "the most important publication in the history of cryptanalysis... His invention of the index of coincidence turned cryptanalysis into a mathematical discipline."

Further, a careful study of the historical documents obtained by Bellovin shows that William Friedman in 1920, that is, while still working not for the state, but for the private crypto bureau of Colonel Fabyan in Riverbank, invented the "Index of Coincidence" in the process of analyzing a very specific cipher machine, the Vernam two-tape system. Which subsequently served as a kind of prototype for almost all 20<sup>th</sup> century stream cipher machine designs. That is, for a great variety of mechanical, electrical and electronic cipher equipment, which until today protect the secret correspondence of diplomats, military and intelligence agencies around the world.

Knowing that Friedman was already at that time a very competent and experienced cryptographer, who initially understood the highest universal value of his invention for breaking all kinds of ciphers, the degree of his indignation when he learned that the best of his work, in fact, was immediately stolen, is also understandable.

Because Colonel Fabyan, who, with the mediation of Friedman, became acquainted with François Cartier by correspondence, in order to impress the French General with the successes of his crypto bureau, sent him a copy of a manuscript about the "Index of Coincidence" that had not yet been published anywhere. Moreover, he deliberately removed the author's name, since the Friedmans fled from Fabyan to Washington at the end of 1920. And General Cartier, who at that time (1921) headed the military cryptography of France, not only immediately realized the high value of the work and ensured its translation into French, but also in the same year published the translation in mass edition through a military printing house.

Soon after the French version, in the same place in Paris, the English-language original was published, where Colonel Fabyan and his Riverbank Laboratory appeared on the title page as the primary source. Naturally, without mentioning William Friedman, since General Cartier just didn't know the name of the real author at that time...

In the USA, the first edition of Friedman's work on the "Index of Coincidence"<sup>126</sup> was published in 1922, in Riverbank's own printing house and under the name of the real author, of course. But in Europe, for quite a long time this work was perceived as "French" and associated with the name of General Cartier. As a result of such an unfortunate combination of circumstances, the ambitious Friedman harbored a bad grudge not only against Fabyan, but at the same time, it seems, also against François Cartier.

In the late 1920s, already occupying a solid cryptographic post in the Signal Corps of the U.S. Army, Friedman undertook a special legal procedure to officially secure his authorship of the work on the "Index of Coincidence"<sup>127</sup>. And in the mid-1950s, fate and the military espionage authorities provided him with a good opportunity to take full revenge on his deceased offenders.

For George Fabyan, who once introduced genetic biologist William and his philologist wife Elizebeth into the world of cryptography, in the Friedman spouses' book *The Shakespearean Ciphers Examined*<sup>128</sup> the authors didn't find any kind or at least respectful word, only waspish and sarcastic ones. As for discrediting General Cartier, everything was done much more subtly and sophisticatedly. But for professionals who really understand the essence of cryptanalytic work, it's not difficult to see that the at-

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<sup>126</sup> Friedman, William F. "The Index of Coincidence and its Applications in Cryptography." Geneva, IL: Riverbank Laboratories, Publication No. 22, 1922, 87 pp.

<sup>127</sup> Sheldon, R.M. "The Friedman Collection: An Analytical Guide", 2014  
[http://web.archive.org/web/20211101214514/https://www.marshallfoundation.org/library/wp-content/uploads/sites/16/2020/01/Friedman\\_Collection\\_Guide\\_September\\_2014.pdf](http://web.archive.org/web/20211101214514/https://www.marshallfoundation.org/library/wp-content/uploads/sites/16/2020/01/Friedman_Collection_Guide_September_2014.pdf)

<sup>128</sup> Friedman, William F. & Elizebeth S., *The Shakespearean Ciphers Examined*. Cambridge: Cambridge University Press, 1957

tempt to discredit Cartier's conclusions is built on the basis of fraud and lies.

There is no doubt that if François Cartier had been alive at that time, he, without much difficulty and using specific examples from his book — that is, provably and verifiable by anyone — could demonstrate that the Friedmans' arguments were essentially a deception. Actually, anyone can verify this even today, because Cartier's book still remains, albeit forgotten by everyone. Moreover, historians now even have documents<sup>129</sup>, signed by the Friedman spouses, indicating that in their book they are lying, knowing very well, in fact, both about the real success of Fabyan's undertakings and about the correctness of Cartier's conclusions.

And finally, to complete the picture of writing of this book on Shakespearean studies from the cryptographer spouses. The original version of their manuscript had the title "Author! Author!"<sup>130</sup>, but soon Friedman changed it, probably realizing that in such emotional words of the title he revealed a little more than he would like to about his long-standing and hidden author's grievances...

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In fact immediately after the Friedman spouses turned to the topic of Bacon-Shakespearean ciphers (1954-1957), in 1958 there followed significant losses of documents from Friedman's "cryptographic collection." Whether it happened by chance or naturally, it's difficult to say for sure.

However, there are impressive examples from the past indicating that such things don't happen by chance.

For example, it's known that immediately after Francis Bacon died in 1626, the huge archive of his manuscripts was divided into three unequal parts. One part of the works was immediately prepared for printing and published. The other part became available for re-

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<sup>129</sup> See chapter "**The New Document**"

<sup>130</sup> NSA William F. Friedman Collection, Document A63765.  
<https://archive.org/details/41743019078222>

search slowly and gradually. And about the third part of the documents, all that is known that it disappeared without a trace and hasn't yet been found, despite the active searches of baconians and other enthusiasts.

Likewise, when Colonel George Fabyan died in 1936, his huge cryptographic collection was also divided into unequal parts. One part, a collection of both very ancient and modern books on cryptography and the occult, was handed on to the Library of Congress as the "Fabyan Collection." And the other part of the archive — essentially all the documentation related to the cryptographic work of the Riverbank Laboratories — disappeared almost entirely and no one knows where to.

However, where important documents disappeared from William Friedman's cryptographic collection has never been a mystery. For in 1958, relying on a new law on the reclassification of information related to ciphers and their breaking, the NSA authorities decided to temporarily seize Friedman's personal collection in order to clear of secrets that threatened national security.

And when the collection was returned to the owner, there was a noticeable lack of not only modern publications on cryptography, but also, what is especially interesting, several documents around the ancient Bacon-Shakespearean ciphers.

Such a strange, from the national security point of view, subject for removing documents from the archive aroused suspicion. Therefore, in the process of OSINT analysis, the list of all documents from the Friedman collection<sup>131</sup>, related to the publication of General Cartier was especially carefully studied (because they were also subject to selective censorship).

Thanks to this focused search, it was possible to discover a highly remarkable document, François Cartier's article<sup>132</sup>, "Bacon's Crypt-

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<sup>131</sup> Sheldon, R.M. "The Friedman Collection: An Analytical Guide", 2014

<sup>132</sup> Cartier, François (General.) "La Système cryptographique de Bacon," *Mercure de France*, May 1, 1939, Volume 291, pp. 687-693 (online pp. 175-181)  
<https://www.retronews.fr/journal/mercure-de-france/01-mai-1939/118/4092369/175>

tographic System,” published in one of the issues of the *Mercure de France* magazine in May 1939.

The article was published the next year after the publication of Cartier’s book on the same topic and meaningfully responds to critical comments from readers, and most importantly, gives very good advice on practical verification and reading Bacon’s ciphers in ancient books. And it’s probably for this reason that this article is now almost impossible to find and download on the Internet, although nominally it’s online, in the collections of a completely official web resource, but it’s there as if invisibly.

How can one find such an interesting publication?

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The literary magazine *Mercure de France* has been published in France since 1672, thus being almost the oldest periodical in the world among those that still exist. Issues of this magazine, published in the first half of the 20<sup>th</sup> century, are officially posted for free access on the BNF Gallica website<sup>133</sup>, that is, in the electronic version of the National Library of France.

And in this magazine, the retired General Cartier in the early 1920s published a series of articles on Bacon’s Shakespearean problem, which later became the basis for his book of 1938. In other words, now these articles can be found on this website and downloaded if there is interest and desire.

But with Cartier’s 1939 article, which is of particular interest to us, everything is much more complicated. Although the corresponding web page appears to offer access to publications from 1900 to 1947, in reality there is no access to the period from 1936 to 1946. This can be seen even in the different color of the table cells - there are no links to navigate to.

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<sup>133</sup> <https://gallica.bnf.fr/conseils/content/mercure-de-france>

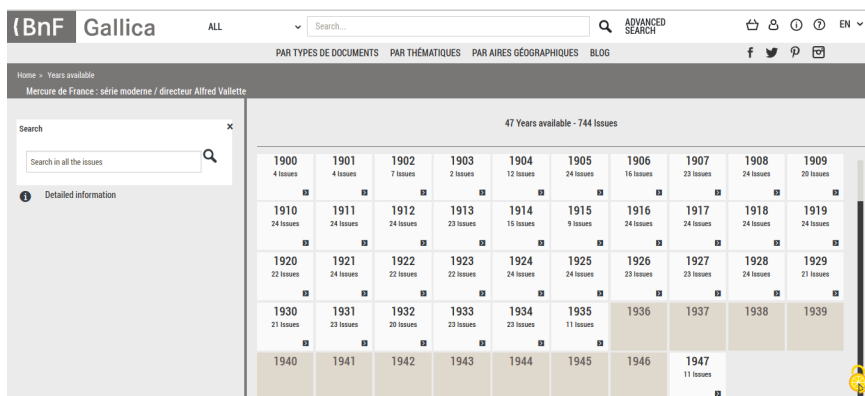


Fig. 41. Screenshot of the *Mercure de France* section on the BnF Gallica website, as it looked in 2022

Why the necessary links aren't provided — there seems to be no explanation on the BNF website, but there is an opportunity to go to another site, RetroNews<sup>134</sup> which provides access to the press of past years from the BNF collection, just not for free, for paying subscribers only.

That's where we can find the magazine we need, but not through the usual search capabilities (available only with subscription), but if you know in advance the web address of what is required. Here is the address of the magazine issue we need:

<https://www.retronews.fr/journal/mercure-de-france/01-mai-1939/118/4092369/1>

But even if you managed to get it, doesn't matter how exactly, then finding the right article is still not easy.

Usually, almost every digital version of the *Mercure de France* magazine begins with a table of contents page (Fig. 42, picture on the left), but in this case, for some reason, there is no table of contents (picture on the right)... But at least it's possible to scroll it — until page 175, where General Cartier's article finally begins.<sup>135</sup>

<sup>134</sup> <https://www.retronews.fr/>

<sup>135</sup> <https://www.retronews.fr/journal/mercure-de-france/01-mai-1939/118/4092369/175>

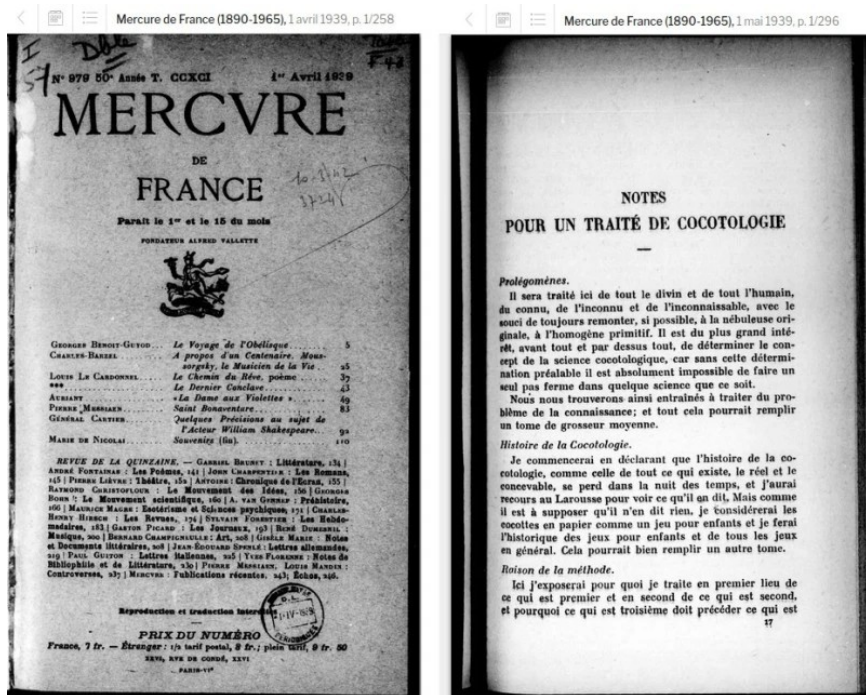


Fig. 42

In other words, if you don't know in advance, based on well-hidden information from the "Guide to the Friedman Collection," exactly where this article is located, then simply using the search capabilities of both the Internet and specific library sites, it's impossible to find this publication...

So what could be hidden there that is particularly interesting?

So that each reader has the opportunity to draw his own conclusions, the full translation of such a difficult-to-find article is provided here, a little further, in the Appendix. And at the same time, for everyone — both those who like to think for themselves, and for whom it's difficult for some reason to make their own conclusions — we can clarify the following.

Almost all the information provided in this article by General Cartier briefly and a little differently repeats the contents of those

pages from his 1938 book, which describe the structure of the bilateral Bacon cipher. The only important addition is in the finale, which tells about a new important publication<sup>136</sup> in the *Baconiana* issue 92, published in January 1939.

The publication, “A Study in Elizabethan Typography,” was written by specialist G.B. Curtis and provides technical detail on how to analyze the characteristics of printed letters in ancient books of the Shakespearean era. In particular, about how to most effectively identify and distinguish biliteral Bacon ciphers in texts. And that when using these methods, not only the author himself, but also several trained women without preliminary experience quickly mastered the decryption technique and independently obtained texts that had previously been deciphered by Elizabeth Gallup...

**In terms of modern science, the special value of this work by Curtis is that it's entirely devoted to one of the most serious problems in deep scientific research — the problem of stable reproduction of subtle effects in independent experiments.**

For this reason, the article by cryptographer General Cartier was hidden so deeply, or for some other reason — there is no point in guessing. But it definitely makes sense to note that General Cartier in the final part of his article confirms that in his own cryptanalysis experience he faced significantly different print quality in different versions of both original books and in different photocopies of the same pages. Therefore, in order to successfully decode Bacon's biliteral cipher, he strongly recommends taking a particularly careful approach to searching for those texts that are best preserved in the original books.

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The conclusions and recommendations of General Cartier allow us to take a significantly new look at the meaning and value of an-

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<sup>136</sup> Curtis G.B. “A Study in Elizabethan Typography.”. *Baconiana*, Vol. XXIV. No. 92, (January 1939) pp. 6-21  
[https://francisbaconsociety.co.uk/wp-content/uploads/2021/03/1939\\_Baconiana\\_No-92.pdf](https://francisbaconsociety.co.uk/wp-content/uploads/2021/03/1939_Baconiana_No-92.pdf)

other remarkable work from the very famous Shakespeare scholar and cryptographer Charlton Hinman (1911-1977). His name has already been mentioned among members of the Shakespeare scholars team from the Folger Library, who during the World War II were involved in breaking ciphers in the U.S. Navy intelligence.<sup>137</sup>

In times of peace, Professor Hinman, like all other scholars associated with the Folger Shakespeare Library, was always a firm supporter of the camp of the so-called Stratfordians, the credo of which is that it's William Shakespeare from Stratford-upon-Avon and no one else who is the true and only author of Shakespeare's works.

To strengthen the unshakable and truly scientific basis for this point of view, Hinman personally conducted really gigantic textual analysis in the 1950s and 1960s. Subjecting, in particular, Shakespeare's First Folio to real forensic examination using a special opto-mechanical device called the "Hinman collator." The essence of this device is that it provided an extremely careful page-by-page and letter-by-letter comparison of all the pages of the approximately 80 copies of the First Folio available in the Folger Washington collection.

The result of this detective work was a monumental two-volume monograph of over 1000 pages, published in 1963 under the title *The Printing and Proof-Reading Of The First Folio of Shakespeare*<sup>138</sup>. Since no one else had done anything of this magnitude and meticulousness, Hinman's work established him as the leading authority on the texts and copies of the First Folio.

Accordingly, the Friedmans, to ground the idea that there were no Bacon's ciphers in the ancient books, and it was impossible in principle to embed them there, attracted on pages 227-228 of their work<sup>139</sup> such a testimony of the authoritative Charlton Hinman:

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<sup>137</sup> See chapter "Concealing the Truth"

<sup>138</sup> Charlton Hinman. *The Printing And Proof-Reading Of The First Folio Of Shakespeare*. Oxford Clarendon Press, 1963  
<https://archive.org/details/printingproofrea0000hinm>

*In any given copy of the First Folio of Shakespeare, there is no full page of the text which is without letters that are so different from the corresponding letters in other copies that they seem to have been, though they were not, printed from different types. Inking variations are doubtless the commonest cause of these differences...*

If you carefully read the 1939 articles from Cartier and Curtis, it's easy to understand that they are talking about precisely these features of printing in ancient printing houses. But according to their version, these features help to find copies that are most suitable for identifying and extracting Bacon's encryptions.

And since these two articles from "C and C" were discovered, despite their careful concealment and hushing up, only thanks to Friedman's cryptographic collection, there can be no doubt that they were well known to the cryptographer spouses, but ignored for obvious reasons.

In the same way, the matter of Bacon's ciphers, not to mention the taboo name of Cartier, is completely ignored in Charlton Hinman's monumental monograph. At the end of his two-volume work, as befits a scientific publication, there is an extensive Index section of 30 pages, that is, a detailed list of all topics and names, one way or another, considered or touched upon by the author in the book. Almost all of Shakespeare's more or less famous literary contemporaries are mentioned there, with the sole exception of the name Francis Bacon...

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The Friedmans' book ends with a highly remarkable paragraph, the meaning of which fundamentally changes for readers depending on how informed and conversant they are in the nuances of the problem. It's useful to quote here the lines of this finale in full, for convenience breaking the paragraph into numbered parts:

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<sup>139</sup> Friedman, William F. & Elizebeth S. *The Shakespearean Ciphers Examined*. Cambridge: Cambridge University Press, 1957

- (1) *It must be remembered that the biliteral cipher is the one reputable system among all those proposed so far in support of anti-Stratfordian theories — that is, it is the only cipher which the professional cryptologist could admit as a valid system in itself.*
- (2) *Yet we think we have shown decisively that it was not used. As for the others, not only were they not used; they were not usable, not even credible.*
- (3) *We suggest that those who wish to dispute the authorship of the Shakespeare plays should not in future resort to cryptographic evidence, unless they show themselves in some way competent to do so. They must do better than their predecessors. We urge that they should acquaint themselves at least with the basic principles of the subject, and that they conduct their arguments with some standards of rigour.*
- (4) *Before they add to the very large corpus of writings on the subject, they might also consider subjecting their findings to the inspection of a professional who has no strong leaning to either side of the dispute.*
- (5) *If all this is done the argument will be raised to a higher plane. There is even the possibility that it would cease altogether.*

In fact, every point of this conclusion is an example of ambiguity of the highest degree, with the exception of the first part. Because:

Part 1 is an unequivocal admission of the undoubted fact that the Bacon cipher is indeed a real cryptographic system, and therefore, mathematically, the most strong argument in the debate about Shakespearean authorship.

Part 2 is a reference to denying the fact that the cipher was used. But in order for their denial to look convincing, the authors had to resort to deception, as if forgetting that in their youth they themselves took and prepared verifying tests to identify and break the Bacon's cipher in ancient books.

In part 3, the authors seem to forget one more fact — their main opponent is the very authoritative cryptographer Cartier, no less competent and no less committed to the strict standards of science than themselves.

In part 4, the authors again “forget” that General Cartier was invited to the Bacon-Shakespeare debate precisely as a reviewing “professional who has no preference for one side or another.”

Finally, in part 5 it’s clear that the authors didn’t exclude the possibility of involving in the analysis of the problem — someday in the future — another experienced professional cryptanalyst, with an understanding of the peculiarities of espionage work and capable of raising the discussion to a truly higher level.

And since the Friedmans themselves understood that their book was deception and disinformation, it wasn’t difficult for them to foresee that with a truly thorough professional analysis this deception would be demonstrably exposed.

Apparently, this is where their final phrase came from — about the existence of “such a possibility that disputes will stop at all...”

We don’t yet know whether any of the cryptanalysis professionals, being of sound mind and independent of the intelligence services, will have the desire to challenge the facts and documents presented in this OSINT investigation.

But the fact of the complete return of General Cartier’s book to free and easy access for everyone interested is known absolutely accurately and reliably. Now not only in the form of the most important fragment translations, but also in its full original form in French.

A digitized version of the original publication can be found either in the Internet Archive<sup>140</sup> collection or on the websites of the online scientific library LibGen.

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<sup>140</sup> <https://archive.org/details/un-probleme-de-cryptographie-et-d-histoire/>

This valuable, but deliberately hidden and undeservedly forgotten book rarity was returned to the world by one kind person, who chose the name “FrancisBacon1623” for online publication.

The year 1623 in this nickname is very, very special both for the biography of Francis Bacon and for our entire story. In 2023, exactly 400 years have passed since the publication of the most important of those encrypted texts that keep the Great Mystery.

And since the secret of the magical science of Bacon and the Rosicrucians still remains as if unknown to official scientific circles, our story is definitely not over yet.

But it’s a subject of investigation for other books. Not this one...

[ The End ]

## Appendix

*Translation of “that very” concealed article by Cartier from 1939: Cartier, François (General). “La Système cryptographique de Bacon.” Mercure de France, May 1, 1939, Volume 291, pp. 687-693*

### Bacon’s Cryptographic System

A cryptographic system enables the transformation of plain text into a cryptogram which, externally, does not have an obvious connection with the original text. Such a cryptogram can only be deciphered by recipients who know the principle of the cipher system and have the necessary elements for its application, namely keys or codes.

Transposition cipher systems generate cryptograms in which all the original letters of the plain text are preserved as they are, but their positions relative to each other in the text are changed. For example, the cipher of the Spartans, Scytale, rearranged the letters of a message using a simple mechanical device.

In other types of cryptographic systems, known as substitution ciphers, individual letters or their combinations (bigrams) are replaced by other letters or bigrams. If the substitution rule remains the same throughout, the cipher is called a simple substitution. However, if the substitution rules change during encryption, the cipher is then referred to as a double key substitution. Julius Caesar’s cryptographic system was a simple substitution, while the more complex Vigenère system is a double key substitution cipher (otherwise known as a polyalphabetic substitution).

Codes or cryptographic dictionaries allow the substitution of entire words and common phrases in the plain text with groups of numbers, letters, or even code words, which may be pronounceable but have no inherent meaning.

Cryptograms generated by all these different systems are identified by their context and stimulate the search for decryption methods by those interested in recovering the corresponding plain texts.

Francis Bacon, in his book *De Augmentis Scientiarum*, points out three methods that cryptanalysts can use to overcome the protective measures that usually ensure the secrecy of such messages:

- (1) Exploit negligence or errors made by participants in secret correspondence, or buy the cooperation of one of them;
- (2) Obtain, by force or bribery, the elements of the cipher necessary for decryption;
- (3) Employ skilled cryptanalysts capable of reconstructing these elements through special analytical processes, the development of which requires extensive research and specialized approaches.

Bacon apparently had little trust in the cryptographic systems used by his contemporaries. We know that he collaborated with a decryption service working for the royal authority, and that this service provided Queen Elizabeth with materials for the trial of Mary Stuart.

Under such circumstances, he was forced to invent his own cryptographic system, which could produce cryptograms that would remain unnoticed. Consequently, this would avoid the search for errors in them and the analytical research of the cryptanalysts.

The use of a pre-agreed language of code words to some extent met Francis Bacon's desires. However, experience has shown that this encryption method can only be recommended for infrequent and short messages with a well-defined subject.

Therefore, Bacon's cryptographic system became a simple substitution. Technically, it's of little interest, but under the circumstances where this cipher was used, it proved to be excellent.

The principle of this cipher is as follows.

It's known that Morse code allows for the representation of all letters with the signs dot ( · ) and dash ( – ). The number of signs corresponding to different letters varies. As a result, the intervals between the letters of a word must be made longer than the intervals between the signs of a letter. For example, the word BACON in Morse code is represented as follows:

— · · ·   · —   — · — ·   — — —   — ·

If all letters consisted of the same number of signs, there would be no need to separate them with longer intervals.

By replacing Morse code with Bacon's alphabet, in which a uniform 5 signs are used for each letter, consecutive letters can be encrypted without separating intervals. Not to mention that this eliminates ambiguity in correct reading.

Bacon's alphabet, structurally similar to the five-digit Baudot telegraph code, is schematically represented by the following table. Each letter in the cipher text is formed by two signs from its row, followed by three signs from the corresponding column.

	· · ·	· · —	· — ·	· — —	— · ·	— · —	— — ·	— — —
· ·	a	b	c	d	e	f	g	h
· —	ij	k	l	m	n	o	p	q
— ·	r	s	t	uv	w	x	y	z
— —								

Thus, in Bacon's cipher, the letter "A" is represented by the sequence · · · · ·

Similarly, "L" is · — · — ·

And “X” is 

Consequently, the word BACON is encrypted as a sequence of 25 symbols like this:



It should be noted that Bacon’s alphabet table consists of only 24 cells, so the same combination of signs is used for the letters (i) and (j), as well as for (u) and (v).

The fourth row of the table was not used for letters; it could include punctuation marks such as a comma (,), semicolon (;), period (.), question mark (?), exclamation mark (!), colon (:), brackets or quotation marks.

Also, the order of the letters in the table could occasionally be changed, which would create new combinations of signs, slightly increasing the system’s resilience. However, Bacon did not consider it necessary to use this possibility, as it also increased the risk of permanently losing the history he recorded for posterity.

Here’s how Bacon used his system.

For each letter of the text, whether lowercase or capital, he used two types of font, one of which would represent a dot ( · ), and the other a dash ( – ).

To encrypt a letter of the secret message according to his table, five consecutive letters of an arbitrary open text are needed, the font forms of which correspond to the dots and dashes of the table. Accordingly, to encrypt the word BACON, it would require 25 consecutive letters of text, the font forms of which would correspond to the above line of 25 dots and dashes.

In his earlier mentioned work *De Augmentis Scientiarum* Bacon provided an example of two font forms for each letter, corresponding to the dots and dashes in our explanation. To make the cipher

mechanism more understandable, he used two easily recognizable forms in his description.

On pages 46 and 47 of my book *The Problem of Cryptography and History*, both these forms and a specific example of their use by Bacon for encrypting text are presented. In this example, anyone can easily distinguish the two different font forms, which Bacon calls A ( · ) and B ( – ). This example also demonstrates that this cipher could have remained unnoticed despite the clear differences in the two used forms of letters, if the readers' attention had not been specifically drawn to these differences.

The example also shows how any secret text can be embedded into any open text, provided that the latter is five times longer than the former. This example also helps understand the usefulness of basic punctuation marks. It's regrettable that Bacon didn't use the cells of the fourth row of his encryption table for this purpose.

Regardless, it's evident that Bacon couldn't ignore the existence of contemporaneous cryptanalysts whose insight was a threat to him. Therefore, in his encryptions, he did not use markedly different letter forms to avoid attracting premature attention.

The typographic forms of letters he used often differed only in hard-to-identify details, and the conditions in which his encrypted texts were stored could make the differences in some letters impossible to discern.

Photographic reproductions do not always accurately replicate the original, and on some trial copies, I noticed transmission defects that hid differences observed in the letters of the original. It should not be forgotten that the works into which Bacon embedded his cryptograms are over three centuries old, and the quality of the letters and typographic setting he used didn't possess the regularity and firmness achieved in the time since.

In the aforementioned work *The Problem of Cryptography and History*, page 261, I included a photograph of a page from a recent book published in 1911, into which a secret text encrypted with

Bacon's cryptographic system was embedded. The differences in letter forms, quite noticeable in the original edition, are barely visible in the photograph.

Further in the my book (on pages 269 and 270), photographs of two additional pages printed in 1919 are presented, which also contain a secret text encrypted using Bacon's method.

This cipher, nonetheless, remained unnoticed by readers of the original edition, although both forms of the letters are easily recognizable there. Studying the photograph of the original, one can understand the changes in letters that occur as a result of copying and reprinting.

Thus, when searching for texts encrypted by Bacon, it is necessary to use only the original editions, especially those that have been protected from moisture during storage.

In the *Baconiana* magazine, published in January 1939, there is a study on printing during Bacon's era ("A Study in Elizabethan Typography," by G.B. Curtis). I find it interesting to cite here a few excerpts that confirm the comments I have just made.

The process of printing involves covering the type-face with ink, by means of a roller. The paper is then squeezed between the "press" and the type, and picks up the ink. In the process, ink will be forced off the face of the type and this surplus ink will be absorbed by the paper.

It is essential to note however that the surplus ink will be absorbed by the paper outside the limits of the outline of the type-face. This surplus ink will produce a printed letter somewhat different from the type-face and each printing will be slightly different from every other.

This is true of modern printing as well as of sixteenth and seventeenth century work, but not so noticeably because of the nice adjustment of modern rollers.

Fortunately, by the use of a reading glass the surplus ink can be differentiated from the ink which was deposited by the type-face itself. Under the glass the former is intensely- black, while the latter is grayish.

Obviously the special characteristics of a letter are to be seen in this grayish area,, and the outside ink must be ignored.

Only by studying printed letters in this manner can one know the exact outline of the type-face which produced the printed letter..

The expert can frequently reconstruct the type-face in his mind by ignoring globules of ink on the side, the “ink-traps” of certain letters, and the distortions which commonly repeat themselves; but the inexperienced must proceed with caution in passing judgment as to similarity or dissimilarity of letters not examined in the original, printing with the aid of a glass.

It follows that an ordinary photograph which pictures the ink from the type-outline itself and the excess ink alike in an even blackness, destroys what can be seen by the eye in studying the original. Hence photographic or photostatic reproductions are practically useless in careful collation of two pieces of printing, particularly if the question of a typographical cipher is involved.

Furthermore the photographic reproducing processes not only do not reproduce the variations in density of ink but are apt to impose new variations of their own on the plate. The letters on the plate in turn may themselves be subject to distortion from an overflow of ink on the newly printed page.

The author of this article provides photographic reproductions of two different copies of the same page from a book printed over 300 years ago, during Elizabethan times, for illustration. Comparing the copies, there are very significant differences between the forms of the same letters, which appear bold in one photograph and thin in another.

If a secret text had been embedded into this page using Bacon’s method, the classification of letters into forms A and B would be clearly different in these two photocopies, and also different from what would have been obtained from the original printed page. The restoration of the secret text would be extremely difficult, if not impossible, due to all the variations in the letters that occurred during copying.

I myself have noted roughly similar differences between photographs of originals taken in America and the corresponding pages of those original editions located in our National Library. Therefore, the necessity of studying only the original editions is beyond doubt, and it's precisely such editions that should be checked for decryptions that have generated objections or criticism.

*General Cartier*

#

*February 2022*



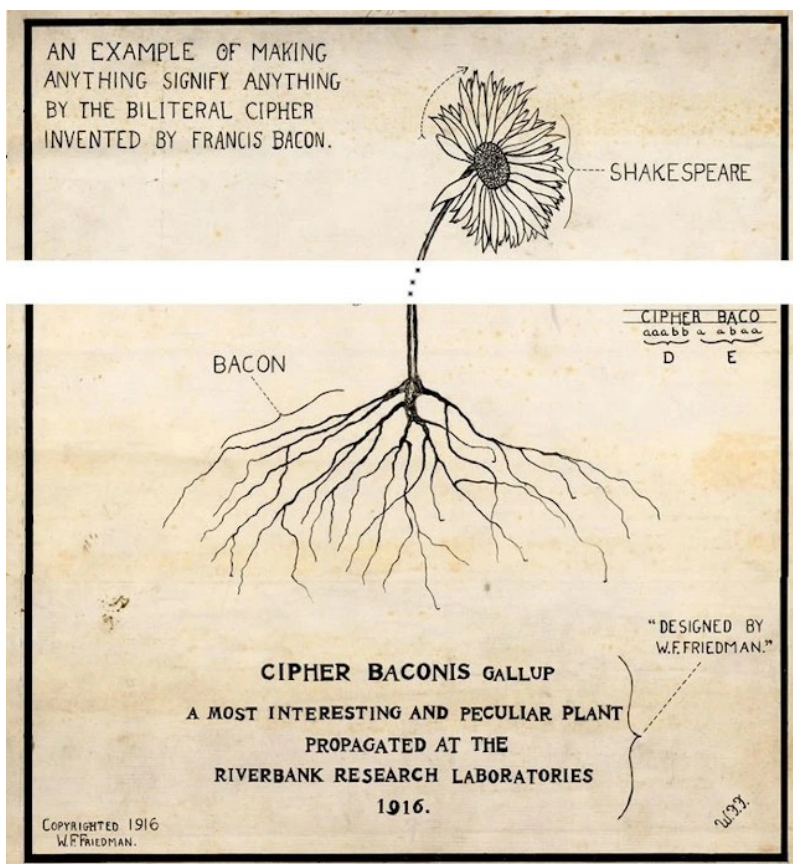
Conclusion.

Mystical and Simply  
Intriguing Coincidences

# Bacon as Shakespeare.

## Keys and Hints from William Friedman

About how much reliable, but unknown to everyone, truth can be obtained and presented by amateurs who ignore the taboos and traditions of professionals, and about how the Problem of History, Literature and Cryptography, which science has tried to forget about for many decades, today reminds itself more and more clearly...



Among the most famous questions in history, which constantly cause clashes between irreconcilable parties, the story of the true author of Shakespeare's works occupies a very special place.

Not only because the subject of this seemingly “insoluble dispute” is already 400 years old, but also, mainly, because in fact there is more than enough irrefutable evidence and indisputably authentic documents that clearly point to Francis Bacon as the real author.

And the “great secret,” accordingly, turns out to be not the original author, reliably confirmed by cryptographic science and historical documents; the secret here is that all this evidence is completely ignored by society.

To convincingly explain WHY the masses of obviously intelligent, educated and rationally thinking people can so easily and for a long time become victims of obvious deception, such a large-scale task isn’t even posed here. But it’s quite possible to clearly demonstrate HOW such things are arranged — using a specific example of fraudulent manipulations in the Bacon-Shakespearean issue.

This example is especially good for the reason that one of the prominent participants in Shakespeare’s grand deception, the “father of modern cryptology” William Friedman, left very important documentary evidence on this matter, a kind of personal testimony that provides the truth to everyone who would like to know it.

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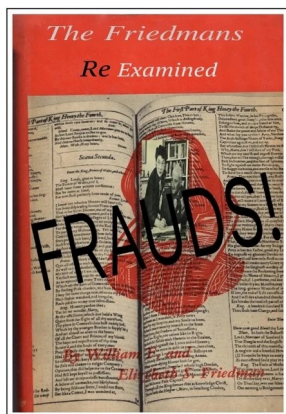
Almost all people have probably encountered a well-known and strange natural phenomenon, which, at the suggestion of Carl Gustav Jung, is called synchronicity. That is, such significant and clearly non-random coincidences in our lives that are clearly connected in meaning, but don’t have an obvious causal relationship.

Since this kind of things happen all the time and everywhere, influencing our perception of what is happening, the psychologist Jung and the physicist Pauli, for example, considered synchronicity as a very important concept that structures ongoing events and connects the worlds of matter and consciousness.

Probably the strangest thing about synchronicity is that since science isn’t able to explain its mechanisms, for scientists this natural

phenomenon doesn't seem to exist. Therefore, from the standpoint of scientific ideas about the structure of the world, all such inexplicable coincidences are nothing more than the most ordinary randomnesses.

There is no point in wasting time on useless arguments with official science; there are much more interesting things to do in life. Such as identifying the next significant synchronicities and careful analysis of how these coincidences structure the events of our present, past and future, or how exactly consciousness affects matter...



In June 2022, a new investigative book, *The Fraudulent Friedmans*, was published. As the title suggests, the main subject of critical research in this book is the famous American cryptographers duo William and Elizebeth Friedman, who outside the U.S. intelligence services are best known in the enlightened world for their highly authoritative work *The Shakespearean Ciphers Examined*<sup>141</sup>. The work was published in 1957 and for a long time put an end, in fact, to all disputes about

cryptographic evidence that the real author of Shakespeare's works is Francis Bacon.

As far as we know, between 1957 and 2022, that is, for over 60 years, NOT A SINGLE book was published in the world that contained a detailed and thorough analysis of the fabrication from the Friedman spouses. The first work of this kind, based on a set of documents and facts that irrefutably prove the Friedmans' lies, was published in May 2022 on the kiwi arXiv website in the form of a collection *4in1: Mask of Shakespeare and Mysteries of Bacon*,

<sup>141</sup> Friedman, William F. & Elizebeth S., *The Shakespearean Ciphers Examined*. Cambridge: Cambridge University Press, 1957

*Book by Cartier and Secrets of the NSA*<sup>142</sup>, the second edition of which you are now reading.

And a little less than a month later, another very detailed book<sup>143</sup> on exactly the same topic *The Fraudulent Friedmans. The Bacon Ciphers in The Shakespeare Works* appeared on the website [www.academia.edu](http://www.academia.edu)<sup>144</sup>.

The new book consists of 340 pages and contains 81 illustrations and 756 references to primary sources. The author of this large work, published under the name “A. Phoenix,” has been working on the monograph for the last six years, and talks about himself very briefly:

*I am an independent scholar researching the areas of Francis Bacon, the true authorship of the Shakespeare Works and the Rosicrucian-Freemasonry Brotherhood.*

Since the author A. Phoenix has been digging up primary sources in English with great enthusiasm and for many years, it’s quite natural that he didn’t notice the appearance of a similar book in Russian; and therefore, in the preface and brief description introducing his new work on the SirBacon.org website, he writes about his work like this<sup>145</sup>:

*This is a story about one of the greatest literary frauds of all time fully revealed here for the first time that will absolutely shock Shakespeare scholarship and the rest of the world and necessitate a complete re-assessment of Francis Bacon’s true authorship of the Shakespeare works.*

Since from the text of the two books on the same, long-forgotten and taboo subject, it’s very easy to see that they were prepared in

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<sup>142</sup> <https://kiwibyrd.org/2022/05/20/22h53/> (rus.)

<sup>143</sup> The Fraudulent Friedmans, by A Phoenix. June 2022.  
[https://www.academia.edu/attachments/87499595/download\\_file?s=portfolio](https://www.academia.edu/attachments/87499595/download_file?s=portfolio)

<sup>144</sup> <https://aphoenix1.academia.edu/research>

<sup>145</sup> What’s New on SirBacon.org, June 16, 2022  
<https://sirbacon.org/whats-new-on-sirbacon-org/>

absolute causal independence of events from each other, it's clear that before us is a typical example of synchronicity according to Jung and Pauli. That is a significant coincidence, inexplicable for serious science, which can, of course, be interpreted as an "ordinary randomness."

But with such an interpretation, we won't extract absolutely anything meaningful from this remarkable situation.

But if you are more careful and recognize informative signals in such an event, you can extract a lot of useful and very powerful facts needed to consolidate a new picture and adequately understand what is happening.

How are things like this done?

#

The main and perceptible difference between the Russian and English books is that the author of the first book worked professionally in the fields of cryptanalysis and intelligence services for many years, while the author of the second one apparently doesn't have such experience, judging by the excessive exaltation in expressions and amateurish judgments about the strength of cryptographic evidence.

At the same time, the lack of professional espionage knowledge and skills is fully compensated by enthusiasm and very scrupulous work with facts extracted from many hard-to-reach sources. It's the main advantage of the second author over the first, who worked mainly with those documents that are available via the Internet.

Phoenix's book about the "Fraudulent Friedmans" is very densely packed with documentary evidence from contemporaries and colleagues of the cryptographer spouses, and all this evidence really very convincingly shows that the Friedmans' work is a deliberately fabricated lie.

The Russian-language book "4in1" proves the same thing, but based on other facts and documents, usually presented from the po-

sition of an open source intelligence specialist and cryptanalyst with many years of experience.

And if for professional cryptologists A. Phoenix's reasoning about the persuasiveness of his cryptographic evidence doesn't seem very convincing, to put it mildly, then all such arguments can simply be ignored, because in the end there still remains a lot of reliable documents and evidence from quite competent intelligence officers, outstanding professional cryptographers and just knowledgeable contemporaries who once found themselves in the right place at the right time...

It's precisely these documents, obtained and presented in Phoenix's book, that will be discussed here.

#

As everyone interested in the topic of the true author of Shakespeare's works knows, the matter of cryptographic proof of Francis Bacon's authorship was actually closed in 1957, after the publication of a very authoritative book by the Friedmans *The Shakespearean Ciphers Examined*<sup>146</sup>.

It's much less known that the basis for this book was the Friedmans' manuscript *The Cryptologist Looks at Shakespeare*<sup>147</sup>, which they had prepared a little earlier for participation in the Folger Shakespeare Library literary competition and which became its winner in 1955.

The volume of this typewritten manuscript significantly exceeded the book published in Cambridge, and the main task of the Cam-

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<sup>146</sup> William F. Friedman and Elizebeth S. Friedman, *The Shakespearean Ciphers Examined: An Analysis Of Cryptographic Systems Used As Evidence That Some Other Author Than William Shakespeare Wrote The Plays Commonly Attributed To Him*. Cambridge: Cambridge University Press, 1957  
<https://web.archive.org/web/20210223192326/https://www.marshallfoundation.org/library/digital-archive/shakespearean-ciphers-examined/>

<sup>147</sup> William F. Friedman and Elizebeth S. Friedman, *The Cryptologist Looks At Shakespeare*. Add. 215, Folger Shakespeare Library, 1955  
[https://digitalcollections.folger.edu/mf\\_bib217559-245930](https://digitalcollections.folger.edu/mf_bib217559-245930)

bridge publishing house editors was to radically reduce the source text in order to preserve in the book all the key statements with their justifications, removing unnecessary or undesirable details.

It should be emphasized that the Friedmans' book is a kind of professional report by veteran cryptographers about how a great metamorphosis happened to them. Or the miracle of the transformation of the very young people, who in 1916 enthusiastically joined the world of cryptography through breaking Bacon's ciphers in books of the Shakespearean era, into something completely different — those highly experienced, skeptical cryptanalysts in the secret state service, who 40 years later suddenly decided to announce to the world that they had never broken any ciphers in ancient books in their youth and had never even seen them there...

Looking at the problem from this point of view, it's quite natural to wonder what exactly of the "unnecessary details and redundant information" was removed when editing the manuscript and wasn't included in the final text of the book.

It's exactly what researcher A. Phoenix did, having obtained a copy of the never published Friedman manuscript from the Folger Library, and discovered very interesting facts among the fragments removed by the editors.

In the book *The Fraudulent Friedmans*, a whole large chapter number 2, over 40 pages long, is devoted to comparing two versions of one work. And here it's enough to tell only about a couple of very important interrelated facts identified by Phoenix, which aren't mentioned anywhere else in the literature about Bacon-Shakespeare or about cryptography. In combination with additional reliable information not included in the Phoenix's book, these materials can serve as a clear demonstration of the "internal anatomy" of the great deception.

#

Any story about William Friedman's prominent role in the achievements of 20<sup>th</sup> century cryptology usually begins with the fa-

mous series of cryptographic brochures under the general title “Riverbank Publications.” This title comes from Riverbank Laboratories, as textile magnate Colonel George Fabyan called his private research institute.

And geneticist biologist William Friedman, from 1916 to 1920, respectively, with a break for military service, had the opportunity to head the cipher department in those laboratories. And also to become the author of the vast majority of cryptographic brochures produced by Riverbank’s own printing house, which, using mathematics, introduced a scientific basis into the art of analytical code-breaking.

In the much later work of the Friedmans of 1955, when it comes to their youth in the Fabyan laboratories and to the famous Riverbank publications, the following notice is first given: “Now it must be emphasized and clearly understood that those publications were of two very different sorts.”<sup>148</sup>

One category included a series of technical monographs devoted to the strength of ciphers and breaking methods. In a completely different separate category, the authors included all Riverbank publications related to the work of Mrs. Elizabeth Gallup on identifying and decoding Francis Bacon’s biliteral cipher in ancient books. That is, connected with everything that the cipher department was busy with before the U.S. entered World War I in 1917.

The most curious thing about such a careful division of publications into two different categories is the matter of the brochures authors. Because the personal characteristics of the Riverbank Laboratories owner — sometimes called “feudal habits” — Colonel Fabyan were such that he almost always, with very rare exceptions, hid the names of the real authors of the brochures, indicating only the publishing house (Riverbank Laboratories) and his notices (Copyright George Fabyan) (see Fig. 43 for an example).

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<sup>148</sup> William F. Friedman and Elizebeth S. Friedman, *The Cryptologist Looks At Shakespeare*. Add. 215, Folger Shakespeare Library, 1955, p. 487  
[https://digitalcollections.folger.edu/mf\\_bib217559-245930](https://digitalcollections.folger.edu/mf_bib217559-245930)

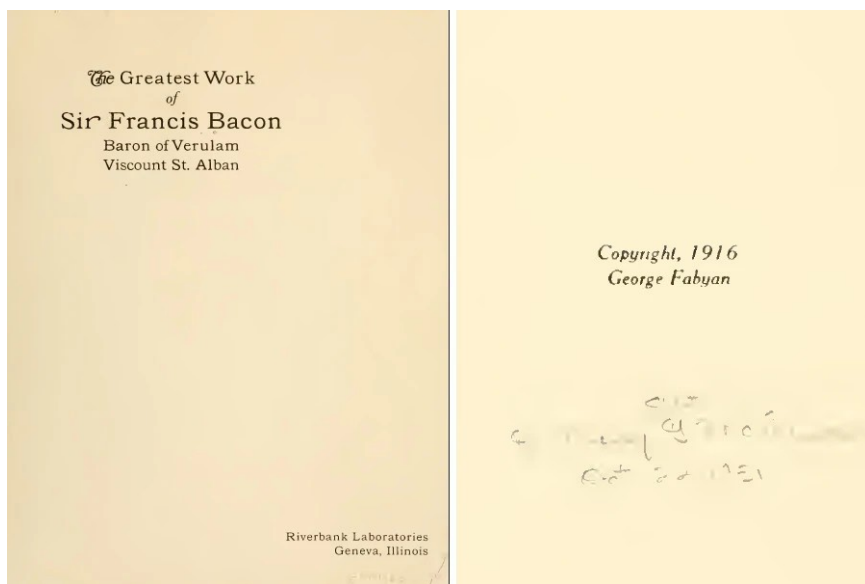


Fig. 43

Now it's well known to historians of cryptography that the real author of almost all technical pamphlets — that is, the first category — was William F. Friedman, sometimes co-authored with his wife Elizebeth S. Friedman. But as for not only the names of the authors, but even the exact number of brochures of the second, now much less known category, historians of cryptography still have no clarity.

Which at first glance looks extremely strange, since almost everything that can be associated with the names of the famous cryptographers Friedmans is considered to be long ago and thoroughly studied. But delving into the essence of the issue a little more carefully, as A. Phoenix did, it turns out that the ambiguity is deliberately constructed and artificially introduced. Because the truth about genuine authorship looks very objectionable in this case, and equally inconvenient both for the official version of history and personally for the Friedmans.

In the Friedmans' book *The Shakespearean Ciphers Examined* Riverbank publications of the "second category" are given only two short sentences, separated by about fifty pages, and even these brief summaries do not fit well with each other. So, on page 208 it says:

*While she was there [Mrs Gallup at Riverbank], Fabyan issued in his series of Riverbank publications six small items relating to the bilateral cipher.*

The second sentence about the same brochures appears on page 250 and looks like this:

*There were five of them; four dealing with what was called 'The Greatest Work of Sir Francis Bacon,' and one called Ciphers for the Little Folks.*

Nothing more, as the very scrupulous researcher A. Phoenix assures, is found in the Friedmans' book about this part of the Riverbank cipher department work. When Phoenix began to study the text of the original source on this subject, that is, the Friedman manuscript *The Cryptologist Looks at Shakespeare*<sup>149</sup>, the picture became more interesting.

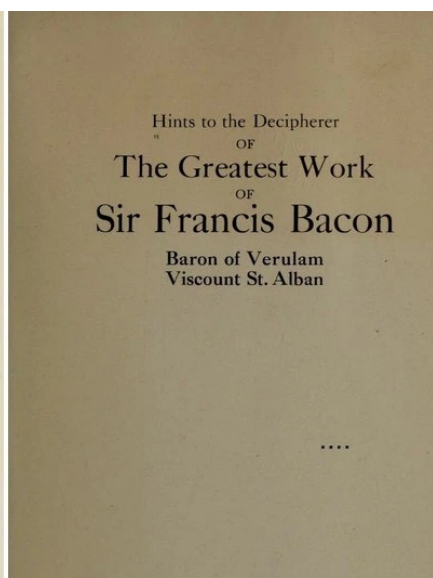
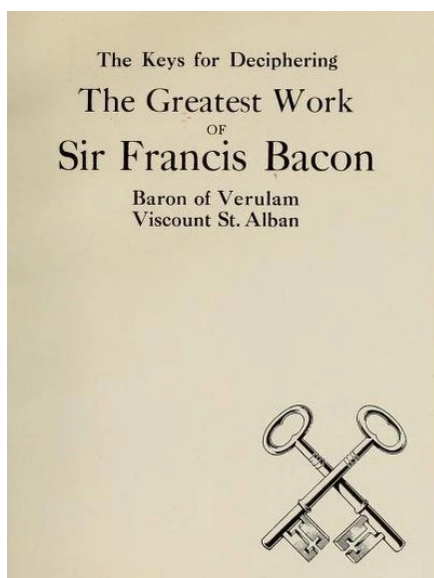
The original manuscript not only fully lists all Riverbank publications of the "first category" with real authors, since mainly, as we remember, they are William and Elizebeth Friedman themselves, but also the five publications known to the authors of the "second category" are listed. Although their second list looks somewhat puzzling and a little less informative (page 487):

- Powell, J. A. *The Greatest Work of Sir Francis Bacon*, 1916, pp. 14
- Anon. *Hints to the decipherer of The Greatest Work of Sir Francis Bacon*, 1916, pp. 15

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<sup>149</sup> William F. Friedman and Elizebeth S. Friedman, *The Cryptologist Looks At Shakespeare*. Add. 215, Folger Shakespeare Library, 1955  
[https://digitalcollections.folger.edu/mf\\_bib217559-245930](https://digitalcollections.folger.edu/mf_bib217559-245930)

- Pott, Mrs. Henry. *Hints for deciphering The Greatest Work of Sir Francis Bacon*, n.d. pp. 17
- Anon. *The keys for deciphering The Greatest Work of Sir Francis Bacon*, 1916, pp. 100
- Crain, Dorothy. *Ciphers for the little folks*, 1916, pp. 73



For those who understand well what the authors of the manuscript are talking about here, such a presentation of the material is a very noticeable and undoubted signal of an attempt to deceive readers. Because in 1916, it was William Friedman who headed the Cryptographic Department that prepared for release all these publications about Bacon ciphers. And since Mrs. Gallup, with whom this whole idea actually began, worked there and at the same time, it's impossible to believe that the Friedmans didn't know the name of the anonymous author of the brochures with "hints and keys" for decryption.

Moreover, having obtained copies of these allegedly "anonymous" brochures and comparing them with later texts and lectures by William Friedman, A. Phoenix brings us to the "main secret" of the authors. The secret that Friedman, the future "father of Ameri-

can cryptology,” was almost certainly the author of brochures that clearly and meaningfully taught everyone how to identify and decipher Bacon’s biliteral cipher. And the well-known manner of Colonel Fabyan — hiding the name of the real author — in this case turned out to be extremely useful for the Friedmans...

#

There is no point in retelling the contents of the documents and arguments collected in A. Phoenix’s book to prove who is the true author of two important and anonymous Riverbank pamphlets related to the Baconian ciphers, because the book<sup>150</sup> with his investigation is freely available to anyone interested on the Internet.

There will be a short story about another important discovery of Phoenix in this regard at the very end of the text. And now it makes sense to tell and show something important that Phoenix didn’t manage to reach in his research.

In general, in his book *The Fraudulent Friedmans* there is a brief mention of the New York Public Library, since in the collections of manuscripts and archives there is a large, but little-studied collection of boxes with documents from the early history of Riverbank under the general title “Bacon Cipher collection.” But Phoenix himself hasn’t been to the New York Public Library, so his book doesn’t contain information about any meaningful materials from this collection.

However, now some of the very interesting documents from the New York “Bacon Cipher Collection” can be found on the Internet, primarily thanks to the huge collection of digitized documents on the Internet Archive website. By the way, there you can also find the Riverbank printing house publications from the Baconian series, which, as it appears are unknown even to A. Phoenix.

In particular, of special interest is the large set of materials from Fabyan’s reports and presentations, entitled *Fundamental princi-*

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<sup>150</sup> *The Fraudulent Friedmans*, by A Phoenix. June 2022  
<https://sirbacon.org/the-fraudulent-friedmans/>

*ples of the Baconian ciphers, and application to books of the sixteenth and seventeenth centuries*<sup>151</sup>.

This document of about 200 pages can't be called a brochure, but it's interesting not so much for this as for the many illustrations made and definitely signed by William F. Friedman. All these illustrations are constructed on the basis of the texts of ancient, mainly Shakespearean books and serve as a kind of visual aids for identifying and breaking the Bacon cipher in them.

And the most interesting thing is that exactly these examples and manuals prepared by Friedman were used by Mrs. Gallup as test tasks when selecting her assistants for the cryptographic department of Riverbank. And one of the first to successfully solve such test decryption tasks was the young philologist Elizebeth Smith, later Friedman. And the signed sheets with her decryptions are still kept in the archives of the New York Public Library...

Details and photographic illustrations of this entire remarkable story from the youth of famous cryptographers can be found above in the chapter "The New Document."

And here is a story about another interesting document from the same archive of the New York "Bacon Cipher Collection." In some intricate way, it's very closely connected not only with the mysteries of Bacon-Shakespeare and secrets from the Friedmans' youth, but also with the content of the chapter that follows "The New Document," that is, "Bacon and Shakespeare: Anatomy of Deception."

Because that chapter presents the text and translation of that part of the secret encrypted autobiography of Francis Bacon, where he tells about his literary and dramatic works, hidden under various masks of famous contemporaries: Spenser and Greene, Marlowe and Peele, Burton and Shakespeare.

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<sup>151</sup> *Fundamental principles of the Baconian ciphers, and application to books of the sixteenth and seventeenth centuries*. Compiled by George Fabyan, 1916  
<https://archive.org/details/fundamentalprinc00faby>

As a visual illustration of this entire amazing story, the following document from the Riverbank Archives in the New York Library, creatively designed in 1916 by William F. Friedman and personally signed by him three times, can serve perfectly.

***The following illustration shows an example of making anything signify anything using the biliteral cipher invented by Francis Bacon.***

Caption below: “Cipher Baconis Gallup, a most interesting and peculiar plant propagated at the Riverbank research laboratories.” The hidden message “designed by W. F. Friedman” is encrypted in the form of the letters of this caption.

On the left is the structure of the binary alphabet in the Bacon cipher. On the right is the key for deciphering the root system meaning “Bacon.”

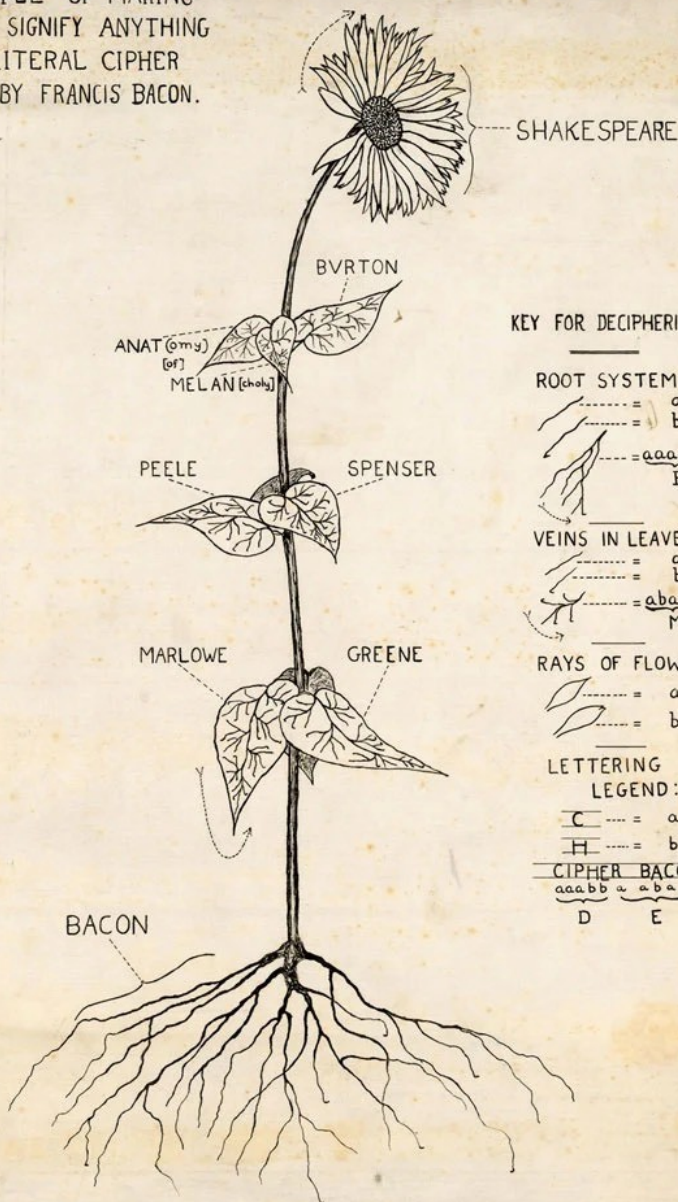
The key for deciphering leaves, where the names Greene, Marlowe, Spenser, Peele and Burton are encrypted in the veins.

The key to decrypt the message in the flower, where the shape of the petals encrypts Shakespeare’s name.

AN EXAMPLE OF MAKING  
ANYTHING SIGNIFY ANYTHING  
BY THE BILITERAL CIPHER  
INVENTED BY FRANCIS BACON.

# ALPHABET

A-aaaaa  
B-aaaaab  
C-aaabab  
D-aaabbb  
E-aabbaa  
F-aababb  
G-aabbba  
H-aabbbb  
I-abaaaa  
K-abaaab  
L-ababab  
M-ababbb  
N-abbaaa  
O-abbbab  
P-abbbba  
Q-abbbbb  
R-baaaaa  
S-baaaab  
T-baaaba  
V-baabb  
W-babaa  
X-babab  
Y-babba  
Z-bubbbb



## KEY FOR DECIPHERING

### ROOT SYSTEM:

----- = a  
----- = b  
----- = aaaaab  
B

### VEINS IN LEAVES:

----- = a  
----- = b  
----- = ababbb  
M

### RAYS OF FLOWER:

----- = a  
----- = b

### LETTERING IN LEGEND:

C ----- = a  
H ----- = b

CIPHER BACON  
aaaaab a abaa  
D E

CIPHER BACONIS GALLUP  
A MOST INTERESTING AND PECULIAR PLANT  
PROPAGATED AT THE  
RIVERBANK RESEARCH LABORATORIES  
1916.

"DESIGNED BY  
W.F. FRIEDMAN."

To complete the story about Phoenix's remarkable research among documents that are difficult to access via the Internet, only a book about little-known pages from the history of architectural acoustics should be mentioned. It's the book *The Sabines at Riverbank*<sup>152</sup>, which is also intricately connected both with the author of the pamphlets of the series "Sir Francis Bacon's greatest work," and with the content of another chapter of the book you are reading, "Bacon, Rosicrucians and Levitation."

It should be noted that in Phoenix's book *The Fraudulent Friedmans* the topic of acoustic levitation, which was simultaneously developed in the Riverbank Laboratories with the help of Bacon's deciphered texts, isn't covered at all. Perhaps because there is not a word about this in the book of the Friedmans either.

But since it was the acoustic levitator that caused the appearance of Wallace Sabine, the most authoritative American specialist in the field of sound physics in Riverbank, and then the Riverbank Acoustic Laboratory, which is still working, the topic of Bacon's ciphers became a page in the history of this field of serious U.S. science.

The uniqueness of this page of history lies in the fact that it's an "inconvenient truth," which practically none of the historians of science mentions. Therefore, *The Sabines at Riverbank*, published by knowledgeable Labs veteran John Kopec, is one of the very rare exceptions.

Rare in every sense of the word, because not only the specific topic of the book, but also its minimal print run by the Acoustical Research Society of the United States immediately made this document a bibliographic rarity. And A. Phoenix got it from the library and quotes important fragments for his investigation.

Since these fragments are equally important and make sense to us, we present them here.

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<sup>152</sup> John W. Kopec, *The Sabines at Riverbank: Their Role in the Science of Architectural Acoustics*. Woodbury, N.Y.: Acoustical Society of America, 1997

John Kopec talks about the story of his book as follows:

I was permanently assigned to Riverbank Acoustical Laboratories by my parent organization, the IIT Research Institute in 1976. After reading the Wallace Clement Sabine biography, I began digging through the junk room (now the museum) to find all I could about Riverbank. I became intrigued by the history and constantly pestered Don (Mr. Riverbank) Williams about anything and everything I could about this fascinating place.

[ Don Williams, also known as ‘Mr. Riverbank,’ who was born there at Riverbank in 1920. Don Williams was the son of Fabyan’s chauffeur Bert Williams. Don ‘Mr Riverbank’ Williams, worked at Riverbank for 35 years before retiring in 1985, and knew more about Riverbank than other person alive. ]

Don decided that because he was getting close to retiring, he would pass the duties of client tour guide over to me. Thus, with Don’s help, I also gained a job-related purpose to learn all I could about Riverbank.

Then, one day an article about Riverbank, the third article within a year, appeared in a local paper. After reading it, Don threw it down on the desk saying, “Garbage! Garbage! Garbage! Why can’t anyone print the truth about Colonel Fabyan rather than all the garbage that others managed to come up with?”

Don then turned to me and said, “If you really want to know all about the history of this place, I’ll tell you what I can recall on one condition... if and only if you promise me, you will document what I say or from whomever or whatever you find about Riverbank that can be regarded as fact. Just so I can retire from Riverbank knowing that at least one document about this place tells it like it was.”

I agreed, not at the time anticipating that a book would result.

Among the many stories that Kopec documented from the narratives of “Mr. Riverbank,” there were, naturally, pages about the Friedmans. Including on the real authorship of the Riverbank brochures about the Bacon cipher:

Although the Friedmans loved Riverbank, they had many reservations about Colonel Fabyan because he had broken many promises, involving back pay, title recognition in regard to published documents, and other fringe benefits. When discussing the Baconian ciphers, the Friedmans stated that they spent years working on Bacon’s writings, and the results of their efforts were documented by them. However, when their book *The Greatest Work of Sir Francis Bacon* was printed in 1916, the author listed was George Fabyan. They also cited other published documents about codes that were written by them but credited to the colonel.

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Concluding this story, we emphasize that among all the published books on the history of 20<sup>th</sup> century cryptography the scrupulous researcher A. Phoenix didn’t find a SINGLE work containing at least an approximately complete list of Riverbank publications on Bacon’s ciphers. Not to mention the fact that NONE of the cryptographic books tells that the authors of the main of these works were the Friedmans, the most famous married couple in the world of cryptology.

Likewise, among the great many books on cryptography, there is not a single one that mentions that the idea of an acoustic levitator, a very relevant device for modern physics, first appeared in Riverbank, and straight from the deciphered texts of Francis Bacon.

Among the texts on the history of acoustic research there are several that mention this undeniable fact — always in the context of the work of the famous physicist Wallace Sabine. But it’s also always emphasized that Sabine didn’t have time to use the laboratory built for him in Riverbank and, accordingly, no real levitator was built there.

Almost no one in science ever mentions that a real acoustic levitator was first manufactured shortly after the death of Colonel Fabyan, and its most effective design was invented by the Intersonics company from the city of Northbrook, located, like the Riverbank laboratory, in the suburbs of the Chicago...

However, that's a completely different story<sup>153</sup>...

## Additional Reading

- "The concept of Synchronicity in the New Science by Pauli and Jung: The Language of Synthesis" [kn:17] (*rus.*)  
<https://kniganews.org/map/n/00-01/hex17/>
- About the recent attempt at experimental research of the synchronicity phenomenon: "An important aspect of the life of mathematician Voevodsky (and why it's being attempted to be hidden)" (*rus.*)  
<https://kiwibyrd.org/2019/08/23/1983/>

*June-August 2022*

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<sup>153</sup> <https://kniganews.org/2015/01/20/soul-fibers/> (*rus.*)



# Philosopher or Clown? (Bacon is Back...)

The multi-part publication of Francis Bacon's secret autobiography, deciphered from ancient books of the 16<sup>th</sup> and 17<sup>th</sup> centuries, undertaken on the *kiwi arXiv* website, caused a completely natural reaction in the British press. Only the reaction signals look a little... specific, let's call it that.



NEWS INDEPENDENT TV CLIMATE SPORT OLYMPICS VOICES CULTURE PREMIUM INDY/LIFE IND



In England there is a good and high-quality newspaper, *The Independent*. But of course, we aren't talking about the newspaper for no reason, but because it turned to topics of high philosophy.

Why on earth, in the midst of a pandemic and other socio-political upheavals, the editors of *The Independent* decided to publish a large series of materials under the general title "The Great Philosophers" — we don't know.

But we know that starting from May 2021 (pay attention to the date) in the premium section of the newspaper, available on the site only for paid subscribers, large articles about “lives and works of some of history’s greatest minds” are regularly published.

Starting, naturally, with Aristotle and Plato, the most famous of the founding fathers of Western philosophy, by mid-July this series reached Francis Bacon and, presumably, greatly surprised the enlightened part of its readers.

Here is a fragment of an article about Bacon, freely available for initial review:

### **Francis Bacon: Prophetic philosopher or scientific buffoon?**

Our series continues with one of the most divisive philosophers of the Renaissance. Was he someone to be admired, or simply a fool?

Few philosophers divide the opinion of commentators as neatly as Francis Bacon (1561–1626). Some have found early manifestations of the very precepts of the Enlightenment in his many writings, while others detect only anti-intellectual propaganda and a defence of the worst kind of religiosity.

Bacon is praised by some as the prophet of modern science, and identified by others as a buffoon whose only attempt at scientific experimentation resulted in his ridiculous death. He is currently reviled by feminists for, among other things, his alleged view that “Mother Nature” is there to be tamed and dominated; and hailed by students of Karl Popper, who find in his writings deep insights into the nature of what would become scientific method.

His life is plausibly viewed from two competing perspectives. From one vantage point, he was a philosopher with a brilliant legal mind, who rose to the height of power before his enemies toppled him with trumped-up charges of corruption. From another, he was an unscrupulous self-publicist and social climber, gaining advantage for himself by any means until he was finally, and justly, ruined by his own greed.

Such an unconventional presentation of material about one of the most significant thinkers in Europe of the 17<sup>th</sup> century could probably be explained if the entire cycle of stories about famous philosophers had been presented in the same spirit of critical innovation. But absolutely all previous texts — up to the text about Bacon — announcements of articles in this series are designed in the spirit of the traditional restrained and respectful treatment of the heritage and often ambiguous facts from the life of the sages of antiquity:

- **Aristotle, father of logic and founder of western philosophy**, whose ideas are as vital and alive today as they were in ancient Greece (*May 25, 2021*)  
<https://www.independent.co.uk/independentpremium/great-philosopher-aristotle-works-important-b1846359.html>
- **Plato brought philosophical dialogue** to perfection. As Whitehead remarked – the safest characterisation of western thought is that ‘it consists of a series of footnotes to Plato’ (*May 25, 2021*)  
<https://www.independent.co.uk/independentpremium/plato-philosopher-books-works-dialogue-b1848416.html>
- **Pythagoras, a mystic who believed in immortality**, a man who is best known for his mathematical theorem but was also a mystic who founded a religion (*June 8, 2021*)  
<https://www.independent.co.uk/independentpremium/pythagoras-theory-great-philosopher-immortality-b1861077.html>
- **Marcus Aurelius: a philosopher-king**, or the philosophically inclined Roman emperor, the Stoic who examined free will, what we can control and what we cannot (*June 15, 2021*)  
<https://www.independent.co.uk/independentpremium/marcus-aurelius-philosopher-king-stoic-b1865385.html>
- **St Thomas Aquinas: Five ways to prove God’s existence, or perhaps the major figure in scholastic tradition** (*June 22, 2021*)  
<https://www.independent.co.uk/independentpremium/saint->

[thomas-aquinas-five-ways-b1869692.html](https://www.independent.co.uk/independentpremium/great-philosopher-averroes-ibn-rushd-b1873981.html)

- **Ibn Rushd, known as Averroes**, perhaps the most important of the Islamic philosophers (*June 29, 2021*)  
<https://www.independent.co.uk/independentpremium/great-philosopher-averroes-ibn-rushd-b1873981.html>
- And finally, on *July 12, 2021*, an article about our hero:  
**Francis Bacon: Prophetic philosopher or scientific buffoon?**  
Was he someone to be admired, or simply a fool?  
<https://www.independent.co.uk/independentpremium/francis-bacon-great-philosopher-scientist-b1882525.html>

From the presented list it's not difficult to see that Francis Bacon occupies a place in this series of "Great Philosophers" that is not only noticeable, but also quite unusual, to put it mildly.

What is the reason for such a special attitude of the current "philosophical series" from *The Independent* towards Bacon? Probably, the answer could be provided by those people from the newspaper who organized all this, but it's possible that even they don't have a clear answer.

Because explanations and motives may lie at the level of psychotrauma of the collective consciousness of society, and such things, as we know, are usually inexplicable at the level of rational arguments. To understand the problem, it's necessary, first of all, to identify the essence and nature of the psychotrauma embedded in the collective subconscious of society, extract it from there for an honest open discussion, and thereby begin treatment.

This kind of process, which is very important for the spiritual and mental health of society, is described in detail and with explanations in the material "Pauli as a psychological trauma."<sup>154</sup> To become clearer about the absolutely obvious parallelisms of the big problems that the scientific community has in understanding and assimilation the true heritage of both Francis Bacon and Wolfgang

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<sup>154</sup> "Pauli as a psychological trauma" (*rus.*)  
<https://kiwibyrd.org/2020/07/05/20h71/>

Pauli, it's enough to read the chapter "Bacon and Pauli" from this book.

And in order to understand the importance of William Shakespeare's texts for a true comprehension of Bacon's legacy, it makes sense to pay attention to an interesting coincidence of dates. The most recent publication on "Shakespearean mythology"<sup>155</sup> in the British press took place in May 2021. Exactly simultaneously with the launch of *The Independent's* series "Great Philosophers," which puzzled the world with a rather strange portrait of Bacon, most similar to a cartoonish squib.

At the same time, it's impossible not to notice that all the latest articles on Shakespearean mythology, which certainly devote space to mysteries and gaps in the biography of the great writer, absolutely don't mention the name of Bacon as the most probable author of Shakespeare's works. As for works on the history of philosophy, it's simply not customary to connect the name of Bacon with the mystery of the authorship of Shakespearean texts.

Why this is so is explained in technical detail in the chapters "Bacon and Shakespeare: Anatomy of Deception," "Bacon, Rosicrucians and Levitation" and "Bacon and Magic."

Each of the listed analytical texts is directly based on the personal evidence of Francis Bacon and the expert opinion of a very competent specialist, cryptographer general François Cartier, which fully confirms this evidence.

Judging by current publications in the British press, the enlightened community is not yet ready to accept any of this evidence, but at the same time, it's clearly noticeable that the Bacon-Shakespeare matter is definitely disturbing the collective consciousness.

And that's already good.

July 2021

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<sup>155</sup> See chapter "Shakespearean Mythology"



## Post Scriptum, or The New Beginning



The year 2023 was quite special for this story.

In the world of Shakespearean Mythology, the 400<sup>th</sup> anniversary of the printing of the First Folio was solemnly celebrated. For this occasion, new and reprinted old books about the life and works of the Great Bard were released. Shakespearean exhibitions and festivals were organized, along with publications in newspapers and magazines.

The parallel 400<sup>th</sup> anniversary of the publication of Francis Bacon's book *De Augmentis Scientiarum* went practically unnoticed. Yet, it was in this work that Bacon detailed his biliteral cipher, which was used to encode great secrets in Shakespeare's First Folio.

Not only the secret about the true author of Shakespeare's plays, but also the keys to unveiling the secret history of England, which until now remains unexplored and unstudied by science.

Exactly 100 years ago, in 1923<sup>156</sup>, all the conditions were formed to begin the true scientific exploration of these profound secrets. Bacon's encrypted messages were successfully deciphered, and two experienced and authoritative cryptographers, François Cartier and William Friedman, could've competently provide scholars with all the restored materials for study. They could've, but they didn't...

Now, in 2023, not only are all the analytical materials from 100 years ago gathered together, but much more than that. A new set of investigations and documents vividly demonstrates how historical truth was hidden from the public for so long and so successfully.

All these materials — both old and new — are available in digital form for free access and study on the website <https://4in1.ws>.

To be more specific, on this website, one can find the second, expanded edition of the investigative book *4in1: Mask of Shakespeare, Mysteries of Bacon, Book by Cartier, Secrets of the NSA*, both Russian original and complete English translation. Also, nearly all the main documents, books and articles<sup>157</sup> that this extensive investigation relies on.

In addition, the site includes a series of articles<sup>158</sup> about new episodes in this story that have occurred since the release of the book "4in1." Including, in particular, the following:

- "Bacon, Shakespeare, and the NSA's 'Cut the Ends!' Reflex"  
<https://4in1.ws/articles/bacon-shakespeare-nsa-cut-the-ends/>
- "Undermining the authorities' credibility and Shakespeare as 'Our Everything'"  
<https://4in1.ws/articles/undermining-authorities-credibility/>

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<sup>156</sup> Sheldon, R.M. "The Friedman Collection: An Analytical Guide", 2014, Item 396. Cartier, François (Général), "Le mystère Bacon-Shakespeare un document nouveau", *Mercure de France*, Paris: 1 Sept. 1922, No. 581, pp. 289-329, 15 Sept. 1922, No. 582, pp. 604-651, and 1 Feb. 1923, No. 591, pp. 603-635

<sup>157</sup> <https://4in1.ws/files/>

<sup>158</sup> <https://4in1.ws/articles/>

- “History Science as an Art of Cutting Out”  
<https://4in1.ws/articles/history-science-as-an-art-of-cutting-out/>
- “The New Golden Age of Decipherment (and What Shakespeare Has to Do With It)”  
<https://4in1.ws/articles/the-new-golden-age-of-decipherment/>
- ... and many more.

Essentially, the main point of all these new episodes boils down to the following. During 2022-2023, a quiet but significant shift in focus occurs in the history of cryptography, from one figures to others. Concurrently, there is a subtle but persistent removal and concealment of those files and documents on the Internet that provide the evidentiary basis for the “4in1” investigation.

The new website <https://4in1.ws> was created precisely to preserve all these materials for free access and study.

*December 2023*





**idb**

4in1. Mask of Shakespeare and Mysteries of Bacon, Book by  
Cartier and Secrets of the NSA

Released by kiwi arXiv & kniganews

Translated from Russian by Eline Cat

Supported by E.

<https://4in1.ws>

<https://kiwibyrd.org>

<https://kniganews.org>

2023

Revision 8: November 3, 2024