

# **THE TORAH SIGNATURE**

by Udi Ben Zvi

Email: [flytoeilat@gmail.com](mailto:flytoeilat@gmail.com)

Phone: 0585-841825

# Chapter 1

## When Distant Worlds Meet

Some questions do not belong to a single age. They remain with us even as language, culture, and technology change around them. One of them is authorship. Who stands behind a text? How do words bear the mark of their source? What allows us to say not only what has been written, but something meaningful about who stands behind it?

In earlier worlds, authorship could still be tied to presence. A person might speak in a familiar voice, write in a recognizable hand, seal a document with a known sign, or stand before witnesses who could attest to the source of a message. The modern world altered that condition. Once messages began to move through invisible networks, detached from face, hand, and immediate presence, the older signs of authorship grew less secure. A new question emerged: how can identity be established when all that remains is information?

Modern cryptography was developed, in part, as an answer to that question.

That can be easy to miss, because cryptography is often imagined only as a science of secrecy. We think of it as a way of hiding messages, protecting data, or locking information away from hostile eyes. But secrecy is only half the field. The other half is trust. How do I know that a message really came from the sender it names? How do I distinguish a genuine message from a forgery? How can a text, reduced to numbers and sent through a machine, still carry something like a signature?

A digital signature is a modern answer to that ancient problem. It is a mathematical way for a message to bear the mark of its source.

This book begins with a possibility that is difficult to state without sounding excessive: what would it mean if an ancient sacred text appeared to contain, within its own numerical structure, a real modern signature system?

The system at issue is RSA, one of the best-known public-key constructions of the modern world. In its signature setting, RSA is not merely a piece of abstract mathematics. It is a formal answer to the problem of authorship in the digital age. It offers a way for a message to be linked, through reproducible mathematical operations, to the identity that stands behind it.

That alone would make it an unusual lens through which to approach any ancient text. But the text in question here is not just any text. It is the Torah.

At first hearing, the claim resists ordinary categories. The Torah belongs to one world, cryptography to another. The Torah comes to us through revelation, transmission, commentary, and sacred reading; cryptography belongs to the world of computation, verification, and digital trust. The Torah comes from antiquity. RSA belongs unmistakably to late modernity. The Torah is received through covenant, law, and interpretation; RSA through mathematics and engineering.

Even to place the two side by side can feel awkward. To suggest that they meet in a formal and non-metaphorical way feels stranger still.

But that strangeness is part of what makes the matter serious. If the connection were easy, familiar, or merely decorative, it would deserve little attention. Human beings are good at drawing analogies between old texts and new ideas. That is not what is being attempted here. This book is not offering a poetic resemblance between Torah and cryptography. It is not saying that one vaguely echoes the other in spirit. It is not an exercise in symbolic free play.

The claim is narrower, and therefore more demanding.

Under fixed and transparent numerical conventions, the Torah appears to yield a genuine RSA digital-signature framework.

That sentence should neither be swallowed whole in enthusiasm nor dismissed at once in suspicion. It has to be unfolded carefully, because its significance lies not merely in the presence of numbers, but in the kind of structure said to emerge.

If what appeared here were only a pleasing symmetry, the proper response might be mild curiosity. If it were only an attractive alignment, one could note it and move on. But a signature system is not just some mathematics. Its native domain is identity. Its purpose is to answer the question of who stands behind a message. That is what makes RSA relevant here. And that is why the convergence, if real, cannot remain a trivial curiosity.

The force of that becomes clearer in relation to the Torah itself.

The Torah has never been only a text to be read. It has also been a text to be located. Who gave it? Who stands behind it? What sort of authority does it bear? Even readers who approach it historically, critically, or literarily cannot avoid the fact that the question

of source is woven into its reception. Within Jewish tradition, that question is not marginal but foundational. The Torah is encountered not only as content, but as something inseparable from origin, giver, and authority.

That gives the inquiry its particular pressure. If an ancient sacred text were found to generate a formal framework of signature and authorship, the result would not remain confined to mathematics. It would touch one of the deepest questions already bound up with the text itself.

For that reason, both wonder and restraint are necessary.

Wonder is appropriate because the possibility is genuinely surprising. An ancient text and a modern formalism of authorship are not expected to meet in this way. The historical distance is too great, the conceptual worlds too different, the languages too far apart. If one encounters such a convergence, surprise is the natural first response.

But restraint is equally necessary, because surprise proves nothing. There is a long history of seeing in texts exactly what one wants to see. There is also a long history of dismissing unfamiliar results before examining them with care. Both temptations are present here. The first turns every pattern into revelation. The second turns every unsettling pattern into nonsense by reflex. Neither is adequate.

The only response worthy of the question is a slower one.

This book does not ask to be believed on the basis of vagueness. It does not proceed by arbitrary codes, free symbolic association, or numerical tricks hidden behind misty language. The conventions involved can be stated. The mathematical framework is standard. The sequence of reasoning can be followed. The claim, where it is made, is meant as a real one.

At the same time, the phenomenon should not be buried under technique. A dry heap of calculations would miss the very thing that makes the matter worth pursuing. The issue is not only that certain values can be handled in a certain way, but that the form of the structure itself belongs to the domain of signature, identity, and authorship. If such a structure emerges from the Torah's own internal values, one is dealing with something more charged than an isolated numerical curiosity.

The first task, then, is not to display the whole construction, the full methodology, or the statistical controls. Those will come later. What matters first is the question in its full seriousness:

What would it mean if the Torah were found to contain not merely significant numbers, but a formal mathematical structure designed to address the problem of authorship?

The inquiry does not begin from a vague impression. It begins from a concrete and unusually conservative place: the Torah's own name. It does not open with hidden passages, obscure codes, or elaborate textual maneuvers. It begins with the most basic textual anchor available. Under the relevant conventions, that anchor yields not merely interesting values, but what appears to be the public framework of an RSA system.

That is not yet the whole story. It is not even the most charged part of the story. But it is enough to make the claim concrete. Something formal, and not merely suggestive, has begun to appear.

From that point, the inquiry deepens of its own accord. Once a genuine signature framework is in place, further questions arise naturally. What sort of signer does such a system imply? What happens when that structure is examined in relation to the authorship problem from which the inquiry began? What occurs when the system is allowed to operate in its native language of signature and identity? And beyond that: could such a result be no more than coincidence, or does it remain rare under fair comparison?

Those are questions for later chapters. For now, it is enough to see why they must be asked.

The modern reader has every right to approach numerical claims with caution. The history of numerical reading is full of excess, and wariness is often justified. But caution should not become blindness. A result is not refuted simply because it resembles other things one has reason to distrust. It has to be judged by its own method, its own constraints, and its own force.

That is especially true here, because the phenomenon presses on a sensitive boundary. If the Torah were found to generate a formal structure of authorship, the implications would not remain safely technical. The result would begin to trouble older separations: between ancient and modern, sacred text and mathematical formalism, revelation and verification. The discomfort many readers may feel is therefore understandable. But discomfort is not itself a judgment. Sometimes it is only the sign that two regions of thought have come into contact before one has learned how to think them together.

This is the spirit in which the book asks to be read: not as an invitation to credulity, and not as an invitation to casual dismissal, but as an invitation to remain with a question long enough for its real character to emerge. If the claim fails, it should fail under

scrutiny. If it holds, it should hold under the same scrutiny. In either case, it deserves more than a passing glance.

One thing, for now, is enough. A modern mathematical formalism designed to address authorship appears to arise from within one of the most ancient and sacred texts in human history. That possibility is surprising enough to awaken wonder, serious enough to demand rigor, and charged enough that, if it proves real, the Torah may not remain thinkable in quite the same way as before.

Before the structure itself can be examined, however, the problem it seems to address must first be understood. Why has authorship always mattered so deeply? And why should a digital signature be the right modern lens through which to approach it?

# Chapter 2

## Who Stands Behind a Text?

The question just opened cannot be answered until authorship itself is seen more clearly.

Authorship is one of those ideas that seems obvious until one looks at it closely. We use the word easily. We ask who wrote a book, who composed a letter, who issued a statement, who signed a decree. In ordinary life, the matter appears simple enough: a text has an author, and the problem is merely to identify that author correctly.

But the matter runs deeper. To ask who stands behind a text is not only to ask who arranged its words. It is also to ask where its authority comes from, what kind of claim it makes upon us, and what sort of presence it carries. A text can be more than a sequence of sentences. It can be a message, a command, a testimony, a promise, a confession. In each case, the words matter. So does the one who stands behind them.

This is why authorship has never been merely technical. It belongs to trust, responsibility, and the relation between speech and source. A text without a source may still be readable, but it does not stand before us in quite the same way. A law without an issuing authority is not the same as a law with one. A promise without a promiser is not a promise in the full sense. A message without a sender may still be information, but it is no longer address in the same way.

Once this is seen, it becomes easier to understand why the problem of authorship is never confined to literature. It appears wherever words seek to bind, persuade, instruct, or oblige. The more consequential the text, the less separable it is from the question of who stands behind it.

That is especially true of sacred texts. Their power does not lie only in the ideas they contain, but in the source to which they lay claim, or from which they are received. A sacred text is not usually encountered as a detached verbal artifact. It is received within a field of authority. It comes with weight. It makes demands. It shapes memory, duty, and belonging. All of that is inseparable from the question of origin.

The Torah is one of the clearest cases of this in human history.

The Torah is not encountered merely as an old text, nor merely as a great one. It is encountered as something given. However one ultimately understands that

claim—religiously, historically, critically, philosophically—the language of givenness cannot easily be removed from the Torah’s life. The question is not only what the Torah says, but who gives it, who speaks through it, and what it means for a text to be received as bound to such a source.

This is one reason the Torah has been surrounded, for so long, by commentary, reverence, dispute, and devotion. The argument has never been about content alone. It has also been about standing. What is this text, such that it can command, instruct, shape, and endure as it has? What kind of source does a text require in order to bear that kind of authority? And how, if at all, can such a source be thought in relation to the words themselves?

These questions are not exhausted either by faith or by historical method. They lead to a more basic question: how can a text bear the mark of its source?

To speak of a divine signature is already to rule out anything merely physical. God does not sign with ink, handwriting, or a seal impressed in wax. A source that is not bodily would not be expected to leave behind a bodily mark. If there is such a thing as a divine signature, it would have to be non-material. This is what gives the modern digital signature its unusual conceptual power. Unlike an ordinary signature, it is not made of physical substance, but of exact form: mathematical, intangible, reproducible. In that sense, the digital signature may be the closest modern analogue to the idea of a spiritual signature.

This gives the present inquiry its center.

The subject of this book is not generic patterns in the Torah, nor a search for hidden cleverness. The real subject is authorship. RSA matters here not because it is mathematically impressive, but because it is formally and explicitly a machinery of authorship.

A digital signature is not merely an encoded mark or an ornament attached to a message. Its function is exact: to bind a message to an identity in a way that can be publicly checked. In a world where sender and receiver may never meet, where presence has disappeared, and where forgery is always possible, the signature becomes a mathematical answer to a very old question: how can a message carry evidence of who stands behind it?

This is not a problem belonging only to mathematicians or cryptographers. Many of us encounter digital signatures without naming them that way: when signing an employment contract, a lease, or bank documents online; when visiting a secure

website; or when receiving a trusted software update on a phone or computer. In each case, the issue is the same: how can a digital message or action carry trustworthy evidence of the identity behind it?

That gives the modern signature a peculiar dignity. For all its technical form, it is not remote from older human concerns. It gathers into a new medium the ancient need for a reliable source, a recognizable sender, and an accountable origin. The seal, the witness, the known hand, the signature: all have digital descendants.

RSA stands in a special place among them. It was the first practical public-key system, and it became the canonical textbook example of digital signatures. That makes it the most natural a priori framework for the present inquiry. The question here is authorship, and RSA was built to address exactly that question: who stands behind this message?

If a text generates a structure that belongs, by design, to authorship, the resulting phenomenon cannot be treated as merely one more numerical curiosity among many. The structure itself determines the seriousness of the question. A signature framework is not neutral with respect to source. It points there. That is its purpose. So if such a framework is genuinely found within the Torah's own values, the discovery is not simply about mathematical coincidence. It becomes a confrontation between a modern formalism of source and a text already charged with the question of source.

The subject can now be stated more exactly. It is not whether the Torah can be made to contain modern science in some generic way. It is whether a formal structure designed to address authorship appears to arise from the Torah's own internal numerical encoding, and if so, what significance that fact can reasonably bear.

Once that question is in view, the next steps follow naturally. If authorship is the problem, one must understand what a digital signature actually is. If the Torah is to be approached through its own numerical values, one must understand how those values are obtained and what sort of stability they possess. And if the meeting between the two is to be judged seriously, one must be able to distinguish between symbolic association and formal construction.

One further clarification matters here. To say that RSA offers a modern framework of authorship is not to say that it exhausts the meaning of authorship. Human beings are not cryptographic keys. Sacred texts are not computer files. No mathematical system can capture the full depth of revelation, tradition, voice, or authority. The point is not reduction.

It is narrower than that. Some human problems can be formalized without being exhausted. The existence of a formal signature system does not abolish the richer meanings of trust, identity, and source. It gives them a precise expression within one domain. That is enough for the present inquiry. RSA does not need to replace theology, history, or interpretation. It only needs to be what it already is: a rigorous formal answer to the question of how a message may bear the mark of its sender.

If something like that emerges from within the Torah itself, then one is entitled—indeed required—to ask why.

The rest of this book is an attempt to ask that question with the seriousness it deserves.

For now, the central point can be stated simply. The issue before us is not hiddenness but authorship; not codes in the sensational sense, but the possibility that a text long bound to questions of source, giver, and authority may contain, within its own internal values, a structure native to the modern problem of signature and identity. If that possibility is real, then the inquiry belongs exactly here: at the meeting point between text and source, message and sender, Torah and authorship.

Before that possibility can be judged, the numerical language in which it becomes possible must first be understood. How do Hebrew words become numbers in a disciplined way? Are those values fixed enough to support a serious mathematical claim? And what does RSA actually require for a true signature system to exist?

Those are the questions that now have to be taken up.

# Chapter 3

## The Language of Discovery

Every serious inquiry depends, at some point, on learning the language in which it can be asked. Without that language, one remains at the level of impression. Something may feel striking, unusual, or suggestive, but one cannot yet see how it is built.

That is where the argument now stands.

If the earlier chapters have done their work, the shape of the problem should already be clear. The question is not whether the Torah contains interesting numbers in some vague sense. Nor is it whether modern mathematics can be used to impose patterns on an ancient text. The question is more exacting: can a modern signature framework of authorship arise from the Torah's own internal numerical values under fixed and transparent rules?

To approach that question responsibly, two kinds of understanding are now required. One must understand how Hebrew words become numbers in a stable and disciplined way. And one must understand, at least in outline, what an RSA digital-signature system actually is. Only then can the meeting between Torah and cryptography be seen as something more than an arresting idea.

For many modern readers, the thought that a word can be treated as a number immediately raises suspicion. The suspicion is understandable. If words can become numbers, numbers can begin to seem infinitely pliable, and one fears the familiar slide into arbitrariness. It is therefore important to begin with what is simplest and least controversial.

Hebrew, unlike English, has long existed in a scriptural and literary world in which letters carry fixed numerical values. This is not an invention of the present inquiry. It is an ancient feature of the script, known in Jewish tradition for thousands of years and not devised for the purposes of this book. Each letter corresponds to a number. When a word is written, its letters can therefore be read not only as sounds or symbols, but also as numerical values whose sum can be calculated.

That is the most basic meaning of gematria here.

At this level, gematria is not yet interpretation. It is encoding. Before one draws symbolic associations, proposes hidden meanings, or treats numerical equivalence as

suggestive of something deeper, one is dealing with a simple and stable rule: letters correspond to numbers. Once a word is given, its value under that rule can be computed by anyone using the same convention.

That stability is what matters here. If letter-values shifted with context, mood, or interpretive preference, nothing serious could be built on them. But they do not shift. They are fixed. This allows Hebrew text to be mapped into integers in a reproducible way. Once a word has been represented as a number, that number can be treated mathematically like any other integer. That mapping is all that is needed at this stage of the argument.

At this point, however, an important distinction must be made.

There are two broad ways of working with gematria. One treats it interpretively, as a source of symbolic association. The other treats it more formally, as a stable numerical encoding of language. This inquiry begins from the second. The question here is not what a number might symbolize, but what mathematical structures can be built once words have been mapped into numbers under fixed rules.

That order matters. The inquiry does not begin by asking what a value means or suggests. It begins by asking what structure emerges when that value is treated as an integer inside a well-defined mathematical framework. Interpretation may later become relevant, but it does not lead the process.

This is one of the main ways the argument avoids arbitrariness. Gematria is not being used here as ornament. It is doing real work. But that work is not initially symbolic. It is formal. The letters of a word supply numbers, and those numbers are then tested within a framework whose rules are not invented along the way.

This becomes clearer once we note that gematria is not a single convention. Jewish tradition has used more than one numerical system. But this inquiry begins with regular gematria, referred to in tradition as *mispar hechrechi*—the primary and most necessary encoding of the letters. It is the most a priori place to begin because it is the baseline numerical assignment of the Hebrew alphabet itself. Only after that foundation is in place does the inquiry also make use of small gematria, a closely related convention formed by removing trailing zeros from the regular values. The choice of these two systems is therefore not opportunistic. They are the most common, the most natural starting point, and mathematically related in a simple and transparent way. Readers who want the full letter-by-letter tables for both systems will find them in Appendix A.

The details of those tables need not detain us here. What matters is that the conventions are fixed in advance and applied consistently. The method does not shift its rules in order to produce a desired result. It operates within a declared numerical language.

A natural concern may still press at this point: does any of this truly escape numerology?

The answer depends on what one means by that word. If by numerology one means any attempt to find meaning in numbers associated with language, the term becomes too broad to be useful. It would collapse symbolic interpretation, poetic association, playful coincidence, and formal mathematical construction into a single undifferentiated category. That obscures more than it clarifies.

The more serious concern is narrower. It is that numbers might be handled too freely—that conventions might be selected opportunistically, or patterns announced without principled reason for preferring one path over another. That concern is justified. It is also exactly why the present inquiry insists on fixed rules, declared starting points, and the most a priori available elements at each stage of the argument.

That methodological restraint is crucial, because numerical availability by itself proves nothing. Every Hebrew word has a numerical value. The mere fact that a value can be calculated does not yet make it significant. The real question is whether, under consistent conventions, those values instantiate a specific structure whose requirements are known in advance.

That is a much narrower claim.

At this point, the argument can cross to the other side of the bridge.

If gematria provides a stable way of mapping words into numbers, RSA provides a stable way of using numbers to create a signature.

At a broad level, a digital-signature system does something conceptually simple, even if its internal workings are mathematically sophisticated. It allows a message to carry a mark that can be checked publicly, but that could only have been produced by someone in possession of a private signing key. That key plays, in the digital world, the role once played by a seal, a known hand, or a personal signature.

What matters here is the structure of the act. A signature is not merely attached from the outside. It arises from a relation between a public framework and a private signing

key. The public framework verifies; the private signing key signs. In that way, a message can bear publicly verifiable evidence of its source.

This is what gives digital signatures their significance. They are not decorative, and they are not labels added after the fact. They are formal acts by which identity is expressed through a reproducible structure. RSA is one of the most important systems of this kind.

At a non-technical level, RSA assigns numbers to distinct roles. Certain values define the public framework. Another defines the private signing key. A message enters, a signature is produced, and that signature can then be publicly verified as coming from its claimed source. One need not yet follow the equations in detail to grasp the shape of what is happening. For now, it is enough to see the structure clearly.

This is what makes RSA so relevant here. It is not merely a tool for manipulating numbers. It is a formal language of authorship.

For some readers, RSA may still suggest secrecy. That association is natural, because the system is often introduced through encryption. But encryption and signature are not the same thing. Encryption concerns hiding a message. Signature concerns identifying its source. For the purposes of this book, it is the second that matters.

The question here is not what is being concealed, but what kind of authorship structure is being expressed.

At this point, the two sides of the inquiry can be seen together. Hebrew words can be mapped into stable numerical values under fixed conventions. RSA can organize numerical values into a genuine signature system. Once both of those facts are in place, the possibility of a real meeting appears.

That does not yet mean that the meeting actually occurs. It means only that it can occur without metaphor.

The distinction matters. At the beginning of the book, the idea that Torah and cryptography might meet could easily sound rhetorical. It can now be seen more clearly. The bridge is real. Words become numbers under stable rules. Numbers can instantiate a signature system under stable rules. The question is no longer whether one can imagine a connection. The question is whether, in the case of the Torah, such a structure actually appears.

One further clarification is needed before crossing that threshold. The fact that a mathematical construction is possible does not yet make it meaningful. Many

structures are possible in principle that do not appear in practice, or appear only weakly, or carry no real significance. The existence of the bridge does not tell us what happens once one walks across it.

That is why the next step matters so much.

Up to this point, only the conditions under which the discovery could occur have been established. It has not yet been shown that it does occur. That distinction protects the inquiry from both exaggeration and dismissal. It keeps the argument from running ahead of the evidence, and it keeps the possibility from being rejected before it has even been examined.

Preparation must now give way to demonstration.

Hebrew words can become numbers. RSA can turn numbers into signatures. The conceptual meeting is now in place.

What remains is to ask a more concrete question:

What happens when the Torah's own name is taken under these rules?

# Chapter 4

## Starting with Torah

If a formal signature framework is truly present, where should one begin?

The answer is not difficult to justify. One begins with the Torah's own name.

This is one of the central restraints built into the inquiry. The argument does not begin with an especially poetic verse, an obscure phrase, or a passage chosen because it happens to produce an intriguing result. It begins with the most basic textual anchor available. If the question concerns the Torah as a whole—its source, its authorship, the identity that stands behind it—then the natural place to begin is not somewhere hidden in the body of the text, but with the word by which the text itself is known.

That choice matters methodologically as well as conceptually. Much questionable pattern-hunting begins by searching widely until something interesting turns up. This inquiry proceeds in the opposite direction. It begins with the most a priori anchor available and asks what, if anything, is actually there.

The word *Torah* is therefore not merely a convenient starting point. It is the starting point most naturally demanded by the question itself.

Once that is granted, the procedure follows from the rules already established. The word is taken under the two numerical conventions introduced in the previous chapter: regular gematria and small gematria. These yield two values. Under regular gematria, *Torah* has the value 611. Under small gematria, it has the value 17.

At first glance, these may appear to be merely two more integers among many. Every Hebrew word has a value, and no serious claim can rest on the bare fact that numbers have appeared. The question is whether these particular values, taken together, instantiate something mathematically distinctive.

Modern RSA owes its practical power to the use of very large numbers. The values involved here are far smaller than those used in contemporary cryptography. But that is not the claim being made. The claim is not that the Torah yields a practically secure signature system for modern digital use. It is that the structure that appears is formally real. In one respect, the smaller scale is an advantage: it makes the framework legible. Once the rules are known, the construction can be seen, checked, and followed without difficulty.

This is where the matter becomes concrete.

In RSA, the public framework is built from two key numerical ingredients: a modulus and a public exponent. The modulus must have a particular form, and the public exponent must satisfy definite structural conditions if the system is to function properly. One cannot simply take any pair of numbers and call the result a signature system.

Those general constraints can now be brought to the present case. The first question is straightforward: does the regular gematria value of *Torah*, 611, have the right form to serve as an RSA modulus?

It does.

The number 611 factors as  $13 \times 47$ . It is therefore the product of two distinct primes: a semiprime of exactly the kind RSA requires. Taken by itself, that is already notable. The word from which the inquiry begins does not merely produce an interesting value. Its regular gematria yields a number of the right mathematical form to serve as the public modulus of a genuine RSA system.

The second question follows at once. Can the small gematria value of *Torah*, 17, serve as the corresponding public exponent?

Again, the answer is yes.

And here the picture sharpens further. The number 17 is not merely acceptable in some broad sense. It belongs to a rare and important family of primes known as the Fermat primes. Only five are known: 3, 5, 17, 257, and 65,537. These values have long held a special place in RSA because they allow especially efficient computation on the public side of the system. Among the smaller Fermat primes, 17 was also used historically as an RSA public exponent, even though modern implementations usually favor 65,537. In other words, 17 is not simply usable here. It belongs to the very class of exponents RSA naturally favors.

This is worth pausing over, because it clarifies the difference between a numerically suggestive result and a formally significant one. If the regular gematria of *Torah* had yielded one interesting number and the small gematria another—say, a Fibonacci number and its index in the sequence—one might still have had something numerically intriguing to discuss. But one would not have had an RSA system. The present case is stronger because the numbers do not merely form an interesting relation. Each falls into exactly the role the RSA framework demands: the regular value as a semiprime modulus, the small value as a valid—and especially apt—public exponent.

This gives us, in the language of RSA, a concrete public framework:

$$(n, e) = (611, 17)$$

The notation may look technical, but what it represents is simple. A public signature framework has now emerged from the word *Torah* under fixed and declared rules. Not a vague analogy to one. Not a symbolic likeness. A real formal instantiation.

This is the first true turning point in the book.

Up to this point, the argument has asked only that the possibility be considered. Here that possibility acquires form. *Torah* and RSA no longer stand beside one another as distant concepts held together by speculation. They now stand in an explicit mathematical relation. The inquiry has crossed from atmosphere to construction.

It is easier, at this point, to see why the earlier chapters had to proceed as they did. Had the book begun here—with the bare pair of values and the announcement that they instantiate an RSA framework—the result might have seemed either abrupt or merely technical. Its significance would have been easy to miss. But once authorship has been placed at the center, and once the language of signature has been clarified, the result appears in its proper light: as the emergence of a modern formal framework of authorship from the *Torah*'s own name.

That does not yet tell us what the framework means. But it does tell us that the framework is there.

It is also useful to notice what has not been done. No hidden passage has been selected. No special pleading has been introduced. No auxiliary interpretive machinery has been invoked to rescue the argument. The construction begins with the most a priori textual anchor available: the book's own name. That would already be the natural place to begin in any disciplined textual inquiry. Here, where the question is authorship, the claim becomes stronger still. That word alone, under the most standard conventions, yields the two public parameters required for an RSA signature system.

One may still object that a semiprime modulus and a valid exponent, taken together, do not yet prove very much. That objection is fair. A public framework can exist without yet saying anything especially charged. Its visible parameters do not, by themselves, reveal what kind of identity, if any, is implicated by it. But this does not diminish what has already been shown. It only clarifies what must come next.

For the significance of RSA does not lie in its public face alone. A signature system is not exhausted by its visible parameters. It exists in order to make signing possible, and that means the public framework points beyond itself. It points toward a private signing key, and therefore toward the question of the signer.

This is where the present construction begins to acquire deeper pressure.

If the name *Torah* yields an RSA framework, then the next question is unavoidable. A signature framework exists in order to bind a message to an identity. So if such a framework has truly emerged here, whose identity stands behind it? What sort of private signing key does it imply? And what happens when the system is allowed to operate as an active signature system?

These questions do not arise by interpretive extravagance. They arise from the inner logic of the system itself. Once a genuine RSA framework is granted, the inquiry must move from the public framework to the hidden signer. That is not a mystical leap. It is the next mathematical step.

And that is where the argument must now go. If the framework is real, the next issue is no longer whether it exists. The next issue is what—or whom—it points to.

# Chapter 5

## What the Signature Points To

Within Jewish tradition, the Torah is explicitly attributed to יהוה, here referred to as *Havaya*, the Tetragrammaton. It is therefore spoken of as תורת יהוה, the Torah of *Havaya*.

Under the numerical conventions used in this inquiry, *Havaya* has the regular value 26 and the small value 17.

Jewish tradition adds a further and equally important layer. The Tetragrammaton is not pronounced directly. In reading and prayer it is vocalized as אדוני, *Adonai*. Under the same conventions, *Adonai* has the regular value 65 and the small value 11.

These names and values fix the expected field in advance. If the system truly points to the source behind the Torah, one would expect its signing value to come from this field: *Havaya* as written in the text, or *Adonai* as voiced in Jewish reading practice.

For the RSA framework derived from *Torah*, the private signing key is 65.

That number is not merely suggestive. It is exact. 65 is the regular gematria of *Adonai*, the pronounced name of the Tetragrammaton. The result yields, at the precise point in the system that corresponds to the signer—the identity behind the message—the traditional spoken name of the one to whom the Torah is attributed.

This is the first inward turn of the construction.

That is already enough to sharpen the inquiry. But the structure does not stop there.

One further feature would make such a result especially significant: self-reference. Self-reference is one of the clearest marks of an intentionally ordered system. When a system points back to the very identity and structure from which it arises, the result suggests purpose rather than drift. In the present context, that would mean more than merely arriving at an author-linked value somewhere along the way. It would mean that the system, once allowed to function as a signature system, returns in a structured way to the very name whose identity it appears to bear.

If the question is identity, the next move follows from the logic of digital signatures themselves. A digital signature system answers the question of who stands behind a message by signing identity-bearing information. In the present case, if the question is

who stands behind the Torah, then the most natural identity for the system to sign is the one Jewish tradition associates with the giver of the Torah: יהוה, *Havaya*, the Tetragrammaton.

The name signed is *Havaya*, whose regular gematria is 26.

The resulting signature is 442.

What matters now is not merely that a number has been produced, but what sort of number it is. In this case, 442 factors as  $26 \times 17$ . It is, in other words, the product of *Havaya's* own regular and small gematria values.

The force of that result is easier to see because the expectation has already been set. The signature contains the name itself, expressed through both of its standard numerical encodings. In other words, the system has produced a self-referential signature.

This is what gives the construction its distinctive pressure. The public framework emerged from *Torah*. The hidden signing value aligned with *Adonai*, the pronounced name of the Tetragrammaton. The signature of *Havaya* then returned in a form composed from *Havaya's* own two standard encodings. The movement is not scattered. It remains within a single authorial field: Torah, signing, the divine name, and return to that name.

There is also an interpretive echo here that does not belong to the formal proof but belongs naturally to the atmosphere of the result. Classical Jewish sources speak in the language of a divine seal, most famously in the Talmudic statement חותמו של הקב"ה אמת – “the seal of the Holy One, blessed be He, is truth.” In that light, 442 is notable for another reason as well. The gematria of אמת, *truth*, is 441. With *hakolel*—that is, with the traditional addition of one for the word as a whole—it becomes 442. Put differently, what rabbinic tradition calls the divine seal is what the mathematical signature of *Havaya* yields here.

This does not create the mathematical result, and the argument does not depend on it. It remains interpretive rather than proof-bearing. But it deepens the atmosphere of the case.

Even without that resonance, the formal result stands. The framework not only points inward to an authorial name. It returns the signed identity in terms built from itself.

That still does not settle the matter. A result can be coherent without being rare. It can point in a meaningful direction and still leave open the harder question: how often should anything like this arise under fair comparison? Is this one impressive case among many possible ones, or is it genuinely uncommon under matched conditions?

That is the burden to which the inquiry must now submit.

# Chapter 6

## The Case for Chance

The argument has now reached a point of real pressure. The construction proved not only coherent but pointed toward authorship: the framework emerged from *Torah*, the private signing key aligned with *Adonai*, and the signature returned to *Havaya* in self-referential form.

And yet even that does not settle the matter.

A serious reader must now ask the necessary question: could this still be chance?

This is not a hostile interruption. It is the right test of the argument's seriousness. A result may be striking, elegant, even deeply suggestive, and still fail to distinguish itself from what might arise accidentally under comparable conditions. One case, however charged, cannot answer that by itself.

This is especially true when numbers are involved. As soon as a numerical construction yields an arresting result, suspicion naturally follows. Was the result genuinely built into the structure, or did it appear only because enough possibilities were available for something interesting to happen somewhere? Was the path to it genuinely principled, or was the method more selective than it first appeared? These are not cynical questions. They are the questions that separate admiration from evidence.

The inquiry must therefore become harder on itself.

Up to this point, the argument has been concerned with internal structure. It has asked what emerges from the word *Torah* under fixed conventions, and what follows when that framework is carried through the logic proper to a signature system. That work was necessary. Without it, there would be nothing to test. But once the structure is visible, a different standard comes into force. The issue is no longer whether the result feels surprising. The issue is whether it remains surprising against a fair background of comparison.

That shift changes the character of the book. Until now, the movement has been one of discovery: the problem was opened, the authorship lens clarified, the numerical language established, the public framework identified, and the construction followed inward to an author-linked, self-referential result. From here onward, the inquiry must

ask something more demanding: how often should anything like this happen when the same rules are applied beyond the reference case?

That question requires a control framework.

The point of such a framework is simple, even if its implementation becomes more elaborate. To know whether a result is merely possible or genuinely unusual, one must compare it with other cases generated under comparable conditions. That comparability is the whole issue. A fair test cannot shift the rules when the reference case becomes attractive. It cannot hold the controls to one standard and the reference case to another. It must ask, with discipline: when the same construction is applied elsewhere under the same declared conventions, what tends to happen?

That is the burden the inquiry now assumes. Fuller formal details of the comparison appear in the accompanying academic paper.

The natural comparison set is the Torah's own vocabulary. Since the reference case arises from the Torah's own textual world, the fairest comparison is the same corpus treated under the same rules. The question is not whether interesting numerical structures can ever arise in the abstract. It is how often they arise when the Torah's own words are allowed to generate the same kind of construction.

That is what gives the control framework its force. The reference case is not being tested against something alien to it, but against a background drawn from the same textual world.

For that comparison to remain fair, the procedure must stay fixed. A word from the Torah's vocabulary is sampled as a candidate book name. Its regular gematria supplies the modulus candidate; its small gematria supplies the public-exponent candidate. The usual RSA-validity conditions are then applied. If the pair does not yield a genuine RSA framework, the case stops there. If it does, the next step is the same one taken in the reference case: candidate author names are drawn from the same Torah vocabulary, and the case survives only if the private signing key aligns with one of them. If that condition is met, the candidate author signature is computed and tested under the same pre-declared pattern rules.

The reference case receives no special allowance, and the controls no artificial disadvantage. The gate is the same in every case. Only the words change.

That is what makes the comparison meaningful.

In the comparison itself, many trials are randomly sampled under those same rules, each producing a candidate case to be evaluated.

What matters is how those trials are judged. In much pattern-based work, rarity is assessed by counting separate hits within such a trial. Here the bar is far higher. The question is not how many local matches a trial contains, but whether the same overall configuration reappears under the same rules. That is a much more exacting standard, and for that reason a much more trustworthy one.

A reader may still ask whether the method, even if consistently applied, is tilted toward the reference case. That concern deserves a direct answer.

In fact, one of the most important features of the control design is that it was made favorable to the controls. The comparison framework was constructed as an adversarial environment for the reference case, giving comparison cases more room to align than the reference case itself strictly required. The controls were not forced through a narrow gate. Their path was widened. That matters because rarity means much more when it survives a background deliberately built to give coincidence room to appear.

This chapter is therefore not a retreat from the force of the result, but its necessary continuation. The argument is asking whether the case can survive a more exacting test.

That is also the only way the book can remain trustworthy. One of the great temptations in an inquiry of this kind is to fall in love with the result too early. A striking case appears, its elegance becomes visible, and the mind begins to defend it before it has been disciplined by alternatives. The present inquiry cannot afford that. If the result is real, it should survive challenge. If it does not, no amount of reverence toward it can save it.

Chance must therefore be allowed its strongest case. The comparison that follows is not designed to make the reference case appear special by force. It is designed to ask, under deliberately fair and even generous conditions, whether the case remains unusual when the same game is played elsewhere. The reference case must now stand before a background large enough, broad enough, and permissive enough to give coincidence every reasonable chance to speak.

Only then will it become possible to know whether the structure uncovered so far is merely one arresting instance among many, or whether it stands apart. The terms of the test are now in place. The comparison has been defined. The burden has shifted from structure alone to structure against background.

What remains is to see what happens when the test is actually run.

# Chapter 7

## The Test of Rarity

The test can now be run.

The question is no longer whether the Torah case is striking in isolation. It is whether anything like it continues to appear when the same construction is carried beyond the reference case and into a fair comparison background. The framework remains the one established in the previous chapter; what changes from case to case is only the sampled material.

This chapter gives the answer.

To answer that question, the comparison was carried out at very large scale. The full computational details belong to the technical paper. What matters here is the result. The Torah case was not allowed to remain singular simply because it was found first. It was made to stand against repeated comparison under the same declared conditions.

That is the real test.

A further clarification is needed. The issue is not whether some interesting-looking pattern ever appears in a control case. Given enough trials, something striking will always appear. The harder question is whether a control case, operating under the same rules, produces an outcome at least as rare as the Torah case.

Under that standard, the Torah case proved extraordinarily rare.

The process was run at very large scale: 100,000,000,000 trials in all—one hundred billion. In each trial, candidate book and author names were drawn from the Torah's vocabulary and tested under the same fixed rules. Within the matched comparison used here, an outcome at least as rare as the Torah case appeared roughly once in every 4 million trials.

That is the point at which the atmosphere changes. Up to now, a skeptical reader could still say, with some justice, that the case might be only one remarkable alignment among many possible ones. Here that possibility is finally tested under fair conditions. And the result of that test is not that the case dissolves into the background. The opposite occurs. It remains extremely rare.

That does not settle every larger question. Statistical rarity is not metaphysical certainty. No probability value, by itself, can resolve every interpretive or theological question raised by a text as charged as the Torah. That distinction must remain in place if the argument is to stay disciplined.

But the distinction cuts both ways. If rarity does not prove everything, it proves enough to change the argument. The Torah case can no longer be dismissed casually as the sort of thing one should expect to arise routinely once enough numerical material is available. Within the matched framework defined here, the result is statistically forceful. Coincidence is no longer a scientifically credible default explanation, and any attempt to retain it now carries a real burden of argument.

That is the significance of the rarity result.

It does not close the inquiry, but it does make one explanation much harder to sustain. Within the matched and explicitly defined framework of this inquiry, the Torah case is extremely rare and unlikely to be explained by coincidence alone.

The reader should feel, at this point, not closure but a deepening of the problem.

The case has now survived two different kinds of pressure. First came internal coherence: does the structure continue to speak the language of authorship as it unfolds? Then came external comparison: does that structure remain unusual when set against a broad corpus-based background? So far, the answer to both questions has been yes.

And yet the inquiry is still not finished.

A further question now becomes unavoidable. Suppose the Torah case is both internally coherent and statistically rare. Suppose it does not dissolve into the wider field of comparison. Does the phenomenon remain confined to the book name alone? Or does the structure continue, in other forms, once the same framework is allowed to extend outward into the Torah's opening architecture?

That is the next horizon.

The rarity result is the central outcome of the comparative test. What follows does not add to that probability claim. It asks something different: whether the central case stands as a solitary peak or belongs to a wider pattern of coherence.

That is where the inquiry now has to turn.

# Chapter 8

## Beyond a Single Case

One further question now comes into view. Does the structure end with the book name, or does it continue, in disciplined form, through the Torah's own opening architecture?

What follows adds no new statistical force. The rarity argument has already been made, and it must remain where it belongs: in the matched comparison framework of Chapters 6 and 7. Nothing in the present chapter is being folded back into that result. The task here is different. It is to ask whether the central case stands alone, or whether the structure continues outward in the most natural places available.

That question must be pursued with the same restraint that governed the inquiry from the beginning. The next steps cannot be chosen for cleverness, symbolic richness, or interpretive convenience. They must be the places one would look next simply by following the text outward from its own beginning.

That points at once to two candidates: the opening word and the opening verse. These are not arbitrary extensions. After the name of the book itself, they are the nearest textual beginnings available.

There is also a structural reason to proceed in this way. In practical RSA systems, the public exponent is often held fixed while the modulus varies, each new modulus defining a distinct signature framework. That gives the present extension a disciplined form. The public exponent already obtained from *Torah*—namely 17—remains fixed, while the modulus is drawn from these next textual anchors.

This is the path taken here.

The opening word of the Torah, בראשית, *Bereshit*, has the regular gematria value 913. That number factors as  $11 \times 83$ , and so yields a valid RSA modulus. With the public exponent still fixed at 17, the resulting system is:

$$(n, e) = (913, 17)$$

Within that framework, signing *Havaya*—whose regular gematria is 26—yields 702. What matters is not only that a value appears, but what kind of value it is. Here 702 factors as  $26 \times 27$ . The signature again turns back toward the identity being signed, remaining structured around 26, the regular gematria of *Havaya*.

The same is true of the opening verse. The first verse of the Torah—בראשית ברא אלהים את השמים ואת הארץ, *Bereshit bara Elohim et hashamayim ve'et haaretz*—has the regular gematria value 2701. That number factors as  $37 \times 73$ , and therefore also yields a valid RSA modulus. Again holding the public exponent fixed at 17, one obtains:

$$(n, e) = (2701, 17)$$

When *Havaya*, 26, is signed within that framework, the result is 232.

In kabbalistic tradition, **232** (רל"ב) is identified with *Havaya* through the four principal expansions of the divine name יהוה. Once again, the result turns back toward *Havaya*, and it does so through one of the most established kabbalistic structures built around the divine name.

At this stage, the essential point is already visible. The structure does not vanish as soon as the inquiry moves beyond the book name. It continues, in distinct but still disciplined form, through the Torah's own opening architecture.

That is enough for the purpose of the present chapter.

Further deterministic extensions drawn from additional a priori textual anchors continue the same pattern, but they need not all be unfolded here in detail. The full set of cases is gathered in Appendix B.

This restraint matters. The point is not to impress by accumulation or to manufacture force through quantity. It is to show, as cleanly as possible, that the phenomenon does not stop with a single anchor, but continues into the opening architecture of the Torah itself.

What this adds is coherence, not probability. These extensions were not part of the randomized comparison, and they do not contribute directly to the rarity result established in Chapters 6 and 7. To blur that line would weaken the argument rather than strengthen it.

But coherence matters. A single rare case may be striking. A rare case that then continues through the nearest textual anchors begins to look less like an isolated peak and more like part of a wider terrain.

That is what this chapter has been tracing.

The *Torah* anchor remains the central case and the statistically tested point of entry. But it no longer stands alone. As the inquiry moves outward—to the opening word and the opening verse—the structure continues to return to the same authorial field.

Had this material appeared earlier, before the statistical test, it might have looked like a cluster of attractive continuations gathered around a central curiosity. Coming here, after the internal and external pressure already brought to bear on the *Torah* case, it takes on a different significance. It is no longer the basis of the argument. It widens the picture.

And once the picture widens, another question becomes unavoidable. If the structure is not confined to a single point—if it survives both internal scrutiny and external comparison, and then appears again in disciplined extensions drawn from the *Torah*'s opening architecture—what kind of explanation is now adequate to it?

That is the question to which the inquiry must now turn.

# Chapter 9

## In Search of an Explanation

Once a phenomenon survives both internal scrutiny and external comparison, description is no longer enough. The question becomes explanation.

This is not a decorative question added after the real work is done. In some ways, it is the deepest question the book has been moving toward all along. A phenomenon may be real without yet being understood. It may be coherent, rare, and difficult to dismiss, and still leave open the question of what kind of account can bear its weight.

That is the level to which the inquiry must now rise.

The need for such a question arises only because the easier dismissals have grown weaker. At the outset, one could still imagine that the whole matter might amount to a decorative convergence, a suggestive but ultimately superficial alignment between an ancient textual world and a modern mathematical one. By now that has become much harder to say. The structure proved formal rather than metaphorical. It turned inward toward authorship in a self-referential way. It survived fair comparison. And it did not remain confined to the book name alone.

At this point, "interesting" is no longer an adequate word.

What is now required is an account.

Any serious account must begin by naming the range of possibilities honestly. At this stage, it would be easy to force the matter too quickly into a single conclusion and mistake that haste for seriousness. But confidence is not always seriousness. A serious inquiry should be willing to consider more than one explanatory category before judging among them.

The weakest explanation is the one most readily available at the beginning of the book: simple coincidence. In the abstract, coincidence can never be ruled out entirely. Human beings are finite knowers, and no argument of this kind reduces every uncertainty to zero. But coincidence is not an explanation merely because it can be named. It has force only so long as it remains plausible in light of the evidence actually at hand. Here that plausibility has weakened. The structure is not merely striking in isolation. It is formal, author-linked, self-referential, tested against a matched comparison framework,

and then echoed in disciplined extensions. Coincidence remains logically possible. But it no longer feels intellectually sufficient in the casual way it once might have.

A second explanation points not simply to chance, but to selective attention. Perhaps the result seems powerful only because a path was found through a rich enough numerical landscape, and once that path was found, everything afterward was read in its light. This concern is more serious than the first, because it raises the possibility that the pattern owes more to the search than to the text.

That objection, too, has force up to a point. No inquiry of this kind can proceed as though the human act of searching were irrelevant. But here as well, the force of the objection weakens once the actual constraints of the case are recalled. The inquiry began from the most a priori anchor available: the name *Torah* itself. It used declared numerical conventions. It moved through a standard and externally defined mathematical framework. It set author-linked expectations in advance. And when challenged by the possibility of chance, it submitted itself to fair comparison rather than shielding the result from scrutiny. None of this removes every concern about selection. But it makes the explanation of mere pattern-hunting less convincing than it would otherwise be.

A third explanation would say that the phenomenon is real, but that its reality belongs to some broader form of textual structure not easily captured by the usual categories of intention or accident. On this view, the Torah may possess a depth of internal order that becomes newly visible when modern formal tools are brought into contact with it. One need not yet decide whether that order should be called designed, emergent, or something else. The essential point is that the text appears to contain a level of organization exceeding the simpler models through which it is often approached.

This possibility deserves to be taken seriously. In fact, it may be the most careful way to state the problem at first. The phenomenon brought to light here does seem to suggest that the Torah cannot be treated as a flat object whose structures are exhausted by historical surface, literary form, or inherited interpretation alone. Something deeper appears to be at work—something capable of meeting a modern formalism of authorship in unexpectedly precise ways.

And yet even this explanation may not be enough unless one is willing to ask what kind of depth is actually being named. “Deep structure” can become, if used carelessly, a way of preserving astonishment while postponing its consequences. It can sound serious while deferring the harder question of what sort of source or intentionality would be adequate to such a structure.

That question leads toward a fourth and stronger explanatory possibility: that the Torah bears a form of intentional architecture.

This need not be stated crudely. It need not mean that every feature of the text has been reduced to a single mechanical design principle, nor that mathematics somehow replaces revelation, theology, or interpretation. It means something narrower and more serious: that the structures brought to light here may be there on purpose; that the convergence with a modern authorship formalism may be neither accidental nor merely emergent, but expressive of a deeper intentional order bound up with the text itself.

This possibility gains force from a fact that has hovered over the book from the beginning: historical asymmetry.

RSA is modern.

The Torah is ancient.

The meeting between them is therefore not symmetrical. It is not as though two contemporary systems were built with each other in view. What gives the phenomenon its particular kind of wonder is that an ancient text appears to instantiate, from within its own numerical values, a framework formalized thousands of years later.

That asymmetry matters. If the structure merely resembled some generic mathematical idea, the surprise would be less acute. But in the book's central case, the structure does not merely resemble a modern signature framework. It instantiates one, and a framework whose whole purpose is to answer the question of who stands behind a message. That is what makes the explanatory burden so difficult to evade. The question is no longer only why these numbers align. It is why an ancient sacred text should appear to speak in a formal language of authorship articulated only in the modern world.

One may try to soften that question by retreating to weaker language. One may say that the framework appears only from our perspective, or that modern mathematics merely illuminates structures that were always there. There is some truth in that. Every age describes what it sees in the vocabulary available to it. But even that does not remove the pressure. It only changes its phrasing. Whether one says that the Torah contains such a structure or that modern mathematics has newly revealed it, the underlying problem remains the same: the text seems capable of entering into relation with a formal authorship framework in a way too exact to be dismissed as loose analogy.

At this point, it becomes possible to say what the book has, and has not, earned.

It has not earned the right to close every question. It has not proven an entire theology. It has not transformed mathematics into revelation or revelation into mathematics. It has not abolished the need for faith, interpretation, history, or dispute. Any claim of that kind would outrun the evidence and diminish the seriousness of the argument.

But it has earned something real. It has earned the right to say that the Torah now stands under a sharpened burden of explanation. Older and easier categories no longer suffice on their own. The phenomenon disclosed here is not merely curious. It is demanding.

That demand falls first on explanation. The question is no longer whether the result is interesting. The question is what kind of account can bear its weight. Coincidence has grown weaker. Pattern-hunting has grown less satisfying. Deep structure, if invoked, must itself be made more exact. And intentional architecture, once named, can no longer be dismissed as though it were merely rhetorical excess.

The argument does not end here. But it does arrive at a new condition: the Torah now stands under a burden of explanation more exacting than before.

The final chapter must therefore ask what remains after an argument of this kind has been made—not only what has been shown, but what has changed.

# Chapter 10

## After the Encounter

After an inquiry of this kind, the first thing that changes is not doctrine but perception.

The Torah cannot now stand in quite the same way as before. Whether one accepts every step of the argument with full conviction, pauses over some parts more than others, or remains cautious about the strongest interpretations, the field of perception has shifted. The Torah has been placed in relation to a modern formalism of authorship in a way that can no longer be unthought. It has been seen, however provisionally, through a language it was never expected to speak—and yet appears able to meet.

That is not a small thing.

For what has emerged in these pages is not just a surprising number pattern, nor a mathematical curiosity attached to a venerable text. It is something harder to contain: a convergence between an ancient text and a modern structure built to answer the question of who stands behind a message.

The Torah appears differently after such a meeting. It appears deeper, because what once seemed to belong only to its inherited religious or literary life has now shown an unexpected relation to a modern mathematical language. Stranger, too, because the line once assumed between ancient text and modern formalism no longer feels secure. And more charged, because the question touched by the structure is not peripheral. It is the question of authorship itself—the question of source, giver, and identity that has always stood near the heart of the Torah's reception.

That is why the final effect of the book should not be mere admiration. Admiration would be too light a word. One can admire a clever observation and remain unchanged. One can admire an elegant piece of mathematics and still keep it at a safe distance. The phenomenon traced here asks more of the reader than that. It asks the reader to remain in the presence of a difficulty that does not disappear once it has been named.

That difficulty has several layers. There is the formal difficulty: how an ancient text can yield, through its own values, a modern signature framework of authorship. There is the statistical difficulty: how the central case can remain extraordinarily rare under a matched comparison. There is the architectural difficulty: how the structure can continue beyond the book name into the Torah's opening architecture. And beneath all

of these lies the deeper difficulty itself: what kind of account can bear their combined weight.

The book has not tried to close that difficulty too quickly. There is a kind of false confidence that comes from ending an inquiry like this with declarations more final than the evidence permits. That temptation should be resisted. By this point, the field of explanation has narrowed and sharpened. The older and easier ways of dismissing the matter no longer suffice.

That, in itself, is a serious achievement.

It means that the book leaves behind not a final slogan, but a burden: a burden of thought, of honesty, of explanation. And that burden does not fall only on those who approach the Torah from within faith. It also falls on those who approach it historically, critically, or philosophically. For the phenomenon described in these pages does not depend, at the outset, on accepting a theological conclusion. It depends first on seeing that something formal, striking, and difficult to absorb has appeared. The implications may differ with one's larger commitments, but the challenge itself is not confined to any one community of readers.

That is one reason the inquiry matters beyond its immediate details. It suggests that modern mathematical tools do not only analyze the external world. Sometimes they illuminate the texts we inherit. Sometimes they bring into view structures within tradition that had not previously been thinkable in quite the same way. That does not make mathematics the master key to sacred texts. The point is narrower than that, and more serious. It is that the encounter between ancient revelation and modern formalism may still contain possibilities we have not yet learned how to name well.

The book has tried to name one such possibility. And it leads, almost inevitably, to a final double note: wonder and disturbance.

These belong together. Wonder is appropriate because the convergence is elegant, improbable, and in some sense beautiful. Disturbance is appropriate because it does not sit comfortably within ordinary habits of thought. It presses against familiar assumptions about time, authorship, text, and meaning. It does not leave the Torah simply where it was.

That is why the book should end not in triumph but in sobriety. The subject matter is too charged for easy victory. If the phenomenon is real—and the argument of the book has been that it is—the right response is not haste, but seriousness: not the satisfaction of

having solved everything, but the recognition that one now stands before a text that has become harder to think about superficially.

In that sense, the book does not conclude by reducing mystery, but by refining it. The Torah has not been explained away by mathematics. If anything, it has become more mysterious through mathematics. The formalism brought to bear on it has not flattened it into mechanism. It has disclosed another face of depth. What first seemed like an unlikely meeting between distant worlds has become, by the end, a demand to think more carefully about both at once.

And perhaps that is the most one should ask of a book like this. Not that it compel all readers to the same final conclusion. Not that it replace devotion, criticism, or interpretation with a single mathematical verdict. But that it make indifference harder. That it leave the reader less able to return to the earlier innocence in which Torah, mathematics, and authorship belonged to wholly separate regions of thought.

Something has crossed between them.

And once that crossing has been seen, however cautiously, the reader is no longer where the book found them. The Torah now stands before them differently: not less sacred, if sacred; not less textual, if textual; not less ancient, if ancient; but deeper, stranger, more demanding, and harder to contain within the simpler categories through which it may once have been approached.

That is what remains after the encounter: not a solved mystery, but a changed intellectual condition; not certainty without remainder, but a more disciplined astonishment; not the end of the question, but its sharpening.

If this book has succeeded, it has succeeded not only by presenting a formal result, but by placing in the reader's hands a question that can no longer be dismissed without cost: what kind of text is this, if it can meet a modern language of authorship in so exact and unsettling a way?

That question does not end here. It leaves the book with the reader, and the reader with the Torah.

# Appendix A. On Gematria

The argument of this book has depended throughout on a simple numerical fact about Hebrew: its letters carry value as well as sound, so that words may be read not only as language but also as number. Jewish tradition preserves more than one way of handling those values, but the discussion here has used only two: regular gematria (*mispar hechrechi*) and small gematria (*mispar katan*). These are the most basic and familiar forms, and they are closely related, since small gematria is derived from the regular values by removing trailing zeros. What follows sets them out side by side, so that the numerical basis of the book can be seen plainly.

Letter	Regular	Small
א	1	1
ב	2	2
ג	3	3
ד	4	4
ה	5	5
ו	6	6
ז	7	7
ח	8	8
ט	9	9
י	10	1
ך / כ	20	2
ל	30	3
ם / מ	40	4
ן / נ	50	5
ס	60	6
ע	70	7

פ / ף	80	8
צ / ץ	90	9
ק	100	1
ר	200	2
ש	300	3
ת	400	4

The value of a word is found by adding the values of its letters.

So, for example, the word **תורה** may be read in both systems.

**In regular gematria:**

$$5 = \text{ה}, 200 = \text{ר}, 6 = \text{ו}, 400 = \text{ת}$$

$$611 = 5 + 200 + 6 + 400 = \text{ה} + \text{ר} + \text{ו} + \text{ת}$$

**In small gematria:**

$$5 = \text{ה}, 2 = \text{ר}, 6 = \text{ו}, 4 = \text{ת}$$

$$17 = 5 + 2 + 6 + 4 = \text{ה} + \text{ר} + \text{ו} + \text{ת}$$

These are the two values used in the book's opening construction:

**611** = **תורה** in regular gematria.

**17** = **תורה** in small gematria.

# Appendix B. The Full Set of Cases

The inquiry has already brought three digital-signature frameworks into view, drawn from the Torah's most natural a priori textual anchors: the book name, the opening word, and the opening verse. What follows returns to those first three cases in fuller interpretive form, and then carries the same movement further through several deterministic developments drawn from the opening frame itself. Nothing here adds new statistical force. What it offers instead is a wider view, in which the coherence of the pattern becomes easier to see as the line extends outward.

## I. The First Three Cases

### 1. The Torah Case

The Torah case has already been introduced in the main text. Here the structure appears at its most compact, and the act of signing can be seen directly. In RSA signature form, with  $m$  as the message,  $n$  as the modulus, and  $d$  as the private signing key, the signature is computed as follows:

$$\text{signature}(m) = m^d \bmod n$$

In the present case, the message is Havaya, whose regular gematria is 26; the modulus comes from תורה and is 611; and the signing key derived from that framework is 65. The signature is therefore:

$$\text{signature}(26) = 26^{65} \bmod 611 = 442 = 26 \times 17$$

In Hebrew, it may also be written as:

$$\text{signature}(\text{יהוה}) = \text{יהוה}^{\text{אדני}} \bmod \text{תורה} = \text{יהוה}_{\text{regular}} \times \text{יהוה}_{\text{small}}$$

Its elegance lies in the way a single line gathers together the Torah, the giver as Havaya, and the pronounced name Adonai. What appeared in stages in the main text is here gathered into a single compact act.

### 2. The Opening Word: בראשית (Bereshit)

The opening word בראשית is the next textual anchor. Its regular gematria is 913, which yields a valid RSA semiprime modulus. Within that framework the signature of Havaya is

702. Since  $702 = 26 \times 27$ , the signature once again turns back toward 26, the regular gematria of Havaya.

But the number admits a further turn. The same value, 702, is also the gematria of שבת (Shabbat). And Shabbat is itself described as a divine name, as the Zohar (Parashat Yitro)—a foundational text of Kabbalah—teaches:

“מהו שבת? שמא דקודשא בריך הוא, שמא דאיהו שלים מכל סטרא”

“What is Shabbat? The name of the Holy One, blessed be He — a name complete from every side.”

In that light, the result takes on a further aptness. The signature is not only structured around 26; it also comes to rest on a divine name. That matters especially here, because the natural end of a signature is a name: authorship is marked by the placing of a name upon a work.

### **3. The Opening Verse בראשית ברא אלהים את השמים ואת הארץ (*Bereshit bara Elohim et hashamayim ve'et haaretz*)**

The opening verse, בראשית ברא אלהים את השמים ואת הארץ, is the next textual anchor. Its regular gematria is 2701, which yields a valid RSA semiprime modulus. Within that framework the signature of Havaya is 232.

The number 232 opens onto one of the deepest traditional structures gathered around Havaya. In kabbalistic tradition, 232 (רל"ב) is identified with Havaya through the four principal expansions of the divine name יהוה. The four principal forms are conventionally known as מ"ה, ס"ג, ע"ב, and ב"ן:

ע"ב – יוד הי ויו הי

ס"ג – יוד הי ואו הי

מ"ה – יוד הא ואו הא

ב"ן – יוד הו וו הו

Their regular gematria values are 72, 63, 45, and 52, which together yield

$$72 + 63 + 45 + 52 = 232$$

In that light, the result turns back toward Havaya through the name's own written unfoldings. What appears here is not merely a return to a traditional kabbalistic value,

but a return through a deeper layer of the name's own unfolding, as יהוה opens into its four spellings and those spellings gather once more into 232.

## II. Further Deterministic Extensions

These further developments are not arbitrary extensions, but simple and disciplined transformations of the same opening value. Two of them – the Sum-of-Thousands reduction and the center-point transform – also appear in earlier work by Rabbi Oren Evron on the Torah's opening verse, where they participate in a broader network of numerical relations drawn from the opening text. The first carries 2,701 to 703 through an operation referred to in the kabbalistic literature as חזרה חלילה. The second takes the verse to its middle value, yielding 1,351. The third turns on a traditional scribal feature of the Torah itself: the enlarged opening beit of בראשית. Under that convention, the initial ב contributes 2,000, raising the value of the opening verse from 2,701 to 4,699.

### 1. The Opening Verse: Sum of Thousands

The first of these developments follows the Sum-of-Thousands reduction, an older kabbalistic operation referred to in the literature as חזרה חלילה. Applied to the regular gematria of the opening verse, 2,701 becomes  $2 + 701 = 703$ .

That reduced value, 703, yields a valid RSA semiprime modulus. Within that framework, the signature of Havaya is 676. This is a striking result, because  $676 = 26^2$ . The self-reference here becomes especially strong: the signature returns as the authorial value squared, as though the signed identity had folded back upon itself.

### 2. The Opening Verse: The Enlarged Beit

The next case turns on a traditional scribal feature of the Torah text itself. The opening letter ב of בראשית appears as a רבתי ב, an enlarged beit, and the only enlarged beit in the Torah. Under that convention, the letter contributes 2,000 to the verse's value, so that the regular gematria of the opening verse rises from 2,701 to 4,699.

That derived value yields a valid RSA semiprime modulus. Within that framework, the signature of Havaya is 1,231.

This number carries a different kind of force. It is the gematria of עשרים וששה ("twenty-six"), the written-out form of the number associated with Havaya, as noted in גינת אגוז by Rabbi Joseph ben Abraham Gikatilla (13th century). Here the return no longer takes the form of multiplication or factorization. Instead, the signature gives the

value 26 back in words. The number becomes language again. And the movement does not stop there. Under the Sum-of-Thousands reduction, 1,231 becomes  $1 + 231 = 232$ , returning once more to רל"ב.

### 3. The Opening Verse: The Center Point

The third case follows the center point of the verse, a move also semantically suggested by the gematria equivalence:

תורה = אמצעית ("Torah" = "middle")

For an odd number  $n$ , the center point is the middle value,  $(n + 1) / 2$ . Applied to the opening verse's regular gematria, 2,701, it yields 1,351.

That derived value yields a valid RSA semiprime modulus. Within that framework, the signature of Havaya is 1,081.

The value 1,081 carries a special aptness, for it is the gematria of the sefira תפארת (Tiferet). In kabbalistic tradition, the ten sefirot are the foundational structure through which divine emanation is described, and among those ten, תפארת (Tiferet) is the sefira specifically associated with Havaya. The result therefore turns back toward the divine name through one of its central traditional associations. And because this case arises from the verse's center point, the return to תפארת gains added force, since kabbalistic tradition also describes תפארת as "עמודא דאמצעיתא" – the "central pillar." The movement toward the verse's center thus seems to find its answer here, in a value already marked in tradition itself by centrality.