Old Testament Introduction
The Bible’s Buried Secrets
Chapter 1, Definitions

***NOVA (TV)***

Ostensibly, NOVA is a TV series about scientific presentations employing TV auditory-visual effects as the principal medium, which are commonly broadcast by pbs.org either through TV channels or through streaming internet.

[http://en.wikipedia.org/wiki/Nova\_(TV\_series)](http://en.wikipedia.org/wiki/Nova_%28TV_series%29)

<http://www.pbs.org/wgbh/nova/>

It is easy to mistake scientific presentation and science as being the same thing. They are not the same. What is science?

***Dimensionality and Sensation***

All human investigation is supposed to enter the mind through sensory gates of which there are exactly five: hearing, sight, smell, taste, touch. These sensate observations are thought to be limited to three Cartesian dimensions and time. Such rules of observation are not necessarily true. Already, in science we are confronted with ideas that cannot be described in terms of dimensions and time. The idea of moments (torque, twisting) requires additional constraints: so instead of three dimensions, scientists begin to think in terms of six degrees of freedom and time, rather than in terms of three dimensions and time. The new vector space is now six dimensional.[[1]](#endnote-1) In order to cope with a mathematics of first moments, we define them in terms of cross products[[2]](#endnote-2) so that they can be thought of as vectors that happen to align with some original three dimensional Cartesian vector space, but we have really discovered three new dimensions; as well as a time which is scalar, not truly dimensional, which is beyond our understanding.[[3]](#endnote-3)

In the field of statistics, it is not difficult to encounter problems that might have an infinite vector space: practically we must limit the number of vectors under consideration, because we can only juggle so many calculations at one time. I’ve occasionally played with vector spaces as large as sixty-three: but this becomes difficult to manage; vector spaces of thirty-one are not uncommon. This is not new. Such mathematics finds its historic roots in the Latin Square.

Nuclear physics also considers additional dimensions. The idea of an Einsteinian alternate reality is not some science-fiction mythology of a parallel universe or parallel universes. Rather, it is the idea of unknown and unidentified dimensions where the forces that obviously exist in Cartesian space, may exert unknown influences in other dimensions: they might bleed through. This is not so important to me and you. Yet, it is important to those struggling with the implications of General Relativity. It is also important to those working at CERN in search of the Higgs or currently in search of micro-black holes.

The field of spirituality also requires the consideration of additional dimension(s). The Spirit bears witness with my spirit.[[4]](#endnote-4) Obviously, many who call themselves Christians do not really believe in such an alternate heavenly reality, a spiritual reality. This is a serious contradiction, so that such people are not really Christians, except in name only.[[5]](#endnote-5) For such people, spiritualty is limited to Cartesian dimensions, and is nothing more than a grand expression of moral ideals, which is devoid of any rational reason for the existence of such high moral ideals. One who does not believe in God, good or evil, heaven or hell, angels and demons, spiritual warfare, satanic attack, or demonic influence is simply not thinking Biblically or Christianly. On the other hand, genuine spirituality is filled with ideas requiring additional dimensions: the eyes and ears of faith; spiritual hearing, sight, visions, dreams. Yet, such experiences are so universal, why are we doubting their scientific existence, rather than investigating the possibility of real causes?[[6]](#endnote-6) We don’t doubt our physical senses that way. Why do we doubt the existence of spiritual hearing, sight, smell, taste, and touch? Why do we doubt the existence of an alternate coexistent reality in other dimensions? Or even without dimensions or time? What kind of science begins with the elimination of evidence?

From square one, the Bible speaks of an alternate, yet tangent spiritual reality. Genesis 1:2 —

The Spirit of God hovered over the surface of the waters.

Genesis 1:26-27 —

And God said, “Let us make man in our image, after our likeness….” So God created man in His own image, in the image of God He created him; male and female He created them [both with the image of God].

Since God is a Spirit, then His image and likeness in me must have a spiritual or immaterial aspect or component. Indeed, God claims such a reality in Genesis 2:7 —

And the Lord God formed man from the dust of the ground, and breathed into his nostrils the spirit of life; and man became a living soul.

It is tempting to equate the “the spirit of life” with nothing more than the blood-oxygen system. If I should breathe into another’s nostrils, the other’s lungs will fill with air and nothing else need happen at all. If I breathe into the nostrils of a clay figure, nothing ever happens. Yet, when God breathes, more takes place, life happens. Thus we believe that human beings have a dual aspect to their nature: partly physical, and partly spiritual; the two aspects together making up the whole or the soul.[[7]](#endnote-7) Additional evidence is found in Matthew 26:41 —

The spirit indeed is willing, but the flesh is weak.

John 4:24 —

God is a Spirit: and those who worship Him must worship Him in spirit and in truth.

Romans 8:16 —

The Spirit Himself bears witness with our spirit, that we are the children of God.

Galatians 5:17 —

For the flesh lusts against the spirit, and the spirit against the flesh. These are contrary to each other: so that you cannot do whatever you will.

The Bible is so filled with this emphasis on otherworldly, spiritual dimensions or dimensionlessness: eternity, infinity, ubiquity; that if we allow analysis after this emphasis is removed, we have destroyed half of the evidence, and the Bible itself cannot any longer make sense. Yet, this is exactly the approach of *The Bible’s Buried Secrets* and it is taken in the false name of science, pseudo-science. Real science never throws evidence away. So, *The Bible’s Buried Secrets*, is built upon error[[8]](#endnote-8) from square one. Archaeologists do not have the scientific right to pick and choose what evidence they like or don’t like. Scientists must always deal with the evidence that is set before them.

***Scientific Method***

We digress. What is science? Science is the rigorous use of the Scientific Method. All human endeavor begins with observation, but not all observation is science. Each individual field of observation has its own definitions, rules for formulating new definitions, as well as its own tests of truth. For example: neither logic nor mathematics need or depend on science in any way. Even so, science is highly dependent on both logic and mathematics. Scientific observation comes with its own set of definitions and truth tests, commonly known as the scientific method. Observations in a philosophical vacuum do not a science make. Yes, science begins with observations, but that is not its distinctive beginning.

The first baby step of science is abduction or induction (definitely not deduction). Abduction is guessing. Induction is educated guessing. Science begins with the idea, the confidence, the faith that one’s observations have coherent meaning. We wonder what such a meaning might be. If we have already developed some conclusive experience with these observations we may be able to form educated guesses. Otherwise we start with silly wild blind guesses, shots in the dark.

The second baby step of science is to state these guesses formally in a null hypothesis, which we now set out to disprove; and/or an alternate hypothesis for which we hope to find some probability of success. The ensuing steps include experimental design, apparatus design, experimentation, experiment repetition and replication, tentative conclusions, peer review, conclusions, all of which must take place before we have any science. Even with all this rigor, many scientific errors and biases leak through the scientific screening, vetting system. Scientists themselves are plagued with personal biases and assumptions, which are difficult to expunge from the mind. Bacon is neither the first nor the last to observe and express such human frailty openly.

<https://en.wikipedia.org/wiki/Baconian_method>
see Contents, item 3: Idols of the mind (idola mentis)

In any case, in spite of the excellent presentation, no matter how well intentioned the purpose and scope, it is important to recognize that NOVA is not science. You are free to examine the discussion above to find a few of the reasons why NOVA is not and can never become science.

***Statistics***

There are errors associated with the applied mathematics, the statistics employed in *The Bible’s Buried Secrets*. Since statistics, characteristically, are not completely reported, we are left with a wide latitude for deception. Not long ago the only statistic commonly reported was the mean or average. Mean by itself is a meaningless statistic. To start with, the mean is only one of several indicators of central tendency, but it may not be the best one to apply: for example the ever popular mean, median, and mode; as well as several others.

<http://en.wikipedia.org/wiki/Mean>

Mean can be made more meaningful by reporting the standard deviation or error which is one of several ways to indicate dispersion.

<http://en.wikipedia.org/wiki/Standard_deviation>

<http://en.wikipedia.org/wiki/Standard_error>

The actual number for dispersion reported by NOVA in *The Bible’s Buried Secrets* is Margin of Error. What does Margin of Error mean? Since NOVA does not state the confidence being used, we must suppose that the commonly accepted use of 95% is intended. This equates to 4 times or ± 2 times the standard error of the mean. Standard error of the mean is, as the name suggests, a property of the mean, not of the population: it is also discussed in the article on standard error. The Standard deviation is a characteristic of the population: it describes the population dispersion. The mean itself is a property of the population describing its central tendency. The standard error of the mean indicates how accurate the mean is thought to be: it describes mean drift. SEM = SD / √n.

<http://en.wikipedia.org/wiki/Margin_of_error>

To get an even better picture we would need to construct a good-old-fashioned histogram which will give us a visual picture of the data shape. This requires that we get our greasy mitts on the actual data.

If we were to collect and evaluate one hundred pieces of data for mean and standard distribution (σ) and we happened to know that the data were shaped like a Gaussian sample we would be confident that 95% of the samples would be found within ± 2 \* σ from the mean. But if the distribution took some other shape, as many statistics do, we would have no such confidence. Moreover, the statement of such a statistic indicates that we have at least 5% of the population about which we know absolutely nothing: when the distribution is not Gaussian our knowledge deteriorates rapidly, we cannot make predictions of any kind, and the sum of our knowledge is limited to the original data. So much for the behavior of individual pieces of data. Now we will abandon the discussion of individuals.

The Law of Large Numbers (LLN) and the Central Limit Theorem (CLT) guarantee to us that the statistics calculated from any data set: such as both mean and standard deviation will follow a Gaussian distribution, no matter what the original shape of the individual data looked like.

<http://en.wikipedia.org/wiki/Law_of_large_numbers>

<http://en.wikipedia.org/wiki/Central_limit_theorem>

So if our original hypothetical data set had a mean of 3000 and a σ or SD of 10, without much more specific information we would know nothing about the individuals, but we would be very confident that the average was 3000; that the SEM was 1; that the Margin of Error at 95% confidence was ± 2. What does this show? It shows that we are 95% sure that the mean falls between 2998 and 3002. It also shows that there is a 5% chance that we haven’t got much of a clue. Of course we can continue to crank up our confidence level: but after our error risk reaches parts per billion, what’s the point, we’ll never find our error anyway.

Okay, what does this demonstrate in common language? It demonstrates that we are 95% sure that we know where the herd is going; but we have a little doubt about that: even so, the odds are pretty good that we know where the herd is going (20:1). It’s a good bet; it’s a safe bet; but it’s never a guaranteed bet, a sure thing. On the other hand, we know absolutely nothing about the individual cows. Any cow can wander out of the herd at any moment in any direction; or startle the herd, break down the whole statistic and cause a stampede. Which is why herds require herders. The strange anomalies need to be controlled. Herding consists of hours upon hours of boredom interspersed with an occasional stray, and a few seconds of stark terror.

This is why, when you turn on the faucet, you are reasonably confident about the direction the water is flowing; but you cannot explain at all how a single individual drop, not a splash, coming from the same stream of flow, could possibly go in the opposite direction, and hit you in the face. However, it most certainly did: you felt it and you know it happened, you know that this is reality.

Most of the dating systems which we will discuss behave in such a statistical fashion. This is as true of 14C dating as it is of pottery dating; and even to some extent of epigraphic dating. We can predict the behavior of large groups, but we can never be sure of the behavior of individuals.

***Uncertainty Principle***

Werner Heisenberg, first put his statement of the Uncertainty Principle as it relates to quantum mechanics into words around 1927.

<http://en.wikipedia.org/wiki/Uncertainty_principle>

It was not that the idea of error was new, but our concepts of error were rather naïve and simplistic. By 1913 all of that changed. Ernest Rutherford (1817-1937) proposed that Hans Geiger (1882-1945) and Ernest Marsden (1889-1970) conduct experiments, firing alpha particles at thin gold foil. The results were both spectacular and unexpected. Atomic theory was born.[[9]](#endnote-9) Michelson and Morley had measured the speed of light and that would be further perfected.[[10]](#endnote-10) Our understanding of the reality of the universe was changed forever. Einstein’s theories would be proposed.[[11]](#endnote-11)

Among the mysteries that Heisenberg proposed to us is that we don’t know where fast moving objects, such as electrons, really are. In a world of binary logic they can be at 0 or at 1; at both places at the same time, or at neither place. If there is a probability that an electron is confined to a particular region; there is also a corresponding probability that it is not there. I’m prone to the idea that we don’t really understand what an electron is. We don’t understand light very well either: so we are compelled to describe light in terms of two conflicting theories at the same time: namely corpuscular theory and wave theory. This sort of discussion eventually led to the idea of alternate realities, the Higgs quest, and now, the search for micro-black holes. Since Heisenberg has introduced the idea that we must change everything we believe about molecular structure, measurements, statistics, and dimensionality; it seems absurd that a few archaeologists should be allowed to propound theories that openly dodge such issues. Heisenberg opens a door that we are unable to close. We are not only uncertain about the measurement of momentum and position at the same time; we are virtually uncertain to some degree about pretty much everything we know by observation. Moreover, we now realize that measurements themselves destroy evidence. The attempt to analyze artifacts statistically, and use those statistics to overstate conclusions must cease. The temptation to delete or destroy evidence we don’t like must be stopped. We must learn to proceed with greater humility. This is especially true as we consider any theory of archaeological dating.

[[12]](#endnote-12)

1. Actually, the new vector space is seven dimensional, but we don’t understand the meaning of the seventh dimension; I am not aware of a single math, engineering, or science textbook even discussing it. The topic comes up in advanced applied statistics. In aircraft or other vehicles these are called thrust, lift, slip, pitch, roll, and yaw: there is no definition, meaning, or name associated with the seventh degree of freedom, the seventh dimension. [↑](#endnote-ref-1)
2. Vector products, as distinct from scalar or dot products. The behavior of vectors and scalars is widely different: even when they look similar numerically. [↑](#endnote-ref-2)
3. There is no such thing as the direct measurement of time; something else is measured and related to the concept of time: for example, angles (measuring solar relationships and sun dials), distance (measuring lengths of burning candles and ropes), harmonic motion (counting ticks and tocks of crystal vibration, metronomes, and pendulums), as well as more complicated movements (atomic clocks, radio clocks, wavelengths of light). Time is a scalar because it has no specific direction; it seems to always apply to every direction “at the same time”. [↑](#endnote-ref-3)
4. Matthew 28:19; Romans 8:16; 1 John 4:1; Revelation 22:17 [↑](#endnote-ref-4)
5. A Christian is, by definition, a baptized person. A true baptism, by definition, always conveys the gift of the Spirit. While there are a variety of opinions about how this takes place, there is universal agreement concerning the outcome. All Christians have received the Spirit at a true baptism, else they cannot possibly be Christians. We might suppose that there are ways to defraud or falsify baptism: that is yet another discussion. Nevertheless, the absence or presence of the Spirit is a kind of evidence; even though it is strictly personal in essence. [↑](#endnote-ref-5)
6. No, I’m not advocating for any of the practices of clairaudience, clairvoyance, extrasensory perception, magic, mindreading, paranormal activity, precognition and retrocognition, psychic phenomenon, telekinesis, telepathy, or anything else of the sort. I am simply claiming that God maintains a continuous conversation with some of mankind through spiritual gifts (1 Corinthians chapters 12-14), which operate far above and beyond ordinary human talent; among which are secondary prophetic abilities, which enable us to understand, interpret, and explain Scripture. Moreover, God has opened this conversation so that any and all who sincerely seek it may join in it (Luke 11:13). In rare cases God has given primary prophetic abilities, which are necessary for the writing of Scripture. So Moses is a prophet in the primary sense; while I am only a prophet in the secondary sense, because I have some small ability to understand Scripture. That being said, such a gift did not come because of anything about my brain which might be considered unusual, the gift came from God the Father, through God the Holy Ghost. The prophetic gift of understanding Scripture, is available to all Christians in varying degrees. [↑](#endnote-ref-6)
7. Not the Greek idea of a duality of nature in which the spirit is imprisoned in the body and must fight its way free: through Epicureanism or Stoicism, and the like. Rather a single nature with dual aspects. The words soul and spirit may be used interchangeably, so this can be confusing. We have retained Genesis 2:7 as our definition. [↑](#endnote-ref-7)
8. This kind of error is commonly known as presuppositional error. In the vernacular it may also be termed “a hip-pocket veto,” tampering with evidence, fraud, lying, and the like. [↑](#endnote-ref-8)
9. http://en.wikipedia.org/wiki/Geiger%e2%80%93Marsden\_experiment [↑](#endnote-ref-9)
10. http://en.wikipedia.org/wiki/Michelson%E2%80%93Morley\_experiment [↑](#endnote-ref-10)
11. http://en.wikipedia.org/wiki/Theory\_of\_relativity [↑](#endnote-ref-11)
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