

The Book of Mormon DNA Controversy: A Case Study in How Not to Think

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Introduction

There is at the moment within the LDS community a debate respecting how much doubt the current evidence respecting DNA casts on the belief Joseph Smith ("JS") and most other Mormons have held that the American Indians descend from the House of Israel. While this story is far too long to tell here, I will provide its outline and then use it to illustrate what in my view is one of the primary ways in which Mormon and other religious thinking runs off the rails.

The Principle of Parsimony

Most of the best decisions humans make consciously or unconsciously use the "principle of parsimony" (sometimes called "Occam's Razor" after the Bishop of Occam who in the 14th century was one of its early and best know practitioners) as a criterion for deciding among competing theories or explanations of what "is". The principle states that we should always choose the simplest explanation of a phenomenon – the one that requires the fewest leaps of logic. This is one of science's basic decision making rules.

Another way to think of parsimony when it comes to decision making is that it makes use of probabilities. That is, it requires us to ask something like, "given all we know about question "x", what is most likely to be the correct answer?" It recognizes that certainty is not possible in answering most if not all questions. This is how scientists, lawyers, judges and others in the business of decision making try to think.

The Book of Mormon DNA Controversy

It is fair to say that there is much DNA based evidence to suggest that JS and all those who have followed him were incorrect respecting the ancestry of Native Americans. That is, it appears that they did not descend from the Israelites. The Church's response to recent summaries of the scientific evidence in this regard, most notably provided by Tom Murphy in various published papers, has been to indicate that "all is well" on its official website, followed by a reference to articles from the "Journal of Book of Mormon Studies" respecting DNA and the Book of Mormon that were prepared to rebut Murphy. See <http://www.lds.org/newsroom/mistakes/0,15331,3885-1,00.html> But one has to read those articles carefully to understand what they mean with respect to this complex issue. They do not conclude that all is well with the Church's theory. In fact, the most reasonable scientific conclusion that can be drawn from those articles is that while the best evidence today indicates that the Church's theory is incorrect, it is

still possible that at some future time more evidence will be found to support the Church's theory. That is, we are not certain at this point that the Church is wrong. And the Church makes no apparent attempt to estimate how likely it is that science will vindicate its position.

Precisely the same thing can be said about the earth's shape as the Church says about the DNA issue respecting the Book of Mormon. That is, the best evidence indicates today that the earth is round, but it is still possible that more persuasive evidence that it is flat will someday be produced. This is what Harvard scientist Stephen Jay Gould said in his introduction to James Watson's "DNA: The Secret of Life". Such statements are useless from a decision making point of view. To make a decision that depends upon a state of fact, I need to understand the relevant probabilities.

For example, many of my clients are in the oil business. Before they drill a well, they spend a lot of money collecting information that allows them to estimate the probability that oil or gas will be found at a particular location, and at a particular depth underground. They then determine how much it will cost to drill the well, and decide based on their best estimate of the probability that oil or gas will be found whether it makes sense to spend that amount of money to drill that particular well. If they asked their geologist whether to drill a well and he all he was prepared to answer was, "Well, no one can prove that there isn't oil or gas there, so let's drill!", he would lose his job. This is tantamount to what the Church says across a wide range of issues. You can't prove God does not exist, so we will assume He does. You can't prove JS lied about a lot of things, so we will assume he is believable. You can't prove that JS did not speak with angels and translate the Book of Mormon from golden plates, so we will assume that he did, while respecting each of these and many other similar issues there is plenty of evidence from which to make a probability based decision. But I digress.

So, particularly with respect to scientific questions such as what kind of light DNA evidence sheds on the Book of Mormon's authenticity, I think it is fair to expect any scientist addressing the issue to do so in a probabilistic way. I suggest that we should be suspicious of any who do not do so. It is my experience that because of what the probabilities in this regard indicate, the Church and those who are faithful to it both consciously and unconsciously resist this kind of analysis when it comes to things like the Book of Mormon. The manner in which the Church's apologetic scientists framed their analysis respecting the DNA question is a textbook example of this.

And as noted above, the kind of probabilistic analysis I have described can be applied to most of the issues that underpin the Church's faith claims. Historical analysis works on the same kind of probabilistic principles as does scientific analysis. And yet we find more or less continual resistance from the Church and those who defend it with respect to this kind of approach.

What Do the Church's Scientists Say About DNA and the Book of Mormon?

Since the question of the application of DNA theory to the native American population base is scientific in nature, one would expect the principle of parsimony to be on prominent display, and indeed one (but only one) of the articles linked to the Church's announcement that "all is well" refers to it. In that regard, D. Jeffrey Meldrum and Trent D. Stephens ("Who Are the Children of Lehi?") note that there is no scientific evidence to support the traditional LDS theory that the Native Americans descended from the Israelites and there is much evidence that must be counted against it. They then indicate that the principle of parsimony indicates that the simplest theory should be accepted until refuted (see pp. 43 – 44). Any scientist reading this would understand them to say that based on the evidence extant, the Church's theory should be rejected until compelling evidence can be found to support it. This means that if a decision had to be made today that depended on whether the Native Americans descended from the Israelites, science would advise us to assume that they did not.

However, Meldrum and Stephens did not say this in the kind of clear fashion that would be required for a layperson to understand it. And then they go on set out a number of other theories, none of which are supported by any evidence, which could lead to the conclusion that the Native Americans did descend from the Israelites. So, given how oblique Meldrum and Stephens' statement against the Church's theory was, and how they indicated ways in which the Church's theory still could be true if evidence to support it was found, and how the Church's website referred to them as supporting the Church's position, most members who take the time to read what they have written will not understand it, and will likely conclude that these scientists are saying that science supports the Church's theory.

Each of the other articles referred to on the Church's website as supporting its position respecting the origin of the Native Americans takes a similar approach, but does not refer to the principle of parsimony. All they show is that science has not proven with 100% certainty that JS's theory of American Native origins is incorrect, and hence they invite Mormons to continue to believe that JS was correct.

For example, Michael F. Whiting (See "DNA and the Book of Mormon: A Phylogenetic Perspective") sets up a straw man by saying that LDS critics claim certain proof of BofM falsity based on DNA alone. He then sets out to prove that of course does so. The difficulty of proving a negative is well known. In addition, contrary to the belief of most non-scientists, science does not purport to prove anything with 100% certainty. Even the basic principles of mathematics were shown by Kurt Godel to be uncertain. So of course it has not been proven that JS was wrong. Without an assessment of the probability based on the best evidence available to date as to who is right and who is wrong, this type of analysis tells us nothing. I should be embarrassing to a scientist such as Whiting (who I understand is reputable) to provide such analysis.

Whiting's paper, which provides all kinds of interesting and useful analysis respecting relatively unimportant issues, reminds me of a tax opinion produced by the local office of one of the world's largest accounting firms. I had to review it in the context of the significant commercial transaction. It was 65 pages long and provided an admirable

summary of the taxation principles (I am a tax attorney) in question, great analysis respecting many relevant points, and then in one sentence buried deep inside that dense document rendered itself useless by assuming away the essential point respecting which the opinion had been requested. That accounting firm lost a client. Whiting similarly did not address the most important issue respecting the DNA and the Book of Mormon.

John M. Butler's article ("A Few Thoughts from a Believing DNA Scientist") also appears impressive. But again, he gives us no probabilistic analysis. All he has succeeded in doing is to show that the case against the Book of Mormon is not air tight. I note that Butler's specialty is DNA forensics and so it is not surprising that his analysis above is suited to the criminal justice process respecting which "proof beyond a reasonable doubt" is the test most often in issue. To thwart proof beyond a reasonable doubt, as is required to prevent a criminal conviction, all that is required is a small probability that the case against you is flawed. Who can forget O.J. Simpson in that regard.

Newton on "Evasion by Hypotheses"

In "A History of Knowledge", Charles Van Doren summarizes the manner in which Newton created the scientific method, and indicates that the formulation Newton laid down still accounts for most of what scientists do. Newton had four rules, which when taken together constitute the scientific method. As Van Doren indicates at p. 210:

The fourth rule of reasoning is, in Newton's view, perhaps the most important of all. The entire rule should be quoted:

In [science] we are to look upon propositions inferred by general induction from phenomena as ... very nearly true, notwithstanding any contrary hypotheses that may be imagined, till such time as other phenomena occur, by which [the existing propositions] may either be made more accurate, or liable to exceptions. ... [and] the argument of induction [that is, the principle he just stated] must not be evaded by hypotheses.

Newton loathed hypotheses. He saw in them all of the egregious and harmful errors of the past. By "hypotheses" he meant the kind of explanations that the Scholastics had dreamed up to explain natural phenomena, the theory of the Elements, the assumption of Quintessence, and the tortured explanations of so-called violent motion, which even the Parisian theologians had not been able to accept. And he was more than willing to admit that he did not know.

As noted earlier, even some of the Church's apologetic scholars are prepared to admit that on the basis of the extant evidence, the principle of parsimony would cause science to side with those who induce from DNA evidence that at least the part of LDS doctrine and culture that indicates an Israelite origin for a large civilization in the Americas is not accurate. There is no doubt in my mind that the same thing can be said respecting a host of other elements of the Book of Mormon. That is, if we follow Newton's "argument

of induction" or the scientific method, the Book of Mormon should be accepted as ahistorical. We then note that after paying lip service to the "principle of parsimony", which is encapsulated by the first of the four rules in Newton's scientific method, the Church's apologetic scientists (an oxymoron if there ever was one) proceed to formulate one highly improbable hypothesis after another, each designed to cause those who read them to doubt the propositions that emerge from an inductive analysis of the evidence at hand. In short, the Church's scientific scholars defend the Church's position in the DNA debate by setting up precisely the kind of hypotheses Newton "loathed", and using them in precisely the fashion he said that they should not use.

The Use of Probabilities in Decision-Making

The interplay between the Church and science's position respecting DNA illustrates something that is endlessly displayed as Mormons attempt to understand the "reality" of their faith. For the psychological and other reasons set out at [http://www3.telus.net/public/rcmccue/bob/documents/rs.should%20i%20join%20\(or%20I%20eave\)%20the%20mormon%20church1003912.pdf](http://www3.telus.net/public/rcmccue/bob/documents/rs.should%20i%20join%20(or%20I%20eave)%20the%20mormon%20church1003912.pdf) (p. 6 and following) and <http://www3.telus.net/public/rcmccue/bob/documents/rs.mormon%20use%20of%20persuasive%20technique1002365.pdf>, those who believe tend to regularly accept arguments like those offered by the Church in favour of its DNA theories, despite the fact that the evidence is heavily against them. While discussing religious issues such as the one related to DNA, I often hear the faithful discount the most probable theory by referring to the fact that there are many possible ways of explaining what happened, and so allow their faith to determine what is or is not. We do not ignore probabilities in our scientific work or in any other significant aspect of our lives. We should not do so respecting our religious beliefs either, despite the powerful psychological incentives that have been built into us to do that.

It is natural for people to assess probabilities about the things that are important to them, and so that almost everyone other than faithful Mormons wish to do this respecting the Book of Mormon is not surprising. When I see the kind of bafflegab I just have coming from the Church's apologists, I can think of only two possible alternatives: Either they are dancing away from the probabilities because they don't want to say them; or as a scientific matter it would require so many assumptions to get to the point where probabilities could be assessed that it would not be responsible to make such an assessment. Were that the case, I would expect them to have said this.

Apologists and Faithful Mormon's Follow President Hinckley's Example

The sloppy reasoning outlined above can be traced within Mormon culture all the way to the top, and appears to be used to accomplish an important organizational objective – keeping the faithful in line. For example, President Gordon Hinckley said the following at the Church's General Conference held in the Spring of 2003:

The book of Revelation declares: "I know thy works, that thou art neither cold nor hot: I would thou wert cold or hot. So then because thou art lukewarm, and neither cold nor hot, I will spew thee out of my mouth" (Revelation 3:15–16).

Each of us has to face the matter—either the Church is true, or it is a fraud. There is no middle ground. It is the Church and kingdom of God, or it is nothing.

This is classic scare/control message, particularly when linked to the rest of the LDS dogma that only obedient Mormons will be able to stay with their families after death. It also stands in complete contradiction to other LDS scripture and prophetic teachings that encourage one to “study things out” and which compare knowledge to a growing plant – the antithesis of “hot or cold”.

It is my view that Church and how it operates make the most sense when viewed through a control/authority paradigm. As soon as I began to use that paradigm to try to understand how the Church has influenced me, things came into focus and I was able to both find the threads that unite my past experience and predict with a high probability of success where things were headed. The "one true church" idea is near the foundation of the LDS control and authority oriented system of religious belief.

The "all black or all white" argument is an oft-repeated Mormon leadership theme, and is nothing more than a false dichotomy that performs the function of a debating trick, except Gordon Hinckley uses it on people who will believe almost anything he says because of the Mormon belief that the utterances and writings of the prophets (including Pres. Hinckley, the rest of the First Presidency, and the Quorum of the Twelve Apostles of which Jeffrey Holland is a member) are modern scripture that override the Bible and all other scriptural authorities.

How can anyone who has experienced the good side of Mormons conclude that Mormonism is 100% bad and fraudulent? Of course there are good things within the Mormon tradition, as there are within all human traditions. Therefore, if Mormonism can only be either all truth or all fraud, it must be all truth. This is the conclusion toward which President Hinckley directs as many people as possible. This position makes no sense in light of my life experience in general or experience with and study of Mormonism in particular. I cannot think of anything in life that is as simple as Pres. Hinckley represents this particularly complex issue to be, and my review of Mormon history and theology has brought me the conclusion that there are serious inaccuracies in the story the Church tells, and pervasive pockets of error within the LDS tradition that continue to influence it today. In short, Mormonism is a mixture of good and bad; truth and error. It is grey and hence the only sensible way to make decisions respecting it is to use the principle of parsimony, probabilities etc. in the fashion outlined above. But nonetheless, President Hinckley attempts to win the debate by the manner in which he frames it, and due to how he is trusted, he will be effective in this regard with many people, and was effective until recently in my case.

To test the sensibility of the black v. white approach, try to think of any other aspect of life in which it would serve us well as a decision making model. Do we accept all of what any school of political thought tells us? How about parenting or child rearing theory? Relationship theory? Educational theory? Economics? Medicine? I cannot think of any other aspect of life in which I would be comfortable accepting the ideas that come from a single source as being my sole guide. Religious belief, in my life, had been established as a unique phenomenon, respecting which all of the rules that governed the remainder of my life were suspended. My acceptance of the one true church concept is what made this possible.

I do not accuse Pres. Hinckley of conscious trickery. But I believe that he is so sure that he is right that he is incapable of checking the intellectual linkages that underpin the means he uses to push those who follow him toward what to him seems to be the only possible conclusion. JS suffered from the same debilitating, philosopher king delusion. That is, he felt justified in misleading his follows because he knew what was best for them. As the Nobel Prize winning physicist Richard Fynman said, we cannot learn until we question. Certainty kills learning.

Teachings such as those of Jeffrey Holland and Gordon Hinckley seem calculated to, and in fact do, cause Church members to become less questioning and hence less apt to learn, and more fearful and hence more passively obedient and accepting of LDS authority. This is the worst of Mormon and all other religious cultures. It is stupefying. It justifies Marx's dictum about religion being the opiate of the masses. It is the stuff of philosopher kings. It is a Dark Ages idea.

As one writer I recently read put it, the question is whether we have religious faith, or whether religious faith has us. If we are well enough informed about what our faith is and how it works in our lives to use it to help us live a full and joyous life, then we have religious faith. If, on the other hand, our beliefs are used by others to control us, then our faith has us. Those others need not be current religious leaders. It is possible to surrender our free will to people who wrote books thousands of years ago that purport to tell us what we should do, or even to abstractions of our own invention. I have resolved to do what I can to ensure that from now on I have faith, instead of being had by it.

Conclusion

Mormons are real people who have to make real decisions. For example, put yourself in the shoes of a 19 year old boy who has to decide whether to go to the Ukraine and drink potentially radioactive water (which my son recently did) while telling probably misleading stories about JS and the Book of Mormon (including that the Native Americans are Israelites) for two years, or to continue his university education while doing a Peace Corp stint or two in the foreign culture of his choice. If that boy is rational, he will want to hear about the probabilities of the Book of Mormon being what the Church says it is based on the best evidence collected to date, as well as a host of other things that are analyzed on the same basis.

In order to make the best decisions they can, Mormons need access to information that will allow them to determine to the best of their ability the probabilities of a host of things relevant to their religious beliefs. The Church goes out of its way to prevent information of that type from circulating among the members. See <http://www3.telus.net/public/rcmccue/bob/documents/come%20clean.pdf> for a summary of concerns in that regard. The example presented by the Church's assurance to its faithful and the world that Mormon beliefs have nothing to fear from DNA evidence is another example of this.

Richard Feynman once explained the concept of "honesty" as follows:

By honest I don't mean that you only tell what's true. But you make clear the entire situation. You make clear all the information that is required for somebody else who is intelligent to make up their mind. ("The Meaning of It All", p. 106)

I have long known that the Church's leaders fall far short of this standard. The above analysis makes it clear that the Church's apologetic scientists have similar moral deficiencies. That is not to say that they are conscious liars, but rather that their faith has blinded their reason, and regrettably their stature within the LDS community will likely cause many whose faith is under threat to gratefully close their minds upon being offered the thin excuse outlined above to do so.