

# DIALOGUE

A JOURNAL OF MORMON THOUGHT



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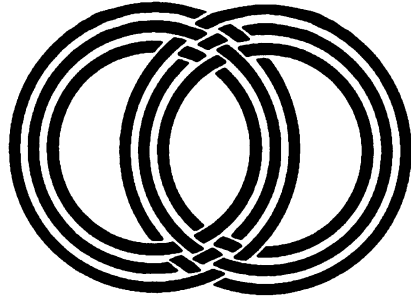
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# DIALOGUE

A JOURNAL OF MORMON THOUGHT

*is an independent quarterly  
established to express Mormon culture  
and to examine the relevance of religion  
to secular life. It is edited by  
Latter-day Saints who wish to bring  
their faith into dialogue with the  
larger stream of world religious thought  
and with human experience as a whole  
and to foster artistic and scholarly  
achievement based on their cultural  
heritage. The journal encourages a  
variety of viewpoints; although every  
effort is made to ensure  
accurate scholarship and responsible  
judgment, the views expressed are  
those of the individual authors and are  
not necessarily those of  
The Church of Jesus Christ of  
Latter-day Saints or of the editors.*

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*Dialogue: A Journal of Mormon Thought* announces a

*Call for Papers*  
on  
WAR AND PEACE

Original critical and personal essays, poetry, fiction, and artwork are solicited for a special thematic issue of *Dialogue: A Journal of Mormon Thought* for publication in early 2004. Articles, essays, and creative work are welcome on any aspect of war and peace likely to interest *Dialogue* readers. An electronic copy in Word or WordPerfect must be received by the new 2004 editorial team no later than 1 September 2003. Interested contributors should direct queries, proposals, and manuscripts to:

Karen Marguerite Moloney and Levi S. Peterson  
Editors-elect

*Dialogue: A Journal of Mormon Thought*

DialogueMSS@aol.com

Queries may be made by phone to the editors at (801) 538-0924.

All contributions will be acknowledged.

## LETTERS

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### *Editorial Excess?*

I never met Eugene England, so it was hard to explain why I needed to be at the public memorial service after his death. Perhaps it is also inexplicable that I would sit in the Provo Tabernacle knowing no one and saying nothing to anyone, yet feeling a shared loss, a communal spirit, and even a unique discernment with everyone there.

In his letter to the editor (Vol 35., No. 2), a recent subscriber to *Dialogue*, John D. Van der Wall, questioned the wisdom of devoting nearly an entire issue to Gene and his writings. Much like Mr. Van der Wall, I too read *Dialogue* for its "provacative, informative, and challenging articles," but that is not the only reason. It is just as much (maybe more) because of my need for regular contact with a certain community of people—nearly all of whom I will never meet. I think of Gene, who helped found *Dialogue*, and Jack and Linda Newell, who introduced me to it, as examples of many others who have not only sensitively and courageously helped provoke, inform and challenge me, but with whom I share something important.

Having read *Dialogue* for over 20 years, my suggestion for the subscriber who thinks that the editors were "excessive" is to keep on reading new issues and as many back issues as you can get a hold of. Someday, you too may do things that will not always make sense to others and feel right about it. And if you are lucky, you may

be able to explain why. Gene England was really lucky.

Roger H. Hoole  
Salt Lake City, Utah

### *In Perspective*

The quotation of President Kimball, at the beginning of Craig Livingston's "Lions, Brothers, and the Idea of an Indian Nation: The Mexican Revolution in the Minds of Anthony W. Ivins and Rey L. Pratt, 1910-1917" (Vol. 35, No. 2), in which Kimball cautions against the use of revolutionary force, might benefit from context.

It was made in Bogota, Colombia, during the eighth and last of a series of area conferences in Latin America. During each of the seven preceding conferences, he had addressed the same general subjects—the importance of temple worthiness and temple ordinances, missionary work, and rearing families in righteousness. He departed from that pattern only in Bogota. I do not know why he did, but I speculate that he felt that there were peculiar dangers to the church in Colombian extremist politics at that time against which he should warn church members.

As used in the article, one might infer that President Kimball was against revolution on principle, but I believe that not to be true. On this particular occasion, he did not reject revolution per se, but made a more limited statement about effectiveness: "Today,



many are becoming extremists and are losing balance and effectiveness and are missing the results which they would desire to attain." He urged, as quoted, that perhaps a slower, more peaceful way would reach the same ends more surely and without such high costs.

In general his emphasis when considering social change was that the gospel of Christ was the best, most effective way to produce the "better life" sought by radicals. He feared that political zeal and spiritual zeal would conflict.<sup>1</sup>

It is true that a number of his statements had pacifist overtones.<sup>2</sup> Whereas others of the General Authorities (principally President McKay and Elder Benson) had been highly vocal as critics of international Communism, President Kimball avoided the subject.<sup>3</sup> In his view, speeches offending communist governments would simply arouse unnecessary antagonisms. They would not cause governments to fall, but would make introduction of missionaries into those countries and living the gospel by members there more difficult.

If President Kimball believed that revolution against oppressive government was wrong on principle, I am not aware that he ever said so. Indeed, he saw the American Revolution as God-endorsed.<sup>4</sup> And referring to Book of Mormon peoples he said, "Power-greedy, paternalistic, centralized governments move toward the inevitable revolution which finally impoverishes

but frees the people to begin again from ashes."<sup>5</sup> My belief is that he would have approved of "good" revolution—revolution that would replace tyranny with beneficent government—but only if it had a good chance of success, since failure would merely compound the misery.

Edward L. Kimball  
Provo, Utah

### *Handmaiden of Faith*

But if the spirit of religion join itself to the love of wonder, there is an end of common sense.

David Hume

I was introduced to Dennis Potter's thinking skill at the 1998 Sunstone Symposium when he delivered a wonderful critique of atonement in his paper, "Did Christ Pay for Our Sins" (See *Dialogue*, Vol. 32, No. 4.).

His latest installment on Mormon theology, "Defending Magic: Explaining the Necessity of Ordinances," while certainly defending magic, does not explain the necessity of ordinances. Rather, Dennis is sliding into the silliness of his Mormon cohorts' vain attempts to "make rational religion."

These new Mormon theologian-philosophers at times recognize that religion is inherently irrational, but, unwilling to give up, invoke fuzzy science as a self-confirming mechanism to flex their intellectual muscles. To

1. In Edward L. Kimball, ed., *The teachings of Spencer W. Kimball* (Salt Lake City: Bookcraft, 1982), 409.

2. *Ibid.*, 413-18.

3. However, see *Ibid.*, 408.

4. *Ibid.*, 403.

5. *Ibid.*, 406.

this debate I add my own theories—since folk theories seem to abound:

A) The Theory of the Real World. Because Dennis uses baptism as his primary example in exploring ordinance-necessity, I will likewise address Mormon baptism and very briefly explain its real world origins:

1) Joseph Smith founded Mormonism.

2) Joseph Smith was a Bible believing Christian.

3) Joseph Smith adopted baptism into the new faith because any new religion needs stuff to do. What better activity than something old with a twist (for the dead).

4) Animal sacrifice was out of fashion, and Hajj (pilgrimage) to Mecca does not work for Bible believers.

B) The Theory of Hope Springs Eternal. A couple of Sunstone Symposia ago, a panel comprised of James McLachlan, Dan Wortherspoon, Blake Ostler, and Lorie Winder Stromberg gleefully presented another nifty rational theory on which to hang faith, "Process Theology." This exercise provided yet another example of my "Theory of Hope Springs Eternal" wherein, first, you make an assumption in the form of a truth statement (say, concerning baptism) and then go in search of any intellectual/scientific "view" or "evidence" which might seem to help justify it. Moreover, this justification must be murky and nebulous enough so as to confuse the layman, on the one hand, while at the same time impressing one's academic peers. Potter, for instance, appeals to Quantum Mechanics, of which, Richard Feynman has said, only a handful of people have even the slightest grasp.

Dennis writes, "A supernatural event is not one that transcends nat-

ural law. Instead, it is merely an event that transcends our understanding of natural law." The implication is a kind of license: should science and reason again dismantle our religious theories, we can, as a consequence, retreat into our secure fortress of faith, wherein reason does not reside.

• Oh yes, and thumbs up to Garth N. Jones's "Blood Sports" in the same issue.

Steve Oakey  
Rexburg, Idaho

### *What is Scripture?*

Thank you for including the Jana Riess' review of my book *Digging in Cumorah* in the Fall 2002 edition of *Dialogue*. I had worked on my book for 15 years with the help of two paid editors, the patient analysis of many competent readers and helpers, and encouragement from such notables as Wayne Booth and Robert Price, but none of us had any idea what the main thesis of the book was until Riess was generous enough to inform us.

The first goal of any review is to summarize the contents of a book for the readers of the review. In this, her most fundamental task as a reviewer, Riess has simply failed. She portrays my work as defending the nineteenth century origin of the Book of Mormon. She says that that is the thesis of my book. But I claim that there is not a single sentence in my book that addresses that issue, and I am willing to assert without hesitation that Riess is absolutely and completely mistaken in this assessment. If you, the readers of *Dialogue*, want to know what my book is about, her review will not help you. Nowhere in my book do I ever address



or even imply the issue of the Book of Mormon's origin. I am not interested; I do not care when the Book of Mormon was written. To me it is a boring issue.

But Riess is obviously bright and thoughtful. How could she be so mistaken? In part, it is because my book, *Digging in Cumorah*, speaks a new language, in a new paradigm that is simply very difficult to understand without a reorientation of thought. So I ask Riess and you, the reader, to give me one more chance to explain this new interpretive paradigm that I am proposing. For the sake of the big picture, I will ignore a few minor, inaccurate observations that she makes about my book and simply turn to the main issue—what is *Digging in Cumorah* about, and why is it so unusual?

*Digging in Cumorah* intends to listen carefully to the voice of the text, rather than argue about when it was written. This is a book intended for both Mormons and non-Mormons, and it makes no judgment whatsoever about the origin of the Book of Mormon. But, having said that, I contend that both Mormons and non-Mormons must agree that the language of the oldest text is the language of Joseph Smith. So we obviously will find theological and idiomatic phrases as well as forms in the Book of Mormon that reflect the language of Joseph Smith. That is the starting point for any serious interpretation of any book: the language of the text. So, the starting point for both Mormons and non-Mormons is the English text of the Book of Mormon. In addition, the Book of Mormon explicitly states that the audience of the Book of Mormon is the audience of Joseph Smith's times. Hence, regardless of one's religious belief, every competent interpreter of the Book of Mormon must begin with that audience in mind.

I give plenty of examples of the language and the theological setting of the Book of Mormon's nineteenth-century audience in my book. (I also give plenty of examples of ancient literary forms and phrases.) If one is serious about interpreting the text, one must account for and understand the significance of both the ancient and modern in the Book of Mormon. But all of this says nothing about the origin of the Book of Mormon.

Even though the nineteenth century is the starting point for serious interpretation of the book, it cannot be the ending point. Every text is trapped by its own audience and historical setting. But there is a way to escape history. As I state in the introduction of my book: "Symbolism transcends historical setting. Thus, while symbolism is inherent in the original rhetoric of the text, it also proved a means by which the current reader can enter into dialogue with the text." *That dialogue is what my book is about—the dialogue between current readers and this remarkable text of scripture.* (Yes, I do accept the Book of Mormon as scripture.) But serious scholarship cannot bypass the original rhetoric of the text to get to its symbolism. We must wade through it.

While my book relies on a variety of disciplines to analyze the Book of Mormon, its most significant contribution is literary. I spend a great deal of time discussing Book of Mormon literary forms and symbolism. All revelation is symbolic. It therefore cannot be proved either true or false by historical research. It can only be proved "true" by its adequacy to express the human condition in light of the Holy. My book discusses at length the existential symbols that portray the "natural man" (or as we would call it "the universal human predicament" of death, sin, and meaninglessness). The answer

that the Book of Mormon gives for this predicament is, of course, Jesus the Christ ("Christ" itself being a symbolic notion). Those existential symbols in the Book of Mormon include stain on the hand or garments, mists of darkness or sleep, chains of hell, a tree of life, and so forth with a two-tiered-narrative interpretive methodology.

That's my statement of what my book is about. Many people may be puzzled when I say that I do not even care when the book was written, while I wholeheartedly accept the Book of Mormon as scripture. Let me explain. What is scripture? I like the ancient rabbis' definition best: scripture is a book that defiles the hands with sacred power. Heft the text. If it defiles the hands, then you are a Mormon, whether you are baptized or not. And whether it defiles the hands or not, its symbolism of the Holy allows us a duet with this sorrowful song of the Nephites. If Riess were to pick up my book and read it again, with this in mind, I am certain that she would understand now the strange language that my book employs to describe this Nephite lament in the Dorian mode.

Mark D. Thomas  
Salt Lake City, Utah

### *Minimum Requirement*

The recent issue of *Dialogue* (Vol. 35, No. 2, Summer 2002) contains a notice from the Board of Directors of the Dialogue Foundation with "A Call for Editors." The "Call for Editors" contains a detailed editor's job description and a description of the desired qualifications. The desired qualifications fail to identify the first and most important criteria for the editor of *Dia-*

*logue*, active membership in and commitment to the Church of Jesus Christ of Latter-day Saints.

*Dialogue* was not established to be the loyal opposition to the LDS church. It was founded by active members of the LDS church who "wish[ed] to bring their faith into dialogue with the larger stream of world religious thought." It was to be "edited by Latter-day Saints" (See the *Dialogue* statement of purpose on page one of every copy of the journal). The failure to recognize that the new editors must be active in the LDS church betrays the original purpose of those who founded the journal and of many readers who support it.

It was my privilege to work as a volunteer with three different *Dialogue* editors, Mary Bradford, Jack and Linda Newell, and Ross and Kay Peterson. All were excellent editors and active in the LDS church. This tradition should continue with the next editorial team.

G. Kevin Jones  
Salt Lake City, Utah

### *Not to Worry*

Early in December of 2002, LDS anthropologist Thomas W. Murphy worried that he might be excommunicated for writing an essay published in *American Apocrypha*, saying that the DNA of New World natives didn't match up with that of Near-Eastern peoples.

This finding strengthened my testimony.

You may recall that I reported my 1997 Pioneer Mormon Trek experience in *Dialogue*. And I mentioned that the lady who owns Nu-Skin cosmetics



flew some BYU Native American boys into Scottsbluff, Nebraska, to dance for us Trekkers. It bothered me a little to see that all of them were rather dark-skinned, and obviously hadn't taken advantage of the pre-1981 promise in the Book of Mormon (2 Nephi 30:6).

But I now suspect that those particular dancers were probably of Asiatic extraction rather than Palestinian. And, therefore, the Book of Mormon promise did not apply to them. Perhaps the flaw in Murphy's research is that he doesn't realize that by now

most of the Palestinian Lamanites, who have been good and true people, have turned "white and delightsome" as promised by the scripture. Therefore, they are now unidentifiable as having Native American roots. In other words, Murphy has been testing the wrong "Indian" population.

Rustin Kaufman  
Rexburg, Idaho  
(via: Joseph Jeppson  
Woodside, California)

## IN MEMORIAM

ON MAY 17, 2002, Richard Williams James passed away quietly in Salt Lake City. He was a gentle, generous man, successful at business with many interests and friends and with deep Mormon roots. He had devoted many years of service to the LDS Branch at the IHC-LDS hospital. He was also an avid reader with a particular interest in his heritage and local history, often assisting his brother John Williams James, who worked with the Utah Historical Society. Both men were enthusiastic and supportive subscribers to *Dialogue*, and this past fall we received news from Richard James's estate that he had left a generous \$10,000 charitable bequest in his own name and his brother's to help the Dialogue Foundation ensure the future and uphold the quality of the journal. We are grateful for all of our readers, for their investment and their engagement with Mormon life and issues. And we are surely indebted to those able, in whatever degree, to assist in our efforts to secure the financial foundation of *Dialogue: A Journal of Mormon Thought*. We have designated this gift to help build the *Dialogue* endowment and want to acknowledge his generosity and contribution to this crucial undertaking.

The Editors

# Thoughts on Mormonism, Evolution, and Brigham Young University

*Duane E. Jeffery, interviewed by Keith E. Norman*

DUANE JEFFERY IS A PROFESSOR OF ZOOLOGY (now integrative biology) at BYU. He has published numerous articles on genetics, evolution, and LDS history and doctrine. He is also a member of the American Association for the Advancement of Science, the Society for the Study of Evolution, and the Genetics Society of America. He has been named Honors Professor of the Year at BYU and has been recognized with the Karl G. Maeser Teaching Award. This interview was conducted by *Dialogue* Associate Editor Keith Norman on 11 August 2001 at the Sunstone Symposium in Salt Lake City.

K.N.: It's a privilege to be here today to talk with Duane Jeffery. As we were coming in, he said he felt a little intimidated by the size of the room and the number of people. I think Duane should know he's a hero to an awful lot of people here for what he has done and written. I want to start out by asking you, Duane, how you got started in science as a career, and what kind of issues you faced in reconciling the conflicts that would inevitably come up between your religious upbringing and beliefs and your developing scientific career.

D.J.: Well, I was raised in a rather unscientific environment, a little farming community. It was only when I got to Utah State University that I began encountering a number of problems. I majored in just about everything for the first couple of years, but on my mission I had some experiences with what we might call doctrinal dissident groups or off-shoot groups from Mormonism, and for the first time in my life I began to see that even inside Mormonism there were different ways of looking at scripture.

On returning to college, I decided to major in biology, and that in-



stantly threw me together with a number of students who were very strong for science and very anti-religious, as well as many others like me who were rather new to the issues. I was also called on a stake mission at that point, and for some reason it seemed as if many of the so-called problem cases were delegated to me. I ended up working with members of various dissident groups—the Church of the Firstborn of the Fullness of Times was a group of major concern in those years and was making tremendous headway among LDS church members—and we didn’t have very much doctrinally at that time with which counter it. So I found myself not only working with several missionary contacts who were in science and interested in evolution and materialist philosophies and so on, but also trying to find out what was going on in my own religion. In all of that mix, I was having a very heady time but expended far more effort studying my religion than studying science, which in many ways has not benefited my career.

I was impressed with the director of the LDS Institute of Religion at Utah State, Wendell Rich, who was in the process of finishing his book *Distinctive Teachings of the Restoration*, trying to look at different ways of “knowing,” and at how Mormonism interacted with such things. I was also very impressed with Eldon Gardner, who was one of Utah’s premier scientists and also a very active and committed member of the church. These two were critical in helping me in those early years, as were a number of other institute and university faculty.

I encountered a book of fiction called *Dorian*, written by Nephi Anderson, one of the LDS books written by him back in the twenties and thirties, trying to teach moral principles to LDS youth. This one really dealt with science and religion but quoted extensively from a book called *Natural Law in the Spiritual World*, and I was impressed with those quotes. This latter book was purportedly by an author named Henry Drummond, but I encountered it in a novel, and I assumed that Henry Drummond and his book were really nothing more than literary devices used by Anderson to get across his message in *Dorian*. Then I visited a family in Malad, Idaho, at about that time and I found *Natural Law in the Spiritual World* by Henry Drummond sitting on the bookshelf. It was really a spiritual experience for me because Drummond’s argument was that the natural laws we see here in the physical world are just extensions of the laws recognized in the religious universe. That resonated greatly with the Mormonism I had been taught. Evolution clearly presented a problem, and I quickly borrowed the book and devoured it. It clearly was well out of date. Then I began to discover that it had been a very popular book in Mormonism at the turn of the century. It was, for instance, one of the alternate books recommended for use with B. H. Roberts’s *Seventies Course in Theology*, 1907 to 1912. Apostle John Henry Evans, in his biography of Joseph Smith, indicates that Henry Drummond had these mar-

velous ideas about how God uses the natural laws that we on Earth know, to operate the whole universe, and we see just the lower end of those same laws. He also said that Henry Drummond had made these concepts popular, but he was fifty years behind Joseph Smith in coming to the concepts.

So those were very heady ideas for me. I was proceeding through a master's degree in wildlife ecology, and it became evident to me that evolution was rather a critical area, which I needed to study further. It seemed to me there were two major ways to evaluate it. One was by means of paleontology and fossils, but I thought that approach was primarily interpretive—you find a fossil, then you “interpret” what it means. (I was very naïve!) You need to do much more than that, I thought. It seemed to me that what was critical and testable was the process of evolution, and the process lay in genetics. So I then shifted gears in my career and started doctoral work in genetics, trying to see what could be learned about the mechanisms of evolution. It's been an interesting study ever since.

K.N.: I wanted to talk a little bit about how you came to BYU and how that experience has been. BYU has a renowned paleontology collection. It seems paradoxical, all those dinosaur bones which used to be under the stadium somewhere, and I guess many still are. I'm told the Zoology Department was recently rated as the top graduate program on the same BYU campus where the religion department tends pretty much toward literalism in interpreting the scriptures. Is there still a religion department? Did I hear they were doing away with that?

D.J.: College of Religion.

K.N.: Okay, well, the religion faculty has traditionally been opposed to the scientific concept of organic evolution, so you have this conflict on campus. You go to one class and hear one thing, and go to another class and hear the opposite thing. To me this is a very intriguing campus paradox. How free do you feel the discussion is on these topics, and how do you deal with students who are troubled by the conflicts they see?

D.J.: Well, that covers a lot of territory. I came to BYU because BYU's Zoology Department critically needed a geneticist. I had been there a relatively short time when Dallin Oaks became president of BYU. One of his first undertakings was to organize a seminar between selected faculty members in science on campus and what was supposed to have been all the College of Religion faculty. This was an ongoing seminar series. I should explain that a number of those people did not participate. You indicated there may have been some animosity. One of the members of the religion faculty wrote a seven-page letter to his dean to tell him he would never participate in such a Satanic enterprise as meeting with the scien-

tists on campus, and he never did show up. But we had a wonderful series of seminars that established some good among those who did participate.

K.N.: This would have been when?

D.J.: This was the early 1970s, and it went on for—oh, I don't know—a year and a half, two years. I don't remember. Somewhere I've got the notes from that seminar, but it was a wonderful discussion between the groups. It did a lot to bring about common understanding. There were still those who felt that science was Satanic. Most of those with that persuasion never attended. Even though one was on the steering committee, he would never come to the formal meetings. However that may be, we established a good rapport. Now a number of those individuals—nearly all, in fact—have since retired and have been replaced, in general, by others who seem not so threatened by science. There are a number there in the College of Religion who seem quite open to many ideas of science and who express the feeling that God can reveal things through sources other than strictly ecclesiastical ones. That has helped.

Now, you asked about paleontology at BYU. Years ago we did have a gentleman by the name of James Jensen, who loved to collect dinosaur fossils and who pioneered many of the techniques to display those fossils with internal structures. The old way was to put up a big structure with a rebar framework or "cage" and hang everything from that, so you could barely see the dinosaur fossil. Jim was a pioneer in developing internal supports. For those of you who haven't been down to the new North American Museum of Ancient Life at Thanksgiving Point, I would strongly recommend you go. It is marvelous. It's being billed as the largest dinosaur museum on the planet. There you will see the internal suspensions that Jim Jensen pioneered. You see the animals standing there, bigger than this room, a couple of them, and it really is worth the price of admission. They have scores of such reconstructed fossils.

Well, however that may be, Jim was doing a lot of collecting, and the only place we had to store things was under the stadium, as you indicated. We do have the small dinosaur museum on campus, and people are continuing to work with that. There have been people at BYU who have recognized the strength and power of having this museum, but also others who have been uncomfortable with it.

There was a movement several years ago to try to get rid of the museum and its collections, which very nearly succeeded, but let me share, if I may, a little anecdote that goes along with that. Wade Miller, a researcher who specializes in mammal evolution from relatively recent periods—Pleistocene and so on—was the director of the museum at that time. He was invited to go to Italy by CES, the Church Education System,

and give a seminar to the LDS youth in Italy on science and religion. After he came back from that seminar, Wade came into my office still searching for words, telling me he was still overwhelmed emotionally with not only the deference and respect, but also with the sense of near worship, of awe, with which he had been treated by the young LDS people in Italy. Now it wasn't just Italians; word had gotten out, so there were young people there from Italy, France, Austria, Switzerland, Spain, and Portugal. Young LDS people from six or seven nations were there to hear a Mormon scientist. Wade said it seemed beyond their comprehension that you could be an active Latter-day Saint and be a scientist. He said they would stand around him almost reverentially. He was somewhat embarrassed by the whole way they were treating him.

K.N.: Were these primarily Mormon students?

D.J.: Oh, these were Mormon students, but beyond that Wade was invited to be on national television. Since then he's been back on Italian television again, and reporters have made a big point of asking how a religious institution can be studying dinosaurs and fossils. Wade has had the wonderful opportunity of speaking on this issue on national Italian television—how do you buy that kind of coverage?

But we consistently downplay the whole connection between science, religion, and the gospel. I had an opportunity a few years ago to speak with one of the European CES directors, and I asked him about the situation our young people face in reconciling science, religion, and the church. He said, "Let's be very clear. Our young people face two choices—they grow up, they go on their missions, they come home, then they make a choice. Do they go to university, or do they stay with the church? Those are seen as mutually exclusive categories." The European, and particularly the Italian, universities, he said, are aggressively atheistic, and anyone who goes to university doesn't usually stay with the church. So he said, "Yes, we lose many of our young people."

We're also losing many in this country. I find myself wondering why this dichotomy—of being forced to choose between science and religion—exists. Certainly, we can find a lot of problems. There really are problems, and I think we ought to be addressing them, but when we're getting such positive publicity—for instance in Italy on national television—it seems to me we're missing a good bet by not doing a little more with that paleontology collection and our other science programs at BYU.

You mentioned that maybe BYU's Zoology program has recently been rated among the top graduate school programs. That is true; we came out fairly well. Chemistry is also a very powerful department. I think the evolutionary biology team at BYU probably does lead in terms of international recognition and the number of non-LDS students coming to BYU to get degrees. Numerous post-doctoral students from other



institutions and countries have been coming to BYU for evolutionary biology programs also—we have them from throughout Latin America, South Africa, Europe. There are frequently visiting professors on sabbaticals who are coming as well as post-docs, as well as people coming for Ph.D. degrees. It has become a strong program. One of our administrators recently said, “It might seem a little strange that the evolutionary biology program at BYU would be one of our best, but we need to let that be known. We have people of faith who are working with that; we need to let that be better known.” So I hope that may happen, but I don’t know how extensively it will.

You raised the question of how free the discussion is at BYU. I wouldn’t want to say that we have open discussion of these topics on campus. It still is a science-versus-religion thing for too many people. This problem got pushed to a head in 1992.

President Rex Lee indicated that he was getting weary of explaining to people what the church’s official documents really say about evolution, so he requested that a packet of authoritative materials be placed in the library. At an upcoming “open forum” where anyone could ask him questions about campus matters, he planned to have a student ask him about church and evolution. He planned to then notify the campus community about the collection of materials in the library and, thus, spare himself considerable future time and energy. Such a packet was, in fact, prepared, containing only statements from either the presidents of the church or the entire First Presidency, but after President Lee’s announcement, certain campus parties registered concern that the anti-science sentiments of certain apostles had not been included in the library materials. So a small committee was formed to consider the matter, and eventually a packet of materials was presented, with an appropriate explanatory cover letter, to our Board of Trustees in the summer of 1992. The Board at that time consisted of the entire First Presidency, seven of the Twelve, and a few other persons. They approved the packet as representing the official position of the church.<sup>1</sup>

The packet includes five items: 1) the cover letter indicating that the church has addressed the origin of man but not the origin of species and that only the First Presidency can make pronouncements of official doctrine or positions; 2) the oft-quoted November 1909 First Presidency “Origin of Man” statement with its anti-evolutionary sentiments; 3) a brief excerpt from that same First Presidency’s 1910 Christmas message, indicating that our religion is not hostile to real science and that “that which is demonstrated, we accept with joy”; 4) the First Presidency’s

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1. This decision was reiterated to the university in March of 2002.

"Mormon View of Evolution," issued during the famous Scopes trial of 1925, which consists entirely of excerpted paragraphs from the 1909 statement but with all the anti-evolutionary sentiment deleted; 5) the "Evolution" entry from the Encyclopedia of Mormonism, into which the First Presidency had considerable input and for which they furnished excerpts from their official minutes of 1931.

Personally, I add to these five documents another two of comparable status: 1) the April 1910 responses to questions addressed to the First Presidency after the 1909 statement, and 2) President Joseph F. Smith's editorial of April 1911, indicating that, although he has personal concerns with evolution, the church itself has no philosophy on the matter. The first of the two documents does address the origin of man, giving three options, not one of which includes the literal reading of scripture. The three possibilities, for those not familiar with that literature, are: a) evolution of man by natural processes under God's direction, b) transplantation from another sphere, and c) having been "born here in mortality as other mortals have been." This 1910 document is the last and most explicit, direct statement on the subject traceable to a First Presidency—and in this case, the same Presidency that issued the 1909 statement in the first place.

All faculty members at BYU were asked, through their deans, to make the packet available to students whenever the question of evolution arises. This has not always been done, but it has greatly reduced, in general, the previous selective quoting of different brethren. But, finally, we do not have open discussion of the topic on campus. It is a matter confined to individual classrooms.

K.N.: It sounds as if the situation at BYU is a little less polarized, at least, than I had thought, but my perception is that the drift in the church has been toward a creationist interpretation of the scriptures, which seems a little strange to me, given Mormonism's materialist theology—God has a physical body and creation really means organizing preexisting matter. In that sense, shouldn't Mormonism be particularly unthreatened by organic evolution?

I'm really concerned that we are losing the best and brightest of the generation coming up. You talked about the students in Italy and Europe who were thirsting for discussion of these issues and how rare it is for them to get that. My oldest son started his college career at Case Western Reserve University, which is probably the premier scientific technical school in Ohio, and he was at the time kind of chafing in his church involvement. I unwisely told him I would give him financial support if he went to Institute. (I should have known exercising control or dominion or compulsion over the souls of the children of men is not the way to go.) Anyway, the institute teacher was talking about the scriptural account of

creation in very narrow terms, and the question was raised in the class, "What about the dinosaurs?" and he said, "Ah, that's a good question. I've thought a lot about that, and I think I've come up with something that resolves that quite neatly." Of course the class leaned forward; they were all eager to hear it. Remember these were sophisticated science students, and he said, "You see, the dinosaurs couldn't fit on the ark."

D.J.: Well, there you have it!

K.N.: Well, that's what the teacher thought. You know, the class sat in stunned silence. My son said they were incredulous, but apparently the teacher interpreted that as having solved the issue, so he went on with his lesson plan. Sometimes when you ask for bread, you know, you get a stone. When my son recounted this to me, he said, "Dad, I don't think this institute experience is having quite the effect on me that you planned." So how do we salvage this upcoming generation of students, as both scholars and faithful members of the church, when their encounters with the official church border on stubborn irrationalism and even downright silliness?

D.J.: You ask a difficult question. Of course, that's why you bring it up. I think probably a classic example of that would be the current lesson manual featuring Joseph F. Smith. Many here will have undoubtedly run into lesson number 37, which has to do with our being the sons and daughters of God. It builds its entire presentation around the November 1909 First Presidency statement on the origin of man, but it totally ignores everything else that happened in the Joseph F. Smith administration. I talked with a friend of mine who's a member of that writing committee and said, "You know, you put us in a real bind. We in the sciences first of all have to try to reconcile the gospel with demonstrable realities in the sciences, but now you've put us in a position where we have to reconcile Joseph F. Smith with the present church. It makes this even more difficult to do—and to try to defend you as a writing committee—when it is obvious to our students that you have not been honest with the Joseph F. Smith materials."

He said, "Oh my, I'm afraid we just didn't bring ourselves up to speed on Joseph F. Smith and science," and I had to say, "Well yes, that's a nice statement, but what will we do about it in the future?" I had heard rumors that the next manual would be excerpts from John Taylor, and I had great concerns that they might use a passage from John Taylor wherein he says that new species cannot be generated. I pointed out to my friend that we've been making species since about 1926 or 1927. In that same statement—and this never gets quoted by the anti-science writers—President Taylor said that chemical elements cannot change from one to another. So I said, "You don't go to Hiroshima and tell people the atom can't be split and

made into new kinds of atoms, because it jolly well can. President Taylor was trying to say that there are eternal laws that do not change, and unfortunately he picked a couple of bad examples, but if you're going to do the manual on John Taylor, please don't put in those passages, because you're just going to further complicate the credibility of both the writing committee and a prophet of the church, and I don't think we need to get into that."

He said, "Well, the manual is not going to be on John Taylor." He wouldn't tell me what it was going to be. The church tries to keep that very, very quiet so people don't write all sorts of "supplementary materials" about how to explain what so-and-so said. I can understand that. I'm sympathetic with that, and I don't know what the manual will be, and I just hope it doesn't provoke these kinds of questions.<sup>2</sup>

But it does put us in a real bind. One thing I have learned over the years is how extremely fragile religious faith can be for many people and how absolutely firecracker volatile it can be for others. Sometimes it's the tiniest little thing that will trigger reactions. I had a student come to me one day. He said, "I went to a fireside you gave three months ago on evolution and Mormonism, and I've finally gotten back to the point where I can pray again." I said, "Well, what was the problem?" He said, "You read that letter from President David O. McKay that said the church had no official position on evolution. I could not imagine a real prophet of God ever saying that, and I haven't been able to pray since because of that statement." How unbelievably fragile. I wonder what has gone on in this young man's background to make it quite that way, but he's not alone, and I've certainly seen others like him since.

So how do we work with students at BYU? We try to work with them in classes, sensitively, openly, honestly, and I try to make clear to them first that the one thing I will not do is lie to them if I can possibly help it. "If there's a topic of controversy here," I say, "I want to make sure that you know everything substantive that's been said on the issue, and I personally don't have any problem at all with divergent statements because it means there's not really a definitive position out there. It's the ones who say there is a position who have to start selecting and choosing their sources." Then, in addition, we spend a lot of time in the office just talking to people individually, trying to help them through some of these questions.

There has, indeed, been a drift in the church toward creationism. And creationism itself as it is generally used in American society is completely incompatible with basic Mormon theology. We won't take the time here to explore that, but it is just incompatible. People seem to think, "I believe in creation, so therefore I am a creationist." I have to ask,

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2. The next manual featured President Harold B. Lee.

"If you live in a democracy, does that make you a Democrat? We live in a republic; does that make us all Republicans? You're clearly an adult, does that make you an adulterer?" Believe me, you can believe in creation without being a creationist. Creationism is a very, very precise theological position that is absolutely incompatible with Mormonism.

You mentioned dinosaurs on the ark. . .

K.N.—Not on the ark.

D.J.: Creationists have had a lot of problems with what to do about the ark and have pointed out that the Bible says that nothing survived other than what was on the ark, but they have tried to make what was in the water an exception to that, not recognizing that if you have all the sedimentary material that makes up the present strata suspended in the water, which is what they argue, you really have a muddy soup in which virtually no fish and no sea life could live.

So there are various games the creationists play, but the one I like best is the recent publication, *Noah's Ark: a Feasibility Study*, by a John Woodmorappe. He's done some things that I think may be of interest here. The publication is advertised as the answer to all the objections about Noah's ark without invoking anything supernatural at all. Well, that's wonderful—that's even in the preface—but as you read the book, you realize that every other page he's invoking supernatural this, that, and the other.

Still, it's interesting what he's done with dinosaurs. He and other people have suggested that dinosaurs did indeed survive the flood, that they were taken on the ark, that they were taken on as little babies (or possibly dwarf species), and that's why you had to have the clean and the unclean animals. You had to have a few of the clean to feed the dinosaurs and so on. One often finds the argument that the legends of dragons mean that dinosaurs did survive from the ark, and that's where the whole idea of dragons comes from. Post-Noachian people saw dinosaurs, some of which may even have breathed fire—that's perfectly acceptable to those folks—which gave rise to the legends of dragons.

I do like one little thing Woodmorappe does. He's had to totally give up on the historical creationist position that there could be no beneficial mutations and no new species. He thinks that he can put about 8,000 different kinds of organisms on the ark. Then, after they get off the ark, he has God miraculously speed up the mutation and speciation rates to generate new species so that in only a short time following the date the Bible gives us as the date of the flood (2344 B.C.—it's pretty easy to calculate), we generated all the several million species that are on the planet today from those 8,000 founders. Then God slowed the rates all down again to look like what we have today—this is the book that is not proposing any supernatural events. The dinosaurs got lost in the scramble. I guess the



knights killed them all off or something. Woodmorappe never quite deals with that, but that's his book, the latest position from young-Earth creationism.

K.N.: I'm interested in how you stayed out of trouble or stayed at BYU at all. I work with the *Dialogue* editorial board, and we've been talking about putting out an issue with the ten or twelve most important articles of all time published in *Dialogue*. Almost invariably near the top of everybody's list is "Seers, Savants and Evolution," which you wrote, when, about 1975?

D.J.: 1974.

K.N.: It's one of the most important things *Dialogue's* ever published. I've heard—I think Devery Anderson writes about this in his history of *Dialogue*—that when Ezra Taft Benson heard about the article (I don't know if he was president of the Quorum of the Twelve at the time, but whatever his position), he was flabbergasted that a wacko such as the author could be on the BYU faculty and publish something like this. What kind of flak did you experience, and how have you dealt with that?

D.J.: Well, that's a long history too. President Benson did get disturbed with my presence at BYU. He did get disturbed over my paper "Seers, Savants and Evolution," and apparently, without naming either me or the paper explicitly, denounced both at a BYU fireside. It turned out that he'd never read it, but he had been told about it by some ambitious underlings in the church who will remain unnamed.

Gary Bergera and Ron Priddis, in their book *Brigham Young University: House of Faith*, have a chapter on the issue of evolution at BYU, and they go into a good deal of what went on there. There were attempts to see that I no longer received a check from BYU, but President Oaks headed that off with the help of President Hinckley. And there have been other episodes since. They're probably best left unelaborated.

I have had the support of a good many friends and other faculty members at BYU and of certain administrators who felt that the kinds of things we have been doing have been positive, have been absolutely necessary. Some of them have themselves had young members of their family who had much the same experience that your son has had, and so they have recognized that people must be given the ability to address these issues. I should perhaps relate that when I was recruited to BYU, I indicated in my interview with BYU's vice president that the university did not have a very good reputation in biology among the nation's universities. Even one of my good friends up at Utah State, a biology professor and stake mission president (who subsequently became a mission president), said, "When we get graduate students from BYU, the first thing we do is throw them into the evolution class, so they can learn

what biology is all about." He said, "All they've had is just a mish-mash. They have ideas about biology that are no more organized than confetti at a New Year's party, and we've got to help them get some sort of organization into what they've got in their heads."

So I mentioned this to the vice president at BYU, and I said, "Why don't you have an undergraduate class in evolution?" and he said, "Well, because nobody's ever proposed it." Well, I happened to know that was not an accurate reflection of the situation, but we left it at that. He was recruiting. So I said, "If I were to come here, we'd probably be suggesting one. How would it be considered?" He said, "The same as any other course."

So Dr. Clayton White and I proposed such a course. All new courses at BYU have to be approved by the Board of Trustees—and I will shorten this story—in the end, word came back to us from Harold B. Lee (he was at that time the powerful person in the church hierarchy). He said, "Clearly this course is needed in the curriculum at BYU. Tell those brethren to teach the most demanding and rigorous course of which they are capable. Just don't get on any bandwagon and beat the church with it."

Now by that time we already knew the material that about three years later would go into the paper, "Seers and Savants," so we replied that we didn't see any need to be beating the church with it and did not intend to. We have taught that course steadily ever since 1971—and I see one member here in the audience who was a member of that first class—and over the years, so far as I am aware, we have had two complaints from students to the administration. Both of those have been from students who were rather interested in cultivating a relationship with people upstairs and thought this was a good way to do so. One of them wrote to our president and said, "My grandfather and I have done a pamphlet that clearly sets this whole story straight, and we'd be happy to meet with you, after you have chastised these faculty members here, and show you how God really did things." Our president was not particularly interested in being so instructed, so that sort of died there, but I know of only two such cases.

Our introductory biology course, where students have less background, often generates more negative response. One of the instructors of the course is a former mission president, and he makes certain that his students get a solid exposure to evolution. One of our vice presidents told me he can always tell when that instructor gets to the evolution part of the course, just from the letters he receives from parents. But so far as I know, we've only had those two complaints about the evolution class itself.

Just this last Tuesday morning, our college announced that we were going to completely reorganize the six departments in our college of biological and agricultural sciences. Along with that, the committee has developed a college core of courses. I was gratified to see that these core

courses included the evolution class. So the course will now be required of virtually all the college majors.

K.N.: Our time is fleeing rapidly. Before we quit—and I certainly want to leave time for questions from the audience—I want to talk a little about this book, *Evolution and Mormonism*,<sup>3</sup> by Trent Stephens and Jeff Meldrum, who, I guess, are two of your former students and are now at Idaho State University.

D.J.: They're both here this morning.

K.N.: Yes, great. I really enjoyed this book. Duane wrote the preface to it, and I guess you might even say he's its grandfather.

D.J.: The "fossil."

K.N.: Well, the book really piles on the physical evidence supporting organic evolution, including the deluge of data in biogenetics and the array of new fossil discoveries, which put to rest the idea of a missing link, as far as I can tell. Talking about a missing link was a big deal when I was growing up, but I guess the links are no longer missing. What kind of response has this book gotten, positive or negative, to your knowledge?

D.J.: Well, I am aware of many positive responses. I'm aware of a couple negative ones. I see one young entrepreneur has read the book in the last ten days and is already trying to sell a pamphlet here at the Sunstone Symposium to refute it. So it's clearly been seen as significant enough to require a response, though not from any official sources. Trent and Jeff were very, very careful to work through their stake president and have this project carried all the way to the First Presidency, so I don't expect anything negative from official sources at all.

I hope it will be seen positively because it is a positive book. I spoke with one person who's very familiar with many publications from Signature Books, and he said, "In all honesty, that's probably the most faith-promoting book Signature publishes." I find that rather interesting, considering the fact that they've published Wilford Woodruff's journals, and the biography of Rudger Clawson, and other similar works. So I certainly know of many, many positive, good reports about the book and only a couple of negative.

K.N.: Let's take some questions from the audience.

Audience Member: What will be the challenges for Mormonism in the

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3. Trent D. Stephens and D. Jeffrey Meldrum, *Evolution and Mormonism: A Quest for Understanding* (Salt Lake City: Signature Books, 2001).

coming century? All we've done here today is stir up fossils; what about the science of the coming century?

D.J.: Well, there will be more from the fossils, I'm pretty sure of that. The fossil record is getting more and more complete every day. Many people think, as I did, that fossils are something you find out there, which you just have to speculate about and interpret, and it's not that way at all. There's a tremendous amount of data that can be derived paleontologically about past climates and so on, which will challenge many of the concepts that our people have traditionally taught or believed.

But I also see such things as the human cloning controversy, stem cells, debates over resource management and human populations, and continuing brain research as generating significant challenges. I see major fundamental challenges in our still infantile, but already incredible, ability to localize specific behavioral traits to precise areas in the brain and to relate them to specific genes. This rather flies in the face of the concepts of spirit/physical body relationships the Mormons have taught historically, that your body is just kind of a shell. It's like your house; you can live in it, but your personality is totally that of the spirit. Your body is molded to look as it does by your spirit, your personality is that of the spirit, and so on. Clearly we're running into great difficulty as more data accrue, for instance, on mental illnesses and ways to treat these illnesses. Our best ways to treat many of them have certainly been either with surgery or with drug therapy. Those both involve fundamentally materialistic ways of looking at mental illness, and I think that will present considerable challenges to the way that Mormons historically have looked at what a human being is and what humanness really means.

Audience member: How do you live with the lack of morality in science, especially in such cases as the manipulation of DNA?

D.J.: Scientists will argue that science is amoral; there will be those persons who argue that it's immoral. Those are two different things. Historically, scientists have said that they're in the business of generating knowledge rather than of determining how that knowledge should be put to use. They, therefore, try to wash their hands of any immoral uses of their knowledge. That kind of naiveté was forever shattered August 6, 1945, when the bomb exploded over Hiroshima.

Many scientists have struggled with that ever since, and we're caught. Knowledge always has two sides to it—it can be used, it can be abused. With the manipulation of DNA, we're going to be able to do some wonderful, wonderful things to better the quality of human life, but we are unquestionably opening up the potential for deep abuse. Now scientists in general, very frankly, do not have the background, the training, the expertise, or the interest to really engage very meaningfully

in deciding what regulations we ought to put on those kinds of things. They will argue, as they're doing with stem cells, that you are consigning many people to death if you do not permit stem cell research. The response to that is, yes, but you're killing embryos in the process.

President Bush, two days ago, tried to take the middle course to permit research only on sixty-some cell lines where the question of life and death has already been decided. That's not likely to be a very workable conclusion. It's a purely political one, even though President Bush insists it's not. Whom are we kidding?

So, where should the moral fiber for society come from? It won't come from the scientists, because science can't generate morals. It can tell you the implications of certain kinds of practices relating to morals, but it can't really generate guiding moral principles. This is why it is of great concern to me that religious organizations get more actively involved in this entire discussion and debate, but they cannot do it by remaining aloof from the arena of discussion and merely pontificating. That goes nowhere. The Pope has learned this over the years, and so now he puts out formal encyclicals. His recent one on faith and reason is a masterpiece, but the Pope does have a background in philosophy, so he understands a lot of the problems, and he doesn't argue, as we're prone to do in the LDS church, that material and information gained through faith are superior to anything gained through reason. He takes a really much more balanced approach, and even goes so far as to say that it is reason which keeps faith from becoming superstition.

Now, it seems to me, that religions can do three things with science. They can ignore it, which is what many of our own people do. They can combat it, which is what young-Earth creationists do. Or they can engage it and strive for a meaningful synthesis of interests from a variety of perspectives. But you can engage in that synthesis only if you have built a background that enables you to do so. In all honesty, and it is to be regretted, we in Mormonism have not built a foundation from which we can meaningfully contribute.

A classic case occurred in the recent controversy over cloning. The National Bioethics Advisory Committee sought to collect sentiments from America's religions. These included Native American religions; they included Islam, Buddhism, Judaism, and many varieties of Christianity, but we as a church opted to say nothing that could be included. Even though the head of the polling committee was an LDS person, the publication appeared with input from a wide variety of religions, but nothing from Mormonism. We became, in that sense, irrelevant to the national discussion on the ethics of cloning, and I think that means we have some work to do. I'm sorry I've given a very long answer that wasn't really an answer.

Audience member: My follow-up question is, how do we get away from this ivory tower suppression? In 1936 at Ricks, we were studying organic

evolution in our zoology and geology classes. We were far enough away from the micro-management of Salt Lake City that that was possible. I'm wondering if our Mormon websites and list-serves such as MormonL wouldn't be the way that we can disseminate information and perspective to these young people you mentioned who are desperate to try to find some accommodation between their religion and science.

D.J.: Excellent question. There are many websites available. I am not an expert on the internet, so I can't tell you about very many. EyringL has certainly been the granddaddy, I think, of discussions on science and Mormonism on the internet. There are a good many others. As with all other things on the internet, you find a lot of assertions that are not founded substantially on the relevant data, so one has to sort through that as well.

We have tried two or three times to put together organizations of LDS scientists to help with some of these issues, but interest flagged fairly quickly because there's this feeling of always having to swim upstream when dealing with these issues in the church. I wish I had a good answer. I just don't. I think that books such as Jeff and Trent's *Evolution and Mormonism* are going to be a critical start, but I don't know if they'll be enough to turn the current at all. In the last fifty years, Mormonism has taken on a very evident public stance of anti-intellectualism, anti-science; there has been a real shift since 1954. That has, I think, worked to our detriment.

Audience member: You mentioned the bias of the curriculum writers for the Sunday School, Relief Society, and Priesthood manuals on Joseph F. Smith. It seems to me this conveys a pervasive bias in the seminaries and to some extent the institute programs of the church, which are influencing so much of our young people's thought. I know the seminary student manuals and the teacher curriculum clearly have a bias against organic evolution, even though we have a number of neutrality statements about the church's taking no position. It seems to me that, as a science department at BYU, you would help yourselves if you'd write a letter that asked for, at least, neutrality.

D.J.: There are some institutional problems with BYU faculty putting out a letter to the brethren. A letter has to follow institutional expectations and go through all the channels between us and the brethren, and sometimes those channels have worked well, and sometimes not. Our administrators are burdened with a great many other issues as well—dress codes and raising money, for example—and sometimes for various reasons their agendas do not seem to find time for these sorts of issues. I've personally been a bit hardened by experience. I also teach a course on the history of philosophy and biology, and we do a good deal with LDS history and doctrine in that as well. I've had two students now who have



been training to be seminary teachers, both of whom have told me that in their classes it has been drilled into them that they are not to use the scriptures as a battering ram to try to recruit students to their own particular views of the gospel. Rather they should introduce the scriptures as a place where individuals can go to try to find answers to their personal questions. I don't know that that has become pervasive yet in the system. We still continually hear about LDS seminary and institute teachers giving answers to their students much like the one Keith's son got. The Old Testament manual, for instance, has quoted Seventh-Day Adventist scientists—it quotes young-Earth creationist ideas as though these were good solid science and compatible with Mormon doctrine. I'm just not sure how effectively to address this. There are people who are trying.

Audience member: This is another follow up on the last question. I'm a retired high school biology teacher, and when I started in the 50s, I got a little bit of flak from the seminary teachers on evolution, but not much, and I thought that by the time I retired, we would have won the battle or war or whatever. Just the opposite happened. As this last gentleman said, it was in the 70s and 80s—I retired in '88—when the seminary teachers began attacking us for teaching evolution in biology, and that was a big disappointment. It's been one of the biggest disappointments of my career that we haven't won the battle in the minds of members of the church, not even in those of the bright students. It's gone the other way.

D.J.: That has been a common problem. I do know of schools where there's a regular animosity between seminary and science teachers. Others seem to work very, very well together. I know of some places where the science teachers have just gone over and sat down with the seminary people and have said, "Let's work together on this." Sometimes that has worked well, and sometimes it hasn't. I would like to say one thing about seminaries, however. Those brethren and sisters are very, very dedicated people, and I think we can thank them for the fact that we have not had, in Utah, the waves of attempts to put creationism into the public schools that other states have had. You know, those states and legislatures have been torn apart. Hawaii just got their fight resolved a week ago. These conflicts have taken place in Iowa and Kansas and Pennsylvania and Michigan and Wisconsin, and states all over the country. We've had none of it in Utah—no significant suggestion that we put creationism into the science classrooms. It doesn't belong there; it's not science. It could perhaps be brought up in social science classrooms—that would be all right—but certainly not in the science classrooms. Now I think the reason we've not had the pressure here is because our LDS people feel that the seminary system can take care of our children's spiritual concerns; we don't have to be messing around with the curricula of the public schools. Now that can be seen as both good and bad, but I

think it has reduced the level of division that otherwise could have developed in Utah communities, and I think seminaries need to be credited and given appreciation for that, though maybe that's a back-handed compliment. They've done some good things, some bad things, but all institutions, including science, do good things and bad things.

K.N.: A profoundly safe closing statement. Thank you very much, Dr. Jeffery.

# The Mormon Myth of Evil Evolution

*Michael R. Ash*

SEVERAL YEARS AGO while teaching the priests' quorum, part of my lesson focused on the deceptive methods used by Satan. I asked my class for suggestions as to what tools, techniques, and deceptive teachings Satan employs. Some of their responses included the immorality in movies, television, and music, or the notion that there is no God. Then the bishop, as president of the priests' quorum and a regular attendee of the class, said, "Evolution." In the years since this event, I've found that there are a number of members who believe that evolution is a doctrine of the devil. It is apparent that many members are not familiar with the official position of the church on the topic of evolution, nor of the past history associated with this issue. The purpose of this paper is not to take a position on whether evolution is correct or is in error, but rather to demonstrate that the church's official stand on the subject is *neutral* and that many faithful Latter-day Saints, including LDS scientists, accept evolution as a currently valid scientific theory.

The controversy among members of the church regarding evolution has been around since shortly after Darwin published his *On the Origin of Species by Means of Natural Selection*. Some of this controversy took place among the faculty at BYU as well as between members of the church leadership. Whereas some prominent Latter-day Saints viewed the teachings of evolution as the theories of men or the wiles of Satan, others have viewed evolution as the method by which God created tabernacles for spirits. In 1909, after decades of controversy, the First Presidency issued an official statement regarding this matter entitled, "The Origin of Man":

Adam, our great progenitor, "the first man," was, like Christ, a pre-existent spirit, and like Christ he took upon him an appropriate body, the body of a man, and so became a "living soul." The doctrine of the pre-existence,—revealed so plainly, particularly in latter days, pours a wonderful flood of

light upon the otherwise mysterious problem of man's origin. It shows that man, as a spirit, was begotten and born of heavenly parents, and reared to maturity in the eternal mansions of the Father, prior to coming upon the earth in a temporal body to undergo an experience in mortality. It teaches that all men existed in the spirit before any man existed in the flesh, and that all who have inhabited the earth since Adam have taken bodies and become souls in like manner.

It is held by some that Adam was not the first man upon this earth, and that the original human being was a development from lower orders of the animal creation. These, however, are the theories of men. The word of the Lord declares that Adam was "the first man of all men" (Moses 1:34), and we are therefore in duty bound to regard him as the primal parent of our race. It was shown to the brother of Jared that all men were created in the beginning after the image of God; and whether we take this to mean the spirit or the body, or both, it commits us to the same conclusion: Man began life as a human being, in the likeness of our heavenly Father.

True it is that the body of man enters upon its career as a tiny germ or embryo, which becomes an infant, quickened at a certain stage by the spirit whose tabernacle it is, and the child after being born, develops into a man. There is nothing in this, however, to indicate that the original man, the first of our race, began life as anything less than a man, or less than the human germ or embryo that becomes a man.<sup>1</sup>

Some have suggested this statement takes an anti-evolution stance. However, the First Presidency's statement doesn't address the mutability of species. Some have also claimed that since Adam is to be regarded "as the primal parent of our race," this rules out the possibility of evolution. Race, however, is not a biological distinction. James C. King, of the *New York University School of Medicine*, notes:

What constitutes race is a matter of social definition. Whatever a group accepts as part of itself is within the pale; what it rejects is outside. Acceptance and rejection are not absolute but can exist in various degrees. . . .

. . . [T]he fact [is] that what constitutes a race and how one recognizes a racial difference is culturally determined. Whether two individuals regard themselves as of the same or of different races depends not on the degree of similarity or their genetic material but on whether history, tradition, and personal training and experience have brought them to regard themselves as belonging to the same groups or to different groups. . . . [G]roup differentiation [is]. . . based on cultural behavior and not on genetic difference.<sup>2</sup>

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1. *Improvement Era*, November 1909, 75-81.

2. James C. King, *The Biology of Race* (N.Y.: Harcourt Brace Jovanovich, Inc., 1971), 160, 163. See also

[http://www.standard.net/standard/news/news\\_story.html?sid=20010628232006.6CA90+cat=news+template=news1.html](http://www.standard.net/standard/news/news_story.html?sid=20010628232006.6CA90+cat=news+template=news1.html)

Therefore, Adam can be the “primal parent of our race”—or *cultural group*—without discarding the evolutionary model. When it was recognized that the First Presidency’s statement didn’t address the origin of man’s physical body, questions among members persisted. Less than six months after the official “statement,” the following information was printed in the April 1910 *Improvement Era*:

Whether the mortal bodies of man evolved in natural processes to present perfection, thru the direction and power of God; whether the first parents of our generations, Adam and Eve, were transplanted from another sphere, with immortal tabernacles, which became corrupted thru sin and the partaking of natural foods, in the process of time; whether they were born here in mortality, as other mortals have been, are questions not fully answered in the revealed word of God.<sup>3</sup>

Thus, three possibilities were suggested for the creation of man’s physical body: 1) evolution via a natural process as directed by the power of God; 2) transplantation from another sphere; 3) birth in mortality by other mortals. None of these three fits the typical “creationist” model.

Because the official “statement” didn’t resolve the issues of evolution or the mutability of species, the controversy among members, and even BYU faculty members, continued. Evolution was being taught by faithful LDS professors at BYU, while other BYU professors (and at times, students or parents of students) opposed such teaching.<sup>4</sup> In 1911 the controversy grew more intense, and several BYU faculty members became embroiled in this issue, resulting in bitter feelings and even some changes of employment.<sup>5</sup>

The 1911 BYU controversy prompted President Joseph F. Smith to conclude that “evolution would be best left out of discussions in our Church schools.”<sup>6</sup> The matter was pushed to a back burner. While President Smith personally believed that the theory of evolution was an “hypothesis” and “more or less a fallacy,” he also stated that the church was

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3. *Improvement Era*, April 1910, 570. Although there was no author’s name attached to this statement, a number of scholars have suggested that Joseph F. Smith was responsible for the material since he and Edward H. Anderson were the editors (see Duane E. Jeffery, “Seers, Savants and Evolution: The Uncomfortable Interface,” *Dialogue* 8 (Autumn/Winter 1973): 60; David John Buerger, “The Adam-God Doctrine,” *Dialogue* 15 (Spring 1982): 41; Erich Robert Paul, *Science, Religion, and Mormon Cosmology* [Urbana and Chicago: University of Illinois Press, 1992], 175).

4. Gary James Bergera and Ronald Priddis, *Brigham Young University: A House of Faith* (Salt Lake City: Signature, 1985), 150.

5. *Ibid.*, 134–48.

6. *The Juvenile Instructor* 46 (April 1911): 208.

"not undertaking to say how much of evolution is true, or how much is false" and that "the Church itself has no philosophy about the *modus operandi* employed by the Lord in His creation of the world."<sup>7</sup> Then in 1913, in a conference address in Arizona, President Smith added another interesting comment to the issue:

Man was born of woman; Christ, the Savior, was born of woman and God, the Father, was born of woman. Adam, our earthly parent, was also born of woman into this world, the same as Jesus and you and I.<sup>8</sup>

Six years later Heber J. Grant became president of the church. After six years of serving in office, President Grant saw a need to reiterate the 1909 official statement on "The Origin of Man" with a few modifications. The First Presidency's "'Mormon' View of Evolution" reaffirmed the divinity and role of Jesus Christ, that Adam was "our great progenitor, 'the first man,'" and that "the doctrine of pre-existence pours a wonderful flood of light upon the otherwise mysterious problem of man's origin." The statement also reaffirmed that man is a "child of God, formed in the divine image and endowed with divine attributes."<sup>9</sup>

Sixteen years earlier, the original 1909 statement had concluded: "It is held by some that Adam was not the first man upon this earth, and that the original human being was a development from lower orders of the animal creation. These, however, are the theories of men." As already noted, some people incorrectly interpreted this as an anti-evolution comment. This ambiguous comment was no longer found in the 1925 statement.

Some of the Apostles had taken an interest in this controversial subject, and they were not always in agreement with one another. Joseph Fielding Smith was opposed to evolution, whereas B. H. Roberts was more open to the possibility. During the mid 1920s, Elder B. H. Roberts began compiling notes for a book on church history and doctrine. In 1927 he began developing his notes into what he hoped would be a study course for the seventies throughout the church.<sup>10</sup> Roberts believed that "Adam represented the beginning of the Adamic Dispensation, but before him, a whole race of human beings had lived and died on earth. These 'pre-adamites' were simply destroyed in a great cataclysm that

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7. *Ibid.*, 208-9.

8. *Deseret News*, December 27, 1913, sec. 111, p. 7; reprinted in the *Church News* section of *Deseret News*, September 19, 1936, pp. 2, 8; quoted in Jeffery, "Seers, Savants and Evolution," 62.

9. Editors' Table, *Improvement Era* 28 (September 1925): 1090-91

10. Richard E. Sherlock and Jeffrey E. Keller, "'We Can See No Advantage to a Continuation of the Discussion': The Roberts /Smith/Talmage Affair," *Dialogue* 13 (Fall 1980): 63.

'cleansed' the earth before Adam, leaving only fossilized remains as the meager evidence of their presence."<sup>11</sup> To Roberts, the evidence for pre-Adamites was overwhelming. In 1928 he finished his *magnus opus* and sometime later submitted it to the publication committee, consisting of five apostles, who rejected his work primarily because of his reference to pre-Adamites. Roberts was told it might be possible to print his book, with modifications, but he refused the suggestion.

In April 1930, speaking to a genealogical conference, the young Apostle Joseph Fielding Smith—while admitting that the Lord had not revealed the method of creation—denounced the belief in death or mortal existence before the fall: "The doctrine of 'pre-Adamites' is not a doctrine of the Church, and is not advocated nor countenanced in the Church." Smith's talk was reprinted in the October 1930 *Utah Genealogical and Historical Magazine*.<sup>12</sup> When Smith's comments came out in print, B. H. Roberts complained to the brethren, challenging the validity of Joseph Fielding's claims. Smith's views were now on public record, whereas Roberts's views were still confined to his unpublished manuscript. Three months later, the Quorum of the Twelve reviewed both Smith's and Roberts's arguments. During this time, Apostle James Talmage, a trained biologist, took interest in the topic and apparently was "sympathetic to much of the spirit of Roberts's efforts."<sup>13</sup> After some denunciation of Smith's geological sources, Talmage "made it clear to his assembled brethren that all reputable geologists recognized the existence both of death and 'pre-Adamites' prior to 6,000 years ago, the presumed date of the fall of Adam."<sup>14</sup> Smith of course disagreed, but the First Presidency took a position of neutrality by stating:

The statement made by Elder Smith that the existence of pre-Adamites is not a doctrine of the Church is true. It is just as true that the statement: 'There were not pre-Adamites upon the earth' is not a doctrine of the Church. Neither side of the controversy has been accepted as a doctrine at all.

Both parties make the scripture and the statements of men who have been prominent in the affairs of the Church the basis of their contention; neither has produced definite proof in support of his views. . . .

Upon the fundamental doctrines of the Church we are all agreed. Our mission is to bear the message of the restored gospel to the people of the

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11. *Ibid.*, 65.

12. Joseph Fielding Smith, "Faith Leads to a Fulness of Truth and Righteousness," *Utah Genealogical and Historical Magazine* 21 (Oct. 1930): 145-58; quoted in Jeffery, "Seers, Savants and Evolution," 63.

13. Sherlock and Keller, "We Can See No Advantage," 98.

14. *Ibid.*, 99.



world. Leave Geology, Biology, Archaeology and Anthropology, no one of which has to do with the salvation of the souls of mankind, to scientific research, while we magnify our calling in the realm of the Church. . . .<sup>15</sup>

The brethren thus suggested that Smith and Roberts drop the issue. Talmage, who had not been part of the publication committee which had reviewed and rejected Roberts's book, was now drawn into the discussion because the issue was brought before the entire Quorum of the Twelve.<sup>16</sup>

Talmage had devoted much of his adult life to harmonizing science and religion. In 1884, while attending John Hopkins University, Talmage listened to a Methodist preacher denounce the "evils of Darwinism." Following the lecture, Talmage wrote in his journal: "[B]elief in a loving God perfectly accords with my reverence for science, and I can see no reason why the evolution of animal bodies cannot be true—as indeed the facts of observation make it difficult to deny—and still the soul of man is of divine origin."<sup>17</sup> Following his college years, Talmage seems to have eventually rejected the evolution of man for lack of evidence, but not for any scriptural reasons. He did, however, believe in pre-Adamites.

Taking a position of neutrality, the First Presidency requested that the issue be dropped from public discourse. James Talmage, who was at the meeting in which the presidency discussed their decision, wrote in his diary: "This is one of the many things upon which we cannot speak with assurance and dogmatic assertions on either side are likely to do harm rather than good."<sup>18</sup> Unfortunately, Smith's talk—and position—had already been published, and Talmage, as well as others, found that many students "'inferred from Elder Smith's address that the Church refuses to recognize the findings of science if there be a word in scriptural record in our interpretation of which we find even a seeming conflict with scientific discoveries or deduction, and that therefore the 'policy' of the Church is in effect opposed to scientific research."<sup>19</sup> In fact, Talmage recorded in his journal that an unnamed member of the First Presidency felt that "'sometime, somewhere, something should be said by one or more of us to make plain that the Church does not refuse to recognize the discoveries and demonstrations of science, especially in relation to the subject at issue."<sup>20</sup>

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15. Quoted in Jeffery, "Seers, Savants and Evolution," 64.

16. Jeffrey E. Keller, "Discussion Continued: The Sequel to the Roberts/Smith/Talmage Affair," *Dialogue* 15 (Spring 1982): 81.

17. *Ibid.*, 81.

18. April 7, 1931, reprinted in *The Essential James E. Talmage*, ed. James P. Harris (Salt Lake City: Signature, 1997), 237.

19. Talmage Journals, Nov. 21, 1931, quoted in Keller, "Discussion Continued," 84.

20. Keller, "Discussion Continued," 84.

In August 1931, that “something” came from James Talmage. The geologist-trained apostle delivered a talk in the tabernacle entitled “The Earth and Man,” wherein he discussed “fossil remains of plants and animals” which, according to scientists, point to “a very definite order in the sequence of life embodiment.” “These primitive species,” explained Talmage, “were aquatic; land forms were of later development. Some of these simpler forms of life have persisted until the present time, though with great variation as the result of changing environment.” Talmage also referred to the studies of geologists which demonstrated that “very simple forms of plant and animal bodies were succeeded by others more complicated; and in the indestructible record of the rocks they read the story of advancing life from the simple to the more complex, from the single-celled protozoan to the highest animals.” While never directly mentioning evolution, Talmage’s choice of words suggests he was open to the possibility. As for the beginning of mankind, Talmage wrote: “In due course came the crowning work of this creative sequence, the advent of man!”

While Talmage did believe in pre-Adamites, he wasn’t as sure regarding the connection between these beings and “man.” He said he did not regard “Adam as related to—certainly not as descended from—the Neanderthal, the PG Cro-Magnon, the Peking or the Piltdown man.” Talmage also recognized that we did not, as yet, have all the information. “Discrepancies that trouble us now will diminish as our knowledge of pertinent facts is extended. The creator has made record in the rocks for man to decipher; but He has also spoken directly regarding the main stages of progress by which the earth has been brought to be what it is. The accounts can not be fundamentally opposed; one can not contradict the other; though man’s interpretation of either may be seriously at fault.”<sup>21</sup>

After much discussion among the brethren (during which Talmage sent a letter to John A. Widtsoe, who replied with words of encouragement), and following a few minor modifications, Talmage’s talk was printed in the November 1931 *Deseret News*, as well as in a separate church pamphlet at about the same time (the “pamphlet” was referred to in the original *Deseret News* article). It was reprinted again in the December *Millennial Star*. Then, in December 1965 and January 1966, it was printed as a two-part article in the *Instructor*.

Accounts vary as to what directive, if any, Talmage had been given concerning the topic, content, and publication of his talk. Historian

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21. James A. Talmage, “The Earth and Man,” address delivered in the Tabernacle, Salt Lake City, Utah, Sunday, August 9, 1931; also available on-line at <http://www.fri.com/~allsop/eyring-1/faq/evolution/Talmage/1931.html>

James B. Allen believes that Talmage gave his talk “at the request of the First Presidency.”<sup>22</sup> According to Talmage’s diary, President Anthony W. Ivins (first counselor in the First Presidency) as well as three other members of the Council of the Twelve—including Joseph Fielding Smith—were present during his talk. And while the brethren recognized that Talmage’s remarks were contrary to Smith’s earlier address, the other brethren (excepting Smith) expressed their “tentative approval” of what Talmage said in the address.<sup>23</sup>

However, in 1935 President Heber J. Grant and his two councilors sent a reply to Sterling Talmage, son of (now deceased) James Talmage, claiming that it was President Ivins (also now deceased) who disagreed with the view of Joseph Fielding Smith and who had arranged for Talmage to deliver his talk in a meeting over which Ivins presided. According to this letter, Grant claimed that all but one of the Quorum of the Twelve were against publishing Talmage’s talk. Finally, however, Ivins saw to the printing of the address without the consent of President Grant. Grant was quick to point out in his letter that he was not condemning the material in Talmage’s lecture, but rather that the address was not officially sanctioned by the church. “This does not mean that his [Talmage’s] views are not orthodox,” wrote the First Presidency, “they may or may not be; it only means that whether or not, they are not the official utterances of the Church and are not binding upon the Church and stand only as the well-considered views of a scholar and an apostle of the Church.”<sup>24</sup>

This letter to Sterling Talmage suggests that the publication of Talmage’s talk was not only opposed by most of the brethren, but had been published without the consent of the First Presidency. However, this contradicts James Talmage’s diary entry on November 21, wherein he recorded that his address had “come under consideration. . . investigation. . . [and] discussion” by the “First Presidency and the Council of the Twelve.” Talmage wrote in his diary that “the *majority* of the Twelve have been in favor of the publication of the address from the time they first took it under consideration.”<sup>25</sup> Reed Smoot’s journal likewise mentioned that a “majority” of the brethren favored printing the lecture with some minor changes.<sup>26</sup> Even Rudger Clawson’s official report recorded that

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22. James B. Allen, “The Story of *The Truth, The Way, The Life*,” *BYU Studies* 33 (1993): 727.

23. April 5, 1930; reprinted in Harris, *The Essential Talmage*, 239.

24. Reprinted in Sterling B. Talmage, *Can Science Be Faith-Promoting?*, ed. Stan Larson (Salt Lake City: Blue Ribbon Books, 2001), 245.

25. April 5, 1930; in Harris, *The Essential Talmage*, 239; emphasis added.

26. Keller, “Discussion Continued,” 39.

after Talmage agreed to make some modifications, the brethren adopted a motion to publish the address.<sup>27</sup> Finally, President Grant's own diary entry of November 17, 1931, contradicts his 1935 letter by noting that "'we. . . authorized its [Talmage's address] publication and also gave authorization for it to be printed in the same form as the radio addresses, for distribution.'" <sup>28</sup>

There are various theories as to why the accounts differ, but in the end we just don't know why there appear to be conflicting stories. When President Grant sent this letter to Sterling Talmage in 1935 (four years after his father's tabernacle address), James Talmage and the two original First Presidency councilors—Ivins and Charles Nibley—had all since passed away. Perhaps the accounts conflict due to failing recollection over the passage of time. Regardless, Talmage's presentation and publication of "The Earth and Man" was the only exposition of a Quorum member to have been reviewed and approved by at least some, if not all, of the First Presidency, and then published officially by the church.

Meanwhile John Widtsoe had also taken interest in the topic of evolution. In 1927, Widtsoe gave a lecture at an outdoor institute for church school educators. One participant recorded:

Brother John A. Widtsoe had courses, trying to provide these seminary men with a rational perspective on the relation of science and religion. . . . [Widtsoe] converted me to the biological theory of evolution. . . . I thought. . . that the theory of evolution was cut and dried. But Brother Widtsoe in his very tentative and very cautious way didn't openly advocate it, but presented the theory so basically and so logically that, in part, it lead to my accepting [it].<sup>29</sup>

In 1934, three years after Talmage's tabernacle address, Widtsoe wrote a letter to Sterling Talmage:

It is very likely that the time is ripe for someone to begin right now to prepare a wise, temperate, scientific statement on the doctrine of evolution, not forgetting the relationship of the doctrine to other good gospel doctrines. Our own views [Widtsoe and Sterling Talmage] with respect to evolution are fairly well known. Evolution as a law seems to me to have been demonstrated. Its metes [measures] and bounds are gradually being determined.

As for the origin of man, or the origin of animals, or the origin of

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27. *Ibid.*, 86-87.

28. Heber J. Grant Diary, 16 and 17 November 1931, according to typescript in Strack Collection; quoted by Stan Larson, ed., in Talmage, *Can Science Be Faith Promoting?*, lviii (emphasis added).

29. "The Twentieth Annual Convention of Teachers in the Schools and Seminaries of the Church of Jesus Christ of Latter-day Saints," 21-22 Oct. 1925, Brimhall Papers, quoted in Bergera and Priddis, *BYU: A House of Faith*, 150.

anything else, I do not see that science has given us any satisfactory answer so far. I accept without reservation the doctrine that man was a preexistent being who came to earth to inhabit a mortal body. How the body was created has not, as far as I know, been revealed to man.<sup>30</sup>

In another letter to Sterling three months later, Widtsoe added that he was cautious about the evolution of species, and he would "hold [his] judgement with respect to the origin of man in suspense" because "existing facts" did not satisfy his mind. Nevertheless, "[i]t would not hurt my feelings at all if in the wisdom of the Almighty the body of man was prepared in just the way you [Sterling] outline in your article ['Is Evolution a Faith-Promoting Principal?']", and then that the spirit of man, the eternal ego, was placed within the body so prepared."<sup>31</sup>

The church's decision to remain neutral on the topic of evolution prevented all of the brethren from getting church approval to publish anything official on the issue. Related topics, however, including the controversy over the age of the Earth, continued to appear in the official LDS magazine, the *Improvement Era*. By at least 1939, some of the magazine's articles began to discuss, once again, pre-Adamites and evolution. In 1943, Widtsoe published his *Evidences and Reconciliations*, wherein he wrote:

The law of evolution or change may be accepted fully. . . . It is nothing more or less than the gospel law of progress or its opposite. . . . The theory of evolution which may contain practical truth, should be looked upon as one of the changing hypotheses of science, man's explanation of a multitude of observed facts. It would be folly to make it the foundation of a life's philosophy.<sup>32</sup>

Widtsoe was also involved in writing several such articles for the *Era*. One such article, printed in 1948, was titled "Were There Pre-Adamites?" In this article, Widtsoe continued to remain cautious as to the creation of man, but wrote, "[I]t must also be admitted that no one can safely deny that such manlike beings did at one time roam over the earth. . . . How all this was accomplished is not known. The mystery of the 'creation' of Adam and Eve has not yet been revealed."<sup>33</sup>

By 1952 the LDS scientist-leaders who were open to the possibility of evolution had all passed away, including James Talmage (died 1933),

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30. April 20, 1934, reprinted in Talmage, *Can Science Be Faith-Promoting?*, 222-23.

31. July 17, 1934, reprinted in *ibid.*, 228-29.

32. John A. Widtsoe, *Evidences and Reconciliations*, 156.

33. John A. Widtsoe, "Evidences and Reconciliations," *Improvement Era*, May 1948, 205.

B. H. Roberts (1933), and John Widtsoe (1952). Apostle Joseph Fielding Smith, who still opposed a belief in pre-Adamites, was left with little opposition to his views. In 1953 he tested the waters by giving a public discourse at BYU entitled "The Origin of Man." A year later he published, without approval of then-prophet David O. McKay, a book on this subject, *Man: His Origin and Destiny*, which became widely accepted by church members. Researcher Duane E. Jeffery has noted: "The work marked a milestone. For the first time Mormonism had a book openly agnostic to much of science."<sup>34</sup> As Smith promoted his book, other LDS leaders were careful to point out that only the president of the church could declare doctrine. President J. Reuben Clark, Jr., second counselor in the First Presidency, delivered a speech entitled "When are the Writings or Sermons of Church Leaders Entitled to the Claim of Scripture?" just nine days after Smith presented his theories to Seminary and Institute teachers at BYU.<sup>35</sup> Smith's scientific theories were also criticized by eminent LDS scientist and dean of the University of Utah, Henry B. Eyring.<sup>36</sup> Others, however, came to Smith's support. Adding credibility to Smith's publication, Elder Sterling Sills said in the October 1954 conference:

I hope I do not embarrass President Joseph Fielding Smith by speaking about his recent great book entitled *Man: His Origin and Destiny* which I think is one of the great books of the Church. I would like to see every person in the world read this great book, for what knowledge could be more important and helpful to man than the ideas therein presented. President Smith has packed into this book the study, meditation, and devotion of a lifetime, but through our reading we may make all of these ideas our own in a week or a month. This is one of the advantages of a great book.<sup>37</sup>

During the controversy over Smith's publication, William Lee Stokes, head of the Department of Geology at the University of Utah, wrote to President McKay inquiring about the church's position on Smith's theories. President McKay responded by noting: "On the subject of organic evolution the Church has officially taken no position. The book *Man, His Origin and Destiny* was not published by the Church and is not approved by the Church. The book contains expressions of the author's views for which he alone is responsible."<sup>38</sup> LDS historian Richard

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34. Jeffery, "Seers, Savants and Evolution," 65.

35. *Ibid.*, 66.

36. See Steven H. Hatch, "The Reconciliation of Faith and Science: Henry Eyring's Achievement," in *Dialogue* 15 (Autumn 1982): 89.

37. *Conference Report*, October 1954, 28.

38. McKay to Stokes, February 15, 1957, cited in William Lee Stokes, "An Official Position," in *The Search for Harmony Essays on Science and Mormonism*, ed. Gene A. Sessions and Craig J. Oberg (Salt Lake City: Signature Books, 1993), 291-94.

D. Poll and his wife also discussed Smith's book with President McKay and recorded McKay's comments:

President McKay said that the book has created a problem. Being written by the president of the Quorum of the Twelve, it has implications which we can appreciate. The book has not been approved by the Church; we are authorized to quote him on that. The work represents the opinions of one man on the scriptures. Brother Smith's views have long been known. Striking the desk for emphasis, President McKay repeated that the book is not the authoritative position of the Church. He does not know how it came to be chosen as a text for the seminary and institute teachers last summer, but the choice was unfortunate.<sup>39</sup>

LDS historian Lowell Bennion recalls a similar meeting with McKay where the prophet told those present that Elder Smith's work "'had not been authorized or approved, and that it did not represent the position of the church. . . on such matters as the age of the earth and the theory of evolution.' He added that, had he known in advance, 'the book never would have been used as a text at the B.Y.U. summer session.'"<sup>40</sup> A concerned David O. McKay asked Adam S. Bennion, an apostle and former superintendent of church schools, to solicit responses to Elder Smith's book from qualified LDS scientists. Elder Bennion invited the opinions of Henry Eyring, geologist William Lee Stokes, and chemist Richard P. Smith. Eyring wrote to Bennion: "'I can understand 'Man—His Origin and Destiny' as the work of a great man who is fallible. . . . It contains many serious scientific errors and much ill humor, which mar the many beautiful things in it. Since the gospel is only that which is true, this book cannot be more than the private opinion of one of our great men.'"<sup>41</sup> Then in a 1973 interview, Eyring, when asked about the age of the Earth controversy, cited his disagreement with Smith's book, but added:

I would say that I sustained Brother Smith as my Church leader one hundred percent. I think he was a great man. He had a different background and training on this issue. Maybe he was right. I think he was right on most things and if you followed him, he would get you into the Celestial Kingdom—maybe the hard way, but he would get you there.

The Church, according to a letter from President McKay, has no position on organic evolution. Whatever the answer is to the question, the Lord has already finished that part of His work. The whole matter poses no prob-

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39. Richard D. Poll, "The Swearing Elders: Some Reflections: A Response to Thomas Blakely," *Sunstone* 10 (January 1986): 16.

40. George T. Boyd, "'Notes from an Interview with President David O. McKay,'" March 1955, as quoted in Bergera and Priddis, *BYU: A House of Faith*, 154n.

41. Quoted in Hatch, "Reconciliation of Faith and Science," 89.



lem to me. The Lord organized the world and I am sure He did it in the best way.<sup>42</sup>

Smith, however, was very adamant and vocal about his views, and by June 1955 there were rumors of a growing rift between Smith and President McKay. McKay despised controversy in the church and was not pleased with the controversy which Smith's book had created. Nevertheless, the prophet made no attempt to publicly or privately silence Elder Smith. Some LDS intellectuals recognized that there would be unavoidable differences of opinion on a variety of topics among members, and even among the brethren. Speaking to BYU students and faculty in 1958, Elder Hugh B. Brown said:

Both religionists and scientists must avoid arrogant dogmatism. . . . Scientists and teachers of religion disagree among themselves on theological and other subjects. . . . Even in our own church men take issue with one another and contend for their own interpretations. But this free exchange of ideas is not to be deplored as long as men remain humble and teachable.<sup>43</sup>

Joseph Fielding Smith's son-in-law, Bruce R. McConkie, took sides with his father-in-law and in 1958 published *Mormon Doctrine*. Like Smith's book, *Mormon Doctrine* was widely accepted by members. Following on the heels of Smith's theories (nearly one-third of his references were to the ten books authored by Smith),<sup>44</sup> McConkie denounced evolution. "Those educational philosophies," he wrote in his 1958 compendium, "which deny Christ and the divine origin of man as an offspring of God (meaning especially the theories of organic evolution), are spawned and sponsored by Satan."<sup>45</sup> While McConkie's book appealed to LDS members in general, not all members or general authorities welcomed McConkie's new publication.

From the perspective presented by the writings of Smith and McConkie, many members have come to the conclusion that the church is officially anti-evolution. However, there have been other publications through the years which should have dispelled such a myth. In 1965, for example, David Lawrence McKay, son of President McKay and member of the general church Sunday School superintendency, brought to the attention of his father an article by BYU botanist Bertrand Harrison which discussed organic evolution. McKay enjoyed the article enough to

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42. Edward W. Kimball, "A Dialogue With Henry Eyring," *Dialogue* 8 (Autumn/Winter 1973): 103.

43. Hugh B. Brown, "What Is Man and What He May Become," 24 March 1958, in *Speeches, 1957-58*, quoted in Begera and Priddis, *BYU: A House of Faith*, 157.

44. Bergera and Priddis, *BYU: A House of Faith*, 157-8.

45. Bruce R. McConkie, *Mormon Doctrine* (Salt Lake City: Bookcraft, 1958), 180.

approve it for publication in the July 1965 *Instructor*. Bergera and Priddis note that this “was the most pro-evolution article to ever have appeared in an official church periodical.”<sup>46</sup> By December of the same year, Talmage’s “The Earth and Man,” was reprinted in the *Instructor* as well.

Bruce R. McConkie, however, continued to advance his anti-evolutionary views, and in 1980 listed evolution as one of the “seven deadly heresies.”<sup>47</sup> Other apostles likewise favored the Smith-McConkie view of evolution. In the October 1970 general conference, for instance, Elder Ezra Taft Benson said:

If your children are taught untruths on evolution in the public schools or even in our Church schools, provide them with a copy of President Joseph Fielding Smith’s excellent rebuttal in his book *Man: His Origin and Destiny*.<sup>48</sup>

For a more balanced or neutral perspective, we cite the words of then-prophet Spencer W. Kimball, who, speaking at an all-women’s fireside, said:

Man became a living soul—mankind, male and female. . . . We don’t know exactly how their coming into this world happened, and when we’re able to understand it the Lord will tell us.<sup>49</sup>

In 1971 Dallin Oaks replaced Ernest Wilkinson as BYU’s president and quickly discovered the serious nature of the controversy over evolution among students and faculty. While Oaks took a balanced role, he allowed and defended the teaching of evolution at BYU.<sup>50</sup> BYU’s current view toward evolution is expressed in a letter from Michael Whiting (a BYU professor who teaches evolution) to my friend Marc Schindler, who queried Whiting regarding an on-line discussion in which someone claimed that if evolution were “true” then it would be taught at BYU. Since it wasn’t taught at BYU, this person claimed, then the church must have a problem with it.

Michael Whiting To Marc Schindler, March 3, 2000

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46. Bergera and Priddis, *BYU: A House of Faith*, 159.

47. Bruce R. McConkie, “The Seven Deadly Heresies,” BYU fireside at the Marriott Center June 1, 1980; transcript available on-line at <http://www.coolcontent.com/McConkie/heresies.html>

48. *Conference Report*, October 1970, 49.

49. Spencer W. Kimball, “The Blessings and Responsibilities of Womanhood,” 1 Oct. 1975, printed in *Ensign*, March 1976, 72.

50. See Bergera and Priddis, *BYU: A House of Faith*, 161-68; also available online at [http://www.fri.com/~allsop/eyring-1/faq/evolution/Relatedness\\_1965.html](http://www.fri.com/~allsop/eyring-1/faq/evolution/Relatedness_1965.html)

Dear Marc,

The topic of evolution is handled at BYU the same way as at other universities. I teach Zoology 475 (Evolutionary Biology) to about 150 students every semester, the course has been on the books for at least the last 15 years, and there is no indication that it will ever be done away with. The first presidency has given its approval of the course, and (wisely) allows the professors to teach it in line with the current theories and data in evolutionary biology. The group of evolutionary biologists at BYU has actually grown in the last 3 years, and we have one of the largest and most active graduate programs in Phylogenetic Systematics (essentially, organismal genealogy) in the country. And we most recently received a large infusion of money from the BYU administration to expand the evolutionary biology program to foster collaboration with statisticians and computer scientists. The only thing different about evolutionary biology at BYU is that I try to incorporate [*sic*] a few lectures on the history of the idea of evolution in the LDS faith within the courses I teach. So evolutionary biology is in fact one of the largest and most successful graduate programs at BYU (over the past three years my research colleagues and [I] brought in roughly 2 million dollars in external research grants, 48% of which is directly deposited in the church's coffers as "indirect costs"), and there are plenty of LDS faithful who are not upset at the notion of a creation that follows natural principles.

So following the logic of the member who challenged you, since BYU does teach evolution and it is a very successful program at the "Lord's University," then it must be true. Though of course I detest such logic.

Cheers,  
Mike<sup>51</sup>

Through the years, various LDS leaders have taken either one side or the other on the evolution issue. While anti-evolution articles or comments have occasionally appeared in the *Ensign*, some neutral and subtly pro-evolution articles have appeared as well. The most recent, and the most authoritative, words on the official LDS position on evolution are found in the *Encyclopedia of Mormonism*. This five-volume reference set printed in 1992 with the strictest of supervision by the brethren (overseen by Neal A. Maxwell and Dallin H. Oaks) and edited by Daniel H. Ludow, who was executive secretary of the Church Correlation Committee, contains two articles relevant to our topic. Under the *Encyclopedia's* heading, "Origin of Man," by LDS anthropologist, John L. Sorenson, we read:

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51. About.com, LDS Apologetics message board; "The Question," #71, 2608.71 in reply to 2608.64; online at

<http://forums.about.com/n/mb/message.asp?webtag=ab-lds&msg=2608.71>.

Michael Whiting and BYU undergraduate, Taylor Maxwell, were responsible for the 16 January 2003 cover story for the scientific journal, *Nature*. Using some of the latest DNA researching techniques, Whiting and Maxwell discovered revolutionary information which enhances the study of evolutionary biology. ("Loss and Recovery of Wings in Stick Insects," *Nature*, 421: 264-267.)

Many sympathetic to science interpret certain statements in LDS scripture to mean that God used a version of evolution to prepare bodies and environmental surroundings suitable for the pre-mortal spirits. . . . Certain statements of various General Authorities are also used by proponents of this idea to justify their opinions.

Other Latter-day Saints accept a more literal reading of scriptural passages that suggest to them an abrupt creation. Proponents of this view also support their propositions with statements from scripture and General Authorities.<sup>52</sup>

Sorenson also notes that "the current state of revealed truth on the LDS doctrine of man's origin may permit some differences of opinion concerning the relationship of science and religion."

Under the title "Evolution," we find an article by William E. Evenson, a BYU professor of physics, who worked through a long process to complete the article which was eventually used in the *Encyclopedia*. The article began as 1,000 words long but grew until it reached 4,500 words. Evenson relates that "finally, in the spring of 1991, the First Presidency and Quorum of the Twelve" reviewed the material and "decided that they wanted only a short article referring to the First Presidency statements on the subject, which are the only definitive source of Church doctrine. The resulting entry in the *Encyclopedia* is only 258 words long."<sup>53</sup> The article reads:

The position of the Church on the origin of man was published by the First Presidency in 1909 and stated again by a different First Presidency in 1925:

The Church of Jesus Christ of Latter-day Saints, basing its belief on divine revelation, ancient and modern, declares man to be the direct and lineal offspring of Deity. . . . Man is the child of God, formed in the divine image and endowed with divine attributes. . . .

The Scriptures tell why man was created, but they do not tell how, though the Lord has promised that he will tell that when he comes again (D&C 101:32-33). In 1931, when there was intense discussion on the issue of organic evolution, the First Presidency of the Church, then consisting of Presidents Heber J. Grant, Anthony W. Ivins, and Charles W. Nibley, addressed all of the general authorities of the Church on the matter, and concluded:

Upon the fundamental doctrines of the Church we are all agreed. Our

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52. Ludlow, Daniel H. et al., eds., *Encyclopedia of Mormonism: The History, Doctrine, and Procedure of The Church of Jesus Christ of Latter-day Saints*, 4 vols. (New York: Macmillan, 1992) 3:1053.

53. William E. Evenson, "LDS Doctrine and the Theory of Evolution," cited by Stan Larson, ed., in Talmage, *Can Science Be Faith Promoting?*, xxxi.

mission is to bear the message of the restored gospel to the world. Leave geology, biology, archaeology, and anthropology, no one of which has to do with the salvation of the souls of mankind, to scientific research, while we magnify our calling in the realm of the Church. . . .

Upon one thing we should all be able to agree, namely that Presidents Joseph F. Smith, John R. Winder, and Anthon H. Lund were right when they said, "Adam is the primal parent of our race" [First Presidency Minutes, Apr. 7, 1931].<sup>54</sup>

Evenson notes that "the role of organic evolution in the development of life on earth is a good example of an issue that is not settled in the Church."<sup>55</sup>

In the same year that the *Encyclopedia of Mormonism* was published (1992), Evenson was asked to put together a packet on evolution for BYU students who were interested in the church's position. The contents of this packet were formally approved by the BYU Board of Trustees, which included the First Presidency, a majority of the Quorum of the Twelve, and several other general authorities.<sup>56</sup> This packet, which is still available at the BYU library as well as on the internet,<sup>57</sup> contains the first three First Presidency statements on the subject (1909, 1910, and 1925) as well as the article on evolution from the *Encyclopedia of Mormonism*.<sup>58</sup> The cover page to this packet notes: "Although there has never been a formal declaration from the First Presidency addressing the general matter of *organic evolution* as a process for development of biological species, these documents make clear the official position of the Church regarding the *origin of man*" (emphasis in original).

Ironically, while the official LDS position on evolution is neutral, the majority of evolution-related comments appearing in official church publications have been hostile to evolution.<sup>59</sup> For example, in the

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54. *Encyclopedia of Mormonism* 2:478.

55. Evenson, cited by Larson, ed., in Talmage, *Can Science Be Faith Promoting?*, xxxii.

56. *Ibid.*, xxxiii and nn 5 and 6.

57. See <http://zoology.byu.edu/zool475/pdf%20files/Evolution%20Packet.pdf> and <http://eyring.hplx.net/Eyring/faq/evolution/trustees1992.html>

58. Evenson, cited by Larson, ed., in Talmage, *Can Science Be Faith Promoting?*, xxxii n6.

59. For example, a search for stances on evolution as recorded in the past thirty years of church publications yielded some lopsided results. I was able to find ten instances wherein a given LDS speaker/author expressed hostility towards evolution: see Elder Ezra Taft Benson, "The Book of Mormon is the Word of God," *Ensign*, May 1975, 63 ff; Elder Bruce R. McConkie, "The Glorious Gospel in Our Day," *Tambuli*, April 1980, 82 ff; Elder Bruce R. McConkie, "Christ and the Creation," *Tambuli*, Sept. 1983, 22 ff; Elder Boyd K. Packer, "The Pattern of Our Parentage," *Ensign*, Nov. 1984, 66 ff; Bruce R. McConkie, "The Caravan Moves On," *Ensign*, Nov. 1984, 82 ff; Elder Russell M. Nelson, "The Magnificence of Man," *Ensign*, Oct. 1987, 44 ff; Robert L. Millett, "So Glorious a Record," *Ensign*, Dec.

1980/81 Melchizedek Priesthood study guide, in a lesson entitled "The Divine Origin of Man," the manual quotes Joseph Fielding Smith's *Seek Ye Earnestly*: "Now, evolution leads men away from God. Men who have had faith in God, when they have become converted to that theory, forsake him."<sup>60</sup>

More recently, two other articles suggesting hostility to a neutral stance on evolution can be found in the *Teachings of the Presidents of the Church: Joseph F. Smith* and in the February 2002 *Ensign*. In the *Teachings of the Presidents of the Church*, which was the instruction manual for the Melchizedek Priesthood and Relief Society for the year 2001, we find selected portions of the 1909 First Presidency statement on the "Origin of Man" which hint that acceptance of evolution is contrary to the gospel.<sup>61</sup> In the February 2002 *Ensign*, we find a reprint of the same 1909 First Presidency statement without noting the 1910, 1925, 1931 statements, or the *Encyclopedia of Mormonism* additions to the topic.<sup>62</sup> To *Ensign* readers unfamiliar with the additional insights added in these post-1909 statements, the reprinted 1909 statement may imply a rejection of evolution on gospel grounds.

Like other myths, both inside and outside the church, the myth of "evil evolution" is perpetuated by the masses who are unfamiliar with information which refutes such falsehoods. The topic of evolution is not unique in this aspect. For instance, while readers of *Dialogue* are aware that President George Albert Smith refuted the June 1945 "Ward Teachers' Message" which claimed that "when our leaders speak, the thinking

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1992, 6ff; Elder George R. Hill, III, "Seek Ye Diligently," *Ensign*, June 1993, 21 ff; Lisa M. G. Crockett, "Roots and Branches," *New Era*, August 1999, 28 ff; "Gospel Classics: The Origin of Man," *Ensign*, Feb. 2002, 26ff. In contrast, I found six comments on evolution that were either liberal, neutral, or open-ended: see Dr. Sherwood B. Idso, "Visitors from Outer Space—Meteorites," *Friend*, Jan. 1979, 11 ff; F. Kent Nielsen, "The Gospel and the Scientific View: How Earth Came to Be," *Ensign*, Sept. 1980, 67 ff; George A. Horton, Jr., "A Prophet Looks at Genesis; Insights from the Joseph Smith Translation" *Ensign*, Jan. 1986, 38 ff; Don Lind, "Things Not Seen," *Tambuli*, June 1987, 42 ff; Morris S. Peterson, "Questions and Answers: Do We Know How the Earth's History as Indicated from Fossils Fit with the Earth's History as the Scriptures Present It?" *Tambuli*, April 1988, 29 ff; Robert J. Woodford, "In the Beginning: A Latter-day Perspective," *Ensign*, Jan. 1998, 12 ff.

60. "The Divine Origin of Man," *Choose You this Day: Melchizedek Priesthood Personal Study Guide 1980-81* (Salt Lake City: The Church of Jesus Christ of Latter-day Saints, 1979), 39; see also Joseph Fielding Smith, *Seek Ye Earnestly* (Salt Lake City: Deseret Book Co., 1970), 283.

61. "Sons and Daughters of the Eternal Father, From the Life of Joseph F. Smith," ch. 37 in *Teachings of Presidents of the Church: Joseph F. Smith* (Salt Lake City: The Church of Jesus Christ of Latter-day Saints, 1998), 331 ff.

62. "Gospel Classics: The Origin of Man," *Ensign*, Feb. 2002, 26 ff.

has been done,"<sup>63</sup> many Latter-day Saints are not only unaware of President Smith's refutation of the statement, but some Saints repeat the declaration as if it were doctrinal. Similarly, a 1985 survey conducted by Richley Crapo at the University of Utah, found that a number of issues which are accepted or rejected by members at a "grass roots" level are contrary to official LDS positions.<sup>64</sup> On the subject of evolution, for instance, Crapo's survey discovered that 57 percent of those polled believed that the official LDS position was anti-evolution, and only 38 percent correctly identified the official position as neutral. 25 percent of those who personally accepted evolution believed that their views were contrary to a supposed official anti-evolution position of the church, and 70 percent of those who rejected evolution believed that this was the official church stance on the subject.<sup>65</sup>

While a greater number of Latter-day Saints will read *Ensign* articles which generally disesteem evolution, there is some comfort in the fact that in addition to the aforementioned *Encyclopedia of Mormonism* articles and the BYU evolution packet, other conservative albeit less familiar LDS publications are more liberal in their approach to organic evolution. *BYU Studies* and *FARMS Review of Books*, for example, tend to express an overwhelming pro or neutral stance toward the topic.<sup>66</sup>

The popularity of these alternate sources of LDS-related publications, as well as publications such as *Dialogue* and *Sunstone* and the

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63. *Ward Teachers' Message for June 1945*, "Sustaining the General Authorities of the Church," *Improvement Era*, June 1945, 354. For President Smith's refutation of the idea, which he said did "not express the true position of the Church," see "A 1945 Perspective," an accompaniment to L. Jackson Newell's "An Echo From the Foothills: To Marshal the Forces of Reason," *Dialogue* 19 (Spring 1986): 36-38; emphasis in original.

64. Richley H. Crapo, "Mormonism and Evolution," working draft for the August 2001 *Sunstone Symposium*, originally posted to Mormon-L and reposted August 13, 2001 on Eyring-L (ey@hplx.net). Copy of repost in author's possession.

65. Richley H. Crapo, "Grass-Roots Deviance From Official Doctrine: A Study of Latter-day Saint (Mormon) Folk-Beliefs," at <http://cc.usu.edu/~FATH6/grassrts.htm>. See also Crapo, "Mormonism and Evolution" (ibid.).

66. See Nissim Wernick, "Man, the Pinnacle of Creation," *BYU Studies* 10 (Autumn 1969), 31 ff; Hollis R. Johnson, "Civilizations Out in Space," *BYU Studies* 11 (Autumn 1970), 3 ff; Richard Sherlock, book review of Neal Gillespie, *Charles Darwin and the Problem of Creation*, in *BYU Studies* 22 (Winter 1982), 119 ff; A. Lester Allen, "Science and Theology: A Search for the Uncommon Denominator," *BYU Studies* 29 (Summer 1989), 71 ff; Scott Wolley review of *The Book of Mormon: Jacob through Words of Mormon, to Learn with Joy*, eds., Monte S. Nyman and Charles D. Tate, Jr., in *FARMS Review of Books*, 3 (1991): 106; Michael F. Whiting, review of Clark A. Peterson, *Using the Book of Mormon To Combat Falsehoods in Organic Evolution*, in *FARMS Review of Books*, 5 (1993): 212; Daniel C. Peterson, "Editor's Introduction: Doubting the Doubters," *FARMS Review of Books*, 8, no. 2 (1996): x.

mushrooming growth of the LDS-information-websites—many of which advance a neutral or pro position to evolution<sup>67</sup>—suggests that in time we may see the demise of the Mormon myth that teaching or accepting evolution amounts to apostasy.<sup>68</sup>

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67. For a few examples see  
<http://www.cs.umd.edu/users/seanl/stuff/Evolution.html>,  
<http://www.etungate.com/Evolution.htm>, and  
<http://zoology.byu.edu/bioethics/chapter4.htm>.

68. Special thanks to Marc Schindler for his helpful comments and suggestions.



# Mormonism and the New Creationism

*David H. Bailey*

## INTRODUCTION

IN SOME SENSE, almost all Latter-day Saints (as well as members of numerous other faiths) would call themselves “creationists.” They believe in a God who has overseen the creation of this and other worlds, and they believe that the universe, earth, and humans all have some transcendent purpose. A reasonably open-minded philosophy of this sort is entirely consistent with modern scientific knowledge.

This paper will deal with a more specific form of creationism, which is often termed “creation science” or “scientific creationism” (these terms will be used synonymously). As defined in a 1981 Arkansas law, creation science is the belief in (1) sudden creation of the universe, energy, and life from nothing; (2) the insufficiency of mutation and natural selection in bringing about development of all living kinds from a single organism; (3) changes only within fixed limits of originally created kinds of plants and animals; (4) separate ancestry for man and apes; (5) explanation of the earth’s geology by catastrophism, including the occurrence of a worldwide flood; and (6) a relatively recent inception of the earth and living kinds.<sup>1</sup> Advocates of this view, which is obviously Biblical literalism without explicit references to God, Adam, and Noah, hold that there was no life on earth before Eden (a few thousand years ago), and no death before the Fall of Adam.

The creationist movement is currently very strong in the U.S. In a 1991 Gallup poll, 47 percent of the U.S. public, including 25 percent of

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1. William J. Overton, “McLean vs. Arkansas Board of Education,” court decision, 529 Federal Supplement 1255 (Eastern District of Arkansas 1982), available at [http://cns-web.bu.edu/pub/dorman/McLean\\_vs\\_Arkansas.html](http://cns-web.bu.edu/pub/dorman/McLean_vs_Arkansas.html). See also Niles Eldredge, *The Triumph of Evolution. . . and the Failure of Creationism* (N.Y.: W. H. Freeman, 2000), 93-94.

college students, agreed that "God created man pretty much in his present form at one time within the last 10,000 years."<sup>2</sup> In the early 1980s Arkansas and Louisiana passed laws requiring equal treatment for creation science and evolution in public schools, although courts subsequently ruled these statutes to be unconstitutional. More recently, the Alabama legislature passed a law requiring that public school teachers, prior to discussing evolution, read a disclaimer that it is only a "controversial theory" believed by "some" scientists. It narrowly defeated a measure that would have required, among other things, that teachers instruct students to pencil in "theory only" beside any mention of evolution in textbooks, and "false data" beside any reference to radiocarbon dating. In Kansas, creationists elected a majority to the state school board, which removed mention of an old earth, macroevolution, or the big bang from the state school curriculum, although this action has now been reversed. In Louisiana, the House Education Committee approved a measure that links Darwinism with Hitler and racism. As this article is being written (May 2001), similar creationist efforts are active in Arkansas, Idaho, Michigan, Montana, Nebraska, Oklahoma, Pennsylvania, and Washington.<sup>3</sup>

Surveys of students at Brigham Young University indicate similar trends in the Church of Jesus Christ of Latter-day Saints. In 1935 only 36% of BYU students denied that humans had been "created in a process of evolution from lower life forms," but by 1973 the figure had risen to 81%. The results of a recent (2001) survey in an introductory biology course at BYU suggest that tension and uncertainty over these issues persist. Among students starting Biology 100 (freshmen biology for non-majors), 48% agreed with a position that while "Evolution might apply to some limited circumstances, it does not occur across boundaries which separate major categories of plants and animals; it may apply to lower forms but not to man" (this was the fourth of five choices, with three more negative towards evolution and one more positive). 21% of these students expressed belief that the earth is only a few thousand years old, based on interpretation of scriptures (the second of five choices), and 50% agreed that creationism and evolution should be given equal time in public schools (the third of five choices). In a similar survey

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2. Jeffrey L. Sheler and Joannie M. Schroff, "The Creation," *U.S. News & World Report*, Dec. 23, 1991, p. 59, available at

<http://www.usnews.com/usnews/news/create.htm>.

3. James Glanz, "Evolutionists Battle New Theory of Creation," *New York Times*, April 8, 2001, p.1, available at <http://www.nytimes.com/2001/04/08/science/08DESI.html>. Some of this information is from Eugenie Scott, director of the National Center for Science Education (personal communication, 2001).

of Zoology 101 students (for freshman zoology majors), the corresponding percentages were 55%, 28% and 57%. For Zoology 475 (for upper-division zoology majors), the figures were 23%, 7% and 29%, respectively. In short, these figures paint a picture of freshmen LDS students who are largely confused and apprehensive about these issues, although much of this tension appears to be removed once students complete rigorous scientific coursework.<sup>4</sup> LDS faculty members at BYU are split on the question of evolution, with almost all in scientific departments affirming the conventional scientific picture, while many in the Department of Religion remain opposed. A popular LDS doctrinal commentary, written by a BYU religion professor, rules out evolution as irreconcilable with fundamental LDS beliefs and holds that there was no death before the Fall of Adam, which occurred only 7,000 years ago.<sup>5</sup>

Given these developments, many Latter-day Saints wonder if they should support the creationist movement. To better understand this issue, we shall examine the historical background of creationism, its connections to the LDS church, the scientific validity of its claims, and, finally, how the religious philosophy behind this movement relates to LDS theology and to modern Christian thought.

#### HISTORICAL BACKGROUND

Modern-day creationism, including, to some extent, the prevalence of creationist ideas within the modern LDS church, can be traced back to a nineteenth century religious movement which was the predecessor to today's Seventh-day Adventist denomination.

The theory of evolution, which was first described in 1859 in Charles Darwin's *Origin of the Species*, initially sparked a backlash among many religious leaders. However, even by the end of the nineteenth century, Christians of various denominations began to acknowledge the basic framework of the evolutionary, old-earth worldview. They typically accommodated the facts of geology either by interpreting the "days" of Genesis to represent vast ages (the "day-age" theory) or by distinguishing a creation "in the beginning" from a subsequent creation in the Garden of Eden (the "gap" theory). Either way, Christians could accept the results of geological and paleontological research, while at the same time retaining their beliefs in the Bible as the Word of God. William Jennings Bryan, the outspoken lawyer who led the anti-evolution crusade in the 1920s,

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4. Survey of biology students at BYU, conducted by Prof. William Bradshaw of BYU, 2001.

5. Joseph Fielding McConkie, *Answers: Straightforward Answers to Tough Gospel Questions*, (Salt Lake City: Deseret Book, 1998), 155-165.

interpreted the “days” of Genesis as geological eras and allowed for limited evolution.

At about this same time, the self-taught geologist George McCready Price started the modern creationist movement. Price was a devout member of the Seventh-day Adventist Church, which was founded in the nineteenth century by Ellen G. White. One of White’s key teachings is that the fourth commandment mandates Saturday worship and a literal belief in Genesis. In one of her visions, she was shown that the creation week was “just like every other week.” In subsequent writings she taught that Noah’s flood was a worldwide event, and that after the flood waters had subsided, God caused “a powerful wind to pass over the earth,” which buried the dead animals with trees, stone, and earth. These buried forests then became coal and oil, which God occasionally ignited to produce earthquakes and volcanoes.<sup>6</sup>

As a student who wrestled with the teachings of geology and biology, Price was intrigued by White’s picture of the creation. In several books he subsequently authored, Price declared that much of modern science is “in the highest degree improbable and absurd.” He focused his attack on geology, charging that geologists date rocks by their fossil content, while simultaneously determining the age of the fossils by their location in the geological column. Following White, Price asserted a recent creation and a literal Noah’s flood. To Price, the flood explained why the fossils appear in a predictable sequence—the flood waters first killed smaller animals, followed by vertebrate fishes, and finally larger animals and man, who fled to the hilltops from the rising waters. Price, again echoing White’s teachings, suggested that a miraculous “cosmic storm” buried their bodies. Thus the fossil record reveals merely a sorting of contemporaneous antediluvian life forms, and the conventional geological column is a delusion.<sup>7</sup> Price’s book, *The New Geology*, which was first published in 1923, has sold over 15,000 copies.<sup>8</sup>

The most influential creationist work in recent decades is Whitcomb’s and Morris’s *The Genesis Flood*, which was first published in 1961. Following the same overall outline as Price’s works, this book starts with an affirmation of the authority and infallibility of the Bible. These authors argue, as did Price, that since the scriptures clearly describe a universal flood, Christian believers have only two choices: reject God’s

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6. Ellen G. White, *Spiritual Gifts: Important Facts of Faith, in Connection with the History of Holy Men of Old* (Battle Creek, Mich.: Seventh-day Adventist Publishing Association, Battle Creek, 1864), 90-91; cited in Ronald L. Numbers, *The Creationists* (Berkeley, Calif.: University of California Press, 1993), 74.

7. Numbers, *The Creationists*, 76-77.

8. George McCready Price, *The New Geology* (Mountain View, Calif.: Pacific Press, 1923).

inspired Word or reject the testimony of thousands of professional geologists. According to the authors, God created the entire universe and populated the earth with fully grown plants, animals, and human beings, all in six literal days, using methods and processes completely different from those now in operation in the universe. There was no death before the Fall, so consequently all fossils are the remains of animals which perished subsequent to the Fall. The authors reject the conventional geological column as Price did, by attributing the apparent order of fossils to hydrodynamic sorting of organisms in the flood waters and the superior mobility of vertebrates. They acknowledge that by some indications the earth and the universe appear to be very old (for example, the evidence of light rays streaming to earth from stars millions of light years away), but an omnipotent Creator could easily have created them with the "appearance of age." One interesting item in this book is its mention of "human" footprints found together with dinosaur tracks near the Paluxy River in Glen Rose, Texas. This contradicts the notion that humans appeared many millions of years after dinosaurs became extinct.<sup>9</sup>

A more recent creationist work is Morris's *Scientific Creationism*, which was published in 1974. One of Morris's arguments for a young earth is based on space dust. Morris argues that if the moon is really as old as scientists claim, then it should be buried in over 180 feet of dust. Given that the astronauts found only a fraction of an inch, the moon (and the earth, by similar reasoning) must be much younger. Morris also argues that the second law of thermodynamics (a scientific principle that closed systems tend to evolve into increasingly disordered states) fundamentally forbids biological evolution.<sup>10</sup>

One other popular creationist work is Duane Gish's *Evolution: The Fossils Say No!* In this book Gish focuses on gaps in the fossil record. He argues that for some of these gaps, such as the transition between land mammals and sea mammals, it is biologically impossible that suitable intermediate species could exist.<sup>11</sup>

#### THE LDS CONNECTION

In the 1920s, LDS Apostle Joseph Fielding Smith became enamored with Price's writings. He was particularly impressed by Price's syllo-

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9. John C. Whitcomb, Jr., and Henry M. Morris, *The Genesis Flood: The Biblical Record and Its Scientific Implications* (Philadelphia: Presbyterian and Reformed Publishing Co., 1961, reprinted 1998), xx, 118, 120, 174, 223, 232-33, 238, 273-75, 344-45, 473.

10. Henry M. Morris, *Scientific Creationism* (El Cajon, Calif.: Creation-Life Publishers, 1974; 2d ed., 1985; reprint, 2000), 38-46, 151-53.

11. Duane T. Gish, *Evolution: The Fossils Say No!* (El Cajon, Calif.: Creation-Life Publishers, 1973).

gism, "No Adam, no fall; no fall, no atonement; no atonement, no savior." He corresponded with Price, encouraging him in his efforts to defeat evolution, and then began writing a manuscript laying out what he regarded as the LDS case against evolution.<sup>12</sup>

In 1931 a dispute arose between LDS leaders Joseph Fielding Smith, Brigham H. Roberts, and James E. Talmage. Smith wanted to publish his anti-evolution manuscript, but Roberts wanted to publish his own manuscript, which acknowledged a conventional old-earth view and the existence of "pre-Adamites." In the course of these discussions, Smith promoted Price's book *The New Geology*. Talmage, as a degreed geologist, recognized the strength of evidence for modern geology and biology. While a student at Johns Hopkins University, he had recorded in his journal that he could see no reason "why the evolution of animal bodies cannot be true."<sup>13</sup> As a result, he was highly skeptical of Price's work, but lacking time to investigate he wrote to his son Sterling Talmage, a professor of geology and mineralogy at the New Mexico School of Mines.

Sterling replied that *The New Geology* was not new, nor did it contain any real geology. He then quipped, "With these two corrections, the title remains the best part of the book." Sterling added that most of Price's arguments were "absurd."<sup>14</sup> Meanwhile the debate over evolution among the LDS leaders was stopped by the First Presidency, who declared in a letter, "Leave geology, biology, archaeology and anthropology, no one of which has to do with the salvation of the souls of mankind, to scientific research, while we magnify our calling in the realm of the Church."<sup>15</sup>

In 1954, after Roberts and the senior Talmage had passed away, Joseph Fielding Smith reworked his manuscript on evolution into the book *Man: His Origin and Destiny*. In this book, Smith argued that not only is the theory of evolution unacceptable for doctrinal reasons, but—citing creationist writers such as Price—it is scientifically invalid as well.<sup>16</sup> David O. McKay, who was president of the church at the time (and who personally accepted the basics of biological evolution), reassured several people who wrote to his office that Joseph Fielding Smith's book contained only the author's opinion, and that the church did not

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12. Sterling B. Talmage, *Can Science Be Faith Promoting?* (Salt Lake City: Blue Ribbon Books, 2001), 190-95.

13. Jeffrey E. Keller, "Discussion Continued: The Sequel to the Roberts/Smith/Talmage Affair," *Dialogue* 15 (Spring 1982): 79-94.

14. Talmage, *Can Science Be Faith Promoting?*, 181-89.

15. Richard Sherlock, "We Can See No Advantage to a Continuation of the Discussion: The Roberts/Smith/Talmage Affair," *Dialogue* 13 (Fall 1980), 63-78.

16. Joseph Fielding Smith, *Man: His Origin and Destiny* (Salt Lake City: Deseret Book, 1954).

have an official view on the subject of evolution.<sup>17</sup> Nevertheless, many of Smith's views were subsequently incorporated into his son-in-law Bruce R. McConkie's book, *Mormon Doctrine*, which today, nearly forty years after its original publication, remains the most widely cited LDS doctrinal reference.<sup>18</sup>

In the meantime, an LDS scientist gave a substantial boost to the nascent creationist movement. Dr. Melvin A. Cook, professor of metallurgy at the University of Utah and an internationally renowned explosives expert, was impressed by the arguments of Price, as well as by the teachings of Joseph Fielding Smith. After studying the technique of radiocarbon dating, he declared in 1961 that these dates should be telescoped down to a mere 13,000 years, in keeping with the notion that the seven days of creation each represent 1,000 years and that 6,000 years have transpired since creation. He was similarly critical of radiometric dating techniques and other underpinnings of modern geology. Other LDS scientists, including the renowned chemist Dr. Henry Eyring of the University of Utah, dismissed Cook's views, but Cook continued his work and subsequently published two creationist books.<sup>19</sup> Cook was invited to join the newly organized Creation Research Society, and he frequently published articles in its quarterly journal. Cook's international reputation lent substantial credibility to the Society. Cook was awarded the Nitro Nobel Gold Medal, which is granted periodically for outstanding contributions to the field of explosives, in the same year that his articles began to appear in *Creation Research Quarterly*.

#### THE NEW CREATIONISM

Within the past few years a new group of creationists has arisen who have adopted a somewhat different strategy than their predecessors. They downplay some of the more controversial notions of creationism, such as flood geology and a recent six-day creation, and focus on a smaller set of fundamental notions, sanitized of explicit references to religious doctrine. According to U.C. Berkeley law professor Phillip Johnson, one of the central figures in this movement, the key notion of the creationist worldview is that there exists a personal Creator (an "Intelligent Designer") who is supernatural and who initiated and continues to control

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17. Talmage, *Can Science Be Faith Promoting?*, xlii; see also Sterling M. McMurrin and L. Jackson Newell, *Matters of Conscience* (Salt Lake City: Signature Books, 1996), 198.

18. Bruce R. McConkie, *Mormon Doctrine*, 2d ed. (Salt Lake City: Bookcraft, 1966).

19. Melvin A. Cook, *Prehistory and Earth Models* (London: Max Parrish, 1966); Melvin A. Cook and M. Garfield Cook, *Science and Mormonism* (Salt Lake City: Deseret News Press, 1967).

the process of creation, in furtherance of some end or purpose.<sup>20</sup> Collectively this new group of creationists are often referred to as intelligent design creationists (IDC), as distinguished from young-Earth creationists (YEC), a term used for the more traditional creationist community.

Johnson argues that there is a fundamental and unproven dogma underlying much of modern science, especially evolution. This is the assumption of scientific naturalism, namely the philosophy that empirical nature is the only reality about which we can have solid knowledge. As a result, Johnson argues, the hypothesis that a God or an Intelligent Designer was involved in the creation of life on earth is, in effect, excluded from scientific discourse. He suggests that if scientists removed their naturalistic blinders, they might see the creation in an entirely new light.<sup>21</sup> Johnson frequently attacks the theory of evolution, arguing for example that the fossil record does not indicate smooth transitions between major branches of the biological kingdom.<sup>22</sup>

Another leader of the IDC school is Michael Behe of Lehigh University. He argues that certain biological features are "irreducibly complex," which means they are composed of several interacting parts, of which the removal of any one would cause the system to cease functioning. He cites as examples the complex molecular machinery involved in vision, blood clotting, and movement of flagella. He then argues that it is impossibly unlikely that these components could have separately evolved, only later to fit into the unified system we see in an organism today.<sup>23</sup> In a similar vein, IDC creationist David Foster argues, drawing from an earlier work by astronomer Fred Hoyle, that the probability of forming the alpha-hemoglobin protein of human blood is so remote that it is extremely unlikely for it ever to have formed solely by natural evolution.<sup>24</sup>

Despite their outwardly open-minded approach to the creation, the IDC community has no tolerance for evolution, even theistic evolution, namely the belief that God directs the course of evolution. William Dembski, a prominent IDC writer, makes this clear: "Design theorists are no friends of theistic evolution. As far as design theories are concerned, theis-

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20. Robert T. Pennock, *Tower of Babel: The Evidence against the New Creationism* (Boston: MIT Press, 1999), 30.

21. Phillip E. Johnson, "The Church of Darwin," *Wall Street Journal*, Aug. 16, 1999, available at <http://www.arn.org/docs/johnson/chofdarwin.htm>.

22. Phillip E. Johnson, *Darwin on Trial* (Washington: Regnery Gateway, 1991), 75.

23. Michael J. Behe, *Darwin's Black Box: The Biochemical Challenge to Evolution* (N.Y.: Free Press, 1996), 39.

24. David Foster, *The Philosophical Scientists*, (NY: Barnes & Noble Books, 1993); see also Fred Hereen, *Show Me God: What the Message from Space is Telling Us about God* (Wheeling, Ill.: Searchlight Publications, 1995), 94.



tic evolution is American evangelicalism's ill-conceived accommodation to Darwinism."<sup>25</sup> Phillip Johnson is even more explicit: he describes the IDC strategy as a "wedge," designed to split the ranks of theistic evolutionists and others who hold that evolution is compatible with religion.<sup>26</sup>

#### THE SCIENTIFIC EVIDENCE

Michael Ruse, a philosopher of science who testified in the 1981 Alabama creationism case, describes science as a discipline that (1) is guided by natural law; (2) is explanatory by reference to natural law; (3) is testable against the empirical world; (4) reaches conclusions that are tentative; and (5) is falsifiable.<sup>27</sup> How does creationism, new or old, measure as a scientific theory? For that matter, what is the status of the scientific view of the formation of the earth and life upon it?

At this point in time, the conventional scientific picture of the earth as approximately 4.5 billion years old, with fossil remnants of the branching tree of creation extending from primitive bacteria in the distant past to flowering plants and vertebrates several hundred million years ago, and ultimately to *homo sapiens* during the past million or so years, is very well established. Geological dates are particularly well established, confirmed by numerous independent schemes, many of which rely on fundamental nuclear processes such as radioactivity and fission. These processes are well understood based on the laws of quantum mechanics. Quantum mechanical laws, in turn, are observed to be operating in distant stars, based on spectral measurements of light rays which departed the stars millions or even billions of years ago. Thus scientists have very good reasons to infer that these processes are completely reliable as clocks into the distant past. Biologist Kenneth Miller has observed, "The consistency of the data. . . is nothing short of stunning."<sup>28</sup> Readable discussions of the dating schemes currently used by geologists are available from several sources.<sup>29</sup>

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25. William A. Dembski, "What Every Theologian Should Know about Creation, Evolution and Design," *Center for Interdisciplinary Studies Transactions* 3, no. 2 (1995): 15-21, available at <http://www.origins.org/offices/dembski/docs/bd-theologn.html>. See also Pennock, *The Tower of Babel*, 31.

26. Phillip E. Johnson, *Defeating Darwinism* (Downers Grove, Ill.: InterVarsity Press, 1997), 92. See also Pennock, *The Tower of Babel*, 41.

27. Pennock, *The Tower of Babel*, 5.

28. Kenneth R. Miller, *Finding Darwin's God: A Scientist's Search for Common Ground Between God and Evolution* (N.Y.: Cliff Street Books, 1999), 76.

29. Eldredge, *The Triumph of Evolution*, 103-109; Miller, *Finding Darwin's God*, 63-80; Chris Stassen, "The Age of the Earth," 1997, available at <http://www.talkorigins.org/faqs/faq-age-of-earth.html>.

Until recently, paleontologists had to rely on a spotty fossil record to infer the course of evolution during past eras. Evolutionary closeness in the biological tree of life was often inferred by similarity in bone structure and organs, but in the past few decades, some powerful new tools have arisen, including comparisons of DNA and amino acid sequences. These new tools have confirmed, with very few exceptions, the traditional taxonomy of the biological world. Indeed, by carefully comparing DNA and amino acid sequences between different species, one can estimate relative times to evolutionary branching events in the past. To cite one well-known example: The 141-amino-acid-long alpha-hemoglobin molecule in humans is identical with that of chimpanzees, differs by one location in gorillas, by eighteen in horses, by twenty-five in rabbits, and by approximately one hundred locations in various fish species.<sup>30</sup>

As any responsible scientist will readily admit, the theory of evolution is still a theory in the sense that there are many details still to be pinned down. First, the origin of the earliest reproducing molecules and organisms is somewhat of a mystery, although some intriguing discoveries have been announced along this line in recent years.<sup>31</sup> Second, the specific course taken by the millions of known species, ancient and modern, will require many more years to be thoroughly understood. Third, the relative roles of natural selection, mutations, environmental change, and catastrophes (such as asteroid impacts) are still being debated. But the central notion that an evolutionary process has occurred over many millions of years is not seriously in doubt.

With regard to the creationist theories, it should first be noted that while the YEC and IDC scholars write articles for their own creationist publications, as far as anyone can tell they have not yet attempted to publish articles in conventional, peer-reviewed scientific journals. What are we to make of some of the specific issues raised by creationists? There is not room in this paper to present a complete analysis of these claims, so I will comment briefly on just a few items. For further discussion of these issues, readers are referred to books by Eldredge, Miller, and Pennock.<sup>32</sup> There is also some interesting material in the Talk.Origins archive, which is located on the web at <http://www.talkorigins.org>.

*Space dust.* As mentioned above, Henry Morris and others have argued that the moon can't be as old as ordinarily thought, because other-

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30. Fred Hoyle and Chandra Wickramasinghe, *Evolution from Space* (London: J. M. Dent and Sons, 1981), 17.

31. Paul Davies, *The Fifth Miracle: The Search for the Origin and Meaning of Life* (N.Y.: Simon and Schuster, 1999).

32. Eldredge, *The Triumph of Evolution*; Miller, *Finding Darwin's God*; and Pennock, *The Tower of Babel*.

wise it would be covered with some 180 feet of dust. This claim is based on a 1960 study, published in *Scientific American*, of the space dust infall rate, estimated from measurements made at the summit of Mauna Loa in Hawaii.<sup>33</sup> However, when the actual space dust flow rate was later directly measured by spacecraft, the result was lower by factor of more than 100. When this and other adjustments are made to the calculation, the result is completely consistent with what the astronauts found on the moon.<sup>34</sup>

These facts were made known to the creationist community at least twenty-five years ago, yet creationist speakers and authors continue to promote their argument. For example, it appears in the latest (2000) printing of Morris's *Scientific Creationism*.<sup>35</sup> This circumstance has prompted one scientist, himself a Christian theist, to comment, "The continuing publication of those claims by young-earth advocates constitutes an intolerable violation of the standards of professional integrity that should characterize the work of natural scientists."<sup>36</sup>

*Paluxy River tracks.* Whitcomb and Morris drew attention to "human" footprints and dinosaur tracks side-by-side near the Paluxy River in Texas. A team of anthropologists who subsequently examined this site found that the "human" footprints were 16 to 22 inches long. Subsequent analysis of subtle coloration effects confirmed that the "human" toe marks were dinosaurian. Based on such results, in 1988 an evangelical scientist wrote that it was no longer appropriate for creationists to use the Paluxy River tracks as evidence against evolution.<sup>37</sup> Nevertheless, the tracks are mentioned in the latest printings of *The Genesis Flood* (1998) and *Scientific Creationism* (2000), and they were also featured in the 1995 NBC broadcast *Mysterious Origins of Man*, narrated by Charlton Heston, which claimed that much of the traditional scientific account is false.<sup>38</sup>

*The second law of thermodynamics.* For years creationists have cited the second law of thermodynamics (a principle that closed systems tend to evolve to increasingly disordered states) as fundamental evidence that

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33. Hans Peterson, "Cosmic Spherules and Meteoritic Dust," *Scientific American* 202 (Feb. 1960): 132.

34. Pennock, *The Tower of Babel*, 222.

35. Morris, *Scientific Creationism*, 151-53.

36. Howard J. Van Till, Davis A. Young, and Clarence Menninga, *Science Held Hostage: What's Wrong with Creation Science AND Evolutionism* (Downers Grove, Ill.: InterVarsity Press, 1988), 82. See also Pennock, *The Tower of Babel*, 223.

37. Ronnie J. Hastings, "The Rise and Fall of the Paluxy Mantracks," *Perspectives on Science and Christian Faith* 40, no. 3 (1988): 144-55.

38. Whitcomb and Morris, *The Genesis Flood*, 174; Morris, *Scientific Creationism*, 122; Eldredge, *The Triumph of Evolution*, 129; Pennock, *The Tower of Babel*, 220.

biological evolution cannot occur. However, those who cite it ignore or downplay the key condition, a "closed system," namely a system that has no influx or outflow of energy. The earth's biosphere is clearly not a closed system, since prodigious amounts of energy are received daily from the sun, and there is also heat generated by radioactive processes within the earth itself. This energy is more than enough to account for the evolution of life on earth. Indeed, life can be thought of as a process which creates order from its environment by extracting energy. Some creationists have discontinued using this argument, but it is promoted at length in the latest printing (2000) of *Scientific Creationism*, and it is also featured prominently in the museum of the Institute for Creation Research in San Diego.<sup>39</sup> Additional background on evolution and the second law of thermodynamics can be obtained from several sources.<sup>40</sup>

*Gaps in the fossil record.* Creationists have long assailed geologists and biologists for gaps in the fossil record. It is certainly true that gaps exist, particularly in sections of the geological column for which there are few accessible fossil sites. In addition, scientists now recognize that the fossil record documents periods of relative stability, punctuated with periods of rapid change. However, many of these gaps have been filled during the past few decades with discoveries of transitional fossils. These include several of the gaps which creationists Gish and Johnson claimed could not be bridged.<sup>41</sup>

*Out-of-order fossil layers.* In several locations, including a region of Montana and Canada, fossil layers appear out of their normal order, but these cases are readily explained by "over-thrusting," namely the movement of one section of rock over another, a phenomenon that can be verified by visual inspection.<sup>42</sup>

*No observed speciation today.* Creationists claim that since we do not observe new species arising today, it is speculation on the part of evolutionists to assert that this has happened throughout the history of the world. It is true that large-scale transitions have not been observed in historical times, doubtless due to the fact that they normally require

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39. Morris, *Scientific Creationism*, 38-46; Pennock, *The Tower of Babel*, 47.

40. Eldredge, *The Triumph of Evolution*, 96-97; Pennock, *The Tower of Babel*, 78-82; Frank Steiger, "The Second Law of Thermodynamics, Evolution, and Probability," 1997, available at <http://www.talkorigins.org/faqs/thermo/probability.html>.

41. Eldredge, *The Triumph of Evolution*, 120-34; Miller, *Finding Darwin's God*, 81-128, 264-65; John N. Wilford, "Feathered Dinosaur Fossils Are Unearthed in China," *New York Times*, April 26, 2001, available at

<http://www.nytimes.com/2001/04/26/.science/26DINO.html>. For a listing of many known transitional fossils, see Kathleen Hunt, "Transitional Vertebrate Fossils FAQ," 1997, available at <http://www.talkorigins.org/faqs/faq-transitional.html>.

42. Eldredge, *The Triumph of Evolution*, 110-13.

many thousands of years, but several more modest speciation events have been documented.<sup>43</sup>

*Irreducible complexity.* IDC creationist Michael Behe's principal argument against evolution is that certain biological systems, such as vision or blood clotting, consist of multiple subsystems, the removal of any one of which would render the system nonfunctional. The main difficulty with this argument is that Behe does not convincingly establish that irreducibly complex systems cannot arise by natural evolution. As biologist Allen Orr explains, "an irreducibly complex system can be built gradually by adding parts that, while initially just advantageous, become—because of later changes—essential."<sup>44</sup> Miller points out that several specific examples highlighted by Behe have been studied at length by biologists, and credible evolutionary pathways have been identified.<sup>45</sup>

*Probability.* Some of the creationists' most impressive arguments against evolution involve probability calculations, so I will respond to this issue in some detail. One argument goes like this: The human alpha-hemoglobin molecule, which plays a key oxygen transfer function, is a protein chain based on a sequence of 141 amino acids. There are twenty different amino acids common in living systems, so the number of different chains is  $20^{141}$ , or roughly  $10^{183}$  (i.e., a one followed by 183 zeroes). If five billion years ago, all available material on the surface of the earth were organized into random generators of amino acid chains, then by now only about  $10^{66}$  sequences would have been generated. Thus the probability that human alpha hemoglobin would have been produced is about  $10^{66} \div 10^{183} = 10^{-117}$ , a fantastically small number. Thus no conventional theory of molecular evolution can account for the origin of human alpha-hemoglobin.<sup>46</sup>

However, this argument ignores the fact that most of the 141 amino acids can be changed without altering the key oxygen transfer function—witness that alpha-hemoglobin in fish differs by about one

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43. Miller, *Finding Darwin's God*, 50-53. For some recently reported speciations, see Darren E. Irwin, Staffan Bensch, and Trevor D. Price, "Speciation in a Ring," *Nature* 409 (Jan. 18, 2001): 333-37; David B. Wake, "Speciation in the Round," *Nature* 409 (Jan. 18, 2001): 299-300; Joseph Boxhorn, "Observed Instances of Speciation," 1995, available at <http://www.talkorigins.org/faqs/faq-speciation.html>.

44. H. Allen Orr, "Darwin vs. Intelligent Design (Again)," *Boston Review* 21, no. 6 (1997), available at <http://bostonreview.mit.edu/br21.6/orr.html>. See also Pennock, *Tower of Babel*, 270.

45. Miller, *Finding Darwin's God*, 129-64.

46. Foster, *The Philosophical Scientists*; Hereen, *Show Me God*, 94; Hoyle and Wickramasinghe, *Evolution from Space*, 19; Pennock, *The Tower of Babel*, 231; David H. Bailey, "Evolution and Probability," *Report of the National Center for Science Education* 20, no. 4 (2001), available from <http://www.dhbailey.com>.

hundred locations from that of humans. When we revise the calculation above, based on only twenty-five locations essential for the oxygen transport function, we obtain  $10^{33}$  fundamentally different chains. This is still a very large number, but it is vastly smaller than  $10^{183}$ . Biologists do not believe that alpha-hemoglobin arose by chance—more likely it arose via numerous intermediate steps—but nonetheless the above probability argument falls apart. It is at best inconclusive.

Another way to better appreciate the difficulties with probability arguments (and also with arguments based on the second law of thermodynamics) is to consider snowflakes. Bentley and Humphrey's book *Snow Crystals* includes over 2000 high-resolution black-and-white photos of real snowflakes, many with intricate yet highly regular patterns.<sup>47</sup> What are the chances that one of these structures can form at random? We can calculate the probability that the pattern in one sector will be identical (to within a reasonable accuracy) with the five patterns in other sectors; it is roughly  $10^{-2500}$ . This probability figure is more extreme than any I have seen in anti-evolution literature. Further, the spontaneous formation of a snowflake appears to violate the second law of thermodynamics. Is this proof that God creates individual snowflakes?

The fallacy in this line of reasoning is the fundamental assumption that a snowflake forms all at once as a random assembly of water molecules. It does not—it is the product of a long series of steps acting under physical laws of atomic interactions. A snowflake's six-way symmetry is merely a reflection of an underlying six-way symmetry in the molecular structure of water. Snowflakes also violate the second law of thermodynamics only if one ignores the fact that the formation of a snowflake requires a certain (very small) amount of energy.

*A naturalistic assumption.* As noted above, one of Phillip Johnson's dominant themes is that underpinning much of modern science is an assumption of scientific naturalism, which excludes the hypothesis of an Intelligent Designer. Here science must respond, "Guilty as charged." One of the characteristics of the scientific methodology is that it seeks natural laws and processes to explain natural phenomena, and empirical tests are the arbiter of truth. This naturalistic methodology, while distasteful to some, forces the researcher to always press on in his or her search, and has proven to be an extremely fruitful approach for scientific investigation.

By contrast, the hypothesis of an Intelligent Designer can be invoked literally anytime a scientist wishes: Nature must be this way because an Intelligent Designer made it that way, and it is futile (and possibly dis-

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47. W. A. Bentley and W. J. Humphreys, *Snow Crystals* (N.Y.: Dover Publications, 1962).

respectful) to seek any further explanation. At least the YEC community offers some concrete hypotheses, such as their claim that the creation of the earth took place approximately 6,000 years ago, producing all species of plants and animals currently on earth. These are testable hypotheses (and by any reasonable standard, they have been falsified), but the IDC community declines to describe its Designer, except to say that it is “omnipotent” (meaning not subject to the laws of the universe) and “inscrutable” (meaning utterly beyond our comprehension). Such hypotheses do not lead to empirically testable conclusions. Thus while the Intelligent Designer hypothesis may be an acceptable religious concept in some faiths, it is not an acceptable scientific notion.<sup>48</sup>

#### CREATIONISM AND LDS THEOLOGY

We have seen that creationism, old or new, fares rather poorly when measured against accepted standards of scientific research, but how does creationism fare from a religious point of view, and in particular from the perspective of LDS theology?

As mentioned above, creationism is founded first and foremost on an infallible Bible. By contrast, the LDS church believes that while the Bible is the Word of God, there are several important caveats: (1) the Bible is incomplete, since revelation continues; (2) it has numerous errors of translation; (3) “plain and precious” material has been dropped; (4) certain segments (such as the Song of Solomon) are of dubious inspiration; (4) certain passages (such as Eve being formed from Adam’s rib) should be interpreted figuratively; and (5) the Bible and other LDS scriptures are subject to official interpretation by the First Presidency—the scriptural texts themselves are not the final authority. With regard to figurative passages, Joseph Fielding Smith once wrote:

Even the most devout and sincere believers in the Bible realize that it is, like most any other book, filled with metaphor, simile, allegory, and parable, which no intelligent person could be compelled to accept in a literal sense. . . .

The Lord has not taken from those who believe in his word the power of reason. He expects every man who takes his “yoke” upon him to have common sense enough to accept a figure of speech in its proper setting, and to understand that the holy scriptures are replete with allegorical stories, faith-building parables, and artistic speech. . . .

Where is there a writing intended to be taken in all its parts literally? Such a writing would be insipid and hence lack natural appeal. To expect a believer in the Bible to strike an attitude of this kind and believe all that is

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48. Pennock, *The Tower of Babel*, 185-206.

written to be a literal rendition is a stupid thought. No person with the natural use of his faculties looks upon the Bible in such a light.<sup>49</sup>

With regards to the creation scriptures themselves, most LDS leaders have been reasonably flexible in their interpretations. For example, Brigham Young declared:

As for the Bible account of the creation we may say that the Lord gave it to Moses, or rather Moses obtained the history and traditions of the fathers, and from these picked out what he considered necessary, and that account has been handed down from age to age, and we have got it, no matter whether it is correct or not, and whether the Lord found the earth empty and void, whether he made it out of nothing or out of the rude elements; or whether he made it in six days or in as many millions of years, is and will remain a matter of speculation in the minds of men unless he give revelation on the subject.<sup>50</sup>

In the twentieth century, James E. Talmage, mentioned above in the 1931 dispute over evolution, offered similar guidance:

The opening chapters of Genesis, and scriptures related thereto, were never intended as a textbook of geology, archaeology, earth-science, or man-science. Holy Scripture will endure, while the conceptions of men change with new discoveries. We do not show reverence for the scriptures when we misapply them through faulty interpretation.<sup>51</sup>

A second arena of contrast between creationism (YEC or IDC) and LDS theology regards God and natural law. Recall, for instance, the IDC notion of an “omnipotent” and “inscrutable” Designer. In contrast, Joseph Smith taught that God works in accordance with natural laws, rather than by transcending natural laws: “True science is a discovery of the secret, immutable and eternal laws, by which the universe is governed.”<sup>52</sup> He specifically disavowed the notion of creation *ex nihilo* (out of nothing).<sup>53</sup> These sentiments were amplified by Brigham Young, Brigham H. Roberts, and others.<sup>54</sup>

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49. Joseph Fielding Smith, *Doctrines of Salvation* (Salt Lake City: Bookcraft, 1956), 3:188-90.

50. *Journal of Discourses* (London: Latter-day Saints Book Depot, 1873) 15:127.

51. James E. Talmage, “The Earth and Man,” Tabernacle address, Aug. 9, 1931, published in pamphlet form by LDS church.

52. *Times and Seasons* 4:46.

53. D&C 93:33.

54. *Journal of Discourses* (London: Latter-day Saints Book Depot, 1872) 14:116; Brigham H. Roberts, *The Mormon Doctrine of Deity* (1903; reprint, Bountiful, Utah: Horizon Publishers, 1982), 95-114.



Such principles naturally lead to a philosophy that seeks harmony between science and religion. As Brigham Young wrote, "In these respects we differ from the Christian world, for our religion will not clash with or contradict the facts of science in any particular."<sup>55</sup> John A. Widtsoe also urged accommodation, not conflict, with scientific research: "Scientific truth cannot be theological lie. To the sane mind, theology and philosophy must harmonize. They have the common ground of truth on which to meet."<sup>56</sup>

A third area of contrast is the question of the age of the earth, and whether there was death before the Fall of Adam. While some authorities have advocated literalist views here, others have been more flexible. James E. Talmage acknowledged the fossil record of countless generations of plants and animals, which "lived and died, age after age, while the earth was yet unfit for human habitation."<sup>57</sup> Brigham H. Roberts wrote:

[T]o limit and insist upon the whole of life and death to this side of Adam's advent to the earth, some six or eight thousand years ago, as proposed by some, is to fly in the face of the facts so indisputably brought to light by the researcher of science in modern times....To pay attention to and give reasonable credence to their research and findings is to link the church of God with the highest increase of human thought and effort. On that side lies development, on the other lies contraction. It is on the former side that research work is going on and will continue to go on, future investigation and discoveries will continue on that side, nothing will retard them, and nothing will develop on the other side. One leads to narrow sectarianism, the other keeps the open spirit of a world movement with which our New Dispensation began. As between them which is to be our choice?"<sup>58</sup>

As noted above, Joseph Fielding Smith adopted a comparatively literal approach to the age of the earth, evolution and related issues, and these views were largely incorporated into McConkie's popular *Mormon Doctrine* (and were a source of the concern raised among top LDS authorities when this book was first published).<sup>59</sup> Yet it is clear from several studies of the church's posture toward science through the years that the Smith-McConkie approach is somewhat of an anomaly. A number of the

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55. *Journal of Discourses* 15:127.

56. John A. Widtsoe, *Joseph Smith as Scientist* (Salt Lake City: Bookcraft, 1908; reprint, 1964), 156.

57. Talmage, "The Earth and Man," 1931.

58. Brigham H. Roberts, *The Truth, the Way, the Life: An Elementary Treatise on Theology*, ed. Stan Larson (1931; reprint, Salt Lake City: Smith Research Associates, 1994; also Provo, Utah: BYU Studies, 1994), 364.

59. David O. McKay diary, entries dated Jan. 7-8, 14, 27, 28, 1960, transcript in author's possession.

early LDS leaders, as well as several of the present-day authorities, have recognized the futility of battling the scientific world and have favored a more progressive approach to these questions.<sup>60</sup>

For example, Elder Russell M. Nelson, in the April 2000 general conference, advocated a flexible interpretation of the seven days of creation: "Whether termed a day, a time, or an age, each phase was a period between two identifiable events—a division of eternity."<sup>61</sup> Further, the First Presidency now sends, to those who inquire about evolution, a short statement concluding with the summary quote from its 1931 letter (mentioned above): "Leave geology, biology, archaeology and anthropology, no one of which has to do with the salvation of the souls of mankind, to scientific research, while we magnify our calling in the realm of the Church." The text of this statement follows the article "Evolution" in the *Encyclopedia of Mormonism*, which was prepared with specific direction from top church leaders.<sup>62</sup> Along this line, current LDS church President Gordon B. Hinckley recently stated that the church requires only belief "that Adam was the first man of what we would call the human race." Recalling his own study of anthropology and geology, Hinckley said, "Studied all about it. Didn't worry me then. Doesn't worry me now."<sup>63</sup>

One final area of contrast between creationism and LDS theology regards the creationist notion that the earth and the universe may have an "appearance of age," and life on earth may suggest an evolutionary process, but this is because an omnipotent Creator created them that way, as part of an inscrutable plan.<sup>64</sup> Despite valiant efforts by creationists to rationalize this doctrine, it remains an exceedingly distasteful notion. Needless to say, this notion is utterly at odds with the LDS concept of a rational, comprehensible God, one who declared, "The Glory of God is intelligence; in other words light and truth."<sup>65</sup> Latter-day Saints are hardly alone in rejecting this notion. Catholic biologist Kenneth Miller writes, "In order to defend God against the challenge [creationists] see from evolution, they have to make him into a schemer, a trickster, even a charlatan. Their version of God is one who intentionally plants misleading clues beneath our feet and in the heavens themselves. . . . To embrace that God, we must reject science and worship deception itself."<sup>66</sup>

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60. Duane Jeffery, "Seers, Savants and Evolution: The Uncomfortable Interface," *Dialogue* 8 (Autumn 1974): 41-75; Erich R. Paul, *Science, Religion, and Mormon Cosmology* (Chicago: University of Illinois Press, 1992).

61. Russell M. Nelson, "The Creation," *Conference Report*, April 2000.

62. Daniel H. Ludlow, ed., *The Encyclopedia of Mormonism* (N.Y.: Macmillan, 1992), 2:478.

63. Larry A. Witham, *Where Darwin Meets the Bible*, (NY: Oxford University Press, 2002): 176-77.

64. Whitcomb and Morris, *The Genesis Flood*, 233-39; Morris, *Scientific Creationism*, 209-10.

65. D&C 93:36.

66. Miller, *Finding Darwin's God*, 80.

LDS scientists on the faculty at Brigham Young University universally reject (as far as I am aware) the young-earth creationist worldview. Many are sympathetic to a more general creationist philosophy, but only to the extent that such a philosophy is consistent with well-established principles of physical and biological science. University administration officials and others have attempted from time to time to impose creationist biology at the school, but these efforts have been scuttled.<sup>67</sup> Along this line, in 1992 the BYU Board of Trustees approved a packet of information regarding evolution to be provided for interested students at the university. It includes a few statements by first presidencies of the church and conveys a generally balanced, open-minded stance on the issue.<sup>68</sup>

I should add that recently some excellent books have been published by LDS scientists on these topics. Sterling B. Talmage's book, *Can Science Be Faith-Promoting?*, and the Stephens-Meldrum book, *Evolution and Mormonism: A Quest for Understanding*, are particularly recommended.<sup>69</sup>

#### CREATIONISM AND MODERN CHRISTIAN THOUGHT

It should be noted that the creationist movement is endorsed by only a relatively small sector of the Christian community. Most mainline Protestant denominations made peace with evolution and other areas of modern science many years ago. In 1996 Pope John Paul II declared that "fresh knowledge leads to the recognition of the theory of evolution as more than just a hypothesis."<sup>70</sup> Along this line, a conference was recently held in Berkeley, California, entitled "Science and the Spiritual Quest." Numerous leading scientists, mostly with Catholic or mainline Protestant affiliations, participated in the meeting. Many expressed deep awe and wonder at the majesty of the universe, which is now known to be much vaster and more exotic than ever before imagined, and the beauty and elegance of the natural laws that govern it. Several of these scientists mentioned interesting new avenues where religion and modern science can accommodate and even reinforce each other.<sup>71</sup>

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67. Gary J. Bergera and Ronald Priddis, *Brigham Young University: A House of Faith* (Salt Lake City: Signature Books, 1985), 131-71.

68. "Evolution and the Origin of Man," packet of information approved by BYU Board of Trustees, June 1992, compiled by William Evenson, available at <http://www.frii.com/~allsop/eyring-l/faq/evolution/trustees1992.html>.

69. Talmage, *Can Science Be Faith-Promoting?*; Trent D. Stephens and D. Jeffrey Meldrum, *Evolution and Mormonism: A Quest for Understanding* (Salt Lake City: Signature Books, 2001).

70. Pennock, *The Tower of Babel*, 39.

71. Sharon Begley and Marian Westley, "Science Finds God," *Newsweek*, July 20, 1998, 46, available at [http://www.washingtonpost.com/wp-srv/newsweek/science\\_of\\_god/scienceofgod.htm](http://www.washingtonpost.com/wp-srv/newsweek/science_of_god/scienceofgod.htm).

In tandem with these developments, numerous books have recently appeared which intelligently and sensitively explore these issues.<sup>72</sup> Physicist Paul Davies describes some remarkable features of our universe, such as its finely tuned physical parameters, and describes the wonder of advanced life on earth, which may be unique in a fairly large region surrounding the solar system.<sup>73</sup> Biologist Kenneth Miller asserts that one can be a serious scientist and a Christian believer, not because evolution is wrong, but because modern science (notably quantum mechanics and chaos theory) has destroyed the traditional notion of a deterministic, clockwork universe, thus allowing the hand of God in the ongoing process of creation.<sup>74</sup> Protestant theologian John Haught points out that in demanding a literal reading of Genesis, and in laying the truth of the Christian religion on the question of whether the Genesis text is scientifically correct, creationists are in effect ratifying the very philosophy (scientific materialism) that they most detest.<sup>75</sup> Haught also observes,

If God were a magician or a dictator, then we might expect the universe to be finished all at once and remain eternally unchanged. If God insisted on being in total control of things, we might not expect the weird organisms of the Cambrian explosion, the later dinosaurs and reptiles, or the many other wild creatures that seem so exotic to us. We would want our divine magician to build the world along the lines of a narrowly human sense of clean perfection.

But what a pallid and impoverished world that would be. It would lack all the drama, diversity, adventure, and intense beauty that evolution has in fact produced. A world of human design might have a listless harmony to it, and it might be a world devoid of pain and struggle, but it would have none of the novelty, contrast, danger, upheaval, and grandeur that evolution has brought about over billions of years.

Fortunately, the God of our religion is not a magician but a creator. And we think this God is much more interested in promoting freedom and the adventure of evolution than in preserving the status quo.<sup>76</sup>

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72. Ian G. Barbour, *Religion and Science: Historical and Contemporary Issues* (San Francisco: HarperSanFrancisco, 1997); Paul Davies, *The Accidental Universe* (London: Cambridge University Press, 1982); Davies, *The Fifth Miracle*; Stephen Jay Gould, *Rocks of Ages: Science and Religion in the Fullness of Life* (N.Y.: Ballantine Publishing Group, 1999); John F. Haught, *God after Darwin: A Theology of Evolution* (Boulder, Co.: Westview Press, 2000); John F. Haught, *Science and Religion: From Conflict to Conversation* (N.Y.: Paulist Press, 1995); Miller, *Finding Darwin's God*; John Polkinghorne, *Belief in God in an Age of Science* (New Haven: Yale University Press, 1998); Michael Ruse, *Can a Darwinian Be a Christian? The Relationship between Science and Religion* (London: Cambridge University Press, 2000).

73. Davies, *The Accidental Universe*; Davies, *The Fifth Miracle*.

74. Miller, *Finding Darwin's God*, 17.

75. Haught, *Science and Religion*, 52; Haught, *God after Darwin*, 31.

76. Haught, *Science and Religion*, 62.

It is significant that none of these books are written by creationists of either the YEC school or the IDC school. Instead, they are written by reputable scientists and theologians, mostly with Catholic or mainline Protestant affiliations, who seek an intellectually honest harmony between modern science and religion.

#### CONCLUSION

In summary, “scientific creationism” (as defined in the introduction) is not legitimate peer-reviewed science. It does not deserve to be presented on a par with conventional science in public schools. Instead, creationism is thinly disguised Biblical literalism.<sup>77</sup> And the new creationism is, for the most part, merely the old creationism in “designer clothes.”<sup>78</sup>

From a theological perspective, creationism leads to the distasteful notion of God as a great Deceiver, who has planted evidence throughout the earth and the universe to mislead diligent seekers of truth. Further, either form of creationism contrasts sharply with fundamental LDS beliefs, which teach of harmony between science and religion, and which describe a rational, comprehensible God, who works within, rather than beyond the realm of natural law.

Creationist arguments in many cases represent new instances of the “God of the gaps” approach to theology—the philosophy that God can be found in the gaps of what currently remains unexplained in science. Those who have adopted this approach over the centuries have invariably been disappointed as scientific knowledge fills more of the remaining gaps. Many religious believers have also found that seeking “proofs” for the existence of God (scientific or otherwise) is an ineffective and often counter-productive route to faith. Jesus of Nazareth frequently commented on the dangers of seeking “signs” of this sort.<sup>79</sup>

Creationists create a false dichotomy: One must either accept their particular form of creationism or else reject faith in God. Yet many leading scientists with religious convictions, both LDS and non-LDS, have accommodated the findings of modern science without abandoning their basic religious beliefs. There is ample room within the scope of modern scientific knowledge for believing in an intelligent God who governs the marvelous ongoing process of creation.

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77. Overton, “McLean vs. Arkansas.”

78. Pennock, *Tower of Babel*, 275.

79. Matt. 12:39, 16:4; Mark 8:12; Luke 11:29.

# Syllabus

## **Astronomy**

The earth  
Or sky wobbles,  
We don't know which

## **Biology**

A mosquito turns the  
Horse's head without  
A bridle

## **Economics**

Four cups of lemonade,  
Three cents each; three cups,  
Five cents each

## **Education**

A little girl asks about babies,  
Her friend  
Explains everything

## **Geology**

Rocks drift, fire flows,  
Earth turns,  
No one watching

## **History**

Black ink describing  
Spilt blood is  
Both red and black

## **Law**

Painting a circle  
On the ground,  
The bull in the middle

## **Literature**

A man goes into town,  
Eats, drinks, burps, prays, sleeps  
Leaves town

## **Medicine**

Guess his  
Name, and vanquish  
Rumplestiltskin

## **Mythology**

A child lost in a dark  
Wood, no path,  
Only light

## **Physics**

Adam steals apples,  
Isaac watches  
Them fall

## **Philosophy**

The Charles overflows its  
Banks, changes course,  
Still the Charles

## **Poetry**

A rusty gate is  
A rusty gate  
And more.

## **Psychology**

The shoe thief discovers  
Shoes and elves  
Takes the elves

## **Religion**

A woman enters stage  
Left, blushes,  
Exits stage right

## **Statistics**

No whales in  
The moon-washed sea  
Only pods

David K. Isom

# The Human Genome Project, Modern Biology, and Mormonism: A Viable Marriage?

*Devyn M. Smith*

## INTRODUCTION

THE WORLD IS RAPIDLY CHANGING as new technologies change the way we think, act, and live. This is particularly true with the many changes biology has wrought in our lives over the last few years. Nearly every day new discoveries are made which advance scientific knowledge and enable us to lead longer, healthier lives. This new scientific information is disseminated to the public daily via television, radio, newspaper, and the internet. New words such as cloning, genomics, anthrax, and genetically modified food, are rapidly entering the layperson's vocabulary. Just as the Industrial Revolution changed the world into a mobile, manufacturing, technology-based economy, the "Biological Revolution" will have similarly unimaginable effects upon our world. These include the curing of some of the most dreaded diseases, such as cancer, and the treatment of age-related illnesses to enable longer, more productive lives to be led. Unfortunately, these same techniques can be used for evil, as recently witnessed by the anthrax bioterrorism attacks.

How will these current and future discoveries within the realm of biology affect Mormonism? This essay is an attempt to understand new scientific breakthroughs within the context of the gospel by focusing on molecular biology and the Human Genome Project, since these two enterprises have been important catalysts for the Biological Revolution. First, a brief introduction to the church's historical attitude toward science will be presented to outline the context of the church's relationship with science. Then, a primer on molecular biology and the Human Genome Project will be presented. In addition, the importance of the Human Genome Project to society will be addressed, and some of the ethical issues associated

with the genome data will be analyzed. Finally, these ethical issues will be applied to some doctrinal ideas to show how the Biological Revolution could complicate traditional Mormon doctrines.

#### THE BATTLE BETWEEN MORMONISM AND SCIENCE

Since the advent of Darwinism in the late nineteenth century, Mormonism and biology have found themselves in a constant battle, particularly over evolution. The church did not have a particularly strong, united anti-science stance in the late nineteenth and early twentieth century when noted Mormon scientists, such as John Widstoe, James Talmage, and B. H. Roberts, were found in the leading councils of the church. Since the deaths of these men in the 1930s, however, the battle between Mormonism and science has been especially strong. From the 1930s until the mid 1980s, Joseph Fielding Smith and Bruce R. McConkie have consistently discussed the evils of evolution and—by extension—science and scientists.<sup>1</sup> In their speeches and through their books,<sup>2</sup> they have clearly stated their positions, implying that these are also the official church position. However, the church says it takes no official position or stand on the issue of evolution except that Adam and Eve were the first humans.<sup>3</sup>

The views of Smith and McConkie have created a conundrum for members of the church. While evolution and the science associated with it have been seen as an inherent evil, the miracles of modern medicine have been seen as blessings from God. For instance, Elder McConkie states, "the Lord...intends that men should use the agency and intelligence He has given them in both preventing and curing sickness."<sup>4</sup> Furthermore, McConkie states, "The promised latter-day increase of knowledge and learning is evidenced by the many inventions....We have already seen the discovery...of medicinal advances, surgical achievements and wonder drugs."<sup>5</sup> However, McConkie harshly criticizes evolution as completely incompatible with the gospel. As a summation to his article on evolution, he states, "There is no harmony between the truths of revealed religion and the theories of organic evolution."<sup>6</sup> Hence, members of the church often have believed that science is inher-

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1. Gene Sessions and Craig Oberg, *The Search for Harmony: Essays on Science and Mormonism* (Salt Lake City: Signature Books, 1993).

2. Joseph Fielding Smith, *Man: His Origin and Destiny* (Salt Lake City: Deseret Book, 1954); Bruce R. McConkie, *Mormon Doctrine* (Salt Lake City: Deseret Book, 1993).

3. Trent D. Stephens, D. Jeffrey Meldrum with Forrest B. Peterson, *Evolution and Mormonism: A Quest for Understanding* (Salt Lake City: Signature Books, 2001).

4. McConkie, *Mormon Doctrine*, 573.

5. *Ibid.*, 72.

6. *Ibid.*, 256.



ently evil, unless it is for the direct medicinal benefit of humankind. The problem with this argument is that the same science and often the same scientists make discoveries in both evolutionary biology and modern medicine. These two fields of science are not mutually exclusive. For example, powerful techniques in molecular biology enable scientists to more rapidly discover new drugs, while the same techniques are also used to generate evidence in support of evolutionary processes. This dichotomy will become more apparent in the future as more scientific discoveries are made which treat disease and at the same time strengthen the case for evolution.<sup>7</sup>

#### WHAT IS MOLECULAR BIOLOGY?

Molecular biology studies the basic molecules and processes which combine to create a living organism. This field of study has been the impetus for many of the scientific advancements in the last twenty years in many fields of science, including modern medicine and evolutionary biology. A short lesson on some scientific terms will enable a more fruitful discussion. DNA—an acronym for deoxyribonucleic acid—is composed of a long chain of nucleosides. Nucleosides are created by joining a nucleotide (purine or a pyrimidine ring) and a deoxyribose molecule (sugar molecule). The purine/pyrimidine bases can be one of four molecules: Cytosine (C), Thymine (T), Guanine (G), or Adenine (A). C-G and A-T can form a molecular interaction or bond with one another, which results in the joining of two parallel DNA strands. In this way, a chain of nucleotides can form a simple alphabet comprised of the four letters AGCT. An organized chain of these bases composes a single gene. The average gene is composed of three thousand nucleotide bases.<sup>8</sup> For example, AAGGTCGATTCCAAGCTGGATGCAGAATTC could be the alphabet for a portion of a gene. Every three bases—a “codon”—contain the code for one amino acid. (Three unique codons actually code for a stop, which means that the full length of the protein has already been synthesized.) For example, ATG codes for the amino acid Methionine. Chains of amino acids form proteins, while a single protein is usually encoded by a single gene. For example, insulin is a protein encoded by the insulin gene. All of the genes and non-coding DNA (i.e., DNA containing regulatory elements for genes and other functions not discussed here) found in a single organism make up that organism’s genome. Gene-

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7. Stephens and Meldrum, *Evolution and Mormonism*.

8. U.S. DOE Human Genome Project. *Human Genome News* 11, no. 1-2 (November 2000).

encoding DNA is first turned into ribonucleic acid, or RNA, as an intermediate step to making a protein. This ensures that only gene-containing DNA is made into protein, as the protein-creating machinery only recognizes RNA. The movement of information from DNA to RNA to protein is called the "Central Dogma."

Molecular biology, as a field of study, began in the 1970s with the discovery of several new technologies. First, it was discovered that RNA could be turned into DNA using a special enzyme discovered in retroviruses (for example, HIV is a type of retrovirus). This enzyme allowed researchers to convert RNA into DNA. RNA is very unstable, and little could be done to identify which particular gene a strand of RNA encoded. Second, the ability to transfer pieces of DNA from one DNA molecule to another using restriction endonucleases (enzymes which cut DNA in specific sites) enabled researchers to chop up long stretches of DNA into smaller pieces and put these smaller strands together again into a desired order. Third, circular DNA molecules (plasmids) could be grown in bacteria to amplify billions of copies of that particular piece of DNA. By this method, individual genes isolated from an organism's genome (through the conversion of RNA into DNA) could be inserted into a plasmid. The bacteria could synthesize many copies of that plasmid, and then the plasmid DNA could be isolated in large, relatively pure quantities. This amplification of DNA can also be performed in a test tube using a technique called the polymerase chain reaction (PCR). Fourth, the ability to sequence DNA, or identify the individual bases (i.e., read the alphabet), allowed researchers to identify which regions of DNA contained genes and which regions contained other DNA elements. These technologies have been combined to create a very powerful method for identifying the genes within an organism. In addition, these techniques allow scientists to understand the roles of the proteins encoded by these genes in creating an organism and in causing disease, while also providing insights into the evolutionary relationships between different species.

#### WHAT IS THE GENOME PROJECT?

The Human Genome Project has been a distinct catalyst for many recent scientific breakthroughs. It was begun in 1990 with the goal of sequencing all three billion bases (A,C,G,T alphabet) of the human genome by 2005. The project was under the direction of the National Institutes of Health and a consortium of university labs throughout the world. Due to improvements in technology, the sequencing was finished during the summer of 2000, five years early, and below budget (not many government programs accomplish that!). A publicly held company, Celera Genomics, also sequenced the entire human genome and finished at the same time as the public consortia. (Celera actually began sequencing the

genome in the late 1990s, but quickly caught up with the government consortia.) The three billion sequenced bases (3164.7 million) are found on twenty-three sets of chromosomes which exist in nearly every one of the human body's 100 trillion (100,000,000,000,000) cells. The data from the human genome sequencing was published in the February 15, 2001 issue of *Nature* and in the February 16, 2001 issue of *Science*.<sup>9</sup>

With the sequencing finished, the task of assembling and analyzing the tremendous amount of generated data has begun. The first step was to identify the number of unique genes existing in the human genome. Using powerful computer technology, scientists have come to believe that the actual number of genes will be around 35,000-40,000, barely double that of a primitive roundworm (*Caenorhabditis elegans*).<sup>10</sup> Each gene must be studied individually to learn its particular role in the development, maintenance, and disease processes of our bodies. This is done by first discovering where a particular gene is expressed, when it is expressed, and finally, how its expression is controlled in each region of the body. In addition, each protein produced by these genes (genes can actually encode for a single or many different proteins) must then be studied to learn which other proteins it interacts with and how this interaction is controlled. By creating this large web of interactions and control mechanisms, we will finally understand physiological processes such as embryology, growth, puberty, aging, and disease.

#### WHY IS THE HUMAN GENOME PROJECT IMPORTANT?

In the past few years, we have just begun to understand the importance of the Human Genome Project. Since the project was launched, many thousands of genes have been identified as the sequencing has progressed. In addition, hundreds of mutations in specific genes have been found which can cause a particular disease. Muscular dystrophy, cystic fibrosis, Huntington's disease, and breast cancer are some examples for which disease-causing mutations in a particular gene are now known.

Pharmaceutical and biotechnology companies are focusing upon those genes containing disease-causing mutations. Once researchers have identified such genes, drug design can occur. Drug design involves creating drugs to disable the mutant protein, bypass the mutant protein, or "fix" the mutant protein. This process is known as "rational drug design." It is hoped that this method of drug development will cut down the

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9. Entire issue, *Science*, 291, no. 5507 (16 February 2001), see especially, Svante Paabo, "The Human Genome and Our View of Ourselves," 1219-1220; Entire issue, *Nature* 409, no. 6822 (16 February 2001), see especially, David Baltimore, "Our Genome Unveiled," 814ff.

10. US DOE, *Human Genome News* 11:3.

tremendous costs (up to \$500 million per drug) and time (between five and ten years) currently associated with bringing a drug to market. This would potentially lower the cost of drugs for patients. The money could also be used to develop additional drugs to cure and treat many diseases, including various types of cancer, age-related illnesses, and other genetic diseases.

In addition, now that the entire complement of genes within the human body is known, scientists can be more precise at analyzing the toxicity of newly designed drugs on the entire genome of an individual, and by inference the individual's body, without actually affecting a patient until the drug is known to be both safe and effective. This would be important, as many thousands of lives are lost each year due to unforeseen drug interactions and toxicity. To analyze drug toxicity, a copy of each gene found within a person's genome is attached to a glass slide. Cells isolated from the person's body can then be tested with potential drugs by first isolating their RNA, converting it to DNA, and testing it with the drug. Some genes will be turned on and others turned off by the drug. By comparing the expression profile of the treated cells with the profile of untreated cells, scientists can identify toxicity and selectivity of drug candidates. The technique also creates a relatively quick, simple, and cheap method for genetic testing. In the future, many tests could be performed using this technique to rapidly assess which drugs would most benefit a particular patient's condition given their unique response profile to a set of drugs.

In addition to the potential "miracle drugs" which may be developed based upon information gleaned from the Human Genome Project, information will also be obtained regarding what makes the human species unique. Some of the questions that could be answered include: Which genes make us different from a mouse or a monkey? Do humans have the same genes as apes? Are there distinct genes that are unique to humans? Are there genes that enable us to have consciousness or emotions? If we have all the genetic information of a human, could a synthetic human then be created? Are there genes that help determine spirituality, kindness, and love? What are the actual genetic differences between men and women? How are these genetic differences manifested in behavioral and physical characteristics? The answers to these questions and many more will come as the data from the Human Genome Project is further studied.

#### THE HUMAN GENOME PROJECT AND ETHICS

The promise of new drugs to cure and/or treat disease may sound wonderful to Latter-day Saints and the world at large, but what are some of the other implications of the Human Genome Project? Should Latter-

day Saints be concerned about these future issues? I would like to highlight a couple which will be a) relevant to members of the church, and b) particularly difficult for the church to formulate a doctrinal response to. This list is not mutually exclusive or collectively exhaustive; rather, it is an attempt to stimulate a thoughtful reflection in the reader's mind.

First, the knowledge gained from the Human Genome Project will allow researchers to know which genetic type ("genotype") leads to certain physical traits ("phenotype"). For instance, the genotypes which lead to above average intelligence, "perfect" physique, eye color, hair color, skin color, etc. could be identified. With the technical ability to perform in vitro fertilization, one could presumably "test" an egg and sperm, or the newly fertilized embryo, to choose traits desired by parents for their offspring. This could lead to a race of people with "perfect" genetic traits. Could this lead to two populations, one that selects for offspring, and one that fertilizes via natural means? (A similar story line was found in the recent Hollywood movie, *Gattaca*.) While such a scenario may seem unfeasible, sex selection does currently occur, and selection for embryos devoid of certain disease genes also occurs. Therefore, the next step would be selection for desirable traits. Clearly, the church would be against such selection for vain purposes, but what if we could select for better leaders, better missionaries, or other desirable traits? Would it be okay to select traits such as compassion, peacemaking, etc.? The church is currently not adamantly against in vitro fertilization when the child will be the biological offspring of its parents (and even when it is not, in vitro fertilization is not considered a sin). Would the official church stance change in the face of such genetic selection? Would the church strike a more conservative ground, as it has with its stance against abortion? (Members are currently allowed abortions in the case of incest, rape, severe deformities which would prevent life after birth, and in cases where the mother's health is in jeopardy.)

Second, genetic testing of individuals for disease genes is already occurring for a select number of diseases. The number of diseases tested and the number of people tested will increase as less expensive, more efficient techniques are developed. Such testing allows individuals to know if they are prone to a certain disease, but what if there is no treatment for the disease? For example, a person could be tested for Alzheimer's disease and learn that she had a fifty percent chance of developing the disease in the next ten years. Unfortunately, there is nothing that can be done to prevent her from developing the disease. Is it ethical to tell someone he or she is a "walking time bomb" for a disease? What effects could these "time bombs" have upon society as a whole?

Third, genetic discrimination toward those who carry disease genes or other "undesirable" genes could occur. This discrimination could take

the form of insurance companies refusing to issue life or health insurance to those with such genes. Furthermore, employers could terminate employees with certain genotypes to keep healthcare costs low. Laws could prevent much discrimination, but experience shows that discrimination will nonetheless occur. If widespread genetic selection occurs, could those who choose *not* to genetically select be discriminated against by employers, schools, insurance companies, etc.? Again, the church would likely be against discrimination in any form, but how would it respond to genetic testing? What if genetic testing were mandated by employers? What about laws that impair the rights of those who refuse to be genetically tested? Will the church still uphold the law?

Fourth, as genes are identified with specific functions in the body, it is entirely probable that some will be found which are linked to homosexuality, alcoholism, and violent behavior. Thus, people who exhibit such behavior could be genetically prone to do so. While being predisposed to a behavior does not preclude one's free agency, would more compassion and perhaps leniency be given to those "afflicted" with such genes? Could homosexuals be "cured" of such behavior, if a genetic mutation is the root cause? Would homosexuality be treated differently within the church or, at least, be more tolerated? Would it be considered a "flaw" to carry these types of genes? Will drugs to "cure" or treat these behaviors be developed? What behaviors should be considered for future drug design?

Fifth, genetic testing for deleterious genes will probably result in an increase in the abortion rate, as fetuses which carry deleterious genes impairing normal life are aborted. This would mean that fewer people would have mental and physical disabilities such as Down's syndrome. It is entirely possible that these disabilities would then exist only in conservative religious groups opposing abortion and strongly discouraging or prohibiting members from participating in abortions. Two key problems occur in this scenario:

First, how would the church interpret its current stance which allows abortion based upon "severe deformities, which prevent life after birth"? What is a "severe deformity"? What is considered "life" after birth? Is living in a vegetative state in an institution "life"? Could abortion be considered an option for some disabilities? If so, which ones? Is there a purpose for children with severe disabilities in families? (Church leaders would most likely say "yes.") Would the increase in abortion of these fetuses result in the loss of blessings for the parents? How would the Lord compensate for the loss of these "special" spirits?

The second conflict concerns the larger societal and financial costs associated with treating disabled individuals who could have been aborted in the first place. Should society as a whole pay for the cost to treat such severely disabled persons? While it seems unfathomable to members of the

church, the sad reality is that money may play a larger role in this than it should. Would parents who choose to have disabled children be forced to pay the costs for treating these children when their insurance or government programs declined to cover the costs? What if governments passed laws mandating abortion of fetuses carrying certain deleterious mutations? Would the Twelfth Article of Faith still be valid in these countries?

Finally, it is only a matter of time before the cloning of a human being occurs. Many different species of mammals have already been cloned, including primates.<sup>11</sup> Therefore, it is probable that someone, perhaps not in the United States or Europe, will clone a human being in the near future. What is the nature of a cloned human's spirit? Did God account for the clone in the preexistence? Does the clone's spirit look identical to the donor's spirit? If so, did God "clone" these spirits to look identical to each other in every way?

#### EFFECTS UPON THE CHURCH?

As can be seen from the above discussion, the Human Genome Project can lead to many wonderful advances for humankind, but it also raises some very complex ethical issues for humankind in general and Mormonism in particular. However, nothing has been written in church publications or said in general conferences about the Human Genome Project.<sup>12</sup> In fact, in recent years, very little has been said about science over the pulpit. The leadership of the church appears to have taken a bystander approach to science under the auspices of Presidents Benson, Hunter, and Hinckley. This approach has probably been due to the fact that many within the leading hierarchies of the church do not understand science and have little time to study it, as many other pressing needs of the church must be met. This has been a fair and appropriate response for the leaders of the church to take as the work of the gospel takes precedence over scientific or ethical issues. Yet, as can be seen from the discussion in this article, the ethical issues arising from the Human Genome Project are no longer potential scenarios, but very real situations that will occur and are now occurring. It is critical that leaders of the church become aware of these issues before they become acute, so that appropriate responses are considered. If church leaders are well prepared for the ethical dilemmas imposed by the Biological Revolution, then a hastily developed, poorly considered response to such issues will be averted, and church members will be less bewildered and troubled.

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11. A. W. S. Chan, T. Dominko, C. M. Luetjens, E. Neuber, C. Martinovich, L. Hewitson, C. R. Simerly, and G. P. Schatten, "Clonal Propagation of Primate Offspring by Embryo Splitting," *Science* 287, no. 5451 (4 January 2000), 317-19.

12. Determined by searching the church magazine database found at [www.lds.org](http://www.lds.org).

In this section, I have highlighted a couple of previously simple doctrinal issues which have been greatly complicated by the Human Genome Project. First, we now have the theoretical capability to create a human being, based upon the newly mapped blueprint of human DNA. We have the knowledge to synthetically create humankind, a power previously reserved for God! Furthermore, we may soon have the knowledge to create a "perfect" human who would not be susceptible to all the physical ailments we currently experience because of imperfect genes. Such individuals should live longer lives and could potentially live forever. (Perhaps, the resurrection is merely the cloning of someone who has already died, while fixing the imperfections within their DNA to render them immortal.) Are humans treading on ground reserved exclusively for God? Or has God given us this knowledge and capability so that the eventual resurrection will be easier to understand for those still on the earth? In fact, perhaps those on the earth during the Millennium could actually participate in the resurrection of their fellow people and animals.

A second, very complex doctrinal issue involves the makeup of our spirits versus our physical selves. If our spirits resemble our physical selves, and the blueprint for our physical appearance is found within our DNA, then how does a premortal spirit resemble our physical self when our DNA constitution was not known until we were conceived? Two possible scenarios could explain this situation.

First, it is possible that our premortal spirits did not have distinct physical characteristics, but acquired them once the physical makeup of the body was known. For example, a spirit could have a "general" human form without attaining its exact or final form until conception of its body. However, this argument does not fit well with the book of Ether in the Book of Mormon, when the brother of Jared saw Christ's physical presence thousands of years before Christ was born.

The second possible scenario suggests that God knew our physical makeup before we were born, and hence, knew what our DNA genotype would be. This explains why our spirits would resemble our physical bodies. If this is the case, then the random distribution of genotypes during the reproductive processes is not random at all, but controlled by the Holy Ghost under God's direction. This also seems improbable, though not impossible. Perhaps the correct answer is a mixture of these two scenarios. God knows who our parents will be and creates a spirit that is a mixture of traits from the two parents. This spirit can then take on the "detailed" characteristics of its genotype after conception, including whatever flaws may exist within our DNA and, subsequently, our physical bodies.

These two examples illustrate some of the complex doctrinal issues created by the completion of the Human Genome Project. Such issues will continuously be brought to our attention as our world becomes increasingly reliant upon new and ever-changing technological advances.



It will be particularly interesting to watch the response of the church leadership and membership to these complex doctrinal issues.

#### THE CONUNDRUM REVISITED

There are two distinct areas with which the church must deal when facing the future of science: ethical problems and doctrinal issues. We may see the church take a very active part politically to ensure that its interests and the rights of its members are not impeded with regard to certain ethical issues. It is unlikely that the church will change its long-held dogmas concerning abortion, homosexuality, or any other non-doctrinal issue. A coalition comprising the church and other conservative religious groups might well be formed to fight against any real or perceived attacks upon these traditional dogmas. It is also possible that new revelation will be received to address some of these ethical issues through doctrinal changes.

The response of the church toward evidence which complicates or negates certain doctrines could take two directions. First, the church could dismiss such evidence as "of the Devil" and false. It could also restate the current doctrine as the truth, even if this doctrine were complicated with new evidence. Finally, a new revelation could be given to clarify or restate such doctrine in light of new evidence. In actuality, a mixture of responses will probably occur, depending upon the nature of the doctrinal "attack" and the importance of the doctrine that is "attacked." One can envision many non-core doctrines being compromised without much communication from church leadership. However, if a core doctrine is compromised in any way, real or perceived, then one can expect a response from church leadership.

#### CONCLUSION

The completion of the Human Genome Project is one of the greatest accomplishments humankind has ever achieved. Members of the church should embrace this accomplishment with all its associated fanfare. We should recognize that God has blessed us with the knowledge, talent, and ability to decode the entire human genome. This knowledge gives us insight into how the creation of humans was undertaken. In the future, more knowledge will be gained about what makes humans unique. We will know more about how we think, how we act, and the nature of human consciousness. Should any of these advances frighten Mormons? No. Should these advances be viewed as an attack upon our religion? No. The knowledge obtained is the truth, as we know it. We should therefore embrace it and find ways to learn more about our purpose here on Earth. We have been blessed with this wonderful knowledge about ourselves. What we do with it is up to us.

# Christmas Card from Siple Station, Antarctica

*Danielle Beazer Dubrasky*

Awake all night where no night comes  
she trasmits waves into the sky  
from sixty feet beneath snow.  
Some arc into the solar winds

where electrons sap their strength,  
then smash into aurora borealis,  
a suicidal blaze in Trondheim.  
Others spin forever between poles.

Empowered by electrons, the strongest  
surge on alone into the galaxy  
silent for months until they send  
strange whistles—*wish you were here.*

The ocean thrusts shores into frozen tusks  
where she is the first in the world to see Christmas,  
waiting in ice fog beneath the midnight sun  
for one who left and was transformed.

# Two Studies of Health and Religion in Utah: Tobacco Smoking and Cancer in Utah

*Ray M. Merrill, Ph.D., M.P.H.*

CHRONIC ILLNESS IS WIDESPREAD in society and touches all our lives. Behind cardiovascular diseases, cancer is the second leading form of chronic illness in the United States.<sup>1</sup> Considerable health resources have been utilized to prevent and control cancer. Although genetic predisposition and age are leading risk factors for cancer, lifestyle behaviors can also influence its occurrence. For example, tobacco smoking has been linked to cancers of the oral cavity and pharynx, esophagus, pancreas, larynx, lung and bronchus, urinary bladder, kidney and renal pelvis, and cervix.<sup>2</sup> Perhaps no single behavioral change is known that would have as great an impact on deaths attributed to cancer, particularly of the lung, as abstention from tobacco.<sup>3</sup>

The first epidemiological reports suggesting a link between tobacco smoking and lung cancer appeared in the early 1950s.<sup>4</sup> By the time of the 1964 Surgeon General's Report, there had been twenty-nine case-control studies and seven prospective cohort studies published indicating a sig-

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1. Robert T. Greenlee, et al., "Cancer Statistics, 2000," *CA Cancer Journal for Clinicians* 50 (2000): 7-33.

2. United States Department of Health and Human Services, *Reducing the Health Consequences of Smoking: 25 Years of Progress: A Report of the Surgeon General, 1989*, DHHS Publication no. (CDC) 89-8411 (Rockville, Md.: Centers for Disease Control, Office on Smoking and Health, 1989).

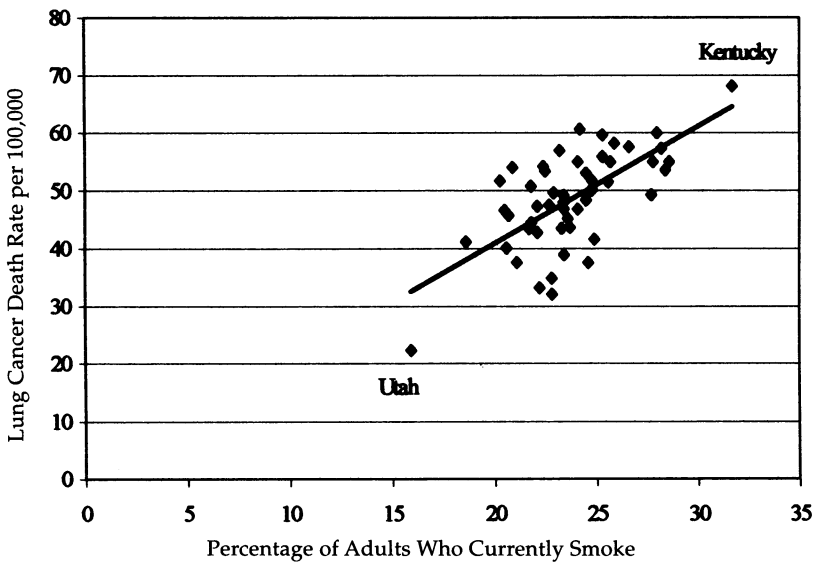
3. Richard Doll and Richard Peto, "The Causes of Cancer," *Journal of the National Cancer Institute* 66 (1981): 1191-1308.

4. Richard Doll and A. B. Hill, "Smoking and Carcinoma of the Lung: Preliminary Report," *British Medical Journal* (1950) 2: 739; Roy Norr, "Cancer by the Carton," *Reader's*

nificantly increased risk of lung cancer among tobacco smokers.<sup>5</sup> In Utah, the percentage of adults eighteen years of age and older who smoke cigarettes has historically been considerably lower than in the rest of the United States.<sup>6</sup> Consequently, Utahns experience the lowest overall cancer incidence and mortality rates in the nation. *Figure 1* shows the positive association between tobacco smoking and lung cancer mortality among the fifty United States, with Utah having the lowest and Kentucky the highest levels of smoking and lung cancer mortality.

A number of studies have looked at the influence of church activity

FIGURE 1: Currently Smoke



Data sources: Behavior Risk Factor Surveillance System and the National Center for Health Statistics, 1996. Rates age-adjusted to the 1970 United States standard population

*Digest* (December 1952): 7-8; "Cigarettes. What CU's Test Showed: The Industry and Its Advertising; and How Harmful Are They?" *Consumer Reports* 18 (February 1953): 58-74; Lois M. Miller and James Monahan, "The Facts Behind the Cigarette Controversy," *Reader's Digest* (July 1954): 1-6; "Tobacco Smoking and Lung Cancer," *Consumer Reports* 19 (February 1954): 54, 92.

5. United States Department of Health and Human Services, "Smoking and Health: Report of the Advisory Committee to the Surgeon General of the Public Health Service," P.H.S. Publication no. 1103. (Washington, D.C.: U.S. Government Printing Office, 1964).

6. Ray M. Merrill, Gordon B. Lindsay, and Joseph L. Lyon, "Tobacco-related Cancers in Utah Compared to the United States: Quantifying the Benefits of the Word of Wisdom," *BYU Studies* 38, no. 4 (1999): 91-114.

on cancer among Latter-day Saint men and women.<sup>7</sup> In each of these studies, religiously active Latter-day Saints showed lower levels of cancer and longer life expectancy than did less active members. In order to obtain a current report of religious preference, church activity, and tobacco smoking prevalence in Utah, we added two questions on religion and church attendance to the Utah Behavior Risk Factor Surveillance System (BRFSS).<sup>8</sup> The results presented in this report were based on 782 respondents in February through April 2000.

Respondents to the Utah survey indicated their religious preferences as: 69 percent LDS, 21 percent other religions, and 10 percent no religion. Church attendance for those who specified having a religious preference is shown in Table 1. In general, Latter-day Saints are comparatively very active in church. Women attend church more frequently than men, regardless of religious preference.

Table 1  
Summary of Church Attendance by Religious Preference  
Among Adults 18 Years of Age or Older in Utah

Religious Preference by Gender					
Church Attendance	LDS		Other Religions		
	Men	Women	Men	Women	
Weekly	71%	81%	15%	37%	
Monthly <sup>a</sup>	12%	6%	32%	18%	
Yearly <sup>b</sup>	6%	8%	24%	13%	
Not at All	11%	5%	29%	32%	

Data source: Utah Behavior Risk Factor Surveillance System, 2000.

<sup>a</sup>Between one and three times monthly.

<sup>b</sup>Between one and eleven times yearly.

A strong association between religious preference and smoking was observed. About 6 percent of Latter-day Saints are current smokers. In contrast, 22 percent of people with other religious preference and 46 percent of those with no religious preference are current smokers. Table 2 shows that tobacco smoking among Latter-day Saints occurs almost exclusively in less active members. People of other religious preference who

7. James E. Enstrom, "Cancer and Total Mortality Among Active Mormons," *Cancer* 42 (1978): 1943-51; John W. Gardner and Joseph L. Lyon, "Cancer in Utah Mormon Men by Lay Priesthood Level," *American Journal of Epidemiology* 116 (1982): 243-57; John W. Gardner and Joseph L. Lyon, "Cancer in Utah Mormon Women by Church Activity Level," *American Journal of Epidemiology* 116 (1982): 258-65.

8. Since 1984, the Centers for Disease Control and Prevention have collaborated with states such as Utah to collect survey data on disease risk factor behaviors like tobacco smoking.

smoke are also less religiously active. Compared with Latter-day Saints, the percentage of tobacco smokers is considerably higher in men and women of other religious preference or in those with no religious preference. As a matter of comparison, in 2000 the national percentages of current tobacco smoking were 24 percent for men and 21 percent for women.<sup>9</sup>

Table 2  
Percentage of Current Smokers according to Religious Preference,  
Church Attendance, and Gender among Adults 18 Year of Age or Older in Utah

Religious Preference by Gender						
Church Attendance	LDS		Other Religions		No Religion	
	Men	Women	Men	Women	Men	Women
Weekly	1%	0.3%	10%	13%		
Monthly <sup>a</sup>	21%	10%	32%	— <sup>c</sup>		
Yearly <sup>b</sup>	31%	33%	14%	23%		
Not at All	21%	52%	38%	35%		
Total	6%	6%	25%	19%	49%	41%

Data source: Utah Behavior Risk Factor Surveillance System, 2000.

<sup>a</sup>Between one and three times monthly.

<sup>b</sup>Between one and eleven times yearly.

<sup>c</sup>Insufficient numbers to compute.

Although the focus of this paper has been tobacco-related cancers, cigarette smoking is also a major contributor to other chronic conditions, such as diseases of the heart and stroke.<sup>10</sup> There are also several other causes of cancer, some of which can be moderated through behavior such as diet and exercise, but many of which cannot (e.g., those resulting from genetic predisposition and age). Certainly Latter-day Saints are not immune to cancer and other chronic illnesses, but a recent study showed that during 1991-1995, lower tobacco-smoking prevalence in Utah compared with the rest of the country resulted in an estimated 4,294 fewer cancer deaths in men and 3,047 fewer cancer deaths in women.<sup>11</sup>

9. Nationwide Tobacco Use, Behavior Risk Factor Surveillance System, 2002. Available at <http://apps.nccd.cdc.gov/brfss/index.asp>.

10. Nancy A. Rigotti and Richard C. Pasternak, "Cigarette Smoking and Coronary Heart Disease: Risks and Management," *Cardiology Clinics* 14 (1996): 51-68; Roger Shinton, "Lifelong Exposures and the Potential for Stroke Prevention: The Contribution of Cigarette Smoking, Exercise, and Body Fat," *Journal of Epidemiology and Community Health* 51 (1997): 138-43; United States Department of Health and Human Services, "The Health Benefits of Smoking Cessation: A Report of the Surgeon General 1990," DHHS Publication no. (CDC) 90-8416 (Rockville, Md.: Centers for Disease Control, Center for Chronic Disease Prevention and Health Promotion, Office on Smoking and Health, 1990).

11. Merrill, Lindsay, and Lyon, "Tobacco-related Cancers in Utah."

In 1833, members of the LDS church were first taught that "tobacco . . . is not good for man." This instruction appeared as part of a health code called the Word of Wisdom (D&C 89). Originally many members treated this as a guideline and not necessarily a commandment. Previous works have identified certain events resulting in the widespread adoption by the church of the Word of Wisdom as a commandment.<sup>12</sup> Not until May 5, 1898 did the First Presidency and the Twelve agree that the Word of Wisdom was a commandment that should be followed explicitly. However, it took several more years before this doctrine was fully enforced. In June 1902, Joseph F. Smith urged church leaders to refuse to authorize temple recommends for flagrant violators of the Word of Wisdom, but to be liberal with old men using tobacco. In December 1915, President Smith said that abstention from tobacco among men with experience in the church was a prerequisite to being ordained to the priesthood or permitted to enter the temple. In 1921, after Heber J. Grant became president of the church, adherence to the Word of Wisdom became less flexible, and over the next decade refraining from tobacco and other substances was required of all members for full fellowship and admittance to the temple.

Studies linking tobacco smoking with a number of cancers and other diseases has led to a decrease in the percentage of adults who currently smoke in the United States, from nearly 45 percent in the 1960s to about 25 percent in the 1980s and 1990s.<sup>13</sup> In 1985, the first year cigarette-smoking prevalence was recorded in Utah, the number of adults smoking was 15.6 percent.<sup>14</sup> This rate has varied only slightly to the present time. As a result, substantial differences exist between the tobacco-related cancer burden in Utah versus the United States. As the nation forms its health policy goals and standards, Utah's low tobacco use and relatively low cancer burden serves as a model, with the influence of religious forces clearly evident.

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12. Thomas G. Alexander, "The Word of Wisdom: From Principle to Requirement," *Dialogue* 14 (Fall, 1981): 78-88. Thomas G. Alexander, *Mormonism in Transition: A History of the Latter-day Saints, 1890-1930* (Urbana and Chicago: University of Illinois Press, 1986).

13. Merrill, Lindsay, and Lyon, "Tobacco-related Cancers in Utah."

14. *Ibid.*

# Active Religion and Health in Utah

Ray M. Merrill, Ph.D., M.P.H., Hala N. Madanat, B.Sc.,  
Joseph L. Lyon, M.D., M.P.H.

RELIGIOUS ACTIVITY IS FREQUENTLY ASSOCIATED with health and lifestyle behaviors, such as abstaining from tobacco use and alcohol abuse, which directly influence physical and mental health outcomes.<sup>1</sup> In recent decades, the adult population in Utah has experienced the lowest overall cancer and heart disease incidence and mortality rates in the United States.<sup>2</sup> Studies have shown that these favorable health outcomes are explained, at least in part, by the health doctrine of the Church of Jesus Christ of Latter-day Saints (LDS).<sup>3</sup> Other studies have looked specifically at the influence of church activity on cancer and total mortality in LDS men and women.<sup>4</sup> In each of these studies, religiously active Latter-day Saints experienced lower levels of cancer and longer life expectancy

1. Lisa Miller et al., "Religiosity as a Protective Factor in Depressive Disorder," *American Journal of Psychiatry* 156 (1999): 808-10; A. W. Braam et al., "Religiosity as a Protective or Prognostic Factor of Depression in Later Life; Results from a Community Survey in The Netherlands," *Acta Psychiatrica Scandinavica* 96 (1997): 199-205.

2. Greenlee et al., "Cancer Statistics, 2000"; Joseph L. Lyon et al., "Cardiovascular Mortality in Mormons and Non-Mormons in Utah, 1969-1971," *American Journal of Epidemiology* 108 (1978): 357-66; Merrill, Lindsay, and Lyon, "Tobacco-related Cancers in Utah."

3. Lyon et al., "Cardiovascular Mortality"; Joseph L. Lyon, John W. Gardner, and Dee W. West, "Cancer Incidence in Mormons and Non-Mormons in Utah During 1967-75," *Journal of the National Cancer Institute* 65 (1980): 1055-61; James E. Enstrom, "Cancer Mortality Among Mormons," *Cancer* 36 (1975): 825-41; Joseph L. Lyon et al., "Cancer Incidence in Mormons and Non-Mormons in Utah, 1966-1970," *New England Journal of Medicine* 294 (1976): 129-33; Joseph L. Lyon, John W. Gardner, and Dee W. West, "Cancer Risk and Lifestyle: Cancer Among Mormons From 1967-1975," *Basic Life Sciences* 43 (1988): 137-61; James E. Enstrom, "Cancer Mortality Among Mormons in California During 1968-75," *Journal of the National Cancer Institute* 65 (1980): 1073-82.

4. Enstrom, "Cancer and Total Mortality"; Gardner and Lyon, "Cancer in Utah Mormon Men"; Gardner and Lyon, "Cancer in Utah Mormon Women"; "Smoking and Health: A Physician's Responsibility (A Statement of the Joint Committee on Smoking and Health, American College of Chest Physicians, American Thoracic Society, Asian Pacific Society of Respirology, Canadian Thoracic Society, European Respiratory Society, International Union against Tuberculosis and Lung Disease)," *Respirology* 1 (1996): 73-77.



than did less active members. This suggests that health and lifestyle behaviors among less active Latter-day Saints, such as cigarette smoking and alcohol abuse, differ considerably from those among active members.<sup>5</sup> Other behavior differences may also be suggested, such as premarital and extramarital sexual relations, less education, or physical inactivity, which are behaviors associated with an increased risk of physical and mental health problems.<sup>6</sup> On the other hand, regular LDS church attendance suggests acceptance of health and moral standards espoused by the church.

Weekly church attendance is an important part of personal worship and worthiness in the LDS church.<sup>7</sup> This paper provides a contrasting picture of the health profiles of Latter-day Saints in Utah who attend church weekly (active) versus those who attend less than weekly (less active). It also considers general health status for those of other religious preferences or with no religious preference.

## METHODS

### *Data Collection*

This analysis was based on a cross-sectional random survey conducted in Utah in 1996 called the Utah Health Status Survey. The Utah Department of Health contracted with the Gallup Organization to collect the data. Gallup incorporated the telephone survey instrument into a computer-assisted random digit dialing software program called SUR-

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5. Arria et al., "Self-reported Health Problems and Physical Symptomatology in Adolescent Alcohol Abusers," *Journal of Adolescent Health* 16 (1995): 226-31; "Anthony F. Jorm et al., "Smoking and Mental Health: Results from a Community Survey," *Medical Journal of Australia* 170(1999): 74-77; J. R. Copeland et al., "Community-based Case-control Study of Depression in Older People: Cases and Sub-cases From the MRC-ALPHA Study," *British Journal of Psychiatry* 175 (1999): 340-47; Anita R. Dixit and Rosa M. Crum, "Prospective Study of Depression and Risk of Heavy Alcohol Use in Women," *American Journal of Psychiatry* 157 (2000): 751-58; E. Rodriguez et al., "Unemployment, Depression, and Health: A Look at the African-American Community," *Journal of Epidemiology and Community Health* 53 (1999): 335-42.

6. E. J. Hauenstein and M. R. Boyd, "Depressive Symptoms in Young Women of the Piedmont: Prevalence in Rural Women," *Women and Health* 21 (1994): 105-23; D. C. Spendlowe, Dee W. West, and W. M. Stanish, "Risk Factors and the Prevalence of Depression in Mormon Women," *Social Science and Medicine* 18 (1984): 491-95; R. Reviere and I. W. Eberstein, "Work, Marital Status, and Heart Disease," *Health Care for Women International* 13 (1992): 393-99; I. Suzuki et al., "Cardiovascular Fitness, Physical Activity and Selected Coronary Heart Disease Risk Factors in Adults," *Journal of Sports Medicine and Physical Fitness* 38 (1998): 149-57.

7. Melchizedek Priesthood Leadership Handbook, "Official Policies and Announcements," *Deseret News*, Church News section, 23 May 1998, 2.

VENT. Interviews were conducted by trained interviewers in a supervised environment across twelve local health districts in Utah. Computer-assisted telephone interviewing was chosen in order to achieve a higher response rate, to yield a more representative sample, and to reduce non-sampling error by standardizing the data collection process. Errors in data entry were minimized by preventing interviewers from entering non-valid codes. The process was also efficient because interviewers entered responses directly into the database.

The survey questionnaire was divided into several core module questions. Data on the presence of chronic medical conditions was solicited, as well as questions covering topics such as demographic characteristics, health, lifestyle, and chronic conditions. The interview process occurred from June 1 to August 31, 1996. The survey interview was conducted with one randomly selected adult age 18 or older in each household. The response rate was 66.3 percent, with 6,188 respondents for study.

#### *Sample Design and Weighting*

A complex survey sample design was used in order to provide a representative sample of all Utahns. It may be described as a weighted probability sample of households disproportionately stratified by twelve local health districts covering the state. Respondents from 500 households were interviewed in each health district, except for the Salt Lake City Health District, where respondents from 800 households were interviewed in order to increase precision in the statewide estimates. A single state, non-clustered, equal probability of selection telephone calling design was used to generate telephone numbers.<sup>8</sup> Post-survey weighting adjustments were made so that survey results could be more accurately generalized to the Utah population. Adjustments weighted the sample to be proportionally consistent with age, sex, geographic, and Hispanic status distribution of the 1996 Utah population.

#### *Statistical Methods*

Estimating sampling error for a complex survey design involves special statistical techniques. Standard errors of the survey estimates employed a Taylor-series expansion which accounts for the complex survey design. SAS (version 8.0)—callable SUDAAN was used for data

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8. R. M. Casady and J. M. Lepowski, "Stratified Telephone Survey Designs," *Survey Methodology* 19 (1993): 103-21.

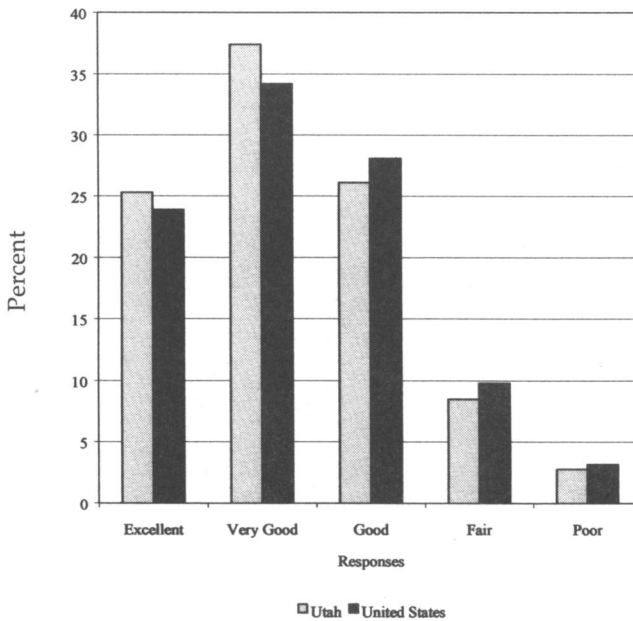
analysis.<sup>9</sup> Weighted frequency and percentage distributions for two-way tabulations were computed. The chi-square test is used for evaluating independence. Tests of significance were based on the 0.05 level.

## RESULTS

Survey-respondents 18 years or older consisted of 69 percent LDS, 21 percent non-LDS, and 10 percent with no religious preference. Latter-day Saints were significantly more likely to be religiously active than were non-Latter-day Saints, with approximately 71 percent attending church weekly. In contrast, 33 percent of non-LDS attended church weekly. Weekly church attendance for the adult population in Utah is roughly 56 percent.

Figure 1 presents self-reported general health status for adults aged

FIGURE 1. Self-reported General Health Status for Adults 18 Years or Older in Utah and the United States



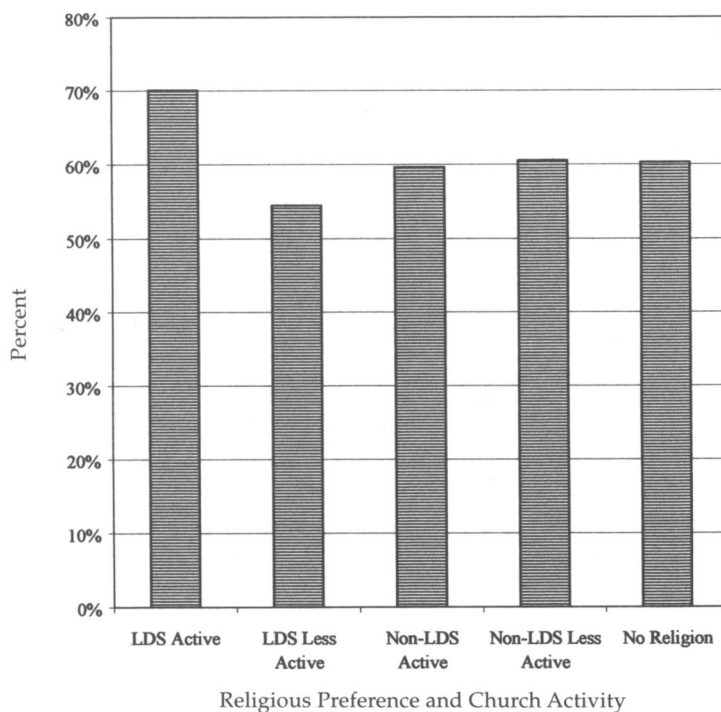
Data source: Behavior Risk Factor Surveillance Survey, 199

9. SUDAAN. Software for the Statistical Analysis of Correlated Data. SUDAAN Release 7.5.4 for PCs, Research Triangle Park, North Carolina. Copyright March, 2000.

18 years or older in Utah compared to the United States. A higher percentage of people in Utah reported having excellent or very good health. Figure 2 shows that in Utah, the percentage reporting excellent or very good health was highest for Latter-day Saints who attended church weekly (active) and lowest for Latter-day Saints who attended less than once a week (less active). The percentage reporting excellent or very good health was similar for religiously active and less active non-LDS, and for those with no religion.

Figure 3 presents the percentage of LDS, non-LDS, and those with no religious preference in Utah, aged 18 years or older, according to select demographic and lifestyle variables. Latter-day Saints, when compared to non-Latter-day Saints and to those with no religious preference, are more likely to be married, have a high school education, never smoke, and abstain from alcohol. There was no significant difference between

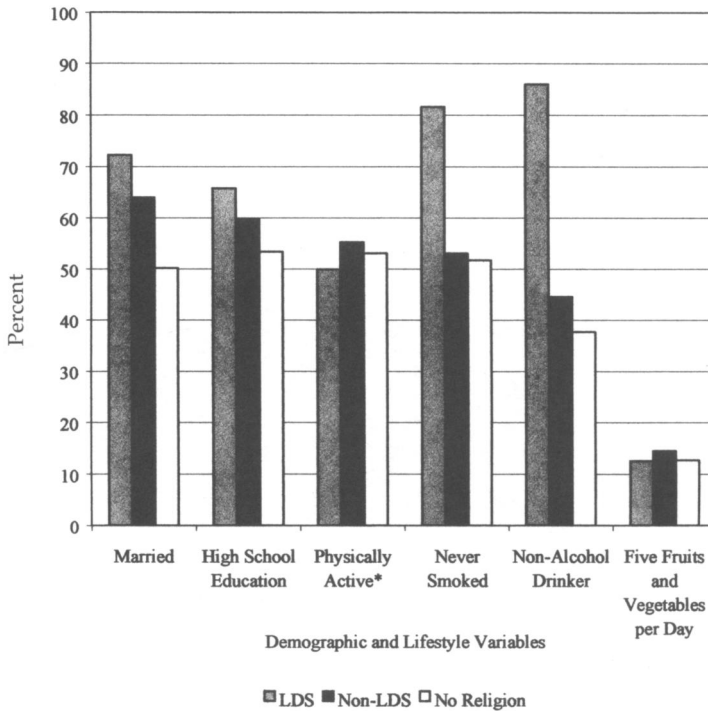
FIGURE 2. Percentage of Adults 18 Years or Older Reporting to Have Excellent or Very Good Health According to Religious Preference and Church Activity



Data source: 1996 Utah Health Status Survey

Active: Attends church weekly. Less active: Attends church less than once a week

FIGURE 3. Percentage of Adults 18 Years or Older in Utah According to Religious Preference and Select Demographic and Lifestyle Variables



Data source: 1996 Utah Health Status Survey

\*Vigorous exercise 20 minutes at least three times per week

religious preferences in eating five fruits and vegetables per day. Latter-day Saints are significantly less likely than non-Latter-day Saints and those with no religious preference to exercise twenty minutes at least three times a week.

The remainder of the results focuses on religiously active and less active Latter-day Saints. The distribution of LDS respondents 18 years of age or older to the 1996 Utah Health Status Survey is reported according to church attendance and demographic variables (Table 1), lifestyle variables (Table 2), general health status (Table 3), and chronic medical conditions (Table 4). The percentage of active LDS significantly varies according to gender, marital status, education, and income. Active LDS represent a significantly higher percentage of women, married, with a high school education, and with an annual household income greater than \$35,000.

Table 1  
Distribution of LDS Respondents 18 Years of Age or Older to the 1996 Utah Health Status Survey According to Church Activity (Active, Less Active) and Demographic Characteristics

Variables	LDS Active	LDS Less Active	Percent Active	Chi square	P value
Gender					
Men	45.2%	52.3%	67.8%		
Women	54.8%	47.7%	73.7%		
	n = 3,039	n = 1,248		7.12	0.0077
Age					
18-24	19.6%	17.4%	73.0%		
25-34	20.9%	19.7%	71.9%		
35-44	18.6%	18.7%	70.5%		
45-54	15.0%	15.6%	69.8%		
55+	25.9%	28.6%	68.6%		
	n = 2,915	n = 1,212		2.06	0.7240
Married					
Yes	76.2%	62.7%	74.8%		
No	23.8%	37.3%	60.8%		
	n = 3,039	n = 1,248		29.03	0.0000
High School Education					
Yes	74.1%	46.0%	79.7%		
No	25.9%	54.0%	53.9%		
	n = 3,037	n = 1,247		112.42	0.0000
Annual Household Income					
Less than \$ 15,000	5.9%	8.2%	63.4%		
\$15,000-(\$35,000	28.3%	32.4%	67.8%		
\$35,000-<\$55,000	33.5%	36.0%	69.0%		
\$55,000 or more	32.3%	23.4%	76.8%		
	n = 2,706	n = 1,128		33.17	0.0001

Active: attends church at least once a week.  
Less Active: attends church less than once a week.  
Percent active refers to the percentage active in church by row category (e.g., of men, 67.8 percent are active).

Table 2  
Distribution of LDS Respondents 18 Years of Age or Older to the 1996 Utah Health Status Survey According to Church Activity (Active, Less Active) and Lifestyle Characteristics

Variables	LDS Active	LDS Less Active	Percent Active	Chi square	P value
Physically Active*					
Yes	52.3%	44.5%	74.2%		
No	47.7%	55.5%	67.7%		
	n = 3,028	n = 1,241		8.62	0.0033
Five Fruits and Vegetables Per Day					
Yes	14.4%	8.1%	81.6%		
No	85.6%	91.9%	69.8%		
	n = 2,971	n = 1,198		14.62	0.0001
Alcohol Consumption (Drinks)					
Nondrinker	98.5%	55.9%	81.1%		
<60 per month	1.5%	40.6%	8.3%		
60+ per month	0.0%	3.5%	0.0%		
	n = 3,019	n = 1,240		272.96	0.0000
Smoking Status					
Never Smoked	92.6%	54.9%	80.4%		
Former Smoker	7.0%	23.7%	41.9%		
Current Smoker	0.4%	21.4%	4.0%		
	n = 3,028	n = 1,245		218.47	0.0000

Active: attends church at least once a week.

Less Active: attends church less than once a week.

Percent active refers to the percentage active in church by row.

\*Vigorous exercise for twenty minutes at least three times a week.

Table 3  
Distribution Of LDS Respondents 18 Years of Age or Older to the 1996 Utah Health Status Survey according to Church Activity (Active, Less Active) and General Health Status

Variables	LDS Active	LDS Less Active	Percent Active	Chi square	P value
In past four weeks accomplished less than desired because of poor physical health					
Yes	20.4%	25.4%	66.3%	4.74	0.0295
No	79.6%	64.6%	72.4%		
	n = 3,036	n = 1,238			
In past four weeks limited in work or other activities because of poor physical health					
Yes	16.9%	22.9%	64.4%	7.18	0.0074
No	83.1%	77.1%	72.5%		
	n = 3,036	n = 1,241			
In past four weeks physical pain interfered with normal work					
Not at all	62.6%	56.2%	73.2%	16.96	0.0020
A Little Bit	25.0%	23.7%	72.0%		
Moderately	7.5%	10.0%	64.6%		
Quite a Bit	3.8%	7.4%	55.9%		
Extremely	1.1%	2.7%	49.3%		
	n = 3,035	n = 1,241			
Time in past four week that felt calm and peaceful					
All the time	10.6%	7.3%	78.1%	32.82	0.0000
Most of the time	57.2%	48.7%	74.1%		
A good bit	17.0%	17.4%	70.4%		
Some of the time	10.7%	18.2%	58.9%		
A Little	4.0%	6.5%	60.2%		
None	1.9%	0.5%	39.3%		
	n = 3,033	n = 1,244			
Time in past four week that felt downhearted and blue					
All the time	0.4%	1.1%	47.6%	0.03	0.8699
Most of the time	1.6%	3.9%	49.9%		
A good bit	3.0%	4.3%	62.6%		
Some of the time	11.5%	15.1%	64.8%		
A Little	41.1%	35.1%	73.9%		
None	42.6%	40.5%	28.1%		
	n = 3,027	n = 1,247			

Active: attends church at least once a week  
Less Active: attends church less than once a week.  
Percent active refers to the percentage active in church by row category.



Table 4  
Distribution of LDS Respondents 18 Years of Age or Older to the 1996 Utah Health Status Survey according to Church Activity (Active, Less Active) and Chronic Medical Conditions

Variables	LDS Active	LDS Less Active	Percent Active	Chi square	P value
History of High Blood Pressure					
Yes	18.4%	23.8%	65.3%	6.04	0.0140
No	81.6%	76.2%	72.3%		
	n = 3,034	n = 1,247			
History of High Cholesterol					
Yes	25.2%	27.8%	70.5%	0.81	0.3681
No	74.8%	75.2%	73.2%		
	n = 2,188	n = 831			
History of Diabetes					
Yes	5.0%	7.4%	62.2%	3.12	0.0774
No	95.0%	92.6%	71.5%		
	n = 3,024	n = 1,239			
History of Asthma					
Yes	4.2%	6.3%	61.9%	2.85	0.0912
No	95.8%	93.7%	71.3%		
	n = 3, 038	n = 1,248			
History of Arthritis					
Yes	8.9%	12.2%	64.1%	3.38	0.0661
No	91.1%	87.8%	71.7%		
	n = 3, 034	n = 1,243			
History of Heart Disease					
Yes	4.3%	7.2%	59.0%	4.11	0.0428
No	95.7%	92.8%	71.5%		
	n = 3,038	n = 1,247			
History of Stroke					
Yes	1.2%	1.7%	63.7%	0.64	0.4248
No	98.8%	98.3%	71.0%		
	n = 3,036	n = 1,247			

Active: attends church at least once a week.

Less Active: attends church less than once a week.

Church activity significantly varies across the levels of the lifestyle variables (Table 2). The percentage of LDS who are active in church is significantly greater for people who are physically active, eat five fruits and vegetables per day, do not consume alcohol, and have never smoked. Active Latter-day Saints compared with those less active have a significantly higher percentage of people who vigorously exercise for twenty minutes at least three times a week, eat five fruits and vegetables per day, are nondrinkers, and have never smoked. Almost no active Latter-day Saints reported consuming alcohol or smoking cigarettes. In contrast, the percentage of active non-LDS in Utah who reported consuming alcohol is 59 percent and who currently smoke is above 8 percent.

General health status variables indicate that better physical and mental health are associated with being active in church (Table 3). Latter-day Saints who reported that they accomplish less than desired, or that their work or other activities are limited because of poor physical health, were significantly less likely to be active in church. The extent that physical pain interferes with normal work is negatively related to church activity. Feelings of calm and peace are positively related to church activity, whereas being downhearted and blue (discouraged) is not significantly related to church activity. Percentages of active LDS who accomplish less than desired or experience limited work or other activities because of poor physical health were significantly lower than for less active LDS.

Several chronic medical conditions were compared between active and less active Latter-day Saints (Table 4). Those with a history of high blood pressure or heart disease are significantly less active in church. Latter-day Saints with a history of diabetes, asthma, or arthritis also may be less active in church (although the results are marginally insignificant at the 0.05 level). Percentages having a history of high blood pressure or a history of heart disease (e.g., angina, congestive heart failure, or heart attack) were significantly lower for active LDS compared with less active LDS.

#### DISCUSSION

The results provide a description of demographics, health status, lifestyle behaviors, and chronic medical conditions for active and less active Latter-day Saints. This is the first report to provide such a comprehensive picture of these characteristics. The results also confirm that health status and lifestyle behaviors are associated with church attendance.

Active Latter-day Saints are more likely to be female, married, have a high school education, a higher annual household income, be physically active, eat five fruits and vegetables per day, have never smoked, and do not drink alcohol when compared with less active members. These factors have been shown to be protective against several chronic

conditions.<sup>10</sup> History of high blood pressure, heart disease, diabetes, asthma, and arthritis were lower for active versus less active Latter-day Saints. Less active LDS were more likely to report accomplishing less than desired or being limited in doing their normal activities because of poor physical health in the past four weeks. Other studies have shown that people who do not attend church regularly are more likely to be unhealthy and experience anxiety, depression, and emotional problems.<sup>11</sup> On the other hand, active Latter-day Saints were more likely to report feeling calm and peaceful over the past four weeks.

The results also show that Latter-day Saints who consume sixty or more alcoholic drinks per month or who currently smoke are rarely active members of the church. Because of the strict health code in the LDS church proscribing tobacco use or consumption of alcohol, coffee, and tea (D&C 89), those who use such substances may feel uncomfortable attending church services. They may also be more likely to experience health problems, making it difficult to attend their meetings. While we do not attempt to sort out this complex situation, further investigation of church inactivity among Latter-day Saints is needed.

We do not expect that bias influenced the results. There is no reason to believe that religion would influence whether a person chose to participate in the study, particularly since the questions about religion and church attendance were asked near the end of the questionnaire. Further, response rates for each variable were above 99 percent, except for age (96 percent), annual household income (89 percent), five fruits and vegetables per day (97 percent), and history of high cholesterol (70 percent). Yet these percentages were similar between active and less active Latter-day Saints.

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10. Arria et al., "Self-reported Health Problems"; Jorn et al., "Smoking and Mental Health"; Copeland et al., "Community-based Case-Control Study of Depression"; Rodriguez et al., "Unemployment, Depression, and Health"; Reviere and Eberstein, "Work, Marital Status, and Heart Disease"; Suzuki et al., "Cardiovascular Fitness"; T. Baranowski et al., "Gimme Five Fruit, Juice and Vegetables for Fun and Health Outcome Evaluation," *Health Education and Behaviors* 27 (2000) 96-111; P. Veer et al., "Fruits and Vegetables in the Prevention of Cancer and Cardiovascular Disease," *Public Health Nutrition* 3 (2000): 103-7; T. Lloyd et al., "Fruit Consumption, Fitness, and Cardiovascular Health in Female Adolescents: The Penn State Young Women's Health Study," *American Journal of Clinical Nutrition* 67 (1998): 624-30.

11. F. Luskin, "Review of the Effect of Spiritual and Religious Factors on Mortality and Morbidity with a Focus on Cardiovascular and Pulmonary disease," *Journal of Cardiopulmonary Rehabilitation* 20 (2000): 8-15; R. A. Hummer et al., "Religious Involvement and U.S. Adult Mortality," *Demography* 36 (1999): 273-85; D. A. Matthews et al., "Religious Commitment and Health Status: A Review of the Research and Implications for Family Medicine," *Archives of Family Medicine* 7 (1998): 118-24; H. G. Koenig et al., "Modeling the Cross-sectional Relationships between Religion, Physical Health, Social Support and Depressive Symptoms," *American Journal of Geriatric Psychiatry* 5 (1997): 131-44.

## CONCLUSION

The superior health experienced in Utah, and particularly among Latter-day Saints, is associated with church attendance. Approximately 69 percent of the adult population in Utah is LDS, and 71 percent of these attend church weekly. Attending church weekly promotes health and lifestyle choices, unique in many ways to the church, which result in relatively high levels of health and well being. Specifically, active LDS church members are more likely to be female, married, have a high school education, a higher annual household income, be physically active, eat five fruits and vegetables per day, never have smoked, and abstain from alcohol. Each of these factors is positively associated with better physical and psychological health. This research is an important step toward better understanding general health status, lifestyle, and chronic disease profiles of active versus less active Latter-day Saints. Less active LDS are an extremely high-risk population for chronic disease conditions.

# Spreading Zion Southward, Part I: Improving Efficiency and Equity in the Allocation of Church Welfare Resources

*Bradley Walker*<sup>1</sup>

“And let every man esteem his brother as himself and practice virtue and holiness before me. For what man among you having twelve sons. . .saith unto the one: Be thou clothed in robes and sit thou here; and to the other: Be thou clothed in rags and sit thou there—and. . .saith I am just?”

—D&C 38: 24-27

“There is a state of human misery below which no Latter-day Saint should descend as long as others are living in abundance.” —Elder Glenn L. Pace

“For where your treasure is, there will your heart be also.” —Matthew 6:21

THE YEAR WAS 1983. Sister Mercedes Pico de Coello was dying of tuberculosis, coughing up blood. A frail and thin 43-year-old mother of twelve, her life could probably have been saved for \$200. As a missionary, I had baptized her in 1980. As a BYU student, I had just spent \$850 for this return visit to Ecuador. Neither of us was aware that her illness could be fatal if untreated. With an annual family income of \$1200, she could not afford the treatment she needed. I considered giving her the \$200, but ultimately I did not do so. Three years later she died from the disease.

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1. I wish to thank Armand Mauss for his assistance in editing this study.

By 1997, I was a trained and experienced public health physician, and I had joined with a small group of other returned missionaries from Ecuador to provide charitable assistance to church members there. My involvement in the research for this paper began during a 1999 visit for the dedication of the new temple in Guayaquil, when I heard Ecuadorian members discussing LDS congregations full of malnourished children who could not get help from the church. At first I was skeptical of such alarmist reports and rumors. Nevertheless, I did some initial investigation in the Huancavilca, Prosperina, and Cuenca Stakes of Ecuador, with the help of local physicians practicing in those stakes. I also interviewed nine current or former stake presidents in Ecuador, along with three former bishops. These key informants and the data from these stakes showed that the grim reports I had heard were by no means exaggerated. I expanded my interviews to include stake presidents and bishops, serving from 1990 to the present, in four additional Latin American countries and in the United States.

A decade ago, Elder Glenn L. Pace of the Seventy, formerly Managing Director of Church Welfare Services, posed a question which is the central question for this study: "Faced with ever-louder cries for help from the world, how do we determine where to focus our efforts?"<sup>2</sup> Posed somewhat more elaborately, the question is this: Considering the vast differences in wealth between church members in the less developed countries (LDCs) and those in the wealthier countries (WCs), are the welfare and fast-offering resources of the church being allocated as efficiently and equitably as possible?<sup>3</sup> To begin, we need to know the total annual income for LDS Welfare Services. My interviews with bishops and stake presidents established estimates of fast-offering donations, which averaged \$27,000 annually per ward in the United States and \$350 per ward or branch in the LDCs. Multiplied by the number of such congregations in (respectively) the United States and the LDCs, these figures would yield about \$400 million for the former and \$4 million for the latter. We might estimate another \$100 million in donated food and clothing, but let's stay with a conservative estimate of \$400 million as the total amount likely to be allocated each year between the WCs and the LDCs.<sup>4</sup>

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2. Glenn L. Pace, "Infinite Needs and Finite Resources," *Ensign*, June 1993, 50.

3. By "equitably" here I mean a reasonable distribution of resources that will at least provide basic living standards in light of differing local circumstances in the spirit of D&C 70:14 and 78:6. The definition of "efficient" in this situation is essentially a cost-benefit assessment, such as the "cost per disability-adjusted life year" (DALY) in the LDCs. For examples of how such calculations are carried out by international experts, see *The World Health Report 2001* (Geneva: World Health Organization, 2001), 151-55; and *How the Other Half Dies* (International Medical Volunteer Association, 2002), 6-7, at [www.imva.org/Pages/deadt.txt.htm](http://www.imva.org/Pages/deadt.txt.htm).

4. I would welcome discussion by e-mail with anyone having more information or questions about these estimates. Contact me at [kwalker22@aol.com](mailto:kwalker22@aol.com).

## RESEARCH METHODS AND DATA

My main methods consisted of (a) reviewing relevant LDS publications and secondary literature; (b) searching relevant documents and reports published by governmental and international agencies concerned with public health; and (c) interviewing more than thirty current and former priesthood leaders of the church in Mexico, Guatemala, Ecuador, Peru, and Brazil, as well as ten from the United States, all of whom had held positions as stake presidents, bishops, or counselors since 1990. Three of these leaders had access to summary data on welfare spending from three different area offices in Latin America, which they were able verbally to share with me. Various documents and reports, which will be cited at the appropriate places in this article, also provided a great deal of statistical data, most of which must be stringently condensed and summarized here in the interest of space. However, the citations will be full enough that any interested reader can obtain access in libraries or on the internet to verify the generalizations made in this study.

The data from my interviews were more informal and “qualitative,” in that they reflect the impressions and extensive personal experiences of priesthood leaders attempting to function successfully at the grassroots in the often agonizing effort to reconcile church policies with pressing human needs not always envisioned by those policies. I have deliberately refrained from using the names of specific informants, since none of them was anxious to attract public attention. Yet all of them, I feel sure, would verify the information I am providing here about the nature and gravity of the problems they have faced and would probably be willing to respond to Spanish-speaking inquirers who would maintain strict confidentiality.<sup>5</sup>

## THE PROBLEM

This study will demonstrate that the Church of Jesus Christ of Latter-day Saints has at least 375,000 faithful and active members living in dire poverty in the less developed countries (LDCs) of the Western Hemisphere and elsewhere. Included among these are 50,000 malnourished and growth-stunted children under the age of fifteen, two thousand annual cases of severe, preventable disability other than growth-stunting, and nine hundred annual, preventable deaths (mainly children under fifteen). In some of the wards, 80 percent of the children are chronically malnourished and/or dying of malnutrition. Most of this suffering could be relieved by a reallocation of less than 10 percent of the \$400 million re-

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5. Interested readers should first contact me at the e-mail address given above for further information about the names and addresses of my informants.

ceived annually by the church in cash donations for welfare, including fast offerings. However, only 2 percent of that amount actually goes to the LDCs where 45 percent of the church membership resides. The other 98 percent is spent on members in wealthier countries (WCs), where it duplicates government programs and entitlements already paid for by their taxes. This represents an expenditure of \$133 per faithful member in WCs and \$5 each in LDCs. In some of the poorest congregations, per capita welfare spending is less than thirty cents, much too small to have a significant impact on malnutrition or disease.

### *Conditions of the Poorest Members of the Church in LDCs*

Of the twelve million members of the Church of Jesus Christ of Latter-day Saints worldwide, about five million live in less developed countries (LDCs), including Latin America, Polynesia, the Philippines, and sub-saharan Africa. Of these LDC Saints, I would estimate that about 30 percent are active or "faithful" members, in the sense that they participate at least periodically in church services and activities.<sup>6</sup> Probably two-thirds of the faithful are women of child-bearing years and children under the age of 15.<sup>7</sup>

Among Latin American LDCs, where 85 percent of the church's LDC population lives, poverty is most pervasive in those countries with largely indigenous populations.<sup>8</sup> About 25 percent of the LDS faithful in these countries live in absolute poverty (defined here as surviving on less than about \$1.25 a day), for a total of about 375,000 faithful, poverty-stricken Saints.<sup>9</sup> LDS poverty rates relative to rates in surrounding

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6. Some observers would find this an optimistic estimate for any given week. Others have estimated "active" LDS membership in North America at between 40 percent and 60 percent, with estimates elsewhere in the world as low as 20 percent. Obviously the time-frame used in a given estimate will be important. That is, the proportion of new members still active a year after baptism is a different estimate from the proportions active during any significant periods of their lifetimes. Neither "active," "inactive," nor "less active" can be assumed to be a permanent status in any person's life. See Tim B. Heaton, "Vital Statistics," in Daniel H. Ludlow et al., *Encyclopedia of Mormonism: The History, Doctrine, and Procedure of The Church of Jesus Christ of Latter-day Saints*, 4 vols. (New York: Macmillan, 1992), 1527.

7. Heaton ("Vital Statistics," 1528-29) shows around 40 percent of the LDS population in LDCs as children under eighteen and a sex ratio of 8:10 (favoring females, who are also more likely to be "faithful"). From my experience with LDS congregations in LDCs, I would estimate that 75 percent of those attending any given worship service are women younger than forty-five with minor children.

8. *World Health Report 2000*, 196-99. See also *Advancing the People's Health—2000: Report of the Director* (Washington, D.C.: Pan American Health Organization, 2000), 3-17, 111.

9. The estimate here of 25 percent for those in absolute poverty comes from multiplying absolute poverty rates in specific LDCs by the percentage of LDS members in a given



national populations are lower than average in Mexico and Brazil, about average in Peru (and presumably the rest of Latin America), and higher than average in Africa and in the Philippines.<sup>10</sup>

In the stakes on which this study is based, the general definition of "poverty" was income ranging from 20 cents to \$2.00 per person per day. Income in this range is not unusual in LDCs, even for those fully employed.<sup>11</sup> The presidents of the stakes I studied generally considered a daily wage of less than a dollar per person as too small even to obtain enough food. Unemployment and underemployment are serious problems for members in these stakes, and the poorest among them tend to live in slums and favelas, with some stakes composed almost entirely of members in dire poverty.

Such poverty, in turn, translates directly into malnutrition, disease, and death.<sup>12</sup> A tenth of the children under age fifteen (est. fifty thousand faithful) are chronically malnourished with their growth stunted from inadequate food intake, parasitic infections, and early weaning.<sup>13</sup> Each year another two thousand faithful members suffer from significant

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country or region listed in the *Deseret News Church Almanac*, 2001-2002, 271-421. The PAHO internet site at [www.paho.org](http://www.paho.org) lists absolute poverty rates for each Latin American country. These rates were determined by using data listed in this site under "basic health indicators B9 and B10," then extrapolating for missing "country-adjusted" data from the relevant region, and multiplying by membership figures in the *Almanac*. Obviously this procedure can provide only estimates, but strict precision in these calculations is almost irrelevant in the face of the gross disparities demonstrated here in the distribution of church resources between the WCs and the LDCs.

10. Garth L. Mangum and Bruce D. Blumell, *The Mormons' War on Poverty: A History of LDS Welfare, 1830-1990* (Salt Lake City: University of Utah Press, 1993), 216-33; and James Lucas and Warner Woodworth, *Working Toward Zion* (Salt Lake City, Utah: Aspen Books, 1996), 164.

11. See Morris Thompson, "Woman among Mexico's Millions Surviving on \$2/day," *Las Vegas Review Journal*, 26 May 2001, 30A, which quotes the "World Bank Report" as saying that 60 percent of the world's population survives on less than \$2 a day, and in Mexico itself, 16 percent on less than \$1 a day; also Zakaria Fareed, "Some Real Street Smarts," *Newsweek*, 20 July 2001, 25, reports that 25 percent of the world's population also survives on less than \$1 a day. Obviously there is a big difference between surviving on one dollar a day and on 20-40 cents a day. Much of the premature death and disability comes from among those in "extreme" poverty with incomes well under one dollar per day.

12. In the calculations which follow here and later, for rates of illness, morbidity, and mortality in LDCs (but not for poverty rates), I am somewhat arbitrarily using an "offset factor" of 20 percent in comparing LDS with general rates. In other words, I am assuming that the LDS cultural expectation of abstinence from alcohol and tobacco will reduce these rates by about 20 percent. Note that such an assumption produces a more *conservative* estimate of comparative LDS suffering. We are not able to estimate whether or not these rates would be different for recent converts compared to lifelong members.

13. Mercedes de Onis et al., "Is Malnutrition Declining? An Analysis of Changes in Levels of Child Malnutrition since 1980," *WHO Global Database of Child Growth* (Geneva: WHO, 2000), 2-3, lists 12.6 percent of Latin American children as growth-stunted from malnutrition. Using a 20 percent "offset factor" for being "LDS" (10 percent instead of 12.6 percent

preventable disability other than growth stunting.<sup>14</sup> Death rates from malnutrition and from infectious diseases (preventable at low cost) are shown in Table 1.<sup>15</sup> Half of these preventable deaths occur in the first year of life, 60 percent in children under age five, and 67 percent in children under age fifteen.<sup>16</sup> Mortality rates under age five are about forty-six per thousand in Latin America generally, so we can assume that even among the LDS faithful, the rate in LDCs generally would be at least thirty-seven per thousand, given the "offset factor" explained above.<sup>17</sup>

Table 1  
Communicable, Nutritional, Maternal, and Perinatal  
Annual Preventable Deaths in LDCs<sup>18</sup>

Cause <sup>19</sup>	Worldwide	Lat. America	Total Church	Faithful Church
Tuberculosis	1.7 mil	57,000	456	142
Diarrhea	2.2 mil	72,000	576	180
Pertussis	295,000	14,000	112	35
Tet& Measles	1.2 mil	5,000	40	12
Meningitis	171,000	13,000	104	32
Hepatitis	596,000	14,000	112	35
Malaria	1.1 mil	2,000	16	5
Schistosomia	14,000	2,000	16	5
Leprosy	3,000	1,000	8	2
"Worms"	16,000	2,000	16	5
Respiratory	4 mil	159,000	1,280	400
Maternal	497,000	18,000	144	45
Perinatal	2.4 mil	138,000	1,120	325
Anemia	133,000	20,000	160	50
Malnutrition <sup>20</sup>	272,000	43,000	344	108
Total (Appr)	14.6 mil	560,000	4,500	1,337

malnourished) and assuming 500,000 faithful church children under age fifteen in LDCs (all of whom are assumed to live in Latin America) gives 50,000 malnourished children.

14. There are an estimated two to three cases of disability avoided or prevented for each death prevented. This study will later describe an intervention program which would prevent an estimated nine hundred deaths annually among faithful church members. The "2000 significant disabilities" can also be estimated from C. J. L. Murray et al., "Quantifying Disability," *Global Comparative Assessments in the Health Sector* (Geneva: WHO, 1994), 49.

15. Data in this table are adapted from "Statistical Data from World Health Report 2000, Annex Table 3: Deaths by Cause, Sex, and Mortality Stratum in WHO Regions—Estimates for 1999," *World Health Report 2000* (Geneva: WHO, 2000), 104-05. In order to estimate church total and church faithful rates, all church LDC membership is assumed to live in Latin America (and would then comprise 1 percent of the total population of Latin America). Also assumed is a 30 percent "faithful" rate and the above-mentioned offset factor of 20 percent, so the table's figures are products of two multipliers: 0.3 ("faithful" rate) and 0.8 (1.0 minus the offset).

16. C. J. L. Murray et al., "Global and Regional Cause of Death Patterns," *Global Comparative Assessments in the Health Sector* (Geneva: WHO, 1994), 49.

17. "Statistical Annex: Demographic Characteristics of WHO Regions—Estimates for

Beyond the general picture in this table, the extensiveness and gravity of child malnutrition and disease among the Latter-day Saints in LDCs can be vividly illustrated by conditions in two representative stakes in Guayaquil, Ecuador. During the year 2000, in the Las Malvinas Ward, Huancavilca Stake, with fifty children aged one to fourteen, 80 percent of the children had abnormally low height per age, and 88 percent had abnormally low weight per age; more than 40 percent were anemic and more than 80 percent had parasites. In the Colinas al Sol, Florida, and Gallegos Lara Wards of the Prosperina Stake, with one hundred children age fourteen or younger, seventy had abnormally low height per age and eighty had abnormally low weight per age; more than sixty were anemic and more than eighty had parasites.<sup>21</sup> In addition, physicians practicing in Cuenca, Ecuador, were able to furnish me with a list of infants who had died among the Saints in the Cuenca Stake between 1980 and 2000. Although it was only a partial list, it contained the names of ten infants, ranging in age from three days to sixteen months, who had died from pneumonia, bronchitis, amoebic dysentery, diarrhea, measles, and malnutrition.<sup>22</sup>

Local leaders see the implications of these figures firsthand in poignant predicaments even during church meetings. A physician and former stake president reports, "In the poor congregations in my country, the children are calorie-deficient and lack the energy even to stay awake during morning Primary. Many simply fall asleep or lie down on the floor. Most of the children get only one meal a day. It would be good if we could feed them breakfast prior to church services." Late one year, with the arrival of the holiday season, a stake president in Mexico lamented that many families in his stake had no means to provide either dinner or presents for their children at Christmas. He proposed that a charitable foundation consisting of ex-missionaries collect and bring

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1978 and 1998," *World Health Report 1999* (Geneva: WHO, 1999), 111, lists the mortality rate under age five as 46/1000 for Latin America and 10/1000 for the U.S.

18. Excluding HIV, STDs, and Chaga's Disease

19. Pertussis, tetanus, measles, hepatitis A and B, miliary TB, meningitis, and pneumonia are partly or wholly vaccine-preventable.

20. These are deaths attributed directly to malnutrition. Fifty percent of the other deaths from this table would have been prevented if malnutrition were eliminated, as discussed later in the study.

21. These data are summaries of studies provided to me by three health professionals at the Fundacion Ayuda Humanitaria who are practicing in these stakes: Dr. Marisol Navarrete (general practice), Dr. Sandra Hernandez (pediatrician), and Ms. Teresa Fuentes (e-mail [teresavfuentes@yahoo.com](mailto:teresavfuentes@yahoo.com)). Height per age is the best indicator of chronic malnutrition, and "low" height or weight per age corresponds to <3<sup>rd</sup> percent on a U.S. (NCHS) growth chart.

22. Drs. Jorge and Gladys Guerrero (general practice), Cuenca, Ecuador, e-mail [prodilec@cue.satnet.net](mailto:prodilec@cue.satnet.net).

presents for children to a big stake dinner which his stake members would provide, but then he added, "Of course, if there are others more in need, then help them out. Just let me know." A current stake president in Ecuador pleaded, "Elder Walker, please go back to Salt Lake City and tell the missionaries who worked here how desperate we are for food and medicines. I have no money to help all the hungry children in my stake. Ask the ex-missionaries to send us food and medicine."

Such conditions in the wards and stakes of LDCs tug at the hearts of any North Americans visiting there, but they are simply reflections of conditions in LDCs more generally. The following summary of the situation by the World Health Organization is apt and applicable here:

Poverty is the main reason why babies are not vaccinated, why clean water and sanitation are not provided, why curative drugs and other treatments are unavailable, and why mothers die in childbirth. . . . Every year in the less-developed world 12.2 million children under five years die, most of them from causes that could be prevented for just a few U.S. cents per child.<sup>23</sup>

#### *Expectations of Church Leaders and Members in Wealthier Countries*

Most Latter-day Saints in the wealthier countries are surprised to learn how desperate the conditions of the Saints in the LDCs are.<sup>24</sup> We are justly proud, if sometimes too smug, about the economic success of the Western way of life generally, and of the economic progress of EuroAmerican Latter-day Saints in particular.<sup>25</sup> The LDS church itself has attracted much attention, usually unwanted, for its extraordinary wealth as an institution.<sup>26</sup> In view of such economic success, we assume—in a church committed historically to "taking care of its own"—we would not leave our brothers and sisters in LDCs to fend for themselves—would we? The answer is no, not deliberately.

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23. "The State of World Health," *World Health Report 1995—Executive Summary* (Geneva: WHO, 1995), 1.

24. Certainly the American Saints and their leaders with any firsthand experience in Latin America are not so sanguine. See Mark L. Grover, "Relief Society and Church Welfare: The Brazilian Experience," *Dialogue* 27 (Winter 1994): 29-38.

25. During the past half century, American Mormons have risen in comparative socioeconomic status from generally working class and rural backgrounds to near parity with American Episcopalians and Presbyterians. See W. Clark Roof and William McKinney, *American Mainline Religion: Its Changing Shape and Future* (New Brunswick, N.J.: Rutgers University Press, 1987), 110; and Armand L. Mauss, *The Angel and the Beehive: The Mormon Struggle with Assimilation* (Urbana and Chicago: University of Illinois Press, 1994), 21-24.

26. Richard N. Ostling and Joan K. Ostling, *Mormon America: The Power and the Promise* (San Francisco: Harper, 1999), 113-29; 395-400.

Our church leaders have repeatedly called for us to share our abundance with the world, especially with those in extreme circumstances. In the words of Elder Glenn L. Pace, "There is a state of human misery below which no Latter-day Saint should descend as long as others are living in abundance."<sup>27</sup> In a *Church News* article only a little more than a year ago, President Hinckley declared, "I hope [and believe] the Church is good at taking care of its own. . . . It has a responsibility sure and certain that we must take care of our own and assist them with their problems."<sup>28</sup> In a similar vein, President Kimball once assured us, "If every member of this Church observed the fast and contributed generously, the poor and needy—not only of the Church but many others as well—would be blessed and provided for."<sup>29</sup>

Such then are the expectations of our leaders. What about the realities? How could these southern-hemisphere Saints, especially the children, be living in the deplorable conditions described above? The explanation lies in the operational functions and procedures rather than the intentions of the church leaders or programs. As we might expect, the present situation has an historical context. Both the fast offering system, which originated in the nineteenth century, and the welfare program, started in the 1930s, have been guided by certain philosophical—even theological—principles. These were entirely appropriate to the times and locales in which they originated and might still make perfectly good sense in the United States and in other relatively wealthy countries. In the less developed countries, however, they have unintended consequences that are not only ironic but tragic.

#### PHILOSOPHICAL PRINCIPLES VS. PRACTICAL REALITIES IN CHURCH WELFARE PROGRAMS AND POLICIES

##### *The Traditional LDS Welfare Philosophy*<sup>30</sup>

One traditional ideal of the church's welfare program is that the locus of responsibility for a person's welfare should be kept as close as possible to the needy individual or family. The helping process begins with self-reliance, which by extension becomes family reliance, and then, as necessary, reliance on the local ward and stake (or branch and

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27. Pace, "Infinite Needs," 54.

28. "Messages of the First Presidency: Humanitarian Aid," *Church News*, 6 October 2001, 2.

29. Quoted by Edward L. Soper in "I Have a Question," *Ensign*, September 1982, 30.

30. This philosophy was nicely summarized in the priesthood and Relief Society manual of the church for 2002 ("Providing the Lord's Way," *Teachings of the Presidents of the Church: Harold B. Lee* [Salt Lake City: Church of Jesus Christ of Latter-day Saints, 2000], 165-74).

mission). The general welfare resources of the church should be the last resort for any needy Saints (except perhaps for those not eligible—i.e., not “worthy” in the eyes of their bishops).

A second and derivative principle is “working for what you get”—putting something back into the system in return for one’s assistance. This is not necessarily *quid pro quo*, since many are not able to “work off” the full material value of what they have received. The moral principle here is more important than economic parity: The beneficiary maintains his/her dignity and self-esteem through honest labor, rather than learning to live “on the dole.” A third derivative principle is the temporary nature of welfare assistance. It is not supposed to be a way of life. One is expected to return as soon as possible to a self-supporting, self-reliant, and self-respecting life. A fourth principle is the moral and spiritual imperative to sacrifice for others, so that in contributing our fast offerings, our labor, or other resources on behalf of the needy among us, we are actually improving our own spiritual condition.

This general philosophy has worked reasonably well among the Saints of North America, at least in recent decades, although it must be conceded that the church has never truly succeeded in “taking care of its own,” even in Utah, where public assistance rolls have always been among the largest in the nation relative to population.<sup>31</sup> Yet most stakes in North America have been able to cover the needs of their church members for special assistance, and many stakes have regularly sent surpluses to church headquarters as “general fast-offering” funds. One of the reasons that stakes in North America can handle their welfare problems so well is that a large proportion of those general fast-offering funds (perhaps most) are spent at bishops’ storehouses and Deseret Industries, which do not exist in the LDCs to any appreciable extent. These institutions have enabled many American bishops to spend more than their entire fast-offering donations on shelter aid because they can draw on food and clothing from D. I. and the storehouses, “off budget,” as it were.<sup>32</sup>

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31. James B. Allen and Glen M. Leonard, *The Story of the Latter-day Saints* (Salt Lake City: Deseret Book Co., 1992), 525. For the historical context and basis for this generalization, see e. g., Wayne K. Hinton, “Some Historical Perspective on Mormon Responses to the Great Depression,” *Journal of the West* 24 (October 1985), 19-26, and (same author), “The Economics of Ambivalence: Utah’s Depression Experience,” *Utah Historical Quarterly* 54 (Summer 1986), 268-85. For book-length histories, see Mangum and Blumell, *The Mormons’ War on Poverty* (cited above), and Glen L. Rudd, *Pure Religion: The Story of Church Welfare since 1930* (Salt Lake City: Church of Jesus Christ of Latter-day Saints, 1995).

32. Rudd, *Pure Religion*, 203-44. One Spanish-speaking ward of which I have personal knowledge in Las Vegas, for example, has in recent years spent as much as \$25,000 a year in fast-offering funds, exceeding the total spent by half of the thirty-four stakes in Ecuador in the year 2000.

The relative prosperity of U.S. stakes has been indirectly responsible for certain ironies and inequities even among the Saints in North America. One of the ironies is that traditional church counsel to avoid the “public dole” has often put the church in the position of subsidizing local, state, and federal governments. To the extent that a church member receives ward or stake assistance in preference to public assistance in food, housing, clothing, or medical care, he or she is freeing up government funds that have been appropriated from the taxes of all citizens, including LDS citizens, needy or otherwise. In that way, church funds are being used in place of public funds to which the needy person is entitled, so the church is subsidizing government programs. This would be irony enough if the effect were limited to the U.S. The irony is compounded, however, when we realize that if church funds were not being used for such subsidies in relatively prosperous North America, they might instead be available for distribution in the stakes of LDCs, where they are desperately needed, and where most governments are not taking responsibility for these needs. Instead, the church leaders in LDCs are instructed to follow the same program and principles applied in North America—namely handle stake needs within the stake. This is often useless advice under the circumstances.

Public welfare, as we know it in the United States, does not exist in the LDCs to substitute for (or supplement) church resources. Some LDCs do have heavily subsidized prices for food, medical care, fuel, and electricity, but these subsidies are not sufficient to cover costs in the poorest countries. Furthermore, many governments in those countries are under pressure from international organizations to decrease or eliminate these subsidies. Medical care in those countries often presents an acute crisis for a family, which cannot raise even the \$5 required for a prescription which would make the difference between life and death for a child with pneumonia. In Ecuador, for example, where ostensibly there is a system of public medical care for the poor, hospitals and clinics periodically just close because they run out of medicines, or because employees have not been paid on time.

### *Misguided Applications of the LDS Welfare Philosophy*

The LDS welfare philosophy developed under circumstances quite different from those we see today in a worldwide church. It was the product largely of a pioneering, western American culture before the arrival of the welfare state. Prior to the middle of the twentieth century, the church had only a minimal presence in LDCs, and most WCs with appreciable Mormon numbers (including the U.S.) had not constructed the public welfare “safety nets” we see today. We were far less likely, therefore, to see the irony discussed above, in which the ideal of “most proxi-

mate" welfare responsibility results in directing stakes in LDCs to "take care of their own" in the absence of meaningful local resources, while wards and stakes in the U.S. sometimes duplicate public services.

As this principle of local self-sufficiency (*autosuficiencia*) is applied by stake and ward leaders in the LDCs, it means that a ward, on average, can expect no more than \$150 annually from the general fast-offering funds distributed through the area office. One wonders why stakes and wards cannot be given more from the general fast-offering funds to relieve premature death and disability of children. Instead, instructions to stake presidents from area leaders restrict the use of such funds to "unusual or emergency circumstances," generally interpreted to mean needs for cancer treatment, extensive surgery, prostheses, and other chronic conditions.<sup>33</sup> Requests from stakes have to be justified in writing, and they are often turned down. In my interviews, stake presidents often made comments such as: "We know if we ask for help from the area, we'll be turned down," or "we got a letter from the area office instructing us not to ask for help unless it's an emergency," or "I asked for help but was told by the area office that they didn't have enough money this year," and so on. Not one stake president or bishop to whom I spoke had been given any funds from area offices to meet such critical needs as minimal nutrition, vaccines, de-worming, or medicines for diarrhea or respiratory infections, which are the most cost-effective interventions by far in order to save lives."<sup>34</sup>

A related irony can be seen in the traditional LDS welfare principle that sacrifice is good for the soul, at least as that principle is applied to LDCs. The prophet Joseph Smith himself declared, "A religion that does not require the sacrifice of all things never has power sufficient to produce the faith necessary unto life and salvation."<sup>35</sup> Guided in part by that principle, Elder Glenn L. Pace, then of the Presiding Bishopric, once recounted an experience with a stake president in South America, who had received only \$200 from his area office during the previous three years, while half of his members were unemployed. Under these circumstances, members of extended families had helped each other, and mem-

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33. In addition, the church leaders interviewed for this study had the unfortunate impression in Latin America that access to general fast-offering funds is dependent more upon personal friendships or connections with personnel in area offices than upon need, worthiness, or logic.

34. Cost-effective intervention in LDCs is the subject of intensive study and regular publication, as shown later in this paper. Furthermore, bishops and stake presidents do not have the requisite expertise to implement an effective program for nutrition and health care, even if they had the money; their roles should be limited to determining eligibility for such intervention, and worthy members should then be turned over to church health professionals.

35. Lucas and Woodworth, *Working toward Zion*, 254.



bers of wards had “shared what they had, however meager.” A great increase in spirituality resulted in the stake. Elder Pace then observed, “We could have poured money into this stake from more affluent areas and felt good about it. However, in doing so we would have robbed them of the opportunity to serve each other and to become sanctified in the process.”<sup>36</sup> He does not say what the temporal human costs were that accompanied the spiritual growth, but on the basis of the typical calculations explained earlier in this paper, I would estimate that the stake in question, over three years, would have seen the avoidable deaths of sixteen small children and the growth-stunting of forty more, in the absence of the minimal extra funds required to nourish and vaccinate these children. The ultimate irony here is found later in the same article, where Elder Pace makes the declaration I quoted earlier that “no Latter-day Saint” should have to descend into “a state of human misery. . . as long as others are living in abundance.”<sup>37</sup>

The “flip side,” as it were, of the official church concern with promoting the principle of sacrifice for spiritual growth is minimizing the risk of “economic conversions” on a large scale. As explained a few years ago in an *Ensign* article, “Historically, Christian missionaries often [converted] ‘rice Christians’ by offering people food and money. In [nations] familiar with the faces of hunger and suffering, the ‘rice Christian’ attitude persists today. People are surprised to learn that converts join [our church] to give and serve, not to receive handouts.”<sup>38</sup> Or, in the words of Richard and Joan Ostling, “No Rice Mormons.”<sup>39</sup> Of course, no one would advocate offering material incentives to join the church, but neither would we advocate the opposite extreme, namely that desperately needed help should be withheld to prevent “economic conversions.”

Indeed, it is precisely the apparent tendency to go to extremes with the traditional welfare philosophy that seems so misguided when this philosophy is applied to the LDCs. It is as though the philosophy is applied arbitrarily, for its own sake, rather than with the practical realities of a twenty-first century global church in mind. If the philosophy calls for self-reliance, or at least keeping welfare assistance “as close to home” as possible, then we tell stakes in LDCs to look after their own, even though a fraction of the funds consumed in prosperous American stakes

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36. Pace, “Infinite Needs,” 54.

37. *Ibid.*

38. Michael Morris, “India: A Season of Sowing,” *Ensign*, July 1995, 40.

39. This was the conclusion of the Ostlings after quoting Elder James O. Mason, Africa Area President and former assistant secretary at the U. S. Department of Health and Human Services. Elder Mason had been expressing some concern lest new converts in Africa might join the church “for the wrong reasons” (Ostling and Ostling, *Mormon America*, 211).

could make the difference between life and death for thousands in the stakes of LDCs. If the philosophy calls for building spirituality through sacrifices by individuals, families, wards, and stakes, then we withhold desperately needed general funds from stakes in LDCs, even though they have nothing left to sacrifice. Whatever material and spiritual benefits might result from mutual sharing among the Saints in any ward or stake, *a situation in which the poor are donating to the poor will never alleviate conditions such as malnutrition and premature death or disability in the LDCs.*

### *Inconsistent and Illogical Applications of the Philosophy*

Aside from the question of how practical and equitable such a philosophy would be if applied churchwide, a major operational problem is the inconsistent—sometimes even arbitrary—application of the philosophy at the local level.<sup>40</sup> Some members in WCs are too humiliated to seek public funds to which they might be entitled or civil remedies available to them when debt burdens become dangerously large. Accordingly, they seek temporary and confidential relief from local bishops, even when they are living in half-million dollar homes. Others expect bishops to cover airfares for visits to dying relatives or moving costs to go from one job to the next. I am personally knowledgeable about such cases. When these sorts of inconsistencies exist, skillful freeloaders among the Saints are able to move from place to place in search of the most generous bishops or to put pressure on reluctant bishops by citing precedents from earlier and more accommodating local leaders.

Nor does this inconsistency occur only in WCs. I am personally acquainted with the case of a stake president in Latin America, who had an annual fast offering total of only \$500 to work with, no access to general church fast offerings, and who admitted that 80 percent of the children in his stake were malnourished; but still he spent half of his fast offerings on funerals for members. Obviously, operational inconsistencies in the WCs can drain off a lot more from the total fund of the church than can the same in LDCs. Even the most consistent application of welfare policy and philosophy in LDCs would do little to offset the reality that per capita welfare spending in the United States is \$133, compared to an average of \$5 in LDCs, and as little as \$.30 in the poorest congregations.<sup>41</sup> Nor is help available from the LDS Humanitarian Fund, which is established to offer

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40. Church leaders are apparently well aware of this inconsistency, judging from a recent history of LDS welfare. See Rudd, *Pure Religion*, 284-88.

41. The general fast-offering funds were allocated in far greater quantity to LDC wards/stakes with higher fast-offering donations, i.e., the wealthier stakes. Many of the poorest wards/stakes have received no help from this fund over the last five to six years.

assistance only *outside* the church. This maldistribution of welfare and fast offering funds is in stark contrast to the much more equitable distribution of tithing funds, which, according to most research, represents a net transfer of tithing from WCs to the LDCs for missionary work and for capital development in land, churches, temples, and other buildings.<sup>42</sup>

*Lack of a Churchwide Monitoring System for Health and Welfare*

President Kimball once made the highly appropriate comment, "I do not worry about the members of the Church being unresponsive when they learn of the needy as much as I worry about our being unaware of such needs."<sup>43</sup> The disparities in church welfare resources between the WCs and the LDCs suggest just such a lack of awareness in high places. Sometimes this lack is brought to church attention in sudden and dramatic ways, as when a serious famine was discovered a couple of years ago among members in Africa.<sup>44</sup> While we can rejoice that the church was able to rush some food staples to alleviate the suffering there, we cannot fail to note that no such response has been forthcoming for the 50,000 chronically malnourished LDS children still waiting in Latin America and the Philippines. This juxtaposition of official expectations with such inadequate and ad hoc responses to severe crises suggests the need for a systematic program to monitor such needs around the church, especially in areas of desperate and chronic poverty.

WHAT CAN BE DONE?

As we contemplate the desperate conditions of so many of our brothers and sisters in the LDCs, we recognize immediately that we cannot fundamentally change such conditions in the foreseeable future. It is within neither the power nor the mission of the church to alleviate the recurrent political and economic chaos which has historically kept the masses in these nations from enjoying more than bare subsistence, if that. However, given the current level of welfare contributions, the church could easily modify its welfare program to provide each faithful member with minimal nutrition and access to health care. If a work requirement were included where appropriate, "economic conversions" would be minimal and might even strengthen the social and spiritual connections of recipients to the church.

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42. See, e. g., Ostling and Ostling, *Mormon America*, 120-27, and Gordon Shepherd and Gary Shepherd, "Membership Growth, Church Activity, and Missionary Recruitment," *Dialogue* 29 (Spring 1996): 48-49.

43. Quoted by Soper, "I Have a Question," 30.

44. See E. Dale LeBaron, "Pioneering in Chyulu," *Ensign*, February 2001, 34.

Following is an outline of a program that could be implemented in a very short time for faithful members. It would not be a substitute for the current welfare system, but rather a supplement to it in certain LDCs. Instead of being administered by area and stake offices, this new program could be the responsibility of "LDS Family Services," while still financed from general fast-offering funds. As a general policy, it would give priority to various low-cost interventions in conditions of health and nutrition in the LDCs, with special attention to children under age fifteen and to adults with pregnancies and/or the principal infectious diseases. (About 80 percent of the health problems in LDCs are attributable to six causes, four of them infectious diseases—e.g. tuberculosis, malaria, childhood pneumonia, diarrhea—plus risks of childbirth and pregnancies, especially unintended ones).<sup>45</sup>

(1) As a starting point, major international health organizations, such as WHO, AID, OXFAM, and others have generally agreed on an efficient and effective program targeted in this manner.<sup>46</sup> One example of such an intervention showed that providing processed food supplements in a malnourished population, at a daily cost of 15 cents per person,<sup>47</sup> brought reductions of 50 percent or more in deaths among small children from infectious disease, anemia, or malnutrition, as well as significant decreases in maternal and neonatal mortality.<sup>48</sup> These food supplements are manufactured in LDCs and resemble anything from candy bars or milkshakes to mashed potatoes (but are not as palatable). They are not normal food or staples but provide a certain level of calories and vitamins (micronutrients).

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45. "Health Care in Poor Nations as Much as a Century Behind," *USA Today*, 24 March 2000, 1A-2A. By one informed estimate in this article, these major diseases could be largely eliminated among the very poor for about \$15 per person per year.

46. For examples of such programs see *Improving Child Health: The Integrated Approach* (Geneva: WHO Division of Child Health and Development, 1998), 1-11; J. L. Bobadilla et al., "Design, Content, and Financing of an Essential National Package of Health Services" in *Global Comparative Assessments in the Health Sector* (Geneva: WHO, 1994), 171-80; "Health Services: Well Chosen, Well Organized" in *World Health Report 2000* (Geneva: WHO, 2000), 53; and J. Rivera et al., "Implementation, Monitoring, and Evaluation of the Mexican Social Programme (PROGRESA)," in *The Food and Nutrition Bulletin* (New York City: The United Nations University 2000) 21:35-41.

47. See "Processed Complimentary Foods: Summary of National Characteristics, Methods of Production, Distribution, and Costs," in *The Food and Nutrition Bulletin* (New York City: The United Nations University, 2000) 21:41, 44, 50, 78, 95, 99.

48. See "Tackling Hunger in a World Full of Food, Tasks Ahead for Food Aid, #1.10," in *World Food Summit* (Geneva: World Food Programme, 1998), 1; "Fact Sheet #178," in *Reducing Mortality from Major Killers of Children* (Geneva: WHO, 1998), 4; and *Malnutrition Affects Productivity: Improved Nutrition/Nutrition and Maternal Health/PHN Home* (Washington, D.C.: USAID Internet site at [www.usaid.gov](http://www.usaid.gov), 2002), 2.

If this intervention were implemented in the LDCs, food supplements could be purchased locally and distributed on perhaps a monthly basis at LDS chapels or during home health care visits. Experience has indicated the importance of the role of home health workers here, who can provide clients the education they need to make the best use of these supplements as part of a broader nutritional regimen (see below). Bishops who believe that inactive members are taking advantage of the church's resources can require some level of church participation for eligibility, but this is not a likely problem, for it has been difficult to convince the Latin American poor to use food supplements, even when such have been provided free of charge by their governments. At a daily cost of 15 cents per daily ration, or about \$50 annually for the 375,000 poor mentioned earlier, the total cost would be about \$19 million.

(2) Going beyond the question of nutrition to medical intervention, the same international literature described a program in northern Brazil, where a reduction of 50 percent in deaths of children under age five was associated with a program of home health education visits by trained health care workers at an annual cost of \$1.30 per client-year. No actual health care was provided during these visits, but clients' nutritional status was evaluated and they were referred to health care providers.<sup>49</sup> To adapt this kind of intervention to the church membership in LDCs, a corps of trained, local health workers (such as nurses) would offer home visits to LDS families ("active" or not) to provide health care instruction on nutrition, water sanitation (including distribution of chlorine), plus information and referrals to available local health care resources wherever they exist.

(3) A more advanced intervention would consist of opening LDS stake centers, chapels, or other buildings on Saturdays every month or two for "health fairs," where nurses and other health professionals would provide not only health education but also such periodic services as de-worming and vaccinations in areas where local governmental services did not reliably provide such. (A few stakes in Ecuador actually provided de-worming and vaccinations for a while, with donated medicines and professional time, but were eventually forced by lack of funds to discontinue these services). Other non-profit or governmental agencies could make similar use of LDS buildings on the same or other occasions to serve non-Mormon clients.

Clearly the major expense of these three kinds of intervention would be professional personnel for the home visits and the health care classes

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49. E. Cutino et al., "Primary Health Care Lessons for the Northeast of Brazil: The Asentes de Saude Program," *Pan American Journal of Health* 7, no. 5 (2000): 293-302.

and services, since the LDS missionaries in those countries are usually not qualified and should not be used for such purposes. Bishops and other priesthood leaders are likewise not usually qualified to decide what health care members need or where they should be referred. However, some local (native) nurses or other professionals, Mormon and non-Mormon, are available on a volunteer basis in many of these locations, and these could eventually be supplemented by LDS health missionaries, both native and foreign. Such health workers could travel to designated LDS buildings every two months on a rotating schedule.

(4) Once this system is operating reasonably well, it could be escalated by the limited addition of clinics in the major urban areas, where eligible church members could be treated by physicians, nurses, pharmacists, or other highly trained professionals for pregnancies, pneumonia, diarrhea, tuberculosis, malaria, typhoid fever, septicemia, and other conditions that yield readily to low-cost treatments. In many of these areas, public hospitals or governmental services of these kinds already exist, so only a few LDS clinics would be necessary to supplement, or refer members to, those public services. Professional staffs for these clinics would not be very expensive: Many primary health physicians in Ecuador, for example, earn only about \$200 per month. Access to LDS clinics could be limited, if necessary, to members with recommends from their bishops.

I would estimate the cost of the medical interventions (#2, 3, 4) at about \$14 million per year. If the rotating home health program served as many as three million of the five million Latter-day Saints in LDCs at two dollars per capita (cf. the Brazilian program, mentioned above, at \$1.30), the cost would be \$6 million. Then, assuming that the 375,000 faithful members in dire poverty (cited earlier) were all to be served by the two more advanced kinds of intervention (rotating Saturday "fairs" and supplemental urban clinics), the cost for these at \$22 per poor member would be about \$8 million.<sup>50</sup> Thus, all three medical interventions would total \$14 million. Adding in the cost for food supplements (#1) mentioned earlier (\$19 million) would bring the total for all these relatively low-cost interventions to \$33 million, or less than 10 percent of the annual church income in fast offerings and welfare funds.

Thus, reallocating general fast-offering funds from the WCs to the LDCs, even to this minimal degree (whether through LDS Family Services or otherwise), would alleviate the chronic malnourishment of 50,000 faithful LDS children, preventing nine hundred annual deaths (85 percent of them children of the faithful),<sup>51</sup> and avoiding two thousand

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50. Bobadilla et al., "Design, Content, and Financing," 171.

51. Intervention #1 (food supplements) would decrease the under-five death rates by 50 percent, per a prior footnote. Intervention #2 (nurses visiting poor members homes to

new cases of significant disabilities annually among the membership.<sup>53</sup> The stakes in LDCs could then come much closer to the ideal of “taking care of our own” by continuing to provide basic food staples and shelter or housing locally for the current outlay of about \$4 million annually. With the fundamentals of nutrition and medical care—which WCs are able to take largely for granted—the stakes in LDCs would have a somewhat more “level playing field” on which to apply the ideals of the LDS welfare philosophy to their specific situations. They could then deal with acute crises in food and shelter among themselves by making “sacrifices” more appropriate to their conditions, and requiring recipients to “work for what they get” in ways that make sense locally.

Perhaps then the church as a whole, both north and south, will also begin to approach the scriptural ideal of Zion as the Lord’s own people, who “were of one heart and one mind, and dwelt in righteousness; and there was no poor among them” (Moses 7:18).

LOOK FOR PART II IN THE NEXT ISSUE OF *DIALOGUE*.

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provide educational services) was also associated with a 50 percent decrease in the total under-five death rates in Northern Brazil (the infectious diseases listed in Table 1 cause 85 percent of the under-five death rates in Latin America). Interventions’s #3 & #4 (urban church clinics and vaccination/de-worming every two months at specified chapels with simultaneous health education classes) would decrease the death rates by an average of 22 percent, per Bobadilla “Design, Content, and Financing”, 171. The sum of all four interventions is estimated to decrease the under-five mortality rate from 37/1000 to 16/1000, or prevent 70 percent of the infectious disease deaths among faithful members from Table 1 (the 1,337 infectious disease deaths from Table 1 would decrease to approximately four hundred). This would give the church an “under-five mortality rate” similar to that of Chile (16/1000), but still 50 percent higher than the U.S. rate.

52. As was previously mentioned, there are two to three prevented disabilities for every prevented death (mortality).

# Miracle of Wood

*Anita Tanner*

—that wood could come in  
that thin and blonde  
for kindling  
after the dark bark,  
after the ax whack  
and the crack  
of white opening,  
the stria of wood  
gouging, indenting  
my armloaded skin

—that I could feel it roll  
piece by piece  
into the bottom of the woodbox  
layered with wood chips,  
chunks of bark,  
the hint of pinecone  
mixed with damp earth

—that wood could come in  
from a cold dark shed  
and give off so much heat  
in a snow-blown frozen winter,  
sometimes the only light  
in the early morning farmhouse  
—that the colored fire  
could make jewels of our eyes  
and surprise us

—that even a split log  
frozen and snow buried  
could load our fire  
with sizzle heat,  
the moisture dropping,  
never drowning out the coals

—that wood could like loaves  
of Mother's bread,  
the hardened crust,  
the sliced steam,  
my teeming nostrils  
welcoming



# John Willard Young, Brigham Young, and the Development of Presidential Succession in the LDS Church

*Todd Compton*

ON NOVEMBER 22, 1855, eleven-year-old John Willard Young, son of Brigham Young, received his endowment, undoubtedly accompanied by his father. Brigham Young clearly felt there was something out of the ordinary in John Willard, which is also shown by the event following the endowment—President Young placed his hands on the head of his son and ordained him an apostle. While we know little about this ordination beyond its date and the attendant endowment ordinance, some family members were probably witnesses, including possibly John Willard's older brother, Brigham Young, Jr., who left a record of the ordination some thirty years later. It was a private event, yet this ordination would potentially impact church government, significantly given the importance of apostolic seniority in the LDS church. Brigham Young may have envisioned that at some point John Willard, his favored son, would succeed him.

About eight years later, Brigham Young ordained two more of his sons apostles in a private ceremony. Brigham Young, Jr., who received his apostolic ordination at this time, wrote, or spoke, the following words recording the event:

In President Young's private room in the Lion House, February 4, 1864 he (Brigham Young) ordained Joseph Angell Young and Brigham Young Jr. Apostles and confirmed upon John Willard Young the ordination to the Apostleship which he received when he went through the endowment

house (which was November 22, 1855) and set each of them apart as assistant Counselors to the First Presidency.<sup>1</sup>

In other words, Brigham ordained Joseph and Brigham Jr. apostles, then called his three oldest sons (then aged twenty-nine, twenty-seven, and nineteen years old) to be assistant counselors in the First Presidency.<sup>2</sup> Brigham ordained another son, Brigham Heber, an apostle some time after 1864.<sup>3</sup> Apparently, becoming an apostle was a prerequisite for serving as a counselor in the First Presidency, so this could have been a

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1. Note in the file "Research concerning John W. Young's ordination," John Willard Young papers, MS 3804, LDS Church Archives. See also Charles W. Watson, "John Willard Young and the 1887 Movement for Utah Statehood" (Ph.D. diss., Brigham Young University, 1984), 33. The words "to the Apostleship" are inexplicably left out of Watson's quotation of this statement. The entire contents of this file are quoted in my Appendix A. For contradictory dates given on this little-known ordination, see Watson, "John Willard Young," 32. Mary Young Goulding, a daughter of John Willard, wrote, "My father was made an Apostle at a very early age. . . . Brother Andrew Jenson. . . many years ago said to me that father was nineteen at receiving that great honor; father himself told me it was earlier" (Mary Luella Morgan Young Goulding, "Biographical Sketch of John W. Young by one of his Daughters," letter to Preston Nibley, Aug. 28, 1959, LDS Church Archives). However, Andrew Jenson gave the correct, earlier date in 1890: "John W. Young, a son of Brigham Young was. . . ordained an Apostle Nov. 22, 1855, by his father, set apart as an assistant Counselor to the First Presidency Feb. 4, 1864, and as first Counselor to President Brigham Young Oct. 8, 1876. The latter position he occupied until the death of President Young in 1877" (*The Historical Record* 9 [Salt Lake City: Jenson, 1890], 123). Watson ascribes the later date to a tendency for "orthodox" writers "to gloss over or deliberately confuse the ordination date." See also Andrew Jenson, *Church Chronology*, 2nd ed. (Salt Lake City: Deseret News, 1899), xxviii (which also gives the correct Nov. 22, 1855 date).

2. For Joseph Angell (1834-1875) and Brigham Jr. (1836-1903), see Dean Jessee, ed., *Letters of Brigham Young to His Sons* (Salt Lake City: Deseret Books, 1974), 3-18; 19-90; Davis Bitton, "The Ordeal of Brigham Young, Jr.," in Bitton, *The Ritualization of Mormon History and Other Essays* (Urbana: University of Illinois Press, 1994), 115-49; and the diaries of Brigham Young, Jr., LDS Church Archives. These diaries, like many of the documents written by LDS general authorities cited in this paper, are restricted and not open to researchers, though they have been open in the past. While typescripts of such documents are sometimes available in other libraries or in published works, they cannot replace examining the originals, because I have found that published quotes or transcribed primary documents have often been misquoted or transcribed incorrectly. The unfailingly professional and helpful archivists at the LDS Archives do all they can to allow researchers access to restricted documents, but they cannot go beyond the policy. Excerpts from Brigham Young, Jr.'s journals, 1874-1902, can be found on *New Mormon Studies* CD-ROM (Salt Lake City: Signature Books, 1997).

3. For this ordination of Brigham Heber (1845-1928), the first son born to Brigham's plural wife Lucy Ann Decker in Nauvoo, see D. Michael Quinn, *The Mormon Hierarchy: Extensions of Power* (Salt Lake City: Signature Books, 1997), 720, hereafter cited as Quinn, *Extensions of Power*; James Henry Moyle, *Mormon Democrat: The Religious and Political Memoirs of James Henry Moyle*, ed. Gene A. Sessions (Salt Lake City: Signature Books, 1998), 295; Jessee, *Letters of Brigham Young*, 127.

motivation for the apostolic ordinations. However, John Willard had been ordained an apostle some eight years before, so his 1855 ordination was merely "confirmed" in 1864.<sup>4</sup>

All this was done without the knowledge of the other general authorities. President Joseph Fielding Smith wrote of these ordinations, "[T]hese brethren [Joseph A., Brigham Jr., and John W.] were ordained privately by Brigham Young and. . . [t]hese ordinations were never presented to the Church or any body of the Church for a sustaining vote."<sup>5</sup>

Once again, given the importance of apostles in succession, the ordaining of Brigham's four sons as apostles would have been seen as potentially very significant for LDS church history, and provides evidence that Brigham Young hoped to be succeeded by one of his sons.

#### JOHN WILLARD YOUNG

The youngest of these three sons, who had become apostles at such a young age, was John Willard, born October 1, 1844, the sixth child and third son (after Joseph Angell, born in 1834, and Brigham Jr., born in 1836) of Brigham and Mary Ann Angell, Brigham Young's second wife, whom he married after the death of his first wife in 1832. John Willard evidently became his father's favorite, reportedly in part because he was the first son of Brigham born under the covenant, after the endowment had been revealed in Nauvoo. A daughter of John Willard wrote to Levi Young, "The reason for him being made an apostle? [i.e., at such a young age] He, John Willard, was the first son born to his Father, Brigham Young, after the latter received his full temple Endowment (this tallies with Grandpa's data re X in your book)."<sup>6</sup>

Yet John Willard must also have shown early signs of a striking personality, for in later life he was known for his verbal brilliance and personal magnetism. He was acknowledged to be the best speaker of Brigham's sons.<sup>7</sup> While John Willard would live up to much of his young

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4. There is a possibility that Brigham Young, Jr. was also ordained an apostle in 1855. In Jenson, *Church Chronology*, xxviii, we read that Brigham Jr. was "ordained an Apostle Nov. 22, 1855, by Brigham Young, and admitted into the Council of Twelve Apostles Oct. 9, 1868." Quinn accepts Jenson's date, *Extensions of Power*, 719. However, this contradicts Brigham Young Jr.'s explicit statement that he was ordained an apostle in 1864. I think it is likely that Jenson was mistaken.

5. Typed note in "Research concerning John W.'s ordination" file, initialed by Earl E. Olson, cf. Watson, "John Willard Young," 34. See my Appendix A.

6. Goulding, "Biographical Sketch."

7. Watson, "John Willard Young," 8; cf. 3 n. 6; Jessee, *Letters of Brigham Young*, 91; Moyle, *Mormon Democrat*, 294-96. Moyle, who served as John Willard's attorney for a time, had a basically positive view of him, portraying John Willard as a failed businessman rather than a swindler. He was "one of the most magnetic men I ever knew. . . His was the most brilliant mind of all the Youngs except for that of his father. I liked and admired him,

promise, becoming extraordinarily charismatic, he also caused controversy when he turned his charisma toward business, especially railroad financing. Many felt that his business dealings were not straightforward and honest.<sup>8</sup> Certainly, many of his projects failed, and he was not able to repay his investors. Nevertheless, he became an important figure in the railroad history of the West,<sup>9</sup> and declared that all he had done had been done to help Zion.

However, this paper is concerned with the ecclesiastical side of John Willard's life. To understand the significance of his 1855 ordination to the apostleship, and Brigham Young's possible motivation for ordaining John Willard, we must examine the issues of succession to the presidency and seniority in the Quorum of the Twelve as they were understood in 1855 and the years following. As it turns out, the little-known ordination of John Willard was possibly a factor in the development of the LDS church's present system of seniority in the Quorum of the Twelve and presidential succession.

#### SUCCESSION AND SENIORITY

Many twentieth-century Mormons accept that the present system of seniority in the Quorum of the Twelve (which allows the senior quorum member, calculated by the date of entrance into the Quorum, to succeed as president of the church) has been in place since the beginning of the church, or at least, since Brigham Young's accession following Joseph Smith, Jr.'s death. Certainly, when Young became president, a pattern was

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though I literally hated some of the important things he did, and things which in business were notoriously objectionable. His marvelous magnetism relieved many of their money, which was never returned. Yet as a rule, and so far as I know, he got the money for what he thought were commendable purposes." Modern historian Guy Bishop defends Young's business acumen, ascribing his failures to financial panics in the east and the difficulty of raising capital in frontier environments (M. Guy Bishop, "Building Railroads for the Kingdom: The Career of John W. Young, 1867-91," *Utah Historical Quarterly* 48 [Winter 1980]: 66-80, 78).

8. For a negative view of John Willard, see Heber J. Grant's journal, LDS Church Archives, August 31, 1887 (and many other places in the journal); excerpts of this are also on *New Mormon Studies* CD-ROM. Grant wrote, "A number of letters to and from John W. Young were read. I wish I had confidence in him but I have not and never hear his name mentioned in connection with our efforts for Statehood but what It decreases my faith in the success of our efforts. If the Lord is going to use a man with a dishonest financial record, to give the people liberty, it looks to me as though He was placing a premium on dishonest methods." See also Moyle, *Mormon Democrat*, 296, where Grant speaks of the "crookedness and lying" of John Willard.

9. See Bishop, "Building Railroads for the Kingdom"; Marlow Adkins, "A History of John Willard Young's Utah Railroads 1884-1894" (master's thesis, Utah State University, 1978); Charles L. Keller, "Promoting Railroads and Statehood: John W. Young," *Utah Historical Quarterly* 45 (Summer 1977): 289-308.

established: The senior member of the Quorum of the Twelve, the senior apostle, would succeed as president and prophet of the church after the former president's death. However, the question of how this seniority was reckoned—a crucial factor—did not reach its present resolution until the twentieth century. John Willard's ordination and subsequent events linked to it were possibly a key element in this development and final resolution.

When the first twelve were named by the Three Witnesses on February 14, 1835, only Lyman Johnson, Brigham Young, and Heber C. Kimball were ordained that day. Six more apostles were ordained the following day (Orson Hyde, David Patten, Luke Johnson, William McLellin, John Boynton, and William Smith), and three apostles were subsequently ordained—Parley P. Pratt on February 21, Thomas Marsh on April 25, and Orson Pratt on April 26.<sup>10</sup> However, on May 2, Joseph Smith instructed them to arrange their seniority according to birthdates, hence the paradoxical system of seniority by seniority.<sup>11</sup> Thus, the original apostles had seniority strictly by age, as follows: Thomas Marsh (born November 1, 1799, 35 years old), David Patten (born November 14, 1799, 35 years old), Brigham Young (born June 1, 1801, 33 years old), Heber C. Kimball (born June 14, 1801, 33 years old), Orson Hyde (born January 8, 1805, 30 years old), William McLellin (born 1806, 29 years old), Parley P. Pratt (born April 12, 1807, 27 years old), Luke Johnson (born November 3, 1807, 27 years old), William Smith (born March 13, 1811, 23 years old), Orson Pratt (born September 19, 1811, 23 years old), John Boynton (born September 20, 1811, 23 years old), Lyman Johnson (born October 24, 1811, 23 years old).

Beginning in 1838, a number of apostles left the quorum. For example, David Patten was killed, and Orson Hyde experienced difficulties with the church, although he eventually worked these out without ex-

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10. Joseph Smith et al., *History of the Church of Jesus Christ of Latter-day Saints. Period I: History of Joseph Smith the Prophet, and. . . Period II: From the Manuscript History of Brigham Young and Other Original Documents*, ed. Brigham H. Roberts, 7 vols. (Salt Lake City: Church of Jesus Christ of Latter-day Saints, 1978), 2:187; Reed Durham and Steven Heath, *Succession in the Church* (Salt Lake City: Bookcraft, 1970), 17. This is a basic book for tracking variation in seniority in listings of the apostles.

11. "It will be the duty of the twelve when in council to take their seats together according to their ages" (Remarks, May 2, 1835, in "A record of the transactions of the Twelve apostles," in "Patriarchal Blessings Book, Vol. 1, February 14 to August 28, 1835," LDS Church Archives, [restricted]; I cite from *New Mormon Studies* CD-ROM). See also Smith, *History of the Church*, 2:219-20; and Gary James Bergera, "Seniority in the Twelve: The 1875 Realignment of Orson Pratt," *Journal of Mormon History* 18 (1992): 19-50, 47. The First Presidency re-emphasized this policy in early 1839: "Appoint the oldest of those of those twelve who were first appointed, to be the President of your Quorum" (Sidney Rigdon, Joseph Smith, Hyrum Smith to Heber C. Kimball and Brigham Young, Jan. 16, 1839, in Joseph Smith collection, MS 155, Box 2, Fd 3, LDS Church Archives).

communication and returned to the church and to his place in the Quorum. Several new apostles were ordained to fill the vacancies. On December 19, John E. Page (born February 25, 1799, age 39) and John Taylor (born November 1, 1808, age 30) were ordained. On April 26, 1839, Wilford Woodruff (born March 1, 1807, age 32) and George Albert Smith (born June 26, 1817, age 21) received their ordinations. Willard Richards was ordained on April 14, 1840 (born June 24, 1804, age 35) and Lyman Wight (born May 9, 1796, age 44) on April 8, 1841.

Using the sole criterion of age, this new group of apostles would have caused a major upheaval in seniority, since Lyman Wight, the last ordained, but the eldest, would become the senior apostle. However, this did not occur. When we look at the early lists showing seniority of the Twelve, we find them in groups. For instance, on April 15, 1841, the twelve, in England, signed an epistle in the following order: Brigham Young, Heber C. Kimball, Orson Hyde, Parley P. Pratt, Orson Pratt, Willard Richards, Wilford Woodruff, John Taylor, George A. Smith.<sup>12</sup>

While not all of the twelve were in England at the time, this document illustrates a new development. The first member of the "new apostles," Willard Richards, signed after Orson Pratt, even though he was seven years older. So while the groups were arranged by date of ordination, within the groups, age seniority was still the criterion.

One oddity in this list will leap out at any Mormon history buff: Woodruff had seniority over John Taylor because he was older, even though Taylor had helped ordain Woodruff to the apostleship. If this system of seniority had continued, Woodruff would have succeeded Brigham Young, and Taylor would never have been president of the church. There were also some minor quirks and oddities in subsequent listings of the Quorum of the Twelve. For instance, Lyman Wight's rank was ambiguous, partially due to his comparatively late ordination, and perhaps also because of his problematic character. Sometimes he was viewed as a "Third Group" because of his late ordination, and was listed at the end of the Twelve, while at other times he was viewed as first of the "Second Group," and at still other times, he was placed after Page but not at the end of the Twelve, an odd compromise!<sup>13</sup> Excluding these few variations, the pattern of seniority within groups explains seniority in the Twelve at this time very well.

In 1842, Orson Pratt had problems with Joseph Smith and was

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12. Smith, *History of the Church*, 4:348.

13. Another quirk is that William Smith and Orson Pratt sometimes traded places. Yet another readily explainable quirk is that, in epistles, Willard Richards sometimes appeared at the end of the Twelve, but this was because the clerk always signed his name last.

nearly excommunicated,<sup>14</sup> so Amasa Lyman was ordained to fill his place. However, Pratt did not leave the church, according to Bergera's interpretation, and was eventually returned to his place in the Quorum. Lyman subsequently filled a vacancy in the Quorum, at the end of the list.<sup>15</sup>

In the years that followed, of course, Joseph Smith and Hyrum Smith were killed, and the church split, with most Mormons following the Twelve, led by the senior member, Brigham Young, who eventually became church president in a First Presidency that was separate from the Twelve. William Smith and John Page left the church, and Ezra T. Benson (born February 22, 1811, age 35) was ordained an apostle on July 16, 1846.

In October 1848, at General Conference, the general authorities were sustained as follows: in the First Presidency, Brigham Young, Heber C. Kimball, and Willard Richards; in the Quorum of the Twelve, Orson Hyde, Parley P. Pratt, Orson Pratt, Lyman Wight, [Willard Richards would be here] Wilford Woodruff, John Taylor, George A. Smith, Amasa Lyman, and Ezra T. Benson. Thus, the First Presidency was followed by nine apostles. However, it was subsequently decided to fill the Quorum of the Twelve. On February 12, 1849, four new apostles were ordained: Charles C. Rich (born August 21, 1809, age 39), Lorenzo Snow (born April 3, 1814, age 34), Erastus Snow (born November 9, 1818, age 30), and Franklin D. Richards (born April 2, 1821, age 27). They took their places in the Quorum of the Twelve in that order.

After this, apostles were generally called one or two at a time. There was no question of age seniority, except regarding groups of apostles called at about the same time. However, one point of ambiguity remained. In these new, single, callings, an apostle was ordained at about the same time he entered the Quorum. Was seniority reckoned from date of ordination, or from date of entrance into the Quorum?

A related ambiguity arose on April 6, 1854, when Jedediah Grant was ordained an apostle, then took his place as second counselor in First Presidency. He evidently became an apostle in order to serve as a counselor. This created a new question: If Brigham had died when Grant was alive, would Grant have taken a place in the Quorum of the Twelve based on the date of his ordination to the apostleship?

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14. See Gary James Bergera, "The Orson Pratt-Brigham Young Controversies: Conflict Within the Quorums, 1853-1868," *Dialogue* 13 (Summer 1980): 7-58 and *Conflict in the Quorum: Orson Pratt, Brigham Young, Joseph Smith* (Salt Lake City: Signature Books, 2002), 7-32.

15. Durham and Heath, *Succession in the Church*, 58. Lyman was supposed to replace Sidney Rigdon in the presidency, as Joseph was upset with Rigdon. Almost comically, though, the saints voted to retain Rigdon, leaving Lyman in another limbo.

This is how matters stood when Brigham Young ordained John Willard an apostle on November 22, 1855. Based on Brigham's interpretation of that ambiguity, he was either giving John Willard a private honor, or he was virtually choosing him to be his successor at some time. If seniority was to be reckoned by ordination to apostleship alone, John Willard would eventually have overwhelming seniority, because he was so young when ordained.

#### SUCCESSION AFTER 1855

On December 1, 1856, Jedediah Grant died, and a month later, on January 4, 1857, Daniel H. Wells was ordained an apostle, then a counselor in the First Presidency.<sup>16</sup> Now there was indeed an apostle not in the Quorum who would outlive Young. When Parley P. Pratt was killed on May 13, 1857, his vacancy in the Twelve was filled on August 26, 1860, by George Q. Cannon (born on January 11, 1827, age 33).

One can only conjecture why Brigham kept the ordination of John Willard secret. Perhaps there was tension between the church president and the Twelve, despite Young's forceful leadership.

However, in October 1861, the ambiguity in apostolic succession was removed, when Brigham Young, at General Conference, stated a policy that brought about an important change in the method for reckoning apostolic seniority. As we have seen, the older Woodruff originally ranked before John Taylor in apostolic seniority, but at this conference, as Taylor called out Woodruff's name before his own, "President Young directed the clerk, J. T. Long, to place Brother Taylor's name above Brother Woodruff's as Elder Taylor was ordained four or five months before Elder Woodruff. . . . President Young said the calling was made in accordance with the date of ordination."<sup>17</sup> Thus, years later John Taylor would become president of the church before Woodruff. Likewise, John Willard, with this new policy, would almost certainly become president of the church at some time, barring unforeseen difficulties, apostasy, or death, provided he entered the Quorum of the Twelve. In 1855, at the time of John Willard's ordination, the next youngest apostle had been Franklin D. Richards, thirty-four years old.

On February 4, 1864, as we have already noted, Brigham ordained his other two oldest sons apostles, and set all three sons apart as assistant

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16. Bryant S. Hinckley, *Daniel Hanmer Wells and Events of His Time* (Salt Lake City: The Deseret News Press, 1942), 233.

17. History of Brigham Young, MSS, October 1861, p. 437, LDS Church Archives, MS CR 100 102, #14; Journal History, LDS Church Archives, Oct. 7, 1861. Cf. John Taylor, *Succession in the Priesthood* (Salt Lake City: n.p., 1881), 2, 16-17; Durham and Heath, *Succession in the Church*, 65.



counselors to the president. Brigham subsequently confided this to two apostles, John Taylor and George Smith:

President Young said I am going to tell you something that I have never before mentioned to any other person I have ordained my sons Joseph A. Brigham & John W. Apostles and My Counsellors. Have you any objections? J. Taylor & G.A. Smith said they had not, that it was his own affair & they considered it under his own direction. He further stated In ordaining my sons I have done no more than I am perfectly willing that you should do with yours. And I am now determined to put my sons into active service in the Spiritual Affairs of the Kingdom and keep them there just as long as possible you have the same privilege.<sup>18</sup>

Joseph Angell was twenty-nine at the time of ordination, Brigham Jr. was twenty-seven, and John Willard was nineteen. In the junior part of the Quorum, Lorenzo Snow was forty-nine, Erastus Snow was forty-five, Franklin Richards was forty-three, and George Cannon was thirty-seven. There was a sizable gap between the oldest of Brigham's ordained sons and the youngest member of the Quorum of the Twelve.

Two years later, on July 1, 1866, Brigham performed another private apostolic ordination that paradoxically would have far more practical consequence than the earlier ordinations of his own sons. After a prayer meeting with Joseph F. Smith and four apostles (John Taylor, Wilford Woodruff, George A. Smith, and George Q. Cannon—a group that did not include the most senior apostles, Hyde and Pratt), Young began to take off his temple clothes, then, as recorded by Wilford Woodruff, “[o]f a sudden he stoped & Exlaimed hold on, ‘Shall I do as I feel led? I always fell [feel] well to do as the Spirit Constrains me. It is my mind to Ordain Brother Joseph F. Smith to the Apostleship, and to be one of my Councilors.’” He then asked for the feelings of the apostles present, who gave the idea “Harty approval. . . . After which Brother Joseph F. Smith knelt upon the Altar & . . . we laid our hands upon him, Brother Brigham being mouth.” Young then ordained Joseph F. Smith an apostle and a counselor to the First Presidency.<sup>19</sup> The secrecy of this ordination is evidenced by

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18. Wilford Woodruff, “Historian’s Private Journal” (1858-78), Apr. 17, 1864, LDS Church Archives, as cited in Quinn, *Extensions of Power*, 164, who notes a typescript of this document, “Minutes of the Quorum of the Twelve Apostles,” in Donald R. Moorman papers, fd 8, box 16, Stewart Library, Weber State University, Ogden, Utah. See also D. Michael Quinn, “The Mormon Hierarchy, 1832-1932: An American Elite” (Ph.D. diss., Yale, 1976), 36; Quinn, *The Mormon Hierarchy: Origins of Power* (Salt Lake City: Signature Books in association with Smith Research Associates, 1994), 454 n38.

19. Wilford Woodruff journal, LDS Church Archives, July 1, 1866, typescript published in Scott G. Kenney, ed., *Wilford Woodruff’s Journal: 1833-1898*, 9 vols. (Midvale, Utah: Signature Books, 1983-1985), 6:290; Joseph Fielding Smith, *Life of Joseph F. Smith*

the fact that Young counseled the apostles to make a record of it, but instructed them not to tell anyone not present about the event. Young's first counselor, Heber C. Kimball, was not present. A few days later, Kimball approached Joseph F. and told him that he had received a spiritual impression that Joseph F. would someday become an apostle. Joseph F. felt somewhat embarrassed that he could not tell Kimball he already was an apostle.<sup>20</sup>

As of yet, none of these apostle-counselors<sup>21</sup> had joined the Twelve, as there were no deaths or apostasies of the members of the Twelve for a number of years. But in 1867, Amasa Lyman was excommunicated and expelled from the Quorum of the Twelve for preaching false doctrine and apostasy, leaving a vacancy. Brigham originally desired to put Brigham Young, Jr., into the vacancy, but this did not take place. Brigham Jr., writing in his journal, gave a remarkable behind-the-scenes view of what happened at this point: "Bro. Geo. A. Smith suggested that it might raise a question & comment if B.Y. Jr. was put in, in place of Br A. M. Lyman apostasized; and if Jos. F. S. was now put in to the Quorum it could make no difference as <I> B.Y. Jr. was ordained an apostle and would take <my—crossed out> his place in the Quorum according to that ordination."<sup>22</sup> This statement shows that the policy of seniority reckoned entirely by date of ordination to apostleship was firmly in place at this time. As George A. Smith suggested in this journal entry, Brigham Jr., when he joined the Quorum at a later date, "would take his place [rank] in the Quorum according to that [earlier apostolic] ordination." Interestingly, Brigham Sr. bowed to George Smith's counsel, and as a result, Joseph F. Smith would later become president of the church rather than Brigham Jr. However, because the policy of seniority by date of ordination was then accepted, Brigham had no qualms about putting Joseph F. into the Twelve first, since he expected that his sons would always have seniority over Joseph F.

When another vacancy occurred, Brigham Jr. was brought into the Quorum of the Twelve on October 9, 1868. In the subsequent April conference, Young was sustained behind Smith, but this was quickly recog-

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(Salt Lake City: Deseret News Press, 1938), 226-27. See also Durham and Heath, *Succession in the Church*, 70-71.

20. Smith, *Life of Joseph F. Smith*, 227; Quinn, *Extensions of Power*, 23, 419 n. 13, citing Quorum of the Twelve Apostles minutes, Apr. 5, 1900, 10, LDS Church Archives. Quinn tells this incident in the context of probable tensions between Young and Kimball.

21. Durham and Heath, *Succession in the Church*, 68-69.

22. Diary of Brigham Young, Jr., April 5, 1900, LDS Church Archives as quoted in Quinn, *Extensions of Power*, 171-72.

nized as a mistake, for in the following years Brigham Young, Jr., was sustained ahead of Joseph F. Smith at conferences. This is how their relative seniority remained for many years.<sup>23</sup>

#### JOHN WILLARD: RAILROAD ENTREPRENEUR AND FIRST COUNSELOR

From 1863 on, although John Willard was an apostle and assistant counselor in the First Presidency, he spent much of his life in New York, engaged in business ventures. In these he alternated between dazzling success and inability to fulfill his dreams and promises. One day he would be a millionaire (and he liked to live like a millionaire), the next he would be penniless. He quickly became chronically indebted and beset by creditors. He raised money with a golden tongue, but when his projects failed, many contributors felt betrayed.<sup>24</sup>

Brigham Young likely looked on his favorite son with great fondness and continual unease. He knew that John Willard was deeply in debt.<sup>25</sup> Brigham Young, Jr., visiting John Willard at one time, wrote, "I have passed a miserable day seeing John harrassed by duns. . . . Money could not hire me to endure the torture which my poor brother suffers every day. I know it must be terrible on his mind."<sup>26</sup> Brigham Sr. would often plead with John Willard to come back to Utah to take up his responsibilities in church leadership,<sup>27</sup> but John Willard never seemed singlemindedly interested in church affairs.

In April 1873, John Willard, along with four others, was publicly sustained as an assistant counselor to Brigham. Still, John did not seem to fulfill his church obligations in any substantial way.<sup>28</sup> Brigham went to the length of paying many of John Willard's debts to convince him to

23. Durham and Heath, *Succession in the Church*, 72.

24. See Jessee, *Letters of Brigham Young*, 92-94; Watson, "John Willard Young"; Bishop, "Building Railroads for the Kingdom"; Adkins, "A History of John Willard Young's Utah Railroads."

25. Brigham Young to Brigham Young, Jr., and John Willard Young, Jan. 11, 1876 (Jessee, *Letters of Brigham Young*, 117). See following notes.

26. Brigham Young, Jr., Diary, 29 Dec. 1875, 3 Jan. 1876, LDS Church Archives, as cited in Jessee, *Letters of Brigham Young*, 117.

27. Brigham Young to John Willard Young Oct. 26, 1874 (Jessee, *Letters of Brigham Young*, 109); Brigham Young to John Willard Young, Dec. 17, 1875 (Jessee, 115-16). This letter has a moving, almost pathetic postscript, written in hand by Brigham himself after the more formal dictated letter: "O Jonna I pr[a]y for you and yours continually. If you nue [knew] how I want to see you, you would come. My dear Jonna, I due hope you will see as we see thing[s]. I send your dear Br Brigham & Br Stanes to prevale on you to come home and stay with us. M[a]y God Bless my d[e]ar Boy. B.Y." See also Jessee, 109-124.

28. Wilford Woodruff journal, Apr. 8, 1873 (Kenney, *Wilford Woodruff's Journal*, 7:130); Brigham Young to John Willard Young, 13 Nov. 1873 (Jessee, *Letters of Brigham Young*, 109);

come back to Utah,<sup>29</sup> but after a stay in Zion, John Willard once again returned to the east. Toward the end of Brigham's life, he managed to bring John Willard back to church service once again. In February and March 1876, John Willard visited Utah. On the day before his departure, Brigham told his son that he desired to make him "his first counselor in the First Presidency if he would walk up to his duties."<sup>30</sup> Evidently, Brigham Young once again coaxed him back by offering financial assistance.<sup>31</sup> John Willard agreed to accept this high church position. After "arranging his business affairs in the east," John Willard returned to Utah in October 1876, and became First Counselor.<sup>32</sup> This youthful apostle—now only thirty-two years old—had a church position of high visibility. He had avoided church service throughout his life, but now held the second most important position in the church.

Brigham Young effected another important change in apostolic seniority in 1875 when he found himself suffering from serious health complaints. (Thus, this change may have been made with a view toward presidential succession, as he feared that he might die.) Before this time, the Twelve had been sustained as follows: Orson Hyde (President), Orson Pratt, John Taylor, Wilford Woodruff, [George A. Smith], Ezra T. Benson, Charles C. Rich, Lorenzo Snow, Erastus Snow, Franklin D. Richards, George Q. Cannon, Brigham Young, Jr., Joseph F. Smith. (George A. Smith and Daniel H. Wells were the First Presidency counselors.) Thus, Orson Hyde was in line to succeed Brigham at his death. However, at a meeting of the First Presidency and the Twelve before April conference, Brigham informed Hyde and Pratt that they had lost seniority because of their difficulties with Joseph Smith in Nauvoo which had caused them to leave the Quorum, and instructed them to give up their leading position in the Quorum. Thus, the new criterion became longest *continuous* apostolic status. In the April 1875 conference, the Twelve were sustained as follows: John Taylor, Wilford Woodruff,

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Durham and Heath, *Succession in the Church*, 73. Brigham now had seven counselors. See also Watson, "John Willard Young," 22.

29. Watson, "John Willard Young," 22 n. 55.

30. Jessee, *Letters of Brigham Young*, 119, citing Brigham Young, Jr., diaries, LDS Archives, 14-15 March 1876.

31. Watson, "John Willard Young," 23 n. 57, citing John Willard Young to H. B. Wooster, 20 Nov. 1877; Brigham Young, Jr., Diary, LDS Church Archives (restricted), 1 Sept. 1875; 14 Mar. 1876.

32. Wilford Woodruff journal, Oct. 7, 1876 (Kenney, *Journal of Wilford Woodruff*, 7:286); Jessee, *Letters of Brigham Young*, 122. Another sign of John Willard's high church status was his receiving his Fullness of Priesthood ordinance on March 28, 1877, see Wilford Woodruff journal (Kenney 7:341); L. John Nuttall diaries, at same date, LDS Church Archives, excerpts available on *New Mormon Studies* CD-ROM.

Orson Hyde, Orson Pratt, Charles C. Rich, Lorenzo Snow, Erastus Snow, Franklin D. Richards, George Q. Cannon, Brigham Young, Jr., Joseph F. Smith, Albert Carrington. (John W. Young and Daniel H. Wells were the First Presidency counselors; they had apostolic seniority just after Franklin D. Richards.)<sup>33</sup>

A behind-the-scenes vignette shows the tension between John Willard and Joseph F. Smith, and the depths of Brigham's love for John Willard. Evidently, after John Willard was chosen as First Counselor, on August 29, 1877, Brigham brought the matter before the Twelve to enlist their support. However, Joseph F. "stated that he thought the people would very much prefer to see Brigham Jr. selected, rather than to take John W. to fill that position. President Young turned to Joseph F. and shaking his finger at him said, 'I have got Brigham [Jr.] and I have got you and I want John W.'"<sup>34</sup> Brigham immediately instructed Joseph F. to prepare to go on a five-year European mission. Joseph F. went to Europe, but was recalled soon after, when Brigham died.

#### AFTER BRIGHAM YOUNG: TENSIONS WITH CHURCH LEADERS

Brigham Young's death, another milestone in Mormon history, did not cause a full-fledged succession crisis, and John Taylor succeeded to church leadership relatively smoothly.<sup>35</sup> There was no debate about the policy of seniority by date of ordination. Wilford Woodruff, in 1879, said, "Elder Taylor is the oldest in *Ordination* and that is why he presides today."<sup>36</sup> However, the general authorities were faced with another problem: what to do with First Presidency Counselors John Willard Young and Daniel Wells. They could have been retained in the First Presidency, as has often happened since. In addition, there would be a vacancy in the Quorum of the Twelve, if the First Presidency were reorganized.

However, the First Presidency was not immediately reorganized. Therefore, the Twelve were sustained as follows in October 1877: John

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33. See Wilford Woodruff journal, April 10, 1875 (Kenney 7:224); Taylor, *Succession in the Priesthood*, 2, 16-17 (who misdates the realignment by Brigham Young at June 1875; instead, the Woodruff journal shows it occurred before April 10, 1875); Bergera, "Seniority in the Twelve" and "The Orson Pratt-Brigham Young Controversies"; William G. Hartley, "The Priesthood Reorganization of 1877: Brigham Young's Last Achievement," *Brigham Young University Studies* 20 (Fall 1979): 3-36, 5; Durham and Heath, *Succession in the Church*, 73-75; Steven Heath, "Notes on Apostolic Succession," *Dialogue* 2 (Summer 1987): 43-57, 44.

34. Charles W. Nibley, *Reminiscences of Charles W. Nibley, 1849-1931* (Salt Lake City: His Family, 1934), 73-74; Quinn, *Extensions of Power*, 38-39.

35. For this succession, see Durham and Heath, *Succession in the Church*, 78-92; Quinn, *Extensions of Power*, 40-41.

36. Moses Thatcher journal, Jan. 5, 1879, LDS Church Archives, as cited in Bergera, "Seniority in the Twelve," 51 n. 106.

Taylor (President), Wilford Woodruff, Orson Hyde, Orson Pratt, Charles C. Rich, Lorenzo Snow, Erastus Snow, Franklin D. Richards, George Q. Cannon, Brigham Young, Jr., Joseph F. Smith, Albert Carrington. The problem of two non-Quorum counselors was solved by creating a new office: Daniel H. Wells and John Willard Young were sustained as counselors to the Twelve.<sup>37</sup> Thus John Willard was still a recognized general authority, but had been kept somewhat at arm's length. He returned to the East, to take up his favored business dealings once again. In 1880, when the First Presidency was re-organized with George Q. Cannon and Joseph F. Smith as counselors to Taylor, three new apostles were brought into the Twelve: Moses Thatcher, Francis M. Lyman, and John Henry Smith. Daniel Wells and John Willard Young were not included.

John Willard's relations with the other general authorities quickly deteriorated.<sup>38</sup> On April 6, 1881, John's name was withheld from the list of general authorities. On May 20, he was tried by the Quorum of the Twelve, but a reconciliation followed.<sup>39</sup> He was again tried by the Quorum on April 3, 1883, immediately before General Conference, "for conduct unacceptable to the rest of the Quorum"; again he obtained reconciliation.<sup>40</sup> On April 29, 1884, John Willard was "threatened with church discipline regarding his handling of church finances," and a year later, he was tried by the Quorum of the Twelve once again, on November 7, 1885, when his release from general authority status was discussed. The authorities objected to John Willard's long stay in the East, his disobedience to counsel, and the fact that his business dealings had not been in line with the church leaders' desires. John Willard, however, obtained another reconciliation.<sup>41</sup>

Part of the problem was that, although the authorities disapproved of John Willard's love of the East, he had many political and financial connections there, so they were willing to have him act as their represen-

37. John Willard was made a "Counselor to the Twelve" on September 4, 1877, see Wilford Woodruff journal, at that date (Kenney 7:372). See also Quinn, *Extensions of Power*, 40.

38. Quinn, *Extensions of Power*, 720-22.

39. John Henry Smith diaries, published in Jean Bickmore White, ed., *Church, State, and Politics: The Diaries of John Henry Smith* (Salt Lake City: Signature Books, 1990), 60-62; Watson, "John Willard Young," 24, 45 n., citing Wilford Woodruff to John Willard Young, 9 April 1881, First Presidency letterpress copy book vol. 6 #19, LDS Church Archives; Wilford Woodruff journal, May 20-25, 1881 (Kenney 8:32).

40. Wilford Woodruff journal, Apr. 3-8, 1883 (Kenney 8:162). See also "Fifty-Third Annual Conference," *Millennial Star* 45 (28 May 1883): 337-38. John Taylor recorded that John Willard had been pursuing secular enterprises and had done little work as a general authority. There were also complaints from church members about his business practices.

41. Brigham Young Jr. Diary, 7 Nov. 1885, LDS Archives (restricted), as cited in Watson, "John Willard Young," 61-63 nn. 26, 27; John Henry Smith journals, Nov. 7, 1885, in White, *Church State and Politics*, 142.

tative in delicate negotiations regarding statehood and lessening the legal blows of anti-polygamy legislation.<sup>42</sup> In this mission, he was entrusted with extensive funds from the church to grease judicial, editorial, or political wheels.<sup>43</sup> However, in 1888 he was accused by Joseph F. Smith of using this money unethically to maintain his wealthy lifestyle.<sup>44</sup> Joseph F. Smith replaced him as head of Utah's statehood efforts at that time, to John Willard's chagrin.

The actions of this charismatic son of Brigham continued to seriously trouble the general authorities. On April 5, 1889, the Quorum of the Twelve again discussed releasing him from his calling, and the Quorum and First Presidency debated the same issue two years later, on October 3, 1891. During the discussion they received a letter of resignation from John Willard. Three days later, he was released from his calling as Counselor to the Twelve.<sup>45</sup> Evidently, he had suffered terrible financial setbacks at the time.

While John Willard was still an apostle, and in line to become president of the church through the policy of apostolic seniority by ordination, he was no longer recognized at conference as a general authority, and relations between him and the church leaders had become extremely cool. His early ordination, which was evidently well known among the First Presidency and Twelve by this time (Brigham Young, Jr., was part of the Quorum), would have been seen as a very dangerous factor for the future of the church, like a time bomb ticking away in the east. He was not a member of the Twelve, but ambiguity in succession still remained; did seniority toward succession come from being the senior apostle (ordination date) or from being the senior member of the Quorum of Twelve?

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42. For this period of John Willard's life, see John Willard Young, *Letterbooks*, in John W. Young Collection, Beinecke Library, Yale University, New Haven, Conn.; Keller, "Promoting Railroads and Statehood"; E. Leo Lyman, *Political Deliverance: The Mormon Quest for Utah Statehood* (Urbana: University of Illinois Press, 1986); Watson, "John Willard Young," 73-100.

43. See Watson, "John Willard Young," 77, quoting John Willard: "My conscience is clear in buying men to do right, but not to do wrong" (John Willard Young to George Q. Cannon, 18 Nov. 1886). In Sept. 1886, John Willard wrote to the First Presidency, "I think almost any judge or particularly obnoxious official can be removed if we go about it in the right way." (John Willard Young to John Taylor, 17 Sept. 1886, as cited in Watson 99.) According to Watson, the First Presidency instructed John Willard to move ahead (99-100). See also Watson, 73, 76, 160, 94.

44. Watson, "John Willard Young," 234, 237, 239-41, 236, 254 n.112, citing Jason Mack [Joseph F. Smith] to Wilford Woodruff, 13 March 1888.

45. Quinn, *Extensions of Power*, 722 and "Organizational Development and Social Origins of the Mormon Hierarchy 1832-1932: A Prosopographical Study" (M.A. Thesis, University of Utah, 1973), 290. However, this resignation did not affect Young's standing for succession, per George Q. Cannon on Oct. 31, 1893, see Quinn, *Extensions of Power*, 722.

The tragedy of John Willard's life continued to spiral downward. Four of his five wives divorced him (two in 1873, two in 1890, and the remaining wife separated from him in 1879). One of his wives wrote, "My children will never know in this life what the word father means."<sup>46</sup> Financial disaster forced him to leave New York for Europe. Further projects failed. One of these left many "Mormon laborers unpaid."<sup>47</sup>

#### APOSTOLIC SUCCESSION: THE FINAL DEVELOPMENT

Wilford Woodruff succeeded John Taylor as acting church president in 1887, and Lorenzo Snow succeeded Woodruff in 1898. In October, Franklin Richards was sustained as president of the Quorum of the Twelve; John Willard was next in seniority; George Q. Cannon, Brigham Young, Jr., and Joseph F. Smith followed John Willard. On December 9, 1899, Franklin D. Richards died. John Willard Young would have been the President of the Quorum of the Twelve, if he had been in the Quorum. Lorenzo Snow was at that time 85 years old, and not in good health. Church leaders clearly saw that a dangerous succession ambiguity was looming. John Willard was roundly disliked by a number of general authorities, and had resigned as counselor to the Quorum of the Twelve; nevertheless he had never resigned his apostleship, and had not been disfellowshipped or excommunicated. By the accepted system, he was the person who *should* succeed Lorenzo Snow. No one wanted him as the next president; in fact, some authorities felt that his succession would be a disaster for the church, but Brigham Young's desire for his favorite son to gain the presidency, sealed by an ordination half a century earlier, was still a shadow falling across the hierarchy. Even if his accession faced practical challenges, his "legal" status still would produce uncertainty and ambiguity.<sup>48</sup>

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46. Jessee, *Letters of Brigham Young*, 94 (no bibliographical data given); Watson, "John Willard Young," 256; divorce dates, see John Willard Young Family Group Sheets, Genealogy Library; Adkins, "A History of John Willard Young's Utah Railroads"; Quinn, *Extensions of Power*, 720. For further on problems in John Willard's family life (neglect, and accusations of a romance with an actress), see Watson, "John Willard Young," 9, 10, 15, 16; Newell Crookston, "The Wages of Sin," LDS Church Archives, pp. 7-8; John D. Lee, *Mormonism Unveiled; or the Life & Confessions of the Late Mormon Bishop, John D. Lee* (St. Louis, Mo.: Bryan, Brand & Company, 1878), 161-63.

47. Watson, "John Willard Young," 256.

48. The early ordinations of John Willard and Brigham Jr., and their implications for presidential succession, were so well known that a *Salt Lake Tribune* story mentioned them in 1871, "The Dynasty of the Youngs," Sept. 9, 1871, p. 4: "It is understood that he ordained his sons, Brigham, Joseph and John, to this special Apostleship, outside the legitimate Twelve, under pretence of making them his personal counselors, which in effect was creating them princes of his royal family. Brigham's Apostleship was conferred upon them, and that in his mind, meant the right to out-rank all the Apostles of the church, when the due time of the succession came up." I am indebted to E. Leo Lyman for this reference.



The final chapter in the story of John Willard and the succession now took place. It would also affect his brother, Brigham Jr. After Woodruff's death on September 2, 1898, his counselors, George Q. Cannon and Joseph F. Smith, briefly returned to their function as members of the Twelve before the next First Presidency was organized, and Smith sat below Brigham Young, Jr., in accordance with the "date of ordination" policy then in place (Cannon was still senior to Brigham Jr.). However, after the meeting, a junior member of the Quorum, Heber J. Grant, somewhat brashly objected to Smith being behind Young. Young replied that he was willing to serve any place in the Quorum, but he nevertheless defended his senior placement. As recorded in his own diary, he stated that he felt he was "fit to be an apostle." In other words, there was no question of unworthiness, as there had been with Hyde and Pratt, and as there might be with John Willard Young. He mentioned that he had "submitted this matter to father one day and he said rather severely 'It is just right the way it is, and you let it alone.'" So Brigham Jr. had the authority of his father for the present placement being correct. He reiterated that after ordination an apostle could not be demoted, if he was worthy: "I am of the opinion that when a man is ordained an apostle and seeks to magnify that office, no new man can rank him in (being) set apart to fill a vacancy in the Quorum of the Twelve." Nevertheless, he stated, with true humility, that he would always bow to the decision of the First Presidency and the Twelve on this issue, and "I yield my views to theirs with all my heart."<sup>49</sup>

On March 31, 1900, the aging President Lorenzo Snow and his counselors, George Q. Cannon and Joseph F. Smith, had a private discussion, in which they agreed that the previous policy of apostolic seniority by date of ordination, which Brigham Young had implemented, was incorrect, and that seniority should be gauged by date of entrance into the Quorum. Although Joseph F. Smith had ranked below Brigham Young, Jr., in Quorum rankings, succession sequence, and solemn public sustainings in conference, Snow told Smith that Brigham Young, Jr., would now rank below him in seniority.<sup>50</sup> There is no escaping the fact that this was a straightforward change in policy; nevertheless, it was also an entirely reasonable and sensible change. However, there remained the difficult problem of informing Brigham Jr. that neither he (nor John Willard) would be the next president of the church.

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49. Brigham Young, Jr., diary, LDS Church Archives, Sept. 9, 1898, as cited in Heath, "Notes on Apostolic Succession," 49.

50. Diary of Joseph F. Smith, LDS Church Archives, as quoted in Smith, *Life of Joseph F. Smith*, 310. See Durham and Heath, *Succession in the Presidency*, 114.

On Apr. 5, 1900, at a meeting of the First Presidency and Council of the Twelve in the Salt Lake Temple, the subject was discussed at length. According to the minutes of the meeting, Apostle John Henry Smith spoke and specifically referred to the problematic nature of the private ordinations of Brigham Young, Jr., and John Willard Young:

Bro. John Henry Smith said that he regarded this as a very important question from the fact that he understood there had been quite a number of men ordained apostles who had never been voted upon as such by the church. . . . Bro. Smith said he recognized the right of the President of the Church to ordain his sons apostles if he chose to exercise that right, and he took it for granted that the late President Young ordained Brigham and others of his brothers apostles, and he supposed history was correct in stating that Brigham and John W. were ordained before Prest. Cannon. . . . On this phase of the proposition, the question of man [at hand?] was simply this: Has a father—himself being an apostle—a right to ordain his son to the apostleship, and that son to preside without the action of the church, his ordination antedating that of the man chosen and acted upon by the church? The speaker said, to his mind there was but one view to be taken to safeguard the church and this council, and to the maintenance of their dignity in the world, such ordinations were dependent upon joint action, first, on the presentation by the First Presidency to the Council of the Apostles for their acceptance, and then to the people for their approval, and then he must be ordained in the proper way; otherwise it would open a door for questions to be sprung entirely unlooked for.<sup>51</sup>

As has been noted previously, Brigham Young, Jr., had stated in 1898 that his position was correct based on accepted church policy and his father's authority. Nevertheless, after George Q. Cannon discussed the cases of Joseph Smith III, Daniel H. Wells, and Hyrum Smith, President Snow "expressed his love and admiration for Brigham Young, Jr., then asked the council to sustain the decision that Smith outranked Elder Young. The vote was unanimous."

Joseph F. Smith wrote: "It was unanimously decided that the acceptance of a member into the council or Quorum of the Twelve fixed his rank or position in the Apostleship. That the Apostles took precedence

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51. Minutes of First Presidency and Twelve Apostles, for 5 April, 1900, LDS Church Archives, also available in John Henry Smith Papers, Special Collections, Marriott Library, University of Utah, Salt Lake City. Much of this is reproduced in Heath, "Notes on Apostolic Succession." See also Brigham Young, Jr., diary, LDS Church Archives, 9 Sept. 1898, cited in Heath; Diary of Marriner Wood Merrill, Apr. 5, 1900, published in Melvin Clarence Merrill, ed. *Utah Pioneer and Apostle, Marriner Wood Merrill and His Family* (Salt Lake City: 1937), 252 ("One subject decided after full discussion was that Joseph F. Smith stood ahead and outranked Brigham Young in the Quorum of Apostles" [Durham and Heath, *Succession in the Church*, 111-16].)

from the date they entered the quorum . . . [t]hat ordination to the Apostleship under the hands of any Apostle other than to fill a vacancy in the quorum and authorized by the General Authorities of the Church did not count in precedence."<sup>52</sup>

So in this momentous, but little known, change of policy, Joseph F. Smith and Brigham Young, Jr., traded places once again.<sup>53</sup> (George Q. Cannon was still alive, and would have preceded them into the presidency, but he died on April 12, 1901, before Snow). Now John Willard had no apostolic seniority at all, though he perhaps did not know it.

On October 10, 1901, President Lorenzo Snow died. Five days later John Willard was in Utah. "It was entirely possible that it was for succession reasons that John W. arrived in Salt Lake City," writes Watson.<sup>54</sup> If so, he must have been bitterly disappointed when he discovered the policy change. His rival and critic Joseph F. Smith became president of the church on October 17, 1901—nominated by Brigham, Jr., and set apart by Joseph F.'s brother, Patriarch John Smith. Joseph F. called a special conference in November, and explained that Lorenzo Snow had directed him to re-organize the First Presidency immediately after his death, with himself (Joseph F.) as president. Again, this might have been an act to forestall the possibility of John Willard putting forth any claim to the presidency, for John Willard had been ordained an apostle eleven years before Joseph F. Smith had. Furthermore, Lorenzo Snow's change in policy had been very recent, and perhaps was not widely known or understood.

John Willard returned to New York, where he probably felt more at home than in Utah. This little-known and little-understood succession crisis had passed.

#### JOHN WILLARD'S FINAL YEARS: SCANDAL AND OBSCURITY

In John Willard Young's last years, he made his living by serving as an elevator operator in an exclusive New York hotel where he had once been a high-paying resident.<sup>55</sup> This contrast between his early dreams of wealth and power, and the final, prosaic, harsh realities of his daily life in old age, is one of the haunting stories of Mormon history. He would

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52. Diary of Joseph F. Smith, LDS Church Archives, as cited in Smith, *Life of Joseph F. Smith*, 310-11.

53. See Bitton, "Ordeal of Brigham Young, Jr.," 142. Bitton interprets Young's reaction as mild, but it seems more likely that Young was deeply affected by this abrupt change in policy just as he expected to become president of the church. I agree with Bitton that Brigham Jr. accepted the policy change with humility (Diary of Brigham Young, Jr., as quoted by Bitton). Brigham Jr. would die on April 11, 1903.

54. Watson, "John Willard Young," 258, cf. 267.

55. Watson, "John Willard Young," 267.

attend the LDS branch in New York as a regular member. A pathetic account records that the branch president would have to corner new members and warn them not to lend any money to John Willard when he approached them.<sup>56</sup>

Another shattering blow to Young was a wayward son's involvement in a bizarre, highly publicized murder case in New York. John Willard's son, Hooper, was living in New York and had arranged a tryst in an apartment with a disreputable woman. She took drugs (possibly given to her by him) and died of an overdose. He probably did not kill her intentionally, even if he did give her the drugs. However, after she died, he panicked, and instead of calling the police, tried to dispose of the body himself, throwing it in a river. The river washed it up, detectives traced it back to Hooper, and after a sensational trial, he was sent to Sing Sing for some twenty years. Thus it is possible he did not commit an actual murder, although he was certainly involved with disreputable women, drugs, and trying to cover up the woman's death.<sup>57</sup>

John Willard Young died of cancer on February 24, 1924, in New York. "He died without a friend in the world," wrote the local church authority.<sup>58</sup> So the favorite son of a powerful church president and prophet, a former first counselor in the First Presidency, died alone in New York, an obscure elevator operator.<sup>59</sup> Despite his charisma, his dreams, his desire (perhaps sincere) to benefit his people and church through financial projects, John Willard remains a profoundly tragic figure. The favorite son of the most powerful figure in Utah Mormonism, he was ordained and groomed for the presidency. From 1901, he was the senior apostle in the church, by date of ordination; by another set of circumstances, he might have directed the church for twenty-three years. Yet because of his questionable business practices, his love of the cities of the East, and without his father as advocate, he lost the protection of both church and family, living as an entirely obscure figure for many years before his death.

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56. Harvey Fletcher to John McQuarrie, May 13, 1954, LDS Church Archives.

57. John McQuarrie, "A Tragic Epic in Missionary History," typescript, in LDS Church Archives; Watson, "John Willard Young," 267 n. 20. Hooper denied murdering the woman, or even administering the dose of chloral, although he admits straying from the teachings of the church, and that he panicked after the woman's death. There was a sad reunion of John Willard and Hooper at church, in which the father told his son that he never wanted to see him again (Fletcher to McQuarrie). Oddly, in Crookston, "The Wages of Sin," 15, we have a diametrically opposed story, a sentimental reunion.

58. Fletcher to McQuarrie.

59. See Watson, "John Willard Young," 268; Jessee, *Letters of Brigham Young*, 327, n. 26; Adkins, "A History of John Willard Young's Utah Railroads," 3 n.

## SOME CONCLUSIONS

In this complex story, there are a number of themes that may strike the reader. First, and most centrally for this paper, the ecclesiastical history of John Willard Young shows the development of the present method of judging apostolic seniority. It was not delivered to the church in final form, neatly packaged and immediately recognized. It developed through a system that might be called creative trial and error. It moved through four distinct stages, from (1) age within group in the original Twelve, to (2) age combined with group date of ordination/entrance in the Quorum, to (3) date of ordination (the standard throughout most of the nineteenth century), to, finally, at the dawn of the twentieth century, (4) date of entrance into the Quorum and public sustaining. Absolutists, positive or negative, might regard this development as non-inspirational, due to the conflicts between the different policies, and because the policy had to develop through some painful, tense, moments occasioned by the human limitations of church leaders. Nevertheless, non-absolutists might find the story ultimately reassuring because the final synthesis resulted in by far the best policy. It serves to lessen the possibility for confusion and autocracy, and brings the Quorum of the Twelve and membership of the church together as partakers in an important decision-making process. In theory, church members could reject an apostle put forward by the First Presidency. I have heard undocumented stories that the Quorum of the Twelve has demurred on apostolic nominations made by the president on occasion.<sup>60</sup>

Second, the life of John Willard sheds added light on a theme analyzed by Michael Quinn: tensions between the church president, the First Presidency, the Quorum of the Twelve, and even the membership of the church. Church government is not a simple monolithic structure in which all church leaders and organizations act alike; there is a system of checks and balances. It is clear that Brigham Young minimized the Council of the Twelve at times, and they resented his use of autocratic power.<sup>61</sup> John Henry Smith, in 1900, emphasized that an apostle should be recognized and accepted by the entire church in order to have seniority status. So this development to seniority by entrance into the Quorum is the result of a creative tension between the First Presidency and the Quorum

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60. See also Quinn, *Extensions of Power*, 51, 54.

61. Quinn, *Extensions of Power*, 38-40. Joseph F. Smith felt that Young had "[ignored] the quorum of Apostles." Joseph F. Smith diary, Oct. 6, 1880, LDS Archives, as cited in Quinn, *Extensions of Power*, 41-42. After Young, the Twelve felt the same resentments against Taylor and his first counselor, Cannon. Quinn, *Extensions of Power*, 42-47.

of the Twelve, and represents a development from autocracy to a more democratic form of government.

Third, in John Willard's story we have a case history showing how Mormon society had developed a recognizable and full-fledged elite by the Utah period. Mormonism had some egalitarian ideals and attempted to implement radical egalitarian programs, such as the United Order.<sup>62</sup> On the other hand, Mormon culture quickly produced an elite in Kirtland, Nauvoo, and Utah, which often inclined some church leaders toward the standard dangers of an elite system: giving important jobs to family members, whose faults a loving relative may overlook (as in the case of John Willard), in preference to more qualified persons, allowing the church leaders/elite with their families to become the wealthy class. Watson writes, of the "missions" Brigham's sons were sent upon, to Europe and elsewhere, that John Willard and other sons were "more like young princes sent to view the world. . .than. . .ordinary bush beaters."<sup>63</sup> Once John Willard wrote to Brigham, excusing his stay in an expensive hotel. "As it was generally known that I was your son, I felt I could do no less than stop at the finest hotel."<sup>64</sup> Sometimes, such elite are excused from accepted standards of conduct. Such double standards would obviously cause the not-so-elite (who were generally expected to adhere to higher standards) to feel injustices were taking place. One thinks of Joseph F. Smith objecting when Brigham Young called John Willard to the second highest church position in 1876. Brigham Young seemingly encompassed stark contradictions and enigmas: On the one hand, he passionately preached and promoted United Orders throughout Utah; on the other hand, there were aspects of elitism in his financial dealings, and in his dealings with his sons, as in the case of John Willard Young.

Finally, this story is a case history of how nineteenth-century church leaders, especially presidents, tended to call their sons into church leadership at a comparatively young age. Clearly, this gave their sons good chances of eventually becoming church president. Examples are: Joseph Smith, Jr., ordained the young Joseph Smith III to succeed him.<sup>65</sup> (This had such a powerful impact on many LDS members that it caused the

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62. See Leonard Arrington, Feramorz Y. Fox, and Dean L. May, *Building the City of God: Community and Cooperation among the Mormons*, 2nd ed. (Urbana: University of Illinois Press, 1992).

63. Watson, "John Willard Young," 8.

64. Watson, "John Willard Young," 10. For John Willard's extravagance, see Joseph Fish, *The Life and Times of Joseph Fish*, ed. John H. Krenkel (Danville, Ill.: Interstate Printers & Publishers, 1970), 221.

65. See Roger D. Launius, *Joseph Smith III: Pragmatic Prophet* (Urbana: University of Illinois Press, 1995), 15-16. George Q. Cannon called this a bad precedent in the 1900 policy-changing session with the Twelve and First Presidency.

church to split, with our Restoration friends from the Midwest following lineal tradition more exactly than we have until recently.) Then Brigham Young ordained four sons to the apostleship. John Taylor called two sons to the hierarchy, including apostle John W. Taylor. Wilford Woodruff called his son Abraham Woodruff to be an apostle. Joseph F. Smith called a son, Hyrum Mack Smith, to be an apostle exactly a week after he became church president. In 1910, Joseph F. also brought a Smith, John Henry Smith, into the First Presidency, and called another son, Joseph Fielding Smith, to the apostleship. As we know, Joseph Fielding became president of the church in 1970.<sup>66</sup>

A major shift occurred in the twentieth century—of recent presidents, McKay, Lee, Hunter, and Hinckley have had no near general authority ancestors. Spencer Kimball was a descendant of Heber C. Kimball, and Ezra Taft Benson was a descendant of an apostle, but neither was the son of a general authority. None of these presidents brought a son into the Quorum of the Twelve. In fact, there appears to be an almost unspoken policy that sons of prominent general authorities are not called into the highest church leadership. Again, I think this is a wise policy, and an example of the church evolving and improving. This story is hopeful in showing that as the church has changed in the past, it can also change in the future.

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66. Quinn, *Extensions of Power*, 171-74. See also Quinn, "Organizational Development," 128, 142 n. 9 and n. 10, 143. When G. Q. Cannon tried to have his sons placed in vacancies in the Quorum of the Twelve, a son of Wilford Woodruff and a grandnephew of Woodruff were put in instead. "I was much disappointed. . . . I felt almost rebellious for a few minutes. . . ." wrote Brigham Young, Jr. (see his diary, Sept. 28 and 30, Oct. 5, 1897, LDS Archives, as cited in Quinn, *Extensions*, 171).

Appendix A:  
"Research concerning John W.'s ordination"<sup>67</sup>

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1. First item: *[typed]*

Research has been done on the following records in an effort to determine the date of ordination [of John Willard Young] as an Apostle.

1. Journal History
2. Ms. History of Brigham Young
3. Brigham Young's papers
4. Wilford Woodruff's journal
5. S.L. Stake Priesthood Records
6. Juvenile Instructor 39.6a
7. John Willard Young's Journal #558G
8. Essentials in Church History p. 688
9. Church Chronology

10. Endowment date as given on the endowment cards shows 22 Nov. 1855 at the Endowment House. *[This sentence typed by a different typewriter]*

Nothing was found to substantiate the ordination of John Willard Young as an Apostle 22 Nov. 1855.

2. Second item: *[handwritten in a very attractive hand, slanted to the right. This parallels Andrew Jensen's language in the Historical Record, so may be his rough draft.]*

13—John Willard Young was born 1 Oct. 1844 in Nauvoo, Hancock County, Ill.—was baptized by [ ] and confirmed by [ ]—was ordained an Apostle 22nd of Nov. 1855 and on the 4th of Feb. 1864 was set apart as a counselor to the First Presidency by his father, President Brigham Young—also on the 8th of October 1876 was set apart as First Counselor to the First President by President Brigham Young, assisted by D. H. Wells and Brigham Young Jr.—and resides at Salt Lake City.

3. Third item:

The following information was obtained from Apostle Brigham Young, April 10, 1884.

In President Young's private room in the Lion House, February 4, 1864 he ordained Joseph Angell Young and Brigham Young Jr. Apostles and confirmed upon John Willard Young the ordination to the Apostleship which he received when he went through the Endowment House (which was November 22, 1855) and set each of them apart as assistant Counselors to the First Presidency.

4. Fourth item: *[typewritten, but pencilled in at the top is "April 10 8[ ]" — a hole in the paper destroys a number]*

Dec. 2, 1966, President Joseph Fielding Smith states that these brethren were only ordained privately by Brigham Young and that these ordinations were never presented to the Church or any body of the Church for a sustaining vote. These brethren were never recognized officially as Apostles, and never became members of the Quorum of the Twelve. For this reason, the ordination as Apostles is not accepted. *[Signed in pen: "EEO", Earl E. Olson]*

*[This statement by Joseph Fielding is problematic. When the privately ordained apostles joined the Quorum (as in the case of Brigham Young, Jr., and Joseph Fielding's own father), they were not re-ordained, to the best of our knowledge. Thus their ordinations to apostleship, although not performed in the presence of the full Twelve and First Presidency, were recognized as binding by the general authorities as then constituted. In addition, it was apparently necessary for a counselor in the First Presidency to be an apostle. Since John Willard Young was an assistant counselor since 1864, and a publicly accepted first counselor in the First presidency in 1876, it would have been difficult to question the validity of his apostolic ordination, private and early though it was.]*

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67. File at LDS Church Archives. See also Watson, "John Willard Young," 34.



# Helaman's Stripling Warriors and the Principles of Hypovolemic Shock

*Robert Patterson*

THE STORY OF HELAMAN and his stripling warriors is well known to students of the Book of Mormon. In brief, around 75 B.C. the people of Ammon, who originally were Lamanites, converted to the Lord and went to live among the Nephites. They swore an oath to never again use weapons for the shedding of man's blood (Alma 24:17-19). When the Lamanites later engaged in a recurring war with the Nephites, the Ammonites wanted to help defend their adopted country, but were persuaded by Helaman not to break their pacifist covenant. Instead, they sent their male offspring, who had not entered into the non-aggression pact, to battle. These two thousand sons of Helaman are described as "all young men, and they were exceedingly valiant for courage, and also for strength and activity" (Alma 53:20). Later they are described as "stripling warriors" (Alma 53:22) and "stripling Ammonites" (Alma 56:57).

Helaman's army eventually engaged a Lamanite force, and after a bitter struggle prevailed. He then took stock of his casualties and discovered unexpected good fortune: "And it came to pass that there were two hundred, out of my two thousand and sixty, who had fainted because of the loss of blood; nevertheless, according to the goodness of God, and to our great astonishment, and also the foes of our whole army, there was not one soul of them who did perish; yea, and neither was there one soul among them who had not received many wounds. And now, their preservation was astonishing to our whole army, yea, that they should be spared while there was [sic] a thousand of our brethren who were slain." (Alma 57:25-26)

In Joseph Smith's time, Webster's (1828) dictionary defined "stripling" as "a youth in the state of adolescence, or just passing from

boyhood to manhood; a lad." The chronology of the Book of Alma suggests a period of fifteen to thirty years between the oath-taking of the senior Ammonites and the military exploits of their sons. These soldiers may have ranged in age from their mid-teens to early twenties, although most societies would consider a male in his twenties as fully grown. Present-day Mormon conceptions of the stripling warriors have been partially influenced by the Arnold Friberg painting, which shows an apparently endless procession of half-naked, well muscled recruits, much closer physiognomically to men than boys.

Regardless of their exact ages, Helaman noted that his wounded young volunteers "fainted because of the loss of blood" (Alma 57:25). In medical terminology, this phenomenon is known as hypovolemic shock. Shock is defined physiologically as inadequate organ perfusion, which in turn leads to cellular hypoxia, acidosis, and death. Shock usually has one of four etiologies: cardiogenic (the heart not pumping well), septic (infectious causes), neurogenic (loss of muscle and vascular tone), and hypovolemic (a sudden decrease in blood volume). Given Helaman's observation relating loss of consciousness to the loss of blood, his injured troops must have suffered from hypovolemic shock.

According to the American College of Surgeons Committee on Trauma, hypovolemic shock is further divided into Classes 1-4, depending on percent of blood volume loss.<sup>1</sup> As a rule of thumb, the volume of blood in an individual is roughly 7 percent of body weight; therefore a 70 kg male will have approximately five liters of blood. In Class 1 hypovolemic shock, 15 percent of the blood (less than one liter) is lost. Anyone who has donated a unit of blood has experienced a Class 1 loss. At this stage, physical signs and symptoms of any change in hemodynamic status are minimal or absent, as demonstrated by post-phlebotomy blood donors cheerfully enjoying juice and cookies. In Class 2 hypovolemic shock, up to 30 percent of blood volume is lost. Physical changes include a slight increase in heart rate, but blood pressure and mental status usually remain normal. Class 3 shock indicates that 30 to 40 percent of the patient's blood has been lost. These patients will have a marked increase in heart rate and a decrease in urine output. For the first time, a drop in blood pressure is measurable. The mental state may be somewhat clouded as the individual displays anxiety or confusion.

Class 4 hypovolemic shock means that the patient has lost 40 percent or more of his blood volume. Only in Class 4 does loss of consciousness transpire. Death occurs after a deficit of 50 percent of blood volume.

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1. American College of Surgeons Committee on Trauma, *Advanced Trauma Life Support for Doctors, Student Course Manual* (Chicago, American College of Surgeons, 1997), 89-105.

Thus, the window between loss of consciousness (40 percent blood loss) and death (50 percent blood loss) is small indeed. Treatment for Class 4 hypovolemic shock involves immediate intravenous fluid replacement, preferably with whole blood or packed red cells. With such severe blood loss, unless a patient is transfused in a timely manner, he will die. If a bleeding patient is transfused after too long a delay, he may still die, as shock soon reaches a point where the process of cellular physiologic decay becomes irreversible, despite aggressive fluid resuscitation.

With regard to the medical history of the stripling warriors, several questions are worth asking. First, what was their intravascular volume status prior to battle? Were they already dehydrated from marching and possibly fasting? Or did they have a recent meal and ready access to water during the course of the day? If they were well hydrated before receiving their wounds, they would have been better able to tolerate blood loss. History, however, suggests that men in combat are frequently hungry and thirsty. Simple logistics often make it difficult to transport food and water into an active battle zone. On the other hand, soldiers might have access to nourishment, but neither the time nor inclination to take it. For example, it was a common practice in World War I to avoid eating before going "over the top" in the belief that a soldier had a greater chance of surviving an abdominal wound if the bowels were empty. More likely, though, Helaman's troops suffered the more common lot of soldiers in battle, and went through the day with empty stomachs and dry throats. As Rudyard Kipling noted in his poem, *Gunga Din*:

But if it comes to slaughter  
You will do your work on water,  
An' you'll lick the bloomin' boots of 'im that's got it.<sup>2</sup>

Next we may wonder what types of wounds the stripling warriors sustained. Military forces in the Book of Mormon armed themselves with a variety of weapons, "with swords, and with cimeters, and with bows, and with arrows, and with stones, and with slings, and with all manner of weapons of war, of every kind" (Alma 2:12). Presumably "all manner of weapons" included more primitive instruments, such as clubs, hatchets, knives, and spears. In medieval times, peasant armies used farming tools as weapons; much later, in World War One, a shovel was still a handy accessory during the crowded melees of trench warfare. Thus "all manner of weapons" may have included some non-traditional armaments. The Nephites must have been skilled metal smiths; at least some

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2. Rudyard Kipling, *Gunga Din and Other Favorite Poems* (New York, Dover Publishers, 1991), 7.

of their swords were forged of steel of a caliber high enough to demonstrate the remarkable ability to repeatedly cut off human arms without becoming dull (Alma 17: 37-39).

Such a broad assortment of weapons could inflict wounds that were superficial or deep, blunt or penetrating. Helaman's troops likely suffered from a variety of anatomical injuries, including cuts, stab wounds, missile tracts (from arrows), and crushing blows. Any of these mechanisms can result in significant blood loss. Helaman further specified that each soldier had received "many wounds" (Alma 57:25), i.e., they were victims of multiple traumas, which greatly complicates triage and treatment. The resultant hemorrhage may have been external, where it was readily visible and amenable to intervention, or it may have occurred internally, where it would have been much more difficult to recognize and treat.

Unfortunately, very little is recorded in the Book of Mormon concerning the state of Nephite or Lamanite medical capabilities. The reader is left to wonder how potentially fatal wounds were doctored. Simple bandaging will not always stop arterial bleeding and is, of course, useless for internal hemorrhage. Tourniquets can buy time and save a life, but often at the expense of a limb. No mention is made in the Book of Mormon of cauterization, the time-honored practice of achieving hemostasis by pouring boiling oil on a bleeding wound. In any case, with loss of consciousness as in Class 4 hypovolemic shock, the treatment consists not only of control of ongoing bleeding, but also of immediate fluid resuscitation. Without a timely blood transfusion, the victim will die.

Thus, Helaman recounts the saga of two hundred young men who suffered significant physical trauma and then bled to the point where they lost consciousness—a sure harbinger of death. All two hundred then spontaneously recovered, with no fatalities recorded. According to our current understanding of human pathophysiology, such an event is so extremely unlikely as to border on the impossible.

Is there a rational scientific explanation for this singular account? One possibility is that the Nephites may have developed more advanced medical knowledge and technology than had their contemporaries. Lehi left Jerusalem around 600 B.C., just before the zenith of Greek civilization. The Greeks produced superb physicians, such as Hippocrates and Galen, who were held in such high esteem by the Romans and other Western societies that the Hellenistic teachings on anatomy, physiology, and pathology went virtually unchallenged for nearly two millennia.

During the Greek period of medicine, the function of blood was unknown. Galen of Pergamon (131-199 A.D.) taught that the body contained four fluids which influenced temperament—blood, phlegm, black bile, and yellow bile—whence come the English expressions sanguine, phlegmatic, melancholy, and bilious. In Pergamon's day, dissection of

human cadavers was proscribed and the understanding of anatomy and physiology was therefore quite limited. Blood vessels were often confused with nerves. It was thought that the heart was a furnace to heat blood, and the lungs in turn cooled the heart. Blood originated in the liver from the conversion of food and was somehow used up in the periphery. Such was the general thinking until English physician William Harvey (1578-1657) published in 1628 his book, *An Anatomical Disquisition on the Movement of the Heart and Blood*.<sup>3</sup> Harvey described the double circulation of the four-chambered human heart, the purpose of valves, and differences between the venous and arterial systems.

It is possible that the Nephites had an understanding of hematology superior to that of their Mediterranean contemporaries. Perhaps they even practiced a primitive form of blood transfusion and thus were able to resuscitate their brethren with donated blood. If so, they would have faced the same challenges eventually overcome two thousand years later by European physicians, such as the problem of blood clotting as soon as it was withdrawn from the donor. In due course, it was discovered that clotting could be avoided by using polished glass pipettes, or whipping the blood to remove fibrin (a clotting factor) prior to transfusion. Even when these precautions were taken, transfusion recipients would still often die of a mysterious sudden febrile illness. Consistently safe blood transfusions were not possible until the discovery of the four blood cell types (A, B, AB, and O) by Austrian physician Karl Landsteiner (1868-1943), who won a Nobel prize in 1930 for his work. Could the Nephites and Lamanites have used blood transfusions to revive their wounded troops? Even if the descendants of Lehi were genetically homogeneous and able to avoid the problem of incompatible blood types, safe transfusion still requires a degree of technical sophistication unlikely to be present in pre-Common Era societies.

Another possibility to explain the resuscitation of the two hundred moribund stripling warriors is that occasionally someone unconscious and even presumed dead is in fact not so. An American military physician recorded one such incident during the Vietnam conflict:

About 3 P.M. there was a call on the wall phone set. It was from Graves Registration.

"Dr. Parrish, we were washing down the bodies when one of them moaned. I don't know how long he's been back here. He's got two legs and an arm missing, and he's full of holes, but he really moaned. I heard him. The guys are bringing him up to triage now."

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3. William Harvey, *An Anatomical Disquisition on the Motion of the Heart and Blood in Animals* (in Latin), transl. Robert Willis (London: J. M. Dent and Co., Ltd., 1908).

Four excited marines rounded the corner each carrying a handle of the litter, and its light burden. . . after two or three seconds I felt a heartbeat. . . then another. . . then two coupled beats. The pupils were large, but they reacted sluggishly to light.

"Don't just stand there staring. Put some tourniquets on his legs and arm, and get me an IV set."<sup>4</sup>

After the transfusion of sixteen units of blood, the American soldier was conscious and talking. He survived long enough to be transferred to Saigon, but later died of renal failure. This case demonstrates that although most Class 4 hypovolemic shock victims will perish, a few may survive their ordeal, at least temporarily. However, the chance of two hundred consecutive victims undergoing spontaneous revival would be exceedingly small.

A third possibility is that the writer, editor, or translator of the chronicle may have overstated the severity of the symptoms or the number of individuals involved. Either Helaman writing his epistle, Mormon during his abridgement, or Joseph Smith while translating could have exaggerated the number of victims or the severity of the symptoms. Even ecclesiastical authorities have been known to engage in hyperbole.

Fourth, Helaman might have wrongly attributed a cause-and-effect association with blood loss and fainting. As practitioners of the sacrificial Law of Moses (Mosiah 2:3), the Nephites were familiar with the gradual loss of strength and consciousness suffered by an animal as it slowly exsanguinated. Perhaps this terrifying image haunted Helaman when he viewed his wounded young men. No doubt his troops were bloodied, each one having received many injuries, but the actual blood loss may not have been excessive. Loss of consciousness could have occurred instead from a combination of dehydration, pain, fatigue, and psychological stress. Although Smith defended the Book of Mormon as "the most correct of any book on earth,"<sup>5</sup> the title page itself suggests that there may be errors in the canon when it states, "And now, if there are faults, they are the mistakes of men. . . ."

A fifth possibility to explain events is Helaman's own attribution to divine intervention: "[T]heir preservation was astonishing to our whole army, yea, that they should be spared while there was a thousand of our brethren who were slain. And we do justly ascribe it to the miraculous power of God. . . they (were) preserved by his miraculous power" (Alma 57:26).

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4. John A. Parrish, *12,20 & 5: A Doctor's Year in Vietnam* (New York, Bantam Books Inc., 1986), 65.

5. Joseph Smith, *History of the Church of Jesus Christ of Latter-day Saints*, 2d ed. (Salt Lake City: Deseret Book, 1978), 4:461.

In *Mormon Doctrine*, Bruce R. McConkie defined miracles as "all those events which are beyond the power of any presently known physical power to produce. They are occurrences which deviate from the known laws of nature and which transcend our knowledge of those laws. . . . [I]n the gospel sense, miracles are those occurrences wrought by the power of God which are wholly beyond the power of man to perform."<sup>6</sup> Given our current understanding of human physiology and pathology, the spontaneous unassisted recovery of two hundred victims of Class 4 hemorrhagic shock is truly indeed a miraculous incident.

A skeptic may offer another explanation, one that is anathema to faithful church members: Perhaps the described events never occurred at all. In his analysis of the Book of Mormon, B. H. Roberts reviewed the story of the stripling warriors and then remarked somewhat derisively, "Beautiful story of faith! Beautiful story of mother-assurance! Is it history? Or is it a wonder-tale of a pious but immature mind?"<sup>7</sup> After commenting on a host of other incredulities in the Book of Mormon, Roberts pondered, "For these absurdities in expression; these miraculous incidents in warfare; those almost mock—and certainly extravagant—heroics; these lapses of the main characters about conditions obtaining, are certainly just such absurdities and lapses as would be looked for if a person of such limitations as bounded Joseph Smith undertook to put forth a book dealing with the history and civilization of ancient peoples."<sup>8</sup>

In conclusion, the epic tale of the stripling warriors and their miraculous recovery from life-threatening trauma would appear, to the rational mind, highly unlikely or even outright impossible. Hundreds of people, even fit young males, simply do not get up and walk away after experiencing Class 4 hypovolemic shock. Perhaps even Joseph Smith, unschooled as he was, did not appreciate the improbability of Helaman's narrative. Like many other miraculous accounts in the scriptures, the claims of Helaman's epistle can only be accepted on the principles of religious faith rather than scientific reasoning.

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6. Bruce R. McConkie, *Mormon Doctrine*, 2d ed. (Salt Lake City, Bookcraft, 1979), 506.

7. Brigham H. Roberts, *Studies of the Book of Mormon*, 2d ed. (Salt Lake City, Signature Books, 1992), 273.

8. *Ibid.*, 277.

# The Passing Lane

*Ken Raines*

Through the glow  
of dashboard lights  
reflected in the glass,  
I watch a plow drop its blade  
and scrape the ice,  
knicking the blacktop.

The occasional contact  
curls sparks over the snow  
in sporadic bursts—  
the mathematic arcs of tiny suns  
as they spin through dark matter

With a yaw and thrum  
the plow slides by,  
glints and flecks in the mirror,  
recedes into the past  
where objects  
are closer than they appear.



# Coming Out of the Evolution Closet

*Dynette Reynolds*

I UNDERSTAND THERE MAY BE some wards in the church where members are able to rationally discuss controversial issues in Sunday School without hurling accusatory labels (and odd pieces of rotten fruit) at each other. This seems unlikely to me, but my brother-in-law, Rick Walton, swears that his Provo ward never has doctrinal arguments, that all members agree with one other—and if not, they simply refrain from mentioning certain subjects. While Rick’s observations may be a tad naive, or perhaps merely a symptom of encroaching Alzheimer’s, I am nevertheless left with the impression that I am stuck in an unusually quarrelsome ward.

From the moment we moved into the Ogden 40<sup>th</sup> Ward ten years ago, I found myself secretly at odds with certain members who seem to think that all Latter-day Saints are—or should be—ideological clones. In one Sunday School class, we were subjected to a member’s musings about the “good old days” when white people weren’t allowed to marry blacks in the temple. Several times we have been treated to diatribes against Democrats—specifically and generally—as if, naturally, all of us understood that only Republicans could be good people. Through it all, I held my tongue on the advice of my calm, rational, college professor husband who really detests conflict.

But one issue finally turned me into what my teenagers describe as a “bitter old lunatic.” That issue was evolution.

It is true that every time the subject of evolution comes up at church, I come home ranting like a “lunatic.” It’s also true that I have been “bitter” from time to time. But “old”? Come on. I’m only forty-five.

Sometimes, I seem to be the only person in the entire church who knows that it’s okay to believe in evolution and still be a faithful, believing Mormon. I have heard unconfirmed rumors that there are others—perhaps even a few here in Ogden, Utah—who are aware of this fact, but

so far not one has come forward in my presence. They must still be in The Evolution Closet, secret members of a secret cult with secret dreams, looking forward to the day when they will be able to expose their beliefs to the world without being publicly branded with a scarlet "L" for "Liberal."

As for me, I received that brand long ago when the ward learned that my family had become vegetarians. (Well, in truth, I was the first family member who became a vegetarian, but since I am the only cook in the household, the entire Reynolds clan was forced to convert.) This was yet another cause for head-shaking. I was told—gravely—by several ward members that "Mormons don't have to be vegetarians." Thank you, ward members. I grew up and have been active in the church my whole life, not to mention going on a mission, graduating from four years of BYU religion classes, and reading all four standard works at least eight times through. And yet somehow I had strayed into vegetarianism.

Thus, I suppose that my recent emergence from the Evolution Closet was simply further evidence of my straying. It was a spectacular emergence, if I do say so myself. After an unsuspecting sister mentioned a "stupid" acquaintance who believed in evolution, I actually shouted at the entire Relief Society. To the best of my memory, these were my remarks: "I'm tired of being told by church members that I'm evil or stupid if I believe in evolution! Just respect my opinions and I'll respect yours!"

To fully understand this outburst, you have to know that a few months before, my 17-year-old daughter had been told by her seminary teacher that "people who believe in evolution are evil." Now, I'm pretty sure it isn't the intention of the church to have its seminary teachers calling their students' parents—or anyone, except perhaps serial killers or child molesters—"evil." In fact, it doesn't sound remotely Christian to me, even if you count fundamentalist scolds as "Christian," which I'm not at all sure you can do. But our poor daughter, whom we had tried to teach through the years that she could make up her own mind about evolution, came home doubting her own parents. This was enough to inspire a bitter lunatic. I wanted to march down to that seminary and give that teacher a chunk of my mind, as well as some official church-sponsored written material, but my (conflict-avoiding) husband yet again advised me to "let it go." So I did. It may have been the very first time in our marriage that I actually followed his advice.

You might think his advice was good and that peace is surely always the better option. But that single incident seems to have festered inside the dark corners of my head, opening up a wound which would not heal and, in fact, grew and grew until I burst out of The Closet in that Relief Society meeting, bellowing my perfidy to the world. So now everyone knows that I am an evolutionist—and hence also stupid and evil, but at least now I'm openly so.

As for my future plans, I am considering starting a support group for “Mormons Who Believe in Evolution.” The scattered few of us need to get together and lean on each other. We could swap persecution stories and share interesting scientific details, such as the fact that a banana is only 15 percent genetically different from a human. (Obviously, some of us are more banana-like than others.) We could have a web site and conduct periodic live-chat sessions. In other words, it’s time to come out of The Closet. “United we’d stand,” at least until the universe starts collapsing on itself. But that’s another controversial issue. You’ll have to get your own support group for that.

# On a Morning After New Snow and a Winter of Healing Inside

*Emma Lou Thayne*

Out there in the yard  
    winter drips silver  
    and bombardiers through branches its excesses  
        of yesterday. White.

White mounding and leveling, puffing up  
    on rocks and seats and sills, fluffing edgeless  
        Over walks

To take on the sun that shimmers it to  
    attention, my attention cutting it through  
        With skis turning it to wands that track  
            my flight as I track that bird there  
        In the animate silence of breathing

White.

White is right for veiling what  
    is vibrant as it is unseen.

And ripe.  
Hibernation or migration would skip this dance  
with white. How pale to sleep or wake to only  
gold or green.

# Grandpa and the Petrified Oysters

*Charles Thompson*

WHENEVER I VISITED MY GRANDPARENTS, I always knew where to check for Granddad. As a means of escaping household routine, he maintained a remote kingdom, a long shed deep in the interior of the backyard where he often worked, creating stories or updating family genealogy. Here in what had once been a combination of hutches for chickens, bins of feed, drawers for different kinds of plant seeds, and an office with a roll top desk for coordinating the bills and other affairs of the household, Grandpa did the bulk of his writing. Here he stored back issues of *Look*, *Life*, *National Geographic*, *Time*, and the *Utah Deseret News*; here also were samples of rocks and ore he had collected during his prospecting days in the Utah, Nevada, and Montana wastelands.

Among these samples, housed in a scientific-looking Erlenmeyer flask, were six oddly shaped rocks which Grandpa mysteriously referred to as his petrified oysters. These, he pointed out to me, had been collected in the desert and proved that the area had once been covered by an ocean. Whole states had been covered by water.

"Millions of years ago," Grandpa would say—he'd kicked back from his writing desk—"pressure under the earth thrust great mountain ranges like the Sierra-Nevadas way up into the sky. At the same time other parts of the land were lowered, and water rushed in to cover much of what is now Wyoming, Montana, and the Dakotas. Geologists call this ancient ocean the Sundance Sea, and in its waters swam some of the strangest creatures that ever lived. It wasn't too deep, but it pushed inland for hundreds of miles. Lots of primitive life was lost when those rampaging waters first rushed onto the land."

Charmed by the notion of catastrophic death and destruction, I asked if those oysters had really lived in that ghost sea. "How'd you find 'em? Was anything else dead mixed in with them?"

"They came from the Barbara Ann Mine," he said. Grandpa's friend

George Pulley had staked a claim in the '30s in an area where he'd found some medium grade ore. He'd named the tunnel he dug after his oldest daughter, and he asked Grandfather to "look over" the digs and give his opinion as to whether or not it had been mined out. Down in that tunnel, Grandpa extracted the ancient shells and placed them in a flask.

While the samples were a source of wonder for me, they represented one of the two great areas of friction between my grandparents. Grandma refused to believe that any part of "Mormon territory" had ever been under water, maintaining steadfastly that the notion of fossils was somehow blasphemous. And any time Grandmother's ire was piqued by Grandpa's possession of these suspect and unwholesome objects, she always let the other foot drop squarely on what she considered his other great failing.

Grandpa drank. While to the larger world, moderate consumption of alcohol was hardly a crime, to my grandmother the mere uncorking of a liquor bottle was a moral transgression on roughly the same level as the rape of the Sabine women. She'd never put together that Grandpa's drinking increased with the loss, one by one, of his long time friends, each of whose passing diminished the importance of his opinions on politics, sports, and other affairs of the world.

To maintain the peace, Grandfather tried to keep his drinking hidden. He'd stash a pint of Early Times, his favorite bourbon, in spaces behind books, hidden cavities among the endless bottles of ore specimens, or even in the narrow pocket beneath the cover of his Underwood. While these stashes were ingeniously conceived, Grandmother almost always discovered them, thrusting pint bottles under Grandpa's nose for what both knew would be an unsatisfactory explanation.

My father, who was almost as fond of Granddad as I was, not infrequently shared a secret libation and a chuckle or two with him. Dad's Methodist upbringing presented no conflict with this activity, and he frequently brought little "gifts" for Grandpa concealed in brown paper bags. I remember their staccato chatter punctuated with rowdy chuckles floating over the long summer nights from one secret rendezvous or another.

One evening, I had just finished a softball game with the Holcomb brothers and was aiming my dirty, balled up sweat shirt at my sister Beverly's head.

"Charlie!" My father had come looking for me. "Want to spend a weekend in the desert? We're leaving early tomorrow morning, so don't plan on reading all night. Your granddad's going and—I don't think you've met him—his buddy, Mr. Meyers. They'll be checking on an old borax mine near Search Light, Nevada. Might be fun. It'll be just the four of us."

This news played to mixed reviews in my mind. On the distaff side, I

loved to lie in the old poster bed in Grandma's guest room with its creamy yellow wall paper. I'd sandwich back issues of Grandpa's *True Wests* or *Smithsonians*, *Saturday Evening Post*, or *Scientific Americans* and read through the night, shutting my eyes only after the dawn birds began chirping and a pale light washed over the wall paper. I'd fall asleep listening to the gentle cacophony of Grandmother opening drawers, rattling coffee spoons, and humming softly to encourage a new brood of German roller canaries to begin singing.

If having to forgo the pleasure of a night with Grandpa's old magazines was difficult to take, the proposed outing had a distinct upside. First, with two others present, my dad would not work in a series of power hikes to "test my manhood." Also, I would escape for awhile the company of my three sisters, each of whom labored on separate quests to make my twelve-year-old life miserable. Most importantly, though, this trip afforded the constant companionship of Grandpa. And there was the possibility that I would finally get a glimpse of "The Thing."

The Thing was an entity obliquely hinted at by a series of "Burma Shave"-type signs. Signs like these strung the old highway to Nevada, always a series of six or seven signs placed twenty feet apart, offering advice—"Brush your teeth every day. Colgate keeps decay away," or confessions—"I always use Dial," the octopus said, 'because with eight armpits I'd rather be dead.'" Sometimes the signs offered promises.

Each summer as my family traveled to Yellowstone Park, the Grand Canyon, or Jackson Hole, we read these signs aloud in chorus. Most of the rhymes were fun. They broke up the tedious journey from California to Nevada. But signs featuring "The Thing" were mysterious with promise and threat.

"The Thing" was the mummy of a grotesquely deformed boy taken from his ancient resting place in the Valley of the Kings and brought, the ads assured, at great risk of life and limb to his new resting place in the middle of the California Desert. During all our summers of travel, we had never, despite my pleading, made the two mile detour off the main road to stop at the little concession that housed this treasure.

Every American kid is interested in ancient Egypt, not because of its contribution to Western civilization, but because the "land of the pharaohs" was where, we all believed, they buried hundreds of people alive in tombs with their dead rulers. Those who resisted were wrapped in linen, screaming and struggling, and placed inside the pyramids. This was the truth and nothing our seventh-grade teachers said could gainsay it.

Old television movies reinforced the texts of comic books with an eloquence that more factual Encyclopedia Britannica films could not match. I wondered how The Thing, the Egyptian boy, came to be buried alive. Was his deformity something that had killed him; or—and this was delicious—had his father, the pharaoh, become so enraged by his ap-

pearance that he had the boy murdered or buried alive in some dark corridor of the pyramid?

I knew I had only to see the boy mummy to know exactly what had happened thousands of years in the past. There would be some tell-tale sign on the creature that he had struggled with his bindings—or, unwrapped, something in the sad and ancient expression would communicate what had happened to him. I just had to see him. The only problem was persuading my father.

"Dad," I inquired sleepily at the breakfast table where I sat between him and Grandpa at four A.M. on the morning of our trip. "Will we be going anywhere near The Thing this time? I've never gotten to see it, and I know Grandpa would want to write about it in his journal."

"Depends on how hot it is and how time is running," said my Dad. "It'll probably be nothing but a doll or sheets soaked in plaster of Paris. We'll try and go there this summer when there's more time."

"I might like to visit that little museum if there's time," interjected Grandpa. "These tourist places usually have rock samples on display. Sometimes something interesting turns up. You never know. Anyway, finish your cocoa, little Charlie. We need to get to Baker before the desert heats up too bad."

I glanced at Dad, gauging his reaction to my blatant attempt at drawing Grandfather's support. His demeanor, I noted with relief, remained calm as he perused the headlines of the *Los Angeles Examiner*. I then turned to Grandpa, taking hope from the grin he bestowed on me as he folded the sports section and stuffed it into the pocket of his plaid traveling coat. One of Grandma's bright-eyed rollers awoke, drummed a perch with both sides of its beak, and chirped tentatively into the gray and somber dawn.

By the time we got to Long Beach and picked up Mr. Meyers, the grumbling of early morning traffic had already begun. As we proceeded north, Dad fumbled with the radio hoping to tune in an early sports report. I scanned the traffic, wishing we'd rub elbows with a Chevy Corvette. The two old prospectors chatted quietly in the back seat of our Buick Roadmaster, their faces shadowed like gangland conspirators.

In those days, leaving the great city of Los Angeles put one at once in the country. I was amazed at how quickly the huge but graceful buildings of the "City of Angels" disappeared, replaced by open fields and trees as our car rushed onward.

"Should have brought property in L.A. when I was selling potatoes to the Farmer's Market," remarked Grandpa ruefully. "Lots of money to be made in real estate then."

Granddad had more than once come close to making really big money. He was one of those small investors who'd leased tracts on Long Beach's Signal Hill, hoping there was oil beneath the otherwise un-



promising land. Along with other investors, he'd tried to get the large California oil companies to do exploratory drilling. These companies, he later claimed acerbically, simply waited for him and others to run out of money, then quietly bought up their leases. A year or two after Grandpa lost his claim, the Black Drake oil well gushed up under that area and, with the accompanying fire, lit the midnight sky for miles. "Made afternoon in the middle of the night," Grandpa exclaimed whenever he told the story.

The water pump's final gasp coincided with our arrival at Baker after the hot ride up old Interstate 40. A local Richfield service station truck towed us in, and the mechanic promised, after lengthy negotiations with my dad, to have the car ready by seven o'clock that evening.

After lingering awhile at a little restaurant, the men and I parted company, they sauntering into a little bar with an old wagon wheel propped up in front for decoration and I returning to the service station clutching a bottle of Nehi orange.

In the waiting room, which was kept surprisingly cool by a single fan that also held aloft the fluttering ribbon tied to it, I picked up a *Real Frontier* and began to leaf through it. Just two paragraphs into an article about mysterious deaths and disappearances in the Superstition Mountains of Arizona, I fell asleep. It was early evening when I felt a gentle pressure on my left shoulder. I blinked up at the three men who stood over me.

"Bring your flashlight?" inquired Grandpa. He knew I'd planned to coax my father into stopping the car somewhere in the desert night, so I could leap out and switch on the light, maybe catching a poisonous insect scuttling about on its sinister business. You never saw them in the daytime; only holes in the sand betrayed the places where they waited. Dad and Mr. Meyers were grinning, and I knew Grandpa had shared my scheme with them. I sheepishly followed the men out onto the street.

In the evening Baker was a city of tawdry beauty. Twilight shadows blended the sprawling urban ugliness with the surrounding desert. As darkness fell, the city was transformed. Electric signs blinked and sized, and buildings flashed with red, blue, green, and hot pink opulence. People, freshly showered and cheerful, sought places to eat or be entertained. Conversations jostled each other; laughter harmonized with scraps of music. An evening riot of fragile-winged and huge-eyed insects appeared and, their ephemeral and waxy beauty eclipsed by the city's gaudy light show, petulantly sacrificed themselves on neon altars.

"Like they're from another galaxy, huh, Grandpa," I suggested as we regarded an impossible creature orbiting a ghostly light over the service station, its angry buzzing just audible above a radio playing softly in the garage. "Wonder what their space ship looks like."

"Probably shaped like an Idaho potato with long legs and a T.V. an-

tenna for navigation," he suggested. "Do you think they'll start World War Three when they get tired of dueling the lights?"

"Yeah. Wonder when they'll make their move. All this time we've been building bombs, we should've been stocking insecticides."

"They're bugs," said my father quietly as if he were injecting a university professor's voice of reason into a serious discussion between Grandpa and me. "They don't communicate, and they don't plan ahead."

"Well, damn!" said Grandpa. "Guess the world'll survive after all if it's just the Russians we have to worry about."

I watched the city recede through the rear window. From a distance through the clear night air, it seemed set into the desert like a ring placed on an ancient finger. As if he'd read my thoughts, Grandpa looked up.

"Desert's been there forever. Hasn't changed since the pioneer days. Maybe you an' I should write a "Twilight Zone" about wagon trains coming around those low hills, as they actually did, but instead of just more desert, they'd find this town exactly as it is—at night with all the lights burning."

"Maybe you'd have a better story if your pioneers had to deal with this," Dad said. He indicated the right side of the road.

There framed by a twisted Joshua tree, was the first of a six sign spread informing travelers that "The Thing" and other fascinating relics of the desert waited nearby. The large cactus, full moon, and billions of stars, which the clear air made huge and proximate, seemed a bewitching collaboration ushering us into another dimension.

"We gotta see this, Dad!" I pleaded. "You know we'll never get another chance. Grandpa wants to see the museum as much as I do."

"Little Charlie's speaking once for me and twice for himself," chuckled Grandpa. "It's your dad's car." He was now addressing me. "The decision's got to be his."

"No, Lorin. This outing is really for you and Mr. Meyers. I've got two days off to chauffeur you guys around. You'll have to decide between you if we can fit it in."

Gravel popped under the Roadmaster's tires as we turned off the highway onto the little dark road. It hardly seemed a fitting approach to a world class relic, but I knew that wonders often lay behind unpromising exteriors. Troy itself was rediscovered beneath an ordinary looking mound.

About half a mile off the highway the little road curved sharply, and a low ranch-style building suddenly came into view, its frame outlined in colored string lights like those used at Christmas for decorating trees. In front of the house colored spots picked up smooth white pebbles that framed a small cactus garden. Behind all this five or six pickup trucks lounged at informal angles in an asphalt parking lot.

As Dad locked up our car, I looked for anything directing visitors to the attraction we'd come to see. A neat electric sign placed on the upper left side of the front window informed travelers that cocktails were sold inside; but what deserved to be featured in letters ten feet tall—that this building housed an entity, a mysterious presence whose life had ended under questionable circumstances three thousand years before—was not even remotely touted by the establishment. If the fabulous artifact were here, it was being carefully hidden.

Dad's voice brought me back to my companions.

"How 'bout a cold beer, Mr. Meyers? Lorin? Want a coke, Charlie?"

Though my mouth was dry with apprehension, it wasn't a soft drink I wanted. "No, thank you," I said and quietly followed my father into the dimly lighted building.

The wall opposite the door was filled with a rustic looking wooden bar standing in front of a large mirror. Arranged on the glass were wilderness photographs advertising Schlitz and Hamms beer. Five or six round tables stood in the foreground and a few chairs filled by the men whose trucks waited in the parking area. They turned to face us as we entered.

Embarrassed, I turned back toward the door. Just above it was mounted the head of a wildcat, small, but with trophy worthy teeth. I must have gasped slightly. One of the strangers chuckled. The sound was low and seemed derisive.

Grandpa and Mr. Meyers had moved around me and were taking seats at the little bar. Dad occupied the restroom. I stood alone clutching my blue Kansas City baseball cap.

"Excuse me, sir," I said to the man serving beer to my grandfather. "Is this where they keep The Thing? I didn't see it when I came. . ."

The whole room exploded. Laughter was punctuated by the sound of feet shuffling and glasses pounding on tables. One man's guffaws escalated into a staccato of coughing. Red faced, he left the room.

"See that hallway, son?" The proprietor gestured to a doorway on the right side of the room. Above it the word "museum" was stenciled in black Roman script. "We usually close up the exhibit at six o'clock; but, since you're the only one asking, I guess it's all right if you take a quick look. I won't charge you nothin,' either."

More laughter from the tables. "Hope you get your money's worth, kid," someone said. "Don't let nothin' bite ya."

Passing under the sign, I proceeded down a long hallway walking as slowly as if I were a prisoner measuring the steps to my own execution. A shadow traveled ahead and above me along the yellow-white wall. I took courage from the fact that it looked bigger and bolder than I was or felt.

At its end, the passageway made a sharp right angle and opened into

a large exhibit room. Glass terrariums and cages of different shapes and sizes were mounted against the walls. At the center of the room was a raised platform on which rested what looked like a stone sarcophagus. This, I assumed, contained "The Thing."

I started touring the sides of the room, determined to put off what I'd really come to see until the very last. Disobeying a note on the first aquarium, I tapped the glass gently and watched what had appeared to be a dead scorpion sluggishly raise its stinging tail and one claw. Suddenly it pivoted, rushed into a mound of straw, and with a dry insect sound scuttled out of sight.

This second exhibit appeared empty, the floor spread with sand and a few cotton wisps of what looked like webbing. Rapping on the glass failed to bring a miniature monster from under the sand. Moving closer, I put my left cheek on the glass and glanced upward. Startled, I thrust backward.

It seemed the whole screen covering the top of this terrarium was filled with the hairy abdomen and extended legs of a huge black tarantula. I thought at first it was trying to muscle its way out of the cage, but it was feeding. A cricket lay pinned in the arachnid's mandibles, slowly waving a pair of dying antennae.

I abandoned the rows of containers of snakes, geckos, kangaroo rats, and a single huge Gila monster and approached the raised display in the center of the room slowly, giving my overworked imagination time to listen to what might lie there. I looked inside the coffin.

How long I stood staring into that stone coffin before I became aware of someone else standing by my side, I don't remember; it seemed a long time. I recall thrusting my blue cap back onto my head and turning away to conceal the disappointment and, even at that age, rage that must have been apparent on my face.

Softly Grandpa said, "It sure doesn't fool anybody, does it?" We both stared down at what appeared to be a coyote mangled while trying to cross the highway. Its jaw, which apparently had been broken by the impact was twisted and thrust up, the large canine teeth enhancing the horror by giving the animal a wicked and maniacal "grin." A rug embossed with pseudo-Egyptian hieroglyphs had been folded over the body. The whole effect was artless enough to suggest the proprietor had not intended to fool anybody, that the hoodwinked patron was supposed to be amused as if he and the owner had conspired in some kind of mutually beneficial joke.

Grandpa kneaded my neck with his left hand. "In a way all this fakery is not so bad," he said.

I wasn't in the mood. "I've waited so long to see this, Grandpa. Why are people so—" the word seemed somehow anemic "—dishonest? No wonder all those guys were laughing when I came in here."

"It might be hard to understand, Charlie, but those men weren't making fun of you. In a way you let them recall their own time of being young enough to be tricked. People get knocked around growing up and when they put up their guard, they get old. They question things that used to fill them with pleasure. Remember, Charlie, just looking forward to this little exhibit has kept you going for a long time. The museum's a disappointment now, but think back on all the fun you've had just dreaming about it. The men out there envy you that."

"So you think fooling people with a fake mummy's okay?"

"Well," Grandfather continued, "Think of all the talk this bogus Egyptian has stimulated in the thousands of cars passing by those signs. Most people don't believe there's a three-thousand-year-old murdered Egyptian way out here in the desert, but this dime store curator may just unwittingly inspire some young person, perhaps yourself, to dedicate his lifetime to studying the ancient Near East."

Just then, I didn't care about the Near East; nor, I confess, would it later exert much influence on my life. I felt that I had been cheated—worse that I was being held up to ridicule by people I didn't even know. I looked about for a back way out. There was none.

"Your dad and Jim Meyers must be about finished with their drinks. Put that sour expression in your back pocket. Don't let anybody think they got to you."

I raked my cap over my head. "Grandpa, would you look at stuff in here for about five minutes and then follow me out? I don't want it to look like I had to be coaxed out."

Grandpa's attention was already drawn to a little exhibit of rocks I'd passed up. If he'd heard me, he didn't let on. I turned and walked slowly back down the hall bracing myself for the coming reception.

Passing again under the museum sign, I noticed my father and Mr. Meyers studying a regional map Dad had picked up at a Chevron station. The other men, I noted with relief, were preoccupied and didn't seem to notice me. I moved across the room and stood behind my two traveling companions.

"Where's your granddad?" My father finally noticed me. "We've got to get moving. Ely is still a long way ahead."

"He's"—I looked toward the hallway—"He's here." Grandpa's brown felt hat had just made its appearance at the near end of the hall, the face it framed holding an expression of mild amusement.

Instead of joining us, Grandpa selected the one table in the little bar that was unoccupied. I shot him a questioning look, but he seemed not to notice. When he finally looked in our direction, he spoke in an unnaturally loud voice immediately drawing the attention of others in the room.

"Well, Charlie," he said brightly, "that exhibit was quite a good joke on us. Easy to get suckered when your guard's down. I'm happy that we,

at least, have the real goods. Come on over here and sit by your granddad a minute."

Dad and Mr. Meyer were already on their way out the front door, Dad throwing a "hurry up" glance at Grandpa. I felt self-conscious as I crossed the room to Grandfather's table, escorted by the stares of the other men. The conspiratorial tone in his voice had drawn the whole room's attention.

"Sit down, Charlie. I've got something to show you."

Grandpa placed his right hand on the lapel of his coat and ran it down the crease. The other hand reached across and into the garment. It extracted a glass container. This he set carefully, almost fussily, on the table in front of him. "Know what's in this jar?"

Of course I knew what the flask contained; he knew I knew it, too. I looked into his face for a clue, one of his conspiratorial winks or perhaps an ironic blue twinkle from the genie in his eye that might alert me to what he was about. Like the practiced Wednesday night card player he, in fact, was, Grandpa kept his facial expression as immutable as that of the Sphinx.

"Well, little Charlie, you see these rocks?" A small scraping noise as one or two of the men edged forward across the wooden floor. Idle conversations between the others subsided as Grandpa's hands cupped the top of the jar as if he were shielding it from the wind.

"Many millions of years ago, Charlie, what is now Wyoming, Montana, and the Dakotas were covered by an ocean. It was too salty at first to support life, but gradually as the waters moved down into southern Utah and east to Colorado, the salt content was reduced. Clams and other kinds of shellfish along with big seagoing lizards flourished near the southern shores. Even though lots of animals lived there, fossils from this particular body of water are pretty rare. Interesting, too, because they prove a lot of the west was once under water."

"You've told me this a million times, Grandpa," was on the tip of my tongue; but, before I could get a word out, he moved on.

"Some of these fossils, you know, also contain precious metals and point to rich deposits of gold or silver in the areas where they were found."

I perked up. This was a new twist on the old tale. Grandpa hadn't ever suggested to me that there was anything of real monetary value in his rock collection. I knew he'd sprinkled some powdered iron pyrites, fool's gold, on his fossil oysters to enhance them as conversation pieces, but the worth of this dust was next to nothing.

"Grandpa, you never said. . ."

"Just a sec', kid." The owner, who had been working behind the bar placed a dishtowel on the counter and moved through the little saloon doors. "Did you mean to. . .did you say there was gold or something on

those rocks?" He reached around Grandpa and picked up the flask. "Those lumps look like sun baked coyote droppings. Who do you think you're kidding?"

"Hold it up to the light," replied my grandfather calmly. "You get a little better perspective that way."

The man looked hard at the flask, then with the same sardonic expression back at Grandpa. He seemed to be wondering if following the old man's suggestion would make him appear foolish. Finally, slowly, he elevated the little jar toward the ceiling light.

Magic happened. As the proprietor passed the flask back and forth, the drab lumps began to glitter as light reflected off the gold dust Grandpa had sprinkled on them. A raindrop pattern of light spots spackled the table.

"You say these rocks are fossils?" The barman seemed to ignore the gold flecks as Grandpa nodded in affirmation.

"Brought 'em back from an old mine, the Barbara Ann. It's mostly played out now, but you never know."

"This gold—I mean those fossils—did you bring them here to sell? We buy unusual rocks—they don't have to be valuable—an' show 'em to the tourists. These fossils you got, the kids would get a real kick out of them."

"Hard to tell how valuable they are." Grandpa replaced the glass container inside his coat and carefully patted it down. "No, I hadn't planned to sell these rocks. I brought them along to show an old mining buddy in Ely. However, if you're interested. . ."

"Didn't say I was," the proprietor cut Grandpa off. "What I said was kids the age of your grandson here might look at 'em if I put them in the museum."

They'd certainly fit, I thought. The gold was as fake as his Egyptian mummy. About the authenticity of the oysters, I was unprepared to comment. Anyway, this man seemed more interested in the glitter.

"Tell you what." Grandpa folded his hands and stared at them for a moment. "I'm not interested in your money. What I'd like is for these fossils to be displayed over a plaque crediting my grandson and me with their discovery. I also want a note stipulating that when we come through here again, if the plaque isn't part of the exhibit, we reclaim the petrified oysters."

"Fine. Deal!" the new owner shook Grandpa's hand vigorously. "Well, young man,"—he turned his head in my direction—"I hope your name's not too long. Lettering on these things can be pretty. . ."

"And," Grandpa interrupted, "I'd like a couple rounds for us and for the rest of the gentlemen here to cement the deal."

Murmurs of affirmation and appreciation punctuated this last part of the bargain.

"Come on, Burt. Start pourin'," someone said. The proprietor hesi-

tated a moment like an actor gauging his audience. Then he moved behind the bar and began to pull bottles off the shelves.

"Better tell your dad and Mr. Meyers to come back in," said Grandpa, his face flushed with satisfaction. "We'll be delayed a little."

Years after Grandpa's death, I turned off the freeway and onto the old road we'd taken on that long ago summer trip. Weathering had chipped into its sides and pitted its surface, but the highway was still serviceable. Hot winds drove a posse of tumbleweeds across now faded lanes. Fortified by air conditioning, I watched a boiling sun create little lake mirages in the distance. I remembered waiting as Grandpa and Dad changed a tire for a lady stranded on the same little road. Peering through the Roadmaster's window at Grandpa as he tipped his hat and refused money from the grateful motorist, I studied his flannel shirt, carelessly untucked, as it flapped ceaselessly behind him in the wind.

I never found the little desert museum, and I don't know if the conditions of Grandpa's contract were ever carried out. I do recall how much the idea of a plaque with my name and his above our "ancient treasure" eased the disappointment of the mummy. Now, when I travel across Southwestern deserts, the present slips from my thoughts, and I imagine snake-necked elasmosaurs gliding over the dunes on tapered flippers while pan headed crocodiles search up and down a long dead shore. And sometimes, under sculpted heat clouds, I catch sight of the man who helped me navigate the shore of a primordial ocean.



## Where the Walls of the World Wear Thin

*Red Water*, by Judith Freeman (New York: Pantheon Books, 2002), 321 pp.

Reviewed by Phyllis Barber, faculty, Vermont College MFA in Writing Program, Montpelier, Vermont

As *Red Water* opens, John D. Lee, an adopted son of Brigham Young, a member of the Council of Fifty, a leader in the Host of Israel (the private militia formed by General Joseph Smith), is being put to death by a firing squad. "'Center my heart, boys. Don't mangle my limbs.' Five shots rang out, and then another five coming so close together they sounded like one slightly drawn-out explosion. He fell back on his coffin, dead" (p. 5). It is a nineteenth-century, classically somber scene, with both winter and spring hovering in the wind that never stops blowing.

Inspired by the writings of the late Juanita Brooks and her own rich imagination, author Judith Freeman has produced a fascinating account of three of the nineteen wives of the infamous John D. Lee: Emma Batchelor Lee, Ann Gordge Lee, and Rachel Woolsey Lee. Though this book is a novel, the work is based on extensive research in journals, letters, and papers from Special Collections of the J. Willard Marriott Library and the American West Center at the University of Utah, the Huntington Library, the Utah Historical Society, and private collections. With a strong feel for

the harsh landscape of southern Utah, the demands of colonial Mormonism, and the challenge of being sister wives to such a controversial man, Freeman enters into territory where some writers might fear to tread.

In three sections entitled "Emma," "Ann" and "Rachel," Freeman essays what it must have been like to be one of three wives with different temperaments, dispositions, and ages, who found themselves situated among the Saints in a polygamous milieu in the rough and tumble frontier society of pre-statehood Utah. All in the face of dishonor. As the settings shift from Harmony, to Corinne, to Kanarra, to Lee's Ferry and Moenabba in the Arizona Territory, Freeman examines the sacred and profane aspects of these women, their hearts and minds, their loyalties and the why of their loyalties, their spirituality, their sexuality, and the headstrong nature and willfulness of some, the straight-line obedience of others. All of this is rendered against the uncertain backdrop of the Mountain Meadows Massacre, each of the wives pinned to this moment in history, her life ultimately tainted by the blood that flowed there.

The character of Emma seems to fascinate Freeman more than that of the other wives, though much of the history of Lee and his family is explored in this section (Emma's account takes up nearly half the book, approximately 150 pages of 321). As she reminisces from her lonely place in Lonely

Dell (Lee's Ferry) where she can always hear the roar of the Colorado River and smell the musky odor of arrowweeds and willows and clay mud, Emma accounts for the wives who've come and gone, the genealogy and psychology of the family structure, and the heavily-laden question in the minds of the wives about who was responsible for the Mountain Meadows Massacre. How did this all fit into their belief in the Gospel and the Holy Doctrine of Plurality of Wives? How did this affect their loyalty? Their sense of themselves? In this novel, Emma seems to be the most sensible, clear-headed, and objective of these wives and the one to emerge with the least-scarred sense of self. When Lee could not be present for the birth of her last son, she delivered "my own child with my son there to help me and I never thought of holding it against him" (p. 19).

Very little actual research material is available on Ann Gordge, and the story of "Ann" feels to be written more from the imagination than the others. After Lee has died and Ann has left the fold, Freeman opens the section on Ann as she rides "hunched up against the wind, letting her feet dangle loose from the stirrups, her eyes half shut against the billowing dust" (p. 171). She's traveling through stern country dressed as a man and riding a horse in a north/south/up-and-down-the-territory search for her stolen gray mare Vittick, the "finest-blooded horse she had ever owned, and due to foal soon" (p. 173). This situation ups the ante on the dramatic curve of this section's plot. Freeman has a fine sense of horses and horsemanship, as well as for the physical territory Ann rides while trying to recapture her horse.

Ann has always been a natural woman who is sure of her sexuality

and Lee's attraction to her, even at the age of thirteen when he first noticed her and took her for a wife. But apparently she never wanted to be a mother, let alone the mother of the three children she bore Lee. Before his execution, Ann had decided not to join Emma and Lee on the Colorado River (p. 165), leaving two of her children, Sam and Belle, with Emma and her youngest son, Albert, with her brother for safekeeping. But nothing being as simple as it seems, the reader is shown the vulnerable side of the independent Ann. She pauses in the midst of her search for Vittick to stand for a long while above the ranch of her childhood where her brother now lives. She watches Albert crossing the barnyard in weak morning light and considers "the possibility of walking down the hill and surprising them all." But, ultimately, she can't imagine the moment of parting. "She could not see how she might take leave of the boy again, or what she would say to her brother if he asked why she did not take her son with her now" (pp. 243, 244).

The final section about Rachel (called "The Mouse" by her sister wives) is rendered in quotations from her journal. Whether these are real or imagined, Freeman doesn't say, but most likely they are a combination of both. The quotations are terse, and Rachel comes across as a woman who won't indulge her emotions or her fears. Straight ahead seems to be her course. No flinching. After all, she's the most devoted of Lee's wives until the bitter end. (Of note is the fact that Rachel's sister, Aggatha, had been Lee's first wife, her youngest sister, Emoline, was the eleventh wife, and he'd also married their widowed mother, Abbagail, at the age of sixty "for her soul's sake" (p. 45). There were four Woolsey women in the cast

of Lee's wives.) However, in a telling moment, Rachel experiences an uncommon vulnerability when she realizes she's never been loved in the selfless way that Emma and Ann love each other, not even by her own sister Agatha, whom she's idealized and from whom she'd never received such affection. In the final section, which belongs to Rachel, Emma returns to Harmony after Lee's death to reclaim Ann's daughter, Belle, who's been "on loan" to Rachel. Emma, who had nursed Belle from the time she was born and whose intentions are to raise the girl as her mother would have wanted, is told she cannot have the girl. In a display of complex human emotion, Rachel justifies her actions by thanking the Lord above that "at least two of her (Ann's) children have been spared a life with such a creature for a mother. She is not only a fool but a liar and I expect she'll come to a bad end" (p. 319).

The central question of the text seems to be the culpability of John D. Lee in the Mountain Meadows Massacre and how that cancerous unknown affected these three women. Was Lee, whom his wives addressed as

"Father," a fine man, honorable at every stage of the game? Was he a complicated man who might use his power or position unethically? Was Lee (who in real life was posthumously restored to church membership in 1961) a scapegoat for the Brethren? Other questions spin out from there: were the wives treated fairly in this polygamous situation? Were the wives honored enough or was it more important for each of them to lay down her questioning and individual impulses in the service of God's Kingdom and the Principle? Can any human live the Principle in all fairness? What of the individual in the tide of the collective?

The finest offering of this novel is Freeman's compassion for each of these wives and her understanding of the complexities of human nature in the face of an absolute which does not prove to be an absolute after all. In this text, questions of the how and the why of the Massacre, the innocence or guilt of John D. Lee, remain open. But the feeling remains that there were many people caught in the web of their self-righteousness who could not allow for the truth of the matter to emerge.

## A Positive View: Polygamy in Nineteenth-Century Manti

Kathryn M. Daynes, *More Wives Than One: Transformation of the Mormon Marriage System, 1840-1910* (Urbana and Chicago: University of Illinois Press, 2001), 307 pp.

Reviewed by Todd M. Compton, author of *In Sacred Loneliness: The Plural Wives of Joseph Smith*.

This book has been published to significant acclaim, winning the Best

Book award from the Mormon History Association for 2001. I agree with much of this praise, but nevertheless have serious reservations about some aspects of the book.

First, it is a pleasure to point out the strengths of *More Wives Than One*. Daynes brings an impressive background in American family history to her research. This book focuses on polygamy in the town of Manti, which is both a limitation and a brilliant

expansion of previous research. Narrowing the focus makes it possible for Daynes to analyze one polygamous Mormon populace thoroughly, using census and other records to make an exhaustive statistical study of polygamy as practiced in Manti. There has been tension in American history between statistical and more "human-focused" approaches, but Daynes has accomplished a happy synthesis of the two here. Narrowing the focus to one town far from Salt Lake City also gives more insight into the lives of average rather than elite polygamists. Both this, and the statistical family history approach, qualify this book as revisionist, in that it looks at a standard subject or issue from a new point of view. My own book, *In Sacred Loneliness*, was revisionist in that it looked at polygamy from the woman's point of view; however, its scope included only a small group of elite women. Surveys of Mormon polygamy, such as those by Foster and Van Wagoner, also have an understandable tendency to emphasize prominent church leaders and their wives. Daynes's examination of non-elite polygamists is thus very welcome.

However, this book has other characteristics that are non-revisionist; for instance, it is solidly conservative in its tendency to view polygamy in an overall favorable light.

In addition to her focus on Manti, Daynes includes chapters on the history of polygamy, from its beginnings in Kirtland to its contemporary practice. These historical analyses are stimulating, sometimes opinionated road maps through controversial territory. Daynes's treatment of marriage law in America and in typical LDS communities is also extremely valuable. She has written two excellent chapters on divorce in nineteenth-century Utah,

showing that plural wives were given great freedom to leave marriages that they felt were inadequate.

Despite these strengths, there is much in this book that is debatable. This is not surprising, considering that it deals with some of the most knotty problems in Mormon history. My disagreements with Daynes are often a matter of emphasis. For instance, her central thesis is that LDS polygamy in Utah was practiced with the primary intention of providing financial help for single women—often widowed, divorced, or immigrant—who had few other means of support in the nineteenth-century American west. While I agree that caring for single women was frequently a motivation for polygamy, I believe that religious motivations were far more important. Daynes views religious motivations as significant (pp. 72-75, 103), but she overwhelmingly emphasizes the sociological explanation of caring for single women: "Mormon women undoubtedly believed in the principle of plural marriage, but women who needed economic help disproportionately practiced it" (p. 125).

By emphasizing this motivation, Daynes tends to oversimplify the question of marital choice in general (see p. 28). In Mormon polygamy, marriage choices included many factors: first religious; then practical, perhaps; then the complex phenomenon of spiritual and physical attraction. Though Daynes rightly emphasizes the puritan or Victorian aspects of Mormon polygamous culture and rightly states that attraction was usually not the prime motivation, I believe that it often played an important part in selecting plural mates, for both men and women. Part of the religious reason for plural marriage was offspring (see p. 33), so "attractive" compatibility

would reasonably be a factor in the marriage choice for that reason (see pp. 46, 122).

Given her argument about significant economic motivations for entering polygamy, Daynes's study would have been improved by a fuller look at what plural marriage was like for women *after* marriage. Some polygamous unions were undoubtedly successful. Nevertheless, plural marriage often led to tragedy. One pattern that appears repeatedly in the history of polygamy is that the woman feels that her relationship with her children is close while her relationship with her husband is distant.<sup>1</sup> Another is that hopes for economic and practical support remain unrealized. Daynes writes, "Patty Sessions's diary entry on the day she married John Parry illustrates the perceived need for men's help: 'I feel to thank the Lord that I have some one to cut my wood for me.'" (p. 119). Yet if Daynes had extended her focus to include Patty's daily experience of that marriage, she would have found that Parry was not very supportive to Patty, either financially or with his time.<sup>2</sup>

A natural question is, why did women continue with non-ideal plural marriages if they were freely allowed divorces? In fact, there were factors in Mormon culture that would make di-

vorce—difficult under the best of circumstances—even more difficult. First, polygamy was viewed as the celestial form of marriage, so women would have felt religious pressures to stay with the marriage. Second, children would have been a factor. A descendant of Anson Call recently told me that when one of Call's plural wives divorced him, he farmed out her children to his other plural wives. This would be consistent with the nineteenth-century legal position that generally gave the father custody of children in a divorce. The possibility of losing her children would certainly give a plural wife pause if she wanted to divorce her husband.

In her chapters that give historical overviews of Mormon polygamy, though Daynes sometimes refers briefly to problems in the Mormon marriage practice, she often does not really come to grips with them. For instance, in her first chapter, Daynes suggests that a number of Joseph Smith's marriages had no sexual dimension (pp. 29, 31). Yet in Utah polygamy, it was widely accepted that all plural marriages (except to older women) had a sexual dimension, given the need to "multiply and replenish" the earth. There is no positive evidence that Smith's marriages lacked this normal element of marriage.

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1. Lawrence Foster, *Religion and Sexuality: The Shakers, the Mormons, and the Oneida Community* (Oxford: Oxford University Press, 1981), 212.

2. Audrey M. Godfrey gives other examples of lack of economic support in plural marriage in her wonderful article "Colonizing the Muddy River Valley: A New Perspective," *Journal of Mormon History* 22 (Fall 1996): 120-42. She describes the experience of Jane Simons, who was left in a primitive shanty in the difficult Muddy Mission in Nevada while her husband returned to his other wife and his farm in the comparative luxury of Payson, Utah. Godfrey gives other examples of husbands sent on difficult missions who left less favored plural wives to represent them and returned to comfortable dwelling places and more favored wives. Obviously, plural marriage made it possible for such abusive situations to take place.

Later, Daynes cites Carmon Hardy's work showing that men were viewed as superior to women in Mormon polygamous culture. Daynes then responds to Hardy with the assertion that "with plural marriage creating a scarcity of women, the position of women was raised simply by their being in so much demand" (p. 115). But often they did not seem to be valued for themselves, but as a religious means to an end. Daynes has not substantively dealt with Hardy's evidence here. In the same way, I find statements such as "plural marriage promoted equality among women" (p. 133) problematic. Such passages might be improved in future editions of this book by fuller argumentation, definition, and explanation.

In her last chapter, Daynes argues against the interpretation of Eugene and Bruce Campbell that there was "anomie," "normlessness," and a "lack of regulation" in plural marriage (p. 189). Instead, she portrays Utah polygamy as carefully regulated by societal norms. While I agree up to a point, Daynes once again tends to smooth over complexities. For instance, the Campbells state that the ideal that the first wife should freely give permission for the husband to take a plural wife "was not carefully followed." Daynes contradicts this, stating that the rule was "generally followed" and that Kimball Young "gives

only two examples" to the contrary (p. 191). But there are many others. For example, we have unusually explicit evidence that Joseph Smith married Emily and Eliza Partridge without the knowledge of his first wife, Emma. When Smith instructed Heber C. Kimball to marry a plural wife, he also instructed him not to tell his first wife, Vilate. Kimball later stated that he had taken many of his 45 plural wives without Vilate's knowledge.<sup>3</sup> Sometimes first wives gave their consent, but only with great reluctance, under pressure.

Daynes, discussing polyandry, describes the marriages of Zina Huntington, Henry Jacobs, and Brigham Young in 1845. However, she goes too far when she states that "there were no more such marriages" (p. 204). Young also married Hannah King in 1872 while she was married to non-member William King.<sup>4</sup> Daynes herself gives another fascinating example of polyandry (pp. 80-81).

Daynes states that plural wives in Utah were fully recognized, that the public announcement of plural marriage in 1852 "ended what vestiges of secrecy still remained" (p. 205). Once again, this overstates the case, as she does not take into consideration the phenomenon D. Michael Quinn describes as "lesser-known wives."<sup>5</sup> Mary Elizabeth Rollins Lightner, in Minersville, was known as the wife of

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3. Wilford Woodruff journal, Oct. 26, 1868; Francis M. Lyman, Diary, Sept. 7, 1892. Thomas Alexander, "Federal Authority versus Polygamic Theocracy . . .," *Dialogue* 1 (1966): 85, 92, writes that the LDS church never "bothered to define any legal status for plural wives"; it imposed only moral and religious sanctions to protect them, "and anyone who chose to disregard them could do so with legal, and sometimes even religious, impunity."

4. Jeffrey Johnson, "Determining and Defining 'Wife': the Brigham Young Households," *Dialogue* 20 (Fall 1987), 57-70.

5. D. Michael Quinn, *The Mormon Hierarchy: Extensions of Power* (Salt Lake City: Signature, 1997), 184-86.

Adam Lightner, while in fact she was one of Brigham Young's "lesser-known" wives. Another factor leading to ambiguity and thus sometimes secrecy was plural wives living far from their husbands. In monogamy, separation usually meant the practical cessation of a marriage; in polygamy it might mean that, but it might not.

In her treatment of post-Manifesto polygamy, Daynes argues that authorizations for post-Manifesto polygamy were "indirect," and thus individuals, not leaders, "bore responsibility for entering plural marriage" (pp. 92-93, 209). Actually, post-Manifesto authorizations were generally tightly controlled by church leaders. For instance, H. Grant Ivins states that the First Presidency gave his father, Anthony

Ivins, the assignment to perform post-Manifesto plural marriages in Mexico. If a couple came to Mexico without the proper recommend, Ivins refused to perform the plural marriage.<sup>6</sup> Daynes's interpretation would lend itself to the incorrect but persistent view that post-Manifesto polygamy from 1890 to 1904 was practiced by a few unauthorized individuals acting on their own.

In sum, the strongest sections in *More Wives Than One* are those dealing with Manti and family law. Daynes is on surer ground here than she is when she generalizes more broadly about the practice of polygamy. Nevertheless, the Manti chapters are superb, stimulating and readable, a valuable contribution to the history of Mormon polygamy.

## The Grass Is Always Greener

*One Side by Himself: The Life and Times of Lewis Barney, 1808-1894*, by Ronald O. Barney (Logan: Utah State University Press, 2001), 402 pp.

Reviewed by Gordon J. Ewing, retired from the Dept. of Chemistry and Biochemistry, New Mexico State University, Las Cruces, New Mexico, currently a housekeeper and birdwatcher.

*One Side by Himself* is well written and shows careful research and documentation. The author, a descendant of Lewis Barney, emphasizes that his subject was a run-of-the-mill Mormon; in fact, he says, "Lewis Barney was a 'last wagon' man" (p. xvii). But Barney was

too independent to be a "last wagon" Mormon, he was an outrider. The author presents him as a self-reliant man, a very independent but loyal church member. The following details illustrate these traits. He was a member of the pioneer wagon train that reached the Salt Lake Valley in July 1847. He then returned—in 1847—to his family in Iowa and proceeded to build up a good farm there. He accepted the Principle and married a second wife, a young widow in poor health. Barney thought that his farm was worth \$1000, but he sold it for about \$50 in 1852 because Brigham Young had called all the Saints in Iowa to go west. On the way west, he had a run-in with

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6. "Polygamy in Mexico as Practiced by the Mormon Church, 1895-1905," Utah State Historical Society, also available on *New Mormon Studies* CD-ROM (SLC: Smith Research Associates, 1998).

the wagon master and left the train in a huff; eighteen wagons from the train followed him to the Salt Lake Valley. Though he never had much money, Barney paid to have many of his ancestors identified and then took his first wife to Manti where they lived for nearly a year, doing temple ordinance work for those ancestors. To reaffirm his loyalty to the church, he was rebaptized at least twice over the years, but he maintained his independence by failing to appear on a list of Mormons who were rebaptized in a show of support for the United Order in Monroe, Utah. For Lewis, the *Order* was much harder to live than the *Principle*.

One of the purposes of this book is to describe how nineteenth-century Mormonism functioned at the family level, at least for the Barney family. The story, the author says, "comes from the voice of the under-represented, quiet majority of Mormonism" (p. xvii). He points out an obvious but important problem in writing a biography of a person like Barney: the common man leaves few tracks. Barney himself sought to overcome this problem. In his later years, he wrote two autobiographies, the first in 1878 in Monroe, Utah and the second, longer work (300 pages) in 1886 in Bowie Station, Arizona. Unfortunately all but 40 pages of this longer autobiography were lost. These two manuscripts, a few personal papers, and an autobiography written by Arthur Barney, Lewis's son, form the framework of this book. The author has gone to great lengths to gather background material to evaluate Barney's recollections and to fill in the blanks. He reports "that Barney is a remarkably reliable witness to the events he describes" (p. xix).

While Barney was a loyal Latter-day Saint and an influential church member, he was not an ecclesiastical

leader. He did, however, become one of the first "teachers of the ward" in Monroe after Young initiated what is now the home teaching program (p. 240). He was also elected a director of the Monroe United Order, but he didn't last long in that job. In an era when the Church was more democratic than at present, Barney was influential in the selection of local church leaders. He says "I used my influence" to have Moses Gifford chosen as bishop in Monroe (p. 220). Shortly afterwards, Barney felt that appointing Gifford as bishop had been a mistake. Gifford came to agree and resigned in a dispute over the United Order. He was replaced by James Thompson Lisonbee, a rigid man, who found that for him managing the Monroe United Order was an impossible task. Lisonbee was released as both bishop and president of the local United Order and called on a mission. Barney then, in 1878, nominated Dennison L. Harris as Lisonbee's replacement. After a discussion, Erastus Snow, who presided at the meeting, called for a vote and Harris was elected and ordained as the new bishop. One could say, then, that Barney was active in local politics.

This book might have been titled *The Peregrinations of Lewis Barney*. It is difficult to count the number of times he moved. Does living away from home for a few months to work or to visit count as a move? What about returning to a previous abode? A reasonable estimate is that Barney moved about 20 times after he ceased living with his father. Typically Barney would become restless by the time he had finished building a log cabin, generally about two years after he had arrived in a new area. He lived in Illinois, Iowa, Utah (in communities across a broad band from Springville to Circleville), and—briefly—in New



Mexico, Arizona, and Colorado. This constant moving was hard on his wives. By the mid-1860s, Barney's first wife, Betsey, apparently became tired of following him about and lived mainly with her sons. In 1889, after not seeing Betsey for over five years, Barney picked her up in Kanosh and took her to Manti, where for nearly a year they regularly attended the temple. In 1886, Elizabeth, his second wife, who had dutifully followed Barney all the way to Bowie Station in southeastern Arizona, refused to move yet again. Maybe she would not cross the Arizona desert in summer. Whatever the reason, Barney, now in his late seventies, returned to Utah without her, traveling with his daughter, Martha, and her husband, Thomas Briscoe. Five years passed before he went to see Elizabeth, who was then living with her son, David, in Mancos, Colorado. Barney shows surprising fairness in the neglect of his wives.

The book does contain a few errors. On page 143, the author has the Spanish Fork River run eastward instead of westward; he makes a similar error by having the Price River flow westward from Wellington to Price (p. 271). He usually calls the LDS Church "The Church of Jesus Christ," which he describes as "the original name of the Mormon Church" (p. 159). Yet "The Church of Christ" is the name printed on the title page of *A Book of Commandments*.<sup>1</sup> Finally, one minor typographical error: the index lists Benjamin Franklin Barney as Lewis's son. He is really Charles Barney's son, and Lewis's half-brother.

I really enjoyed this book. Reading about a Mormon who never even became a bishop's counselor and viewed himself as a loyal Mormon all of his life was both informative and refreshing. More serious historians should write books like this one.

## A Patchwork Biography

*Mormon Healer and Folk Poet: Mary Susannah Fowler's Life of "Unselfish Usefulness,"* by Margaret K. Brady (Logan, Utah: Utah State University Press, 2000), 222 pp.

Reviewed by Deborah Fillerup Weagel, a scholar in Albuquerque, New Mexico with degrees in art, music, and French.

"... I cut out my patch work & you rested from shoveling snow." (105)

In pioneer times, women salvaged and collected whatever scraps of fabric they could find and created quilts that were often colorful, dynamic, and artistic. In a similar manner, Margaret K. Brady has pieced together a biography of Mary Susannah Sumner Fackrell Fowler, a Mormon woman who lived in Utah from 1862 to 1920. She gathered information, including photographs, journals, oral narratives, records from various organizations, a grandson's biography, and Mary

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1. The name may go back to as early as June 1829; see the reprint edition, *A Book of Commandments for the Government of the Church of Christ Organized According to Law, on the 6th of April, 1830* (Independence, MO: Church of Christ - Temple Lot, 1960), 26.

Fowler's own diary, poetry, and essays. Having skillfully arranged and manipulated her materials, Brady constructs the story of a polygamous wife and mother who was active as a nurse, midwife, healer, and poet.

In the introduction, Brady defines herself as a "folklorist by training, cultural historian by interest, and literary cultural critic by academic affiliation" (3). Her approach to the writing of the text is interdisciplinary, and she is particularly interested in "reflexive" or "reciprocal" ethnography (4). In this method, the researcher's own role in the writing of the book becomes more visible and intertwined with the final product. She acknowledges that she is constructing her own version of the life of Mary Fowler, based on her particular interests and interpretations. However, she also places responsibility on the reader to become engaged with the text and to join her in constructing a personal perception of the Mormon healer and folk poet.

In the first chapter, Brady, a non-Mormon, explains that she stumbled across a reference to the manuscript diary of Mary Susannah Fowler in the card catalogue at the University of Utah Marriott Library while seeking an idea for a talk for a folklore conference. She read the diary and became so impressed and infatuated with the Mormon woman that she conducted extensive research on her life and eventually wrote this book. In Chapter 1 Brady also includes a short chronological summary of Mary's life. The second chapter presents the concept of Mormon community, focusing not only on Mary's own life, but also on her relationships with other women in Orderville, a town which followed the United Order. In the third chapter, Brady details Mary's activities as a midwife and healer and discusses the

metaphor of the "nurturing mother" (83). Chapter 4 deals with the concept of literacy within the community, and Chapter 5 discusses and analyzes Mary's folk poetry. The final chapter reflects on the various discourses utilized in the former chapters and on life writing as a genre.

Born in Woods Cross, Utah, Mary was one of fifteen children (only eight survived to adulthood) born to David Bancroft Fackrell and Susannah Sumner Fackrell. The family eventually moved to Mt. Carmel, where Mary was baptized, and then relocated once again two miles north in Long Valley. They eventually settled in what became known as Orderville, where Mary met and married Henry Ammon Fowler. While here, Mary gave birth to her first five children, and her husband took a second wife, Eliza Norwood. In 1888, Henry moved both families to Huntington, where Mary experienced seven more pregnancies, from which only three children survived. In 1903, at her request, Henry moved Mary and her children to Provo, so two of their sons could attend Brigham Young Academy, and while there she took some courses to add to her knowledge of nursing. After about four years, the family returned to Huntington and then moved to Price a few years later. In 1920, Mary died shortly after surgery in Salt Lake City, where she had gone for specialized medical treatment.

This biography, which has been meticulously pieced together, is worth reading. It is apparent that Brady is passionate about her subject, and she is respectful of Mormon doctrine and beliefs. Eighteen photographs and illustrations enhance the text and provide further documentation for the book. However, as a Mormon reader, I expected more emphasis on the hard-

ships and trials of this woman who lived in polygamy and poverty during difficult times. It seems that Brady anticipated this criticism. In response to her portrayal of the relationship of Mary and her "sister-wife" Eliza, she writes, "It might appear from this discussion that I have idealized the nature of that relationship" but "Mary's own writing virtually never indicates. . . animosity towards Eliza" (49, 50-51).

It is not until Chapter 5, which deals with Mary's poetry, that there is more focus on tribulation and pain. In her poetry, Mary states that "life is hard, and trials cloud the way" and mentions "sacrifices suffered" and "our pains and our heartaches" (137, 148, 149). Also, in the last chapter, a long passage written by Mary about the family's move from Orderville to Huntington refers to many difficulties, such as: "aching heart," "rained very

hard," "very tired," "tongue of his wagon broken," "very cold day," "snowed on us during the night," "oh such mud!" "awfully tired," "sharp wind blowing," "rough roads," "a stormy day," "so tedious a trip" (176-80). In her analysis of the poems and the description of the move, Brady acknowledges the trials and sorrows. Mary's own writing, however, satisfies my desire to learn of her tribulations more than does Brady's interpretation of that writing. Yet, in a way, my response shows that Brady is successful in bringing about the collaboration she wants to occur between author and reader. She provides a perspective which has not been framed by an LDS upbringing, and I, a descendant of Mormon pioneers and polygamists, fulfill my responsibility to remember the pain, suffering, and sacrifice of those who preceded me.

## CONTRIBUTORS

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BRADLEY WALKER is married and the father of six children ages six through fifteen. He works as a public health/family practice physician at University Medical Center in Las Vegas, Nevada.

## ABOUT THE ARTIST

Born the third son of a Hungarian Goldsmith, **Albrecht Dürer** (1471-1528) had begun painting by the time he was thirteen. At fifteen he left his father's employ and was apprenticed to the painter and printmaker Michael Wolgumut where he began to work with woodcuts and copper engravings as well. He traveled to the Netherlands and often to Italy where he studied Italian Renaissance painters. By 1512 he had become portraitist to the rich and famous of his time, including prominent merchants, clergy, government officials, and Emperor Maximilian I and King Christian II of Denmark.

"The Fall of Man," the 1504 engraving of Adam and Eve which appears on our cover, was an early product of his Italian studies and sought to express his new ideas of beauty and harmony. It combines the ideals of the south within the Gothic traditions of the North.

## THE COVER ART

Albrecht Dürer, German, 1471-1528

The Fall of Man (Adam and Eve), 1504

Engraving

Catalogue Raisonné: Bartsch (Intaglio) 001; Meder 1,11, a

Platemark: 25.2 x 19.4 cm (15/16 x 7 5/8 in.)

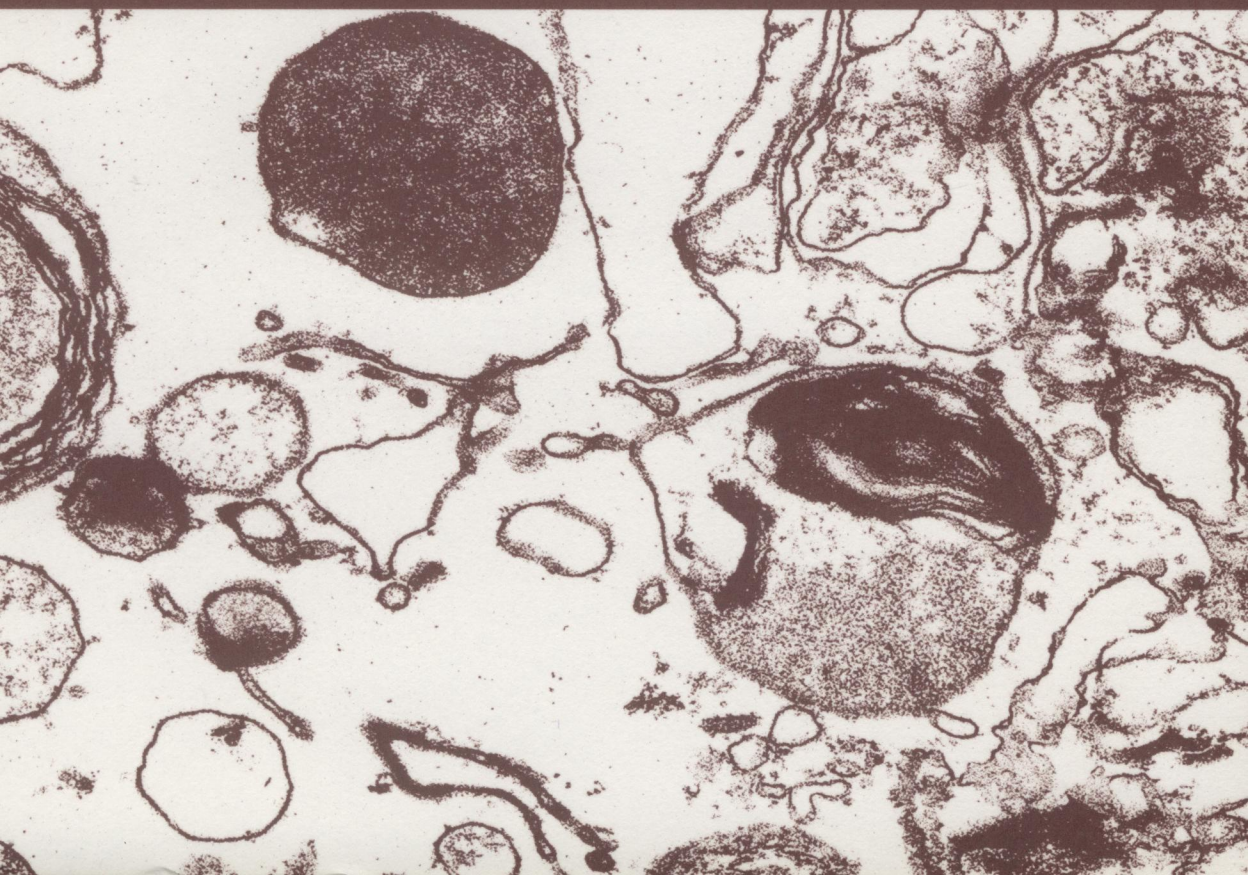
Museum of Fine Arts, Boston

Centennial Gift of Landon T. Clay; 68.187



*Both Religionists and scientists  
must avoid arrogant dogmatism. . .  
Scientists and teachers of religion  
disagree among themselves on  
theological and other subjects. . .  
even in our own church men take  
issue with one another and contend  
for their own interpretations. But  
this free exchange of ideas is not to  
be deplored as long as men remain  
humble and teachable.*

HUGH B. BROWN





# DIALOGUE

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