

Interpreter

**A Journal of Latter-day Saint
Faith and Scholarship**

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Once-implausible Prophetic
Statements**

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Article Print

Pages 91–128

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ISSN 2372-1227 (print)
ISSN 2372-126X (online)

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“Enough and to Spare”: Economic Data Vindicate Once-improbable Prophetic Statements

Jeffrey D. Lindsay and Gale L. Pooley

Abstract: *Despite frequently lacking material abundance in his life and living at a time when Malthusian concepts were becoming popular among intellectuals, Joseph Smith made a daring prophecy in 1834. He stated that God had designed the earth with abundant resources such that “the earth is full, and there is enough and to spare” (Doctrine and Covenants 104:17). While many in the world, and sometimes even in the Church, believe that the world is running out of many resources due to overpopulation, extensive economic data show that the opposite is true. Resources tend to become more abundant over time, as long as there is some degree of economic freedom. Here we examine those data, showing that our planet is not merely blessed with abundance, but with “superabundance.” The data suggest that Joseph’s daring prophecy has been vindicated. In fact, economic data further suggest that the most serious scarce resource the planet faces is arguably human beings who can create, innovate, and solve problems of scarcity, especially human beings who apply their agency for good. The teachings of the gospel can bring both spiritual and temporal abundance on this earth that is full, with enough and to spare.*

Joseph Smith’s life was characterized by poverty, scarcity, and financial distress. The scarcity of writing paper is one example that was an issue during the translation of the Book of Mormon. Joseph’s poverty and the resulting lack of adequate resources were impediments to that sacred work. This was suggested by Joseph Knight as he recounted the work of the translation:

Now he Could not translate But little Being poor and nobody to write for him But his wife and she Could not do much and take Care of her house and he Being poor and no means to live But work. His wifes father and familey ware all against him and would not h[e]lp him. He and his wife Came up to see me the first of the winter 1828 and told me his Case. But I was not in easy Circumstances and I did not know what it mite amount to and my wife and familey all against me about helping him. But I let him have some little provisions and some few things out of the Store apair of shoes and three Dollars in money to help him a litle. In January his father and Samuel [Smith] came from Manchester to my house when I was Buisey a Drawing Lumber. I told him they had traviled far enough. I would go with my sley and take them down to morrow. I went Down and found them well and the[y] were glad to see us. We conversed about many things. In the morning I gave the old man a half a Dollar and Joseph a little money to Buoy [buy] paper to translate, I having But little with me.¹

Joseph's lack of material resources turned out to be a testimony-nurturing feature for Martin Harris. Before his experience as one of the Three Witnesses, Harris was permitted to feel the weight of the plates while they were still covered. His response is telling:

While at Mr. Smith's I hefted the plates, and I knew from the heft that they were lead or gold, and I knew that Joseph had not credit enough to buy so much lead. I left Mr. Smith's about eleven o'clock and went home. I retired to my bed-room and prayed God to show me concerning these things, and I covenanted that if it was his work and he would show me so, I would put forth my best ability to bring it before the world. He then showed me that it was his work, and that it was designed to bring in the fullness of his gospel to the gentiles to fulfill his word, that the first shall be last and the last first. He showed this to me by the still small voice spoken

1. Dean Jessee, "Joseph Knight's Recollection of Early Mormon History," *BYU Studies* 17, no. 1 (1976): 35–36, emphasis added, byustudies.byu.edu/article/joseph-knights-recollection-of-early-mormon-history.

in the soul. Then I was satisfied that it was the Lord's work, and I was under a covenant to bring it forth.²

For Harris, the as-yet-unseen plates must have been real gold, for there was no way that Joseph, in his poverty, could have acquired enough lead to fabricate plates that would fool Harris.

Despite his experiences with scarcity, Joseph made a prophetic statement in Kirtland, Ohio, in 1834. It spoke of the abundance that the Lord had created on this earth which was said to be "full," blessed with "enough and to spare":

For it is expedient that I, the Lord, should *make every man accountable, as a steward over earthly blessings*, which I have made and prepared for my creatures.

I, the Lord, stretched out the heavens, and built the earth, my very handiwork; and all things therein are mine. And it is my purpose to provide for my saints, for all things are mine. But it must needs be done in mine own way; and behold this is the way that I, the Lord, have decreed to provide for my saints, that the poor shall be exalted, in that the rich are made low.

For the earth is full, and there is enough and to spare; yea, I prepared all things, and have given unto the children of men to be agents unto themselves.

Therefore, if any man shall take of the abundance which I have made, and impart not his portion, according to the law of my gospel, unto the poor and the needy, he shall, with the wicked, lift up his eyes in hell, being in torment. (Doctrine and Covenants 104:13–18)

The Lord's preparation, the requirement of accountability as agents and stewards, and earthly blessings are brought together in verse 13. Humans with the gift of agency who hearken to the voice of the Lord are the key to providing for all his Saints and for solving the problem of poverty.

Especially important is verse 17, where the Lord links the potential abundance of the earth with human agency. One may say that it

2. "Martin Harris Interview with Joel Tiffany, 1859," originally published in "Mormonism—No. II," *Tiffany's Monthly* 5 (August 1859): 168–69, available in Dan Vogel, ed., *Early Mormon Documents*, vol. 2 (Salt Lake City: Signature Books, 1998), 309–10, emphasis added, archive.org/details/volume-2_202011/page/309/mode/2up.

reframes the question of abundance, pointing to human agency rather than the resources of the earth as the key limiting factor.

The Savior affirms this truth when he says, “I am come that they might have life, and that they might have it more abundantly” (John 10:10). When humans use their agency to follow Christ, shunning selfishness, theft, injustice, and sin of all kinds, the result is abundance, both spiritually and physically.

Examples of the physical abundance that followed periods of widespread acceptance of the principles of the gospel are shown in the Book of Mormon. Examples include the time immediately following King Mosiah’s establishment of a system of governing judges (Alma 1:28–31) and the time following Christ’s ministry to Book of Mormon peoples (4 Nephi 1:3, 7, 15–18).

The teachings of Doctrine and Covenants 104 on abundance are also reflected in section 101, a revelation given four months earlier after the Saints in Missouri had been scattered by their enemies. Here the word *abundance* is explicitly used, yet that abundance is lacking because of congregations of the Saints who did not hearken to the Lord’s guidance.

There is even now already in store sufficient, yea, even an abundance, to redeem Zion, and establish her waste places, no more to be thrown down, were the churches, who call themselves after my name, willing to hearken to my voice.

And again I say unto you, those who have been scattered by their enemies, it is my will that they should continue to importune for redress, and redemption, by the hands of those who are placed as rulers and are in authority over you — *According to the laws and constitution of the people, which I have suffered to be established, and should be maintained for the rights and protection of all flesh, according to just and holy principles; That every man may act in doctrine and principle pertaining to futurity, according to the moral agency which I have given unto him, that every man may be accountable for his own sins in the day of judgment.*

Therefore, *it is not right that any man should be in bondage one to another. And for this purpose have I established the Constitution of this land, by the hands of wise men whom I raised up unto this very purpose, and redeemed the land by the shedding of blood.* (Doctrine and Covenants 101:75–80)

While enemies prevailed and the abundance needed to establish Zion was not available because of disobedience, the Saints were encouraged to seek redress under the laws of the land. The Lord then adds information about the laws and Constitution of the nation, indicating that they "should be maintained for the rights and protection of all flesh, according to just and holy principles" (v. 77). Further, under their rule, men should be able to "act . . . according to the *moral agency* which I have given unto him, that every man may be accountable" (v. 78).

Action with protected rights and moral agency that is in accordance with the guidance of God could have brought prosperity and abundance to the Saints. The material riches were there, but were lost to the Saints because of disobedience and the infringement of their rights by others. Those rights are essential: "It is not right that any man should be in bondage one to another."

Sections 101 and 104 address issues of abundance, prosperity, and the protection of rights. From an economic perspective, section 104, in light of section 101, clearly shifts away from the common view that limited resources are the cause of scarcity.

When men are not agents unto themselves (Doctrine and Covenants 104:17), as when they are in bondage to others (Doctrine and Covenants 101:79) or have their rights desecrated, abundance is limited. This makes sense economically because the fruits of a person's labor may be stolen by oppressors and incentives to create and innovate may be quashed.

This paper considers several sources of data about the issue of scarcity in order to evaluate Joseph's teachings. Foremost will be a resource containing extensive economic data, a book titled *Superabundance: The Story of Population Growth, Innovation, and Human Flourishing on an Infinitely Bountiful Planet*, by Marian Tupy and Gale Pooley.³ (The latter is also a coauthor of this paper.)

A Sharp Contrast with Malthus

Thirty-six years before Joseph Smith's revelations in Doctrine and Covenants 101 and 104, Thomas Malthus had published a book that proposed a very different approach to the world and its resources.⁴

3. Marian L. Tupy and Gale L. Pooley, *Superabundance: The Story of Population Growth, Innovation, and Human Flourishing on an Infinitely Bountiful Planet* (Washington, DC: Cato Institute, 2022).

4. Thomas Robert Malthus, *An Essay on the Principle of Population, As It Affects*

In this book, Malthus argues that population growth inevitably leads to scarcity. He claims that population increases geometrically, but the food supply can only increase linearly. The result is that, as the population increases ever more rapidly, it must eventually outpace the ability of limited agricultural resources to feed that population, resulting in disaster. He deals with not just a distant future catastrophe, but also the then-current unsavory conditions of the destitute masses, suggesting that their poverty and disease was an inevitable result of the science of population growth.

Malthus's work gained traction more rapidly in Europe than in the US. Significant American voices, such as Thomas Jefferson and James Madison, had some degree of respect for Malthus, though they also believed the special nature of America might make it less susceptible to the problems he predicted.⁵ Madison, for example, has often been said to be supportive of Malthusianism. Drew McCoy's careful reading of Madison's letters indicates that the resemblance was only superficial. Rather, Madison believed that America's abundance ensured that surplus agricultural production would support a growing population, resulting in the problem for America's future being not how to produce food for great numbers, but how to provide sufficient jobs outside of agriculture for the masses.⁶

While many were impressed with the apparent logic of Malthus's argument, there was also reasoned opposition. A significant refutation to Malthus's work was published in 1823 by Alexander Everett, an American diplomat.⁷ Everett observes that humans are not just mouths to feed, but can work and create, leading not just to enough production to feed an increased population, but innovations that might increase productivity and abundance:

The leading principle of the work [is] that the increase of population is a cause of abundance, and not of scarcity; since it augments the supply of labor in precisely the same proportion with the demand for its products, and develops

the Future Improvement of Society (London: J. Johnson, 1798), archive.org/details/b31355250/page/n5/mode/2up.

5. Drew R. McCoy, "Jefferson and Madison on Malthus: Population Growth in Jeffersonian Political Economy," *The Virginia Magazine of History and Biography* 88, no. 3 (July 1980): 259–76, [jstor.org/stable/4248405](https://www.jstor.org/stable/4248405).

6. McCoy, "Jefferson and Madison on Malthus," 273.

7. Alexander H. Everett, *New Ideas on Population: with Remarks on the Theories of Malthus and Godwin* (Boston: Oliver Everett, 1823), archive.org/details/newideasonpopula00ever/mode/2up.

at the same time the new element of skill, by means of which the same quantity of labor is applied with greater effect, and becomes more productive than before.⁸

What Everett offers as a logical proposal has since been greatly refined and clarified by a large body of economic data. Nevertheless, Malthusian perspectives have influenced more people and more of the world's leaders and intellectuals than ever before. Prominent voices warn of the dangers of population growth that would, if left unchecked, result in too many people for the scarce resources of the planet. How, then, could Joseph's 1834 prophecy be viewed as anything other than excessive and unjustified optimism that must be tempered by scientific reality?

What Is at Stake?

Much more is at stake than a single verse in the Doctrine and Covenants. The optimistic view in section 104, contra the prevailing secular view, is consistent with many other aspects of the revelations and teachings of Joseph Smith. He revealed to the world a tangible God the Father and Christ (Doctrine and Covenants 130:22) who are fundamentally like us. They care about our mortal lives and our physical well-being, with their ultimate goal being the "immortality and eternal life of man" (Moses 1:39). As Terryl Givens put it, Joseph's revelations result in the "collapse of sacred distance" between us and God.⁹

Similarly, families are not only something enjoyed during mortality. They are integral to God's eternal plan for us and, therefore, sacred. Families are meant to be eternal and a part of endless abundance in eternal life. While the beautiful earth we live on is not currently paradise, there is enough and to spare, and that will be even more true during the incredible abundance and population growth we can expect in the Millennium. In that day, freed of infant mortality and with great longevity of all, freed from sorrow and disaster, abounding in great knowledge (Doctrine and Covenants 101:25–36), there will be such abundance that "whatsoever any man shall ask, it shall be given unto him" (v. 27).

Through Joseph, the Lord brought forth a Church that has a duty

8. Everett, *New Ideas on Population*, 120.

9. Terryl L. Givens, *People of Paradox: A History of Mormon Culture* (New York: Oxford University Press, 2007), 28, archive.org/details/peopleofparadox/h00give/page/28/mode/2up.

to help lift the poor in mortality, that warns us against taking harmful substances into our bodies, that promotes the family as a divine institution, and that helps us have meaningful and productive lives. Both the Church and God care about this physical world and our lives here. They want us to live here in peace, joy, knowledge, and abundance, which is possible if mankind will live the gospel.

Living that gospel inherently points us to the importance of families and of bearing children. This, of course, requires population growth which, implicitly, cannot lead to scarcity and poverty, but must lead to the prosperous life God wants us to have. Recall the declaration: “It is my purpose to provide for my saints, for all things are mine” (Doctrine and Covenants 104:15). The potential for abundance is by design.

An 1831 revelation recognizes the suffering of the poor, the justice of God, the richness of the abundant earth he has made, and his desire to give yet greater riches in a land of promise:

And for your salvation I give unto you a commandment, for I have heard your prayers, and the poor have complained before me, and the rich have I made, and all flesh is mine, and I am no respecter of persons. And I have made the earth rich, and behold it is my footstool, wherefore, again I will stand upon it.

And I hold forth and deign to give unto you greater riches, even a land of promise, a land flowing with milk and honey, upon which there shall be no curse when the Lord cometh; And I will give it unto you for the land of your inheritance, if you seek it with all your hearts. (Doctrine and Covenants 38:16–19)

Great optimism is embedded in those words, as well as implied accountability to be just stewards over the earth. Its inherent abundance is further implied when God told Joseph:

The kingdom is yours and the blessings thereof are yours, and the riches of eternity are yours. And he who receiveth all things with thankfulness shall be made glorious; and the things of this earth shall be added unto him, even an hundred fold, yea, more. (Doctrine and Covenants 78:18–19)

Such abundance and generosity is evident, for example, in the rewards God described for his people if they would keep the Sabbath day sacred:

Verily I say, that inasmuch as ye do this, the fulness of the earth is yours, the beasts of the field and the fowls of the air, and that which climbeth upon the trees and walketh upon the earth; Yea, and the herb, and the good things which come of the earth, whether for food or for raiment, or for houses, or for barns, or for orchards, or for gardens, or for vineyards; Yea, all things which come of the earth, in the season thereof, are made for the benefit and the use of man, both to please the eye and to gladden the heart; Yea, for food and for raiment, for taste and for smell, to strengthen the body and to enliven the soul.

And it pleaseth God that he hath given all these things unto man; for unto this end were they made to be used, with judgment, not to excess, neither by extortion. And in nothing doth man offend God, or against none is his wrath kindled, save those who confess not his hand in all things, and obey not his commandments. (Doctrine and Covenants 59:16–21)

These revelations in the Doctrine and Covenants agree with the Book of Mormon, which insists that a people will “prosper in the land” if they follow God (1 Nephi 4:14; 2 Nephi 1:20, 4:4; Jarom 1:9; Omni 1:6; Mosiah 1:7, 2:22, 31, 9:9, 10:5; Alma 9:13, 36:1, 30, 50:20, 62:51; Helaman 3:20; Ether 10:16). This is a blessing that can be withdrawn in times of wickedness. It shows that in times of relative righteousness, the growing population of the Nephites enjoyed prosperity. This includes “all the riches which we have of every kind” as mentioned by King Benjamin (Mosiah 4:19). Then, later, the “prosperous circumstances” of the members of the Nephite Church at the start of the reign of judges, led to an

abundance of all things whatsoever they stood in need — an abundance of flocks and herds, and fatlings of every kind, and also abundance of grain, and of gold, and of silver, and of precious things, and abundance of silk and fine-twined linen, and all manner of good homely cloth. (Alma 1:29–30)

After a time of dissension, decay, and warfare, there was a rapid rise in prosperity as the Nephites “did establish again the church of God, throughout all the land,” such that the Nephites “began to prosper again in the land, and began to multiply and to wax exceedingly strong again in the land” and to “grow exceedingly rich,” while still

remaining humble and grateful to God at that time (see Alma 62:46–51; cf. Helaman 6:7–13).

The Book of Mormon repeatedly points to prosperity that can increase with population growth when the people are righteous. The pride and spiritual laxity that can occur in times of abundance tended to be a much more serious problem for the Nephites than were inadequate resources in the land (see Jacob 2:12–19; Helaman 3:36, 4:12, 6:17, 13:20–33; 3 Nephi 6:10–15; 4 Nephi 1:43). Scarcity could strike due to warfare, famine attributed to God, and wickedness in general, but abundance was clearly possible when they sought to follow God.

The joyous consequences of a society infused with a devotion to Christ are well illustrated by the century that followed his post-resurrection visit to the Nephites when they all sought to follow the Savior. The result was peace, joy, happiness, great population growth, and prosperity, contra Malthus:

And now, behold, it came to pass that the people of Nephi did wax strong, and did multiply exceedingly fast, and became an exceedingly fair and delightsome people. And they were married, and given in marriage, and were blessed according to the multitude of the promises which the Lord had made unto them. (4 Nephi 1:10–11)

And it came to pass that there was no contention in the land, because of the love of God which did dwell in the hearts of the people. And there were no envyings, nor strifes, nor tumults, nor whoredoms, nor lyings, nor murders, nor any manner of lasciviousness; and surely there could not be a happier people among all the people who had been created by the hand of God.

There were no robbers, nor murderers, neither were there Lamanites, nor any manner of –ites; but they were in one, the children of Christ, and heirs to the kingdom of God. And how blessed were they! For the Lord did bless them in all their doings; yea, even they were blessed and prospered until an hundred and ten years had passed away; and the first generation from Christ had passed away, and there was no contention in all the land. (4 Nephi 1:15–18)

To this can also be added the report about Enoch's people who fully turned to God and established a righteous city upon which the glory of God could come (Moses 7:17). With apparent great understatement,

the record simply says that they "did flourish" (v. 17). Then comes a beautiful verse: "And the Lord called his people Zion, because they were of one heart and one mind, and dwelt in righteousness; and there was no poor among them" (Moses 7:18). No poor among them, in a society that, as it was growing, would surely attract thousands of immigrants fleeing from the chaos and scarcity the secular world offered, seeking for something much better. Enoch's Zion had no poor among them — not because no poor came, nor because no poor were allowed in, nor because population reduction programs were implemented to eradicate the poor, but because the people were united in love, growing in the knowledge of the Lord, living in righteousness, and thus were enabled to create, share, and enjoy the endless abundance the Lord has created for us.

Zion was then received into the bosom of the Lord (v. 69), removed from this earth for a time, but will return one day as the New Jerusalem with an unimaginable infusion of knowledge and wisdom that will be one of the reasons why the Millennium will be such a joyous, abundant era. It will not be *despite* increasing population, including the sudden spike in population from the New Jerusalem, but in part *because of* that population growth. This is because the most important scarce resource of all is increased: righteous people able to create, raise vibrant families, work, and create ever more abundance and beauty.

In revelation after revelation, it is evident that the theme of prosperity, flourishing, and abundance is part of God's design, while the adversary seeks the opposite in every way.

Much More Than an Academic Debate

In our day, the need to understand and review hard data on the issue of scarcity versus abundance is not just a matter of economic debate. It is a vital issue that has affected how millions feel about the future, their lives, their duties, and especially the decision to have children. Teachings about the dangers of population growth and the risks of scarcity and economic doom have left generations in fear. Such widespread indoctrination — a fair word once the nature of the misinformation is understood — has motivated some to avoid marriage or having children lest they contribute to social harm or bring children into a doomed world facing disaster, pollution, and widespread starvation. In the US, for example, a 2025 report from the Centers for Disease Control shows that the fertility rate is at a level of 53.1 births per 1,000

in women aged 15–44.¹⁰ This is a historic low, down 23.1% from 2007 and 5.1% from 2021. Some of this decline may be due to various environmental factors and medications, but surely a portion is from the impact of messaging on the ostensible harms of population growth and future doom and gloom. On the other hand, reasons for changes in fertility rates can be complex and multifaceted, plus many nations experience transitions from high birth rates to lower birth rates as they move from less developed to more developed states.¹¹ We are not saying that declining fertility in our era is solely or largely caused by Malthusian misinformation. Nevertheless, such information clearly has an impact on the thinking and behavior of many people.

Popular culture reinforces concerns about population growth and having children. This often comes through movies and other media such as the popular film, *Avengers: Infinity War*. Thanos, a superhuman character decides he must destroy half of the life in the universe: “It’s a simple calculus. This universe is finite, its resources, finite. If life is left unchecked, life will cease to exist. It needs correction.”¹² This echoes earlier statements by Malthus about the exponential disaster that awaits for “population, when unchecked.”¹³

Another example of the anti-natalist pressure on young people comes from interviews of mothers by Catherine Pakaluk.¹⁴ One woman, Jenn, attended UC Berkeley where, on the first day of a required course on geography, the students were taught at length, with various statistics being cited, that the world was overpopulated and that “it was irresponsible to have any more than one or two children, or any

10. Brady E. Hamilton, Michelle J. K. Osterman, and Elizabeth C. W. Gregory, “Births: Provisional Data for 2025,” Vital Statistics Rapid Release No. 43, US Centers for Disease Control and Prevention, 9 April 2026, dx.doi.org/10.15620/cdc/252434.

11. Max Roser, “Demographic Transition: Why is Rapid Population Growth a Temporary Phenomenon?,” *Our World in Data*, 1 June 2019, ourworldindata.org/demographic-transition. For examples of theories to explain declining fertility after significant economic growth, see Oded Galor, “The Demographic Transition: Causes and Consequences,” *Cliometrica* (Berlin) 6, no. 1. (January 2012): 1–28, pmc.ncbi.nlm.nih.gov/articles/PMC4116081; and Oded Galor and David N. Weil, “From Malthusian Stagnation to Modern Growth,” *The American Economic Review* 89, no. 2 (May 1999): 150–54, jstor.org/stable/117097?seq=1.

12. *Avengers: Infinity War*, directed by Anthony Russo and Joe Russo (Burbank, CA: Marvel Studios, 2018). The statements by Thanos are approximately 1:07:02 into the movie.

13. Malthus, *Principle of Population*, 14, 21.

14. Catherine Ruth Pakaluk, *Hannah’s Children: The Women Quietly Defying the Birth Dearth* (New York: Regnery Gateway, 2024).

children at all." Jenn now believes that "this sort of messaging at elite colleges and in the media is part of the story of falling birth rates."¹⁵

One American Young Women's leader told one of us of a Latter-day Saint girl who, during a lesson on the family, objected to the Church's emphasis on families. The reasoning given by the girl was that she had learned in school that the world was running out of food, water, and clean air because there are too many people. She was convinced that it would be wrong to have children in such a time of crisis and growing scarcity.

The related fear of climate change also plays a role in discouraging many from raising children. In 2025 the Associated Press published a story by Caleigh Wells that illustrates this:

Younger generations of Americans are increasingly citing climate change as making them reticent to have children, according to several studies. They are worried about bringing children into a world with increasing and more intense extreme weather events. . . . And they are concerned about the impact their offspring will have on the planet. . . .

Parenthood and climate change are related not just because of fears for a child's well-being, but also by concern for the planet's well-being.

Compared to the carbon emissions of all the other decisions, "having a child is by far, by orders of magnitude, larger," said Nandita Bajaj, executive director of Population Balance, which is a nonprofit focused on humans' environmental impact.

Unlike other choices, procreation comes with something that bioethics professor Travis Rieder of Johns Hopkins University calls "carbon legacy."

"You're not only doing carbon expensive activities like buying a larger house and a larger car and diapers and all that," said Rieder. "You're also creating someone who is going to have their own carbon footprint for the rest of their lives."

That child might have children, and those children might have children, creating an impact that lasts generations, Rieder added.¹⁶

15. Pakaluk, *Hannah's Children*, 215.

16. Caleigh Wells, "Anxiety over Global Warming Is Leading Some Young

Wells assures readers that Rieder “is not advocating” for “the logical extreme [of] having no children,” but that seems to be the ultimate conclusion of his warnings. Weighing the value and impact of a child in terms of their carbon footprint is analogous to the Malthusian view of seeing humans only as carbon-demanding mouths to be fed, rather than as precious resources that can work, produce, solve problems, and bring abundance through innovation.

A 2024 *Lancet* study is cited by Wells as evidence of how many young people, affected by the messaging of climate change, have turned away from raising children.¹⁷ In a survey of nearly 16,000 young people from age 16 to 25, “More than half of [those surveyed] indicated that climate change is causing them . . . to be hesitant to have children (52.3%).”¹⁸

The angst is real and widespread. Fortunately, there is good news that points to the abundance that God has created on this earth. Indeed, there is the potential for “superabundance,” in which population growth can lead to greater abundance.

From a gospel perspective, the adversary’s desire to destroy God’s work drives him to deny the blessings of children and families to as many as possible. Satan’s yearning to “destroy the world” (Moses 4:6) is partially achieved not just through war or elective abortion. Harm is also achieved through every influence that destroys families, shatters marriages, or leads people to choose not to raise children in the first place. The experience of raising a child, or many children, can bring great joy. It helps to advance God’s work and his glory by providing more of Earth’s scarcest resource: *people*, especially people raised in a healthy, happy family.

There is hard data that supports this optimistic view of population growth and abundance. Given how widespread the pessimistic messaging has become—contrary to the optimistic perspectives given

Americans to Say They Don’t Want Children,” *AP News*, 29 October 2025, apnews.com/article/climate-anxiety-impact-children-parent-environment-change-b29d351efd43d6fc79e5ae6c7510dfeb.

17. R. Eric Lewandowski et al., “Climate Emotions, Thoughts, and Plans Among US Adolescents and Young Adults: A Cross-Sectional Descriptive Survey and Analysis by Political Party Identification and Self-Reported Exposure to Severe Weather Events,” *The Lancet Planetary Health* 8, no. 11 (November 2024): e879–e893, [thelancet.com/journals/lanplh/article/PIIS2542-5196\(24\)00229-8/fulltext](https://thelancet.com/journals/lanplh/article/PIIS2542-5196(24)00229-8/fulltext).

18. Lewandowski et al., “Climate Emotions,” e885, referring to data shown on e884.

by revelation to Joseph Smith—it is important to provide a significant dose of the data to illustrate how serious the support is for Joseph's prophetic "enough and to spare" revelation.

Economic Data Reveal the Phenomenon of Superabundance

Tupy and Pooley provide critical data on the issue of scarcity versus abundance. Data from multiple perspectives demonstrate that as population rises, resources and goods of many kinds don't just become more plentiful overall, but they become more abundant per capita. This means that increased population can be a blessing, not a cause for fear.

Based on hundreds of materials and goods that are considered, numerous databases that are tapped, and multiple time periods that are explored, a generally consistent pattern emerges. In terms of the time that one must labor to obtain a resource, the world has become a much more abundant place, especially since the Enlightenment and the Industrial Revolution. This is largely due to systemic changes that included respect for individual property rights, economic freedom, and freedom of expression. The result of these changes has been incentivized innovation, encouraged knowledge sharing, and plentiful and affordable resources of all kinds. As well, quality of life is becoming better. Malthus-like prophecies have consistently failed.¹⁹

There are also overwhelming positives of the modern age compared to the past: cleaner air, cleaner water, improved sanitation, and the reasonable expectation that innovation and economic freedom can help humanity tackle serious problems as they arise.

Importantly, it is the poor who arguably benefit the most by this rising abundance. The benefit of abundance is best measured using a unit called *time price*. This term is defined as the time of work required to obtain a measure of a given item for basic goods.²⁰ For example, in a community where the average person must work five hours a day to get enough bread or rice to eat, a 60% reduction in the time price for bread and rice means that only two hours per day must be worked for those items. The result is three extra hours each day for other pursuits or for earning money to buy previously unaffordable goods. For a relatively rich person who may only need to work thirty minutes a day to

19. Tupy and Pooley, *Superabundance*, 89–93.

20. Tupy and Pooley, *Superabundance*, 128–29.

earn enough for food, the 60% reduction in time price yields eighteen additional minutes. In other words, the benefit to the poor in this scenario is ten times greater than it is for the rich. Increased abundance is good news for all, but especially for the poor.

The use of time prices also eliminates complexities caused by inflation or different currencies. While numerical prices may rise steadily as a currency weakens, the time price may decrease as an item becomes easier to obtain in terms of the work time required.

Insights Related to Abundance

Some degree of economic freedom is essential for superabundance to be achieved. Centrally planned economies and totalitarian regimes tend to be laden with scarcity, except for the few rulers and their friends who may revel in abundance. When market forces can work to incentivize production and innovation, and when people are free to act upon those incentives, abundance increases.²¹

The detailed analysis of multiple data sets over various periods of time show how strongly abundance has been growing over the decades and centuries.²² When population growth data is also considered, it becomes clear that growing population leads to an even greater growth in abundance.²³ Figure 1 is a bar chart showing some of the many categories of items analyzed by Tupy and Pooley, which is based on a database of commodity prices, adjusted for time price, from 1980 to 2018.²⁴ In general, the time price of commodities has declined steeply during that thirty-eight year period.

Additional details can be evaluated to further flesh out the abundance that is so easy to overlook. One interesting product type is bicycles:

In 1885 John Kemp Starley invented the modern bicycle with two wheels of the same size and a rear wheel connected and driven by a chain. Interest in the new innovation

21. Tupy and Pooley, *Superabundance*, 254–79, 311–21, 349–57.

22. Tupy and Pooley, *Superabundance*, 99–197.

23. Tupy and Pooley, *Superabundance*, 199–236.

24. Tupy and Pooley, *Superabundance*, 138. Two materials of the many others in Tupy and Pooley's Figure 5.1, silver and gold, have shown a recent dramatic increase in price for reasons that may be complex and temporary, but could also reflect concerns in the inflationary weakening of global currencies including the US dollar. A discussion of those issues is outside the scope of this paper.

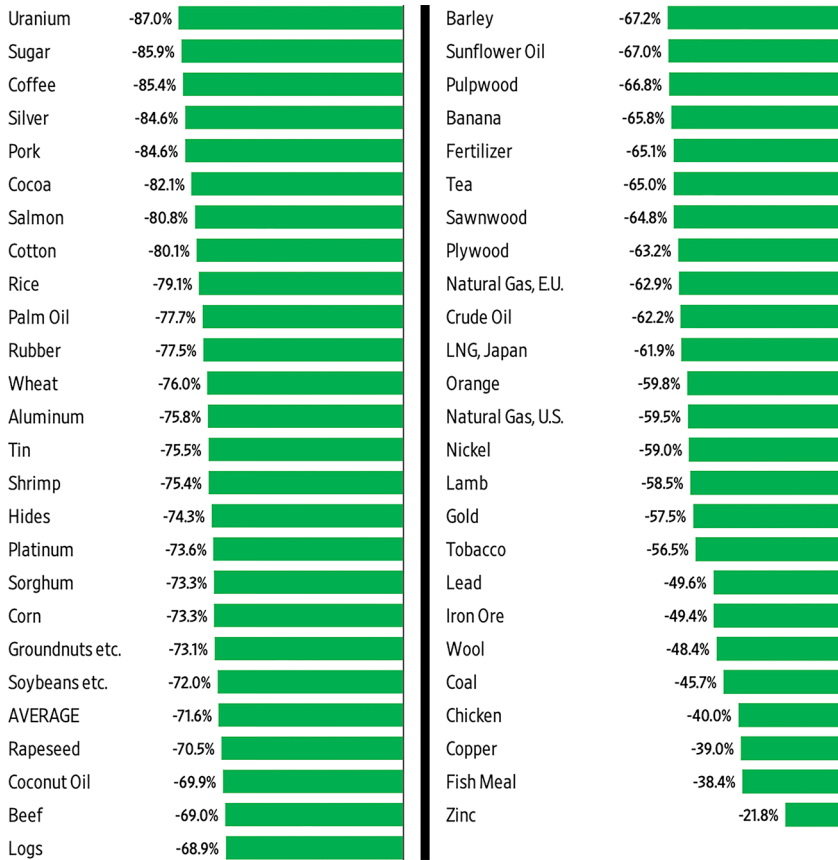


Figure 1. Percent reduction in time price, 1980–2018.

exploded, and by the 1890s, Europe and the United States were in the midst of a bike craze. . . .

In 1910 you could buy a basic bicycle for \$11.95 from the Sear[s.] Roebuck catalog. This sounds like a low price until you realize that entry-level unskilled wages were 11 cents an hour. This means that it would take 108.6 hours to earn the money to buy one bicycle. Today you can buy a basic bike at Walmart for \$98 and entry-level limited food service workers['] wages are \$18.75 per hour, indicating a time price of 5.2 hours. The time price has fallen by 95.19 percent. For the time require[d] to earn the money to buy one bicycle in 1910, you get 20.9 today. Personal bicycle abundance has increased by 1,990 percent.

This astonishing increase in bicycle abundance occurred

while global population increased 369 percent from 1.75 billion to 8.2 billion. Every one percent increase in population corresponded to a 5.4 percent increase in personal bicycle abundance. It's as if all the new people brought their own bicycle and extra bicycles to share with everyone else. When human beings are free to innovate, they turn scarcities into abundances.²⁵

A simple thought experiment can illustrate the importance of population density for having a world with abundant bicycles. Imagine living in a heavily depopulated world with just a few thousand people in North America living the simple, sustainable lifestyle that some advocates of depopulation seem to yearn for. How much time would it take to obtain a bicycle without the aid of steel mills, tire factories, bicycle factories, abundant power, and efficient international supply chains? If one little tribe wanted to make a bicycle and knew where iron ore was located and even had access to a rubber tree plantation, how long would it take? In that world, with a gargantuan average amount of resources available per human being, the time price of a bicycle could be many thousands of hours of labor. The cost would be prohibitive when most people would need to spend much of their time gathering food to live. Free markets fueled by abundant human resources are needed for timesaving luxuries such as bicycles to become affordable.

For those who appreciate the importance of data and evidence when it comes to vital issues, *Superabundance* provides nearly 200 pages filled with tables and charts examining numerous categories of goods and their measures of abundance over time. This deep dive looks at:

- Fifty basic commodities (energy, food, minerals, metals, materials, etc.) that have been tracked between 1980 and 2018 by the World Bank and the International Monetary Fund.
- Thirty-seven basic commodities tracked by the World Bank from 1960 to 2018. Wages for comparison to these commodities are based on the average global nominal GDP from twenty-eight countries accounting for 75% of global production.

25. Gale Pooley, "Bicycle Superabundance," *Gale Winds* (Substack), 12 December 2025, galepooley.substack.com/p/bicycle-superabundance.

- Forty commodities dating back to 1900 compared to US hourly wages.
- Twenty-six commodities dating back to 1850 compared to US hourly wages.
- Forty-two food items in the US with price information going back one-hundred years, supplemented with Walmart data for modern prices.
- Thirty-five finished goods between 1979 and 2019 compared to US wage information for unskilled, blue-collar, and upskilled workers.
- A variety of services over various time periods.
- A revisit of the metals considered in the Simon-Ehrlich wager extended to the range of 1900 to 2019.²⁶

Importantly, the data over various periods of time and locations reflect another consistent aspect of growing abundance: an increase in population is consistently associated not just with more available goods in total, but more per person. When there is a reasonable degree of economic freedom, more people are an economic blessing, a source for more innovation, specialized skills, and work that can add value and increase the quality of life for a society. In short, a larger world population enables more economic complexity, leading to a state of superabundance.

While it may be surprising to many, the data and the logic strongly show that Malthus was fundamentally wrong in his approach and assumptions. The good news, based on hard economic data, includes headlines such as:

- Extreme poverty has plummeted, from 90 percent in 1820 to less than 10 percent today.
- Maternal mortality has dropped dramatically.
- Between 1950 and 2020, the population-weighted global income per person rose over 300%. This growth was not limited to wealthy Western nations.
- Population-weighted global life expectancy rose from 52.6 years in 1960 to 72.4 years in 2017. Some of the biggest gains were in poorer countries.
- Global food supply from 1961 to 2017 rose from 2,115 calories to 2,917 calories a day, a 38% gain.

26. Tupy and Pooley, *Superabundance*, 134–35.

- The boom in available food worldwide is reflected by the forty-fold decline in death by famine from the 1880s to today.
- Education and literacy have been increasing globally.
- For a database of fifty key commodities, every single one dropped in time price between 1980 and 2018.
- For the thirty-five finished goods in a database covering 1979–2019, all but one showed a drop in time price.²⁷

If couples are looking for the right time to bring a child into the world, the ideal time may be one when:

- Mothers are less likely to die in childbirth.
- Children are more likely to live long lives.
- Families are least likely to starve.
- Young people are most likely to have good education.
- There is an abundance of the resources and services most suited to support meaningful, active, healthy lives.

In other words, the ideal time might be *now*, not the less abundant and often more dangerous past.

There Is Bad News—From False Narratives

Tupy and Pooley also share some of the tragedies that have occurred as a result of fears relative to overpopulation. They report on the ugly consequences of the one-child policy implemented in China,²⁸ which was inspired by a group of European elites in an organization known as the Club of Rome. In 1972 the group published *Limits to Growth*, which predicted disaster for Earth within a century unless strong international measures ensured decreased population growth and prevented resource depletion.²⁹ They later published a book indicating that fear of environmental disaster was actually necessary in order to “unite” humanity. Under the heading “The Common Enemy of Humanity Is Man,” the authors report:

In searching for a new enemy to unite us, we came up with the idea that pollution, the threat of global warming, water shortages, famine and the like would fit the bill. In their

27. The items in this list are treated in Tupy and Pooley, *Superabundance*, 22–23, 287–92.

28. Tupy and Pooley, *Superabundance*, 60–67.

29. Donella H. Meadows et al., *The Limits to Growth: A Report for the Club of Rome's Project on the Predicament of Mankind* (New York: Universe Books, 1972), archive.org/details/TheLimitsToGrowth.

totality and in their interactions these phenomena do constitute a common threat which demands the solidarity of all peoples. But in designating them as the enemy, we fall into the trap about which we have already warned, namely mistaking symptoms for causes. All these dangers are caused by human intervention and it is only through changed attitudes and behaviour that they can be overcome. The real enemy, then, is humanity itself.³⁰

In contrast to the message of hope and abundance that arises from numerous measures, the Club of Rome spoke of the many reasons for despair, including the problem of "extreme poverty" and the "throbbing song of calamity" promoted by mass media:

There are so many reasons for doubts and despair: the disappearance of values and references; the increasing complexity and uncertainty of the world and the difficulty of understanding the new emerging global society; unsolved problems such as continuing environmental deterioration and extreme poverty and underdevelopment in the southern countries; the impact of mass media often operating as a magnifying glass for a crushing reality and a throbbing song of calamity.³¹

The influence of the Club of Rome on China, sadly, exacted high human costs, with future economic trouble still looming from an inadequate supply of talented young workers who could provide for their elders and keep the economy healthy.³² China has begun to recognize that population growth is needed for lasting economic success. Meanwhile, for many of those who dared have more than one child, the forced abortions, sterilizations, shaming, and economic persecution represented a dark era for China's past.

It is important to also consider the population control that was imposed upon India during the "Indian Emergency." This occurred

30. Alexander King and Bertrand Schneider, *The First Global Revolution: A Report by the Council of The Club of Rome* (New York: Pantheon Books, 1991), 115, archive.org/details/the-first-global-revolution-a-report-by-the-council-of-the-club-of-rome-alexander/page/114/mode/2up.

31. King and Schneider, *First Global Revolution*, 116.

32. Christopher Bodeen, "China's Population Falls for a Third Straight Year, Posing Challenges for Its Government and Economy," *AP News*, 20 January 2025, apnews.com/article/china-population-economy-growth-6415abe5e6422de26bd838b6bf0b7564.

from 1975–1977 under Indira Gandhi’s administration and with active support from the West.³³ The US government, the United Nations, the Ford Foundation, the World Bank, and other wealthy organizations gave massive grants for population control and family planning, ultimately even supporting coercive measures. For example, World Bank President Robert S. McNamara praised India for its progress in population control, “noting without alarm coercive policies including, in his words, ‘compulsory abortion’ and ‘sterilization laws.’”³⁴

Over the decades in which population growth was a hot topic, Africa was often mentioned as a place where population control was needed. But Africa has a population density less than half that of Europe (87 people per square mile in Africa, versus 188 in Europe³⁵). For many African nations, their low population is a major problem, making it difficult to create the kind of infrastructure needed — roads, power grids, running water, etc. — for economies to flourish. Serious allegations have been made by some African public health officials and government leaders, with seemingly reasonable documentation, that some Western aid programs were actually efforts to sterilize African women.³⁶ The issue is controversial. There is no dispute that

33. Tupy and Pooley, *Superabundance*, 68–71.

34. Chelsea Follett, “Neo-Malthusianism and Coercive Population Control in China and India: Overpopulation Concerns Often Result in Coercion,” Cato Institute Policy Analysis No. 897, 21 July 2020, cato.org/policy-analysis/neo-malthusianism-coercive-population-control-china-india-overpopulation-concerns. Follett cites *The World Bank: Its First Half Century*, vol. 1: *History* (Washington: Brookings Institution Press, 1997), 295, for McNamara’s words. This passage from Follett is cited by Tupy and Pooley, *Superabundance*, 68–69.

35. Victor Kiprop, “Continents by Population Density,” *World Atlas*, 17 April 2019, worldatlas.com/articles/continents-by-population-density.html. Also see “Countries by Population Density 2026,” *World Population Review*, worldpopulationreview.com/country-rankings/countries-by-density.

36. See “Statement by the Kenya Conference of Catholic Bishops on Mass Tetanus Vaccination Campaign Carried Out in Kenya in March and October 2014,” Kenya Conference of Catholic Bishops, 14 January 2015, bbfu.de/dokument/KENYA_CONFERENCE_OF_CATHOLIC_BISHOPS.pdf; “Kenya Conference of Catholic Bishops Criticise Tetanus Vaccinations,” *Vatican Radio*, 9 October 2014, [archivioradiovaticana.va/storico/2014/10/09/kenya_conference_of_catholic_bishops_criticise_tetanus_vaccinations__/_en-1108257](https://www.vaticanradio.va/storico/2014/10/09/kenya_conference_of_catholic_bishops_criticise_tetanus_vaccinations__/_en-1108257); AgriQ Quest Ltd., “Laboratory Analysis Report for the Joint Committee of Experts on Tetanus Toxoid Vaccine Testing: The Ministry of Health and Kenya Catholic Health Commission,” Nairobi, Kenya, 23 January 2015, data.over-blog-kiwi.com/1/47/73/60/20150502/ob_e8acd5_kenya-rapport-d-analyse-des-fioles-de.pdf.

the WHO funded development of vaccines to reduce fertility;³⁷ what is disputed is whether those were illicitly given to African women.

Compulsory or deceptive anti-natalist agendas are not a feature unique to distant nations. In the West, for example, extreme population control measures resulted in harm to many. The violation of the rights of many Latina women, in Puerto Rico as well as in other parts of the United States, occurred under a program that became known as "La Operación" (the operation).³⁸ Puerto Rico led the world in sterilization, with 36% of women of childbearing age having been surgically sterilized by 1968.³⁹ Efforts in the US were not limited to Latina women, but also targeted women of African descent and many others who were poor or viewed as targets for eugenics.⁴⁰ For a sampling of related

37. See G. P. Talwar et al., "Isoimmunization Against Human Chorionic Gonadotropin with Conjugates of Processed Beta-Subunit of the Hormone and Tetanus Toxoid," *Proceedings of the National Academy of Sciences (PNAS)* 73, no. 1 (1976): 218–22, [pnas.org/doi/epdf/10.1073/pnas.73.1.218](https://doi.org/10.1073/pnas.73.1.218). The acknowledgement on p. 222 states, "This project was funded by a Research and Training Center Grant of the World Health Organization (animal experiments only), the Family Planning Foundation of India, and the International Committee for Contraception Research."

38. See Quiara Alegría Hudes, "#OurMothersToo: Reckoning With My Abuela's Coerced Sterilization," *The Nation*, 17 June 2021, [web.archive.org/web/20230206062848/https://www.thenation.com/article/society/ourmotherstoo-reckoning-with-my-abuelas-coerced-sterilization/](https://www.web.archive.org/web/20230206062848/https://www.thenation.com/article/society/ourmotherstoo-reckoning-with-my-abuelas-coerced-sterilization/). Also see Katherine Andrews, "The Dark History of Forced Sterilization of Latina Women," *Panoramas*, University of Pittsburgh, 30 October 2017, [web.archive.org/web/20190415061918/https://www.panoramas.pitt.edu/health-and-society/dark-history-forced-sterilization-latina-women](https://www.web.archive.org/web/20190415061918/https://www.panoramas.pitt.edu/health-and-society/dark-history-forced-sterilization-latina-women). A useful summary is "Eugenics and Reproductive Coercion in Puerto Rico," Center for Latin American & Caribbean Studies, University of Wisconsin-Milwaukee, 28 April 2022, [web.archive.org/web/20230401005028/https://uwm.edu/clacs/eugenics-and-reproductive-coercion-in-puerto-rico/](https://www.web.archive.org/web/20230401005028/https://uwm.edu/clacs/eugenics-and-reproductive-coercion-in-puerto-rico/). For an extensive bibliography, see Florita Z. Louis de Malave, "Sterilization of Puerto Rican Women: A Selected, Partially Annotated Bibliography," University of Wisconsin-Madison, library.wisc.edu/gwslibrarian/bibliographies/sterilization/.

39. José L. Vazquez Calzada and Zoraida Morales del Valle, "Female Sterilization in Puerto Rico and Its Demographic Effectiveness," *Puerto Rico Health Sciences Journal* 1, no 2 (June 1982): 68, [rcm1.rcm.upr.edu/demografia/wp-content/uploads/sites/30/2020/04/1982-Vazquez-Calzada-Jose-Morales-Del-Valle-Zoraida-Female-sterilization-in-Puerto-Rico.pdf](https://www.rcm1.rcm.upr.edu/demografia/wp-content/uploads/sites/30/2020/04/1982-Vazquez-Calzada-Jose-Morales-Del-Valle-Zoraida-Female-sterilization-in-Puerto-Rico.pdf).

40. Alexandra Minna Stern, "Sterilized in the Name of Public Health: Race, Immigration, and Reproductive Control in Modern California," *American Journal of Public Health* 95, no. 7 (July 2005): 1128–38, [pmc.ncbi.nlm.nih.gov/articles/PMC1449330/](https://www.ncbi.nlm.nih.gov/articles/PMC1449330/).

efforts in many other parts of the country, see the timeline provided by Quiara Alegría Hudes.⁴¹

Not all can have children and not all want them. It is tragic, though, if some couples walked away from the blessings of a family due to a false narrative that made them think they were sparing the earth by living a childless life. It is even more tragic that many thousands suffered from forced sterilization, abortion, and other coercive measures in the name of saving the planet.

The data support the perspective revealed to Joseph Smith: population growth can be associated with increased prosperity. There is no justification for the false narrative that reducing population will make the world better. There is justification in believing that families bringing more children into the world can contribute to increased prosperity.

Setting the Stage: The Simon-Ehrlich Bet and Simon's Insights

A key event to consider is a 1980 wager between University of Maryland economist Julian Simon and Stanford University biologist Paul Ehrlich. Ehrlich was one of the most influential doomsday authors in recent times. His influence especially increased after the intense publicity and media praise that he received for his 1968 book, *The Population Bomb*.⁴² The public promotion of his theories included an unprecedented hour-long interview on Johnny Carson's *Tonight Show*.⁴³ Ehrlich's book warned that many millions would die soon unless the world adopted strict population controls to fight the "cancer" of human population growth. He even advocated for forced sterilization, which he called "coercion in a good cause."⁴⁴

In contrast, Julian Simon saw humanity as a resource capable of incredible innovation that could overcome resource constraints and create abundance. Based on the work of earlier economists and his own work, Simon expected that the impact of a rising population

41. Hudes, "#OurMothersToo." The timeline is at the end of the article.

42. Paul R. Ehrlich, *The Population Bomb* (New York: Ballantine Books, 1968), archive.org/details/populationbom00ehrl/mode/2up.

43. John Tierney, "Betting on the Planet," *New York Times*, 2 December 1990, section 6, 52, [nytimes.com/1990/12/02/magazine/betting-on-the-planet-505690.html](https://www.nytimes.com/1990/12/02/magazine/betting-on-the-planet-505690.html).

44. Ehrlich, *Population Bomb*, 165–66, where he said the US should have gone all out to support a proposal for forced vasectomies on Indian men, referring to it as "coercion in a good cause." He added, "We must be relentless in pushing for population control around the world" (p. 166).

would be a drop in raw material prices, not an increase. He was willing to make a wager to call attention to this insight.

Under the terms of Simon's wager, Ehrlich, teaming up with John Harte and John P. Holdren, professors at UC Berkeley, selected five metals that they expected to become scarcer over the coming decade: chromium, copper, nickel, tin, and tungsten. A \$1,000 basket with \$200 worth of each metal, as priced in 1980, would be tracked. After ten years, if the inflation-adjusted price of the basket was greater than \$1,000, Simon would send a check to Ehrlich for the amount of the difference. If the price dropped below \$1,000, Ehrlich would send a check to Simon for the difference. In 1990, Ehrlich, without comment, quietly mailed Simon a check for \$576.07 due to the dramatic drop in prices of those metals.⁴⁵ Ehrlich's payment was 36% of the value of the \$1,000 basket in 1980 when adjusted for inflation in 1990 (\$1,580). In other words, the inflation-adjusted price of the basket of metals had dropped by 36% in a decade.⁴⁶

The outcome of the wager is even more dramatic when population growth is considered. "During that decade the world's population grew by more than 800 million, the greatest increase in history, and the store of metals buried in the earth's crust did not get any larger."⁴⁷

Ehrlich's loss of the wager received little attention and was argued as insignificant evidence or perhaps just bad luck, even though the trend of declining metals prices had been occurring for many years before 1980. Simon's victory was noticed by Tupy and Pooley and motivated them to explore the topic of scarcity and population growth in much more detail.

A Methodology Drawing on Simon's Work

Simon's prediction that the prices of raw materials would drop was not based on ideology or an optimistic personality. It was based on economic data that caught him by surprise and led him to pursue his own studies. Those studies undermined many of the simplistic Malthusian theories of the day. Tupy and Pooley describe what Simon learned from his work in economics:

Simon thought like an economist who understood the

45. Tierney, "Betting on the Planet."

46. The chart showing the drop in price is at Tupy and Pooley, *Superabundance*, 186. Time price was not considered, just the inflation-adjusted price.

47. Tierney, "Betting on the Planet."

powers of incentives and the price mechanism to overcome resource shortages. Instead of the quantity of resources, he looked at the prices of resources and at the human creativity that higher prices awaken. He saw resource scarcity as a temporary challenge that can be resolved through greater efficiency, increased supply, development of substitutes, and so on. The relationship between prices and innovation, he insisted, is dynamic. Relative scarcity leads to higher prices, higher prices create incentives for innovations, and innovations lead to abundance. Scarcity gets converted to abundance through the price system. The price system functions as long as the economy is based on property rights, the rule of law, and freedom of exchange. In relatively free economies, therefore, resources do not get depleted in the way that Ehrlich feared they would. In fact, resources tend to become more abundant.⁴⁸

Tupy and Pooley built upon Simon's approach by looking at the time price of goods and services, overcoming the difficulties in using inflation-adjusted prices. By looking at how long people worked in the past to obtain a unit of goods such as bread, light, leather, or tin, economists can measure the abundance of those items for individuals and for the population as a whole. But for global measures, it is not possible to directly determine the global average hourly earnings. A reasonable approximation, however, is to use the gross domestic product for each nation and divide it by the total hours worked. Those data can then be used to determine average global nominal GDP per hour worked.⁴⁹ For the United States, though, the Officer–Williamson database of nominal wages provides useful data from 1774 to 2018.⁵⁰

While other economists have sometimes discussed scarcity in terms of how much labor is required to obtain a product, Tupy and Pooley's approach used time prices in interpreting vast bodies of data. This includes, for one, the systematic application of multiple measures of time prices such as the "personal resource abundance multiplier" (the time price at the beginning of a period of time divided by the time

48. Tupy and Pooley, *Superabundance*, 5.

49. Tupy and Pooley, *Superabundance*, 120–23.

50. Lawrence H. Officer and Samuel H. Williamson, "Annual Wages in the United States: Unskilled Labor, 1774 to 1940, and Manufacturing Workers, 1774–Present," *MeasuringWorth*, 2026, measuringworth.com/datasets/uswage/. Also see Tupy and Pooley, *Superabundance*, 123.

price at the end of the period). It also includes the "personal resource abundance elasticity of population" (percent change in personal resource abundance divided by the percent change in population), and the "population resource abundance multiplier."

With a strong nod to Simon's foundational work, Tupy and Pooley call their methodology the "Simon Abundance Framework":

The Simon Abundance Framework (SAF) measures and analyzes the relationship between the abundance of resources and population growth over time. The framework captures all the benefits of innovation. It transcends currency fluctuations, inflation measurement uncertainties, and purchasing parity adjustments. It enables us to see the true prices of all goods and services as expressed in the universal constant of time. The framework consists of two levels of analysis: personal resource abundance analysis and population resource abundance analysis.⁵¹

There is straightforward math involved in these calculations, but also a number of equations that may be barriers for some readers. The math can be skipped because the trends and results obtained are usually clear: the present is an age of abundance. In fact, the data show that this planet has long experienced superabundance in which more humans can make life better, not worse.

Simon is not the only scholar who has rejected the projections of Malthus and other modern promoters of population-based doom. On a personal note, over thirty years ago one of us (Lindsay) became aware of significant evidence rebutting perpetual and misleading claims that our planet faced great crises due to impending shortages of various materials. This occurred after reading a book by Texas A&M University economics professors Charles Maurice and Charles W. Smithson.⁵²

Maurice and Smithson's book was enlightening. Whether it was the tin crisis of the ancient Greeks, the oil crisis of the 1970s, the lumber crisis of the early 1900s, or the perpetual "problem" of excess population threatening the collapse of everything, in case study after case study, Maurice and Smithson illustrate that apparent crises are eventually

51. Tupy and Pooley, *Superabundance*, 101.

52. Charles Maurice and Charles W. Smithson, *The Doomsday Myth: 10,000 Years of Economic Crises* (Stanford: Hoover Institution Press, 1984), archive org/details/doomsdaymyth10000000maur/mode/2up.

resolved by human innovation and free markets, when allowed to operate. The mechanism is simple and aligns closely with Tupy and Pooley's discussion: When a needed resource becomes scarce, free markets respond by requiring higher prices for the scarce resource. The mechanism of price then motivates three things:

1. increased production when possible, often by finding new sources or new ways to increase supplies
2. substitutes for the scarce resource through innovation
3. conservation or reduced consumption of the scarce resource.

The result is generally a rapid resolution to the problem of resource scarcity and often involves rapid advances in technology to find substitutes or improved ways of producing the resources. As one example, when free markets and economic freedom exist, scarce whale oil is replaced with petroleum. Later the rising price of scarce petroleum makes it profitable to use oil sands as a new source or to pursue alternatives like biofuels, nuclear energy, or solar power. As another example, scarce natural rubber is replaced by rubber-like polymers made from relatively inexpensive oil. Most importantly, scarce food is met with advances in production, increased land used for agriculture, and reduction in or repurposing of waste products. The result of temporary shortages is often more abundance when economic freedom (akin to "the moral agency of man") exists. When government tries to solve problems by fixing prices or otherwise controlling the market, scarcity is worsened. Artificially low prices cause a misallocation of resources and exacerbate shortages. They discourage production while keeping demand high. They inhibit innovation in the absence of reasonable returns for the investments required to innovate or increase production.

One of many examples to consider here is the US ethanol industry. In this case, government subsidies have resulted in many farmers producing corn to be used as fuel instead of food. This is something that would not have happened to such a degree without direct government intervention. Scholars have begun to see that severe misallocation of resources may have occurred, and human hunger may have increased.⁵³

53. David J. Tenenbaum, "Food vs. Fuel: Diversion of Crops Could Cause More Hunger," *Environmental Health Perspectives* 116, no. 6 (June 2008): A254–57, pmc.ncbi.nlm.nih.gov/articles/PMC2430252. See also Nicole

Those lessons from Maurice and Smithson’s 1984 book have been greatly reinforced with a tremendous amount of new data in Tupy and Pooley’s work. The revelations of Joseph Smith stand strengthened by such data. The earth does have enough and to spare, if the agency of man is unfettered enough for economic freedom to exist. Joseph’s broad teachings on human agency or liberty remain especially relevant, spanning the Book of Mormon (for example, 2 Nephi 2:11, 16, 26–27, 10:23; Alma 12:31; Helaman 14:30), the Doctrine and Covenants (Doctrine and Covenants 29:34–45, 58:26–29, 93:29–31, 101:75–80), and the Pearl of Great Price (Moses 4:1–6, 6:55–56, 7:32–33; Abraham 3:22–26; Article of Faith 2 and 3).

Of particular interest is Doctrine and Covenants 101:75–80, which teaches that the principles of liberty in the inspired Constitution are intended “for the rights and protection of all flesh” (v. 77), not just the Saints. They are principles that bring religious freedom and economic freedom, with power to bless many nations. This and many related revelations of Joseph on agency, liberty, and prosperity remain valid and in need of much more attention across the world.

Considering Counterexamples

Some critics of the concept of superabundance point to products that clearly have become much less abundant over time. Economist Arnold Kling, for example, gives the example of baseball tickets. In 1966, the most expensive ticket to watch the St. Louis Cardinals play in their stadium cost about four hours of average wages for production workers. Forty years later, in 2006, such a ticket cost about a month’s wages.⁵⁴

There are other, similar counterexamples: tickets to a Taylor Swift concert, an acre of land next to Manhattan’s Central Park, the Hope Diamond, or various goods and services that are tightly controlled by government. Like Kling’s baseball tickets, these items are not basic resources and services that are widely used for life and

Condon, Heather Klemick, and Ann Wolverton, “Impacts of Ethanol Policy on Corn Prices: A Review and Meta-Analysis of Recent Evidence,” Environmental Protection Agency, NCEE Working Paper Series, Working Paper #13-05, August 2013, revised October 2013, epa.gov/sites/default/files/2014-12/documents/impacts_of_ethanol_policy_on_corn_prices.pdf.

54. Arnold Kling, “Has Everyone Forgotten the Economics of Exhaustible Resources?,” *In My Tribe* (Substack), 23 August 2022, arnoldkling.substack.com/p/has-everyone-forgotten-the-economics.

business — materials and products like rice, wheat, butter, petroleum, metals, leather, wood, and glass. The emphasis is on commodities, “the building blocks of most foodstuffs and other finished products.”⁵⁵ One-of-a-kind items or items with a fixed supply, like seats to a live Taylor Swift concert, clearly do not fit that definition.

While stadium tickets are capped in their supply, technology and innovation can make access to a baseball game or concert available at low cost to millions, making the remote experience of a sports game or a concert vastly more abundant than ever. Millions can now afford to virtually enjoy numerous events once only possible for the very wealthiest. The Internet and telecommunication technologies have brought once unimaginable abundance into peoples’ lives.

Some readers may contend that health care is an important counterexample of a necessary service that has only become more expensive over time. Here it is important to distinguish between markets that are relatively free versus those that are highly controlled by government. The cosmetic procedures (cosmetic surgery) market has been relatively unregulated in the US and has shown a typical increase in abundance over time.⁵⁶ The time price for nearly all cosmetic procedures considered has declined. On the other hand, highly regulated non-cosmetic health care costs have rapidly increased, reflecting the impediments to innovation and free market solutions that government tends to bring when it asserts heavy control to solve the problem of scarcity.

It may seem a little strange to include a section on the abundance of U.S. cosmetic procedures relative to the wages of U.S. unskilled workers. People at the bottom of the income ladder, we recognize, face more pressing challenges than hair removal and chin augmentations. In the end, we decided to discuss cosmetic procedures from the perspective of unskilled workers for one simple reason. The budgets of the unskilled workers are disproportionately squeezed by fast-growing medical and hospital bills in the United States. We contend that those price increases would be lower if health care in the United States were subjected to some of the competitive forces that operate in the market for cosmetic procedures. By outlining the effect of market competition on

55. Tupy and Pooley, *Superabundance*, 161.

56. Tupy and Pooley, *Superabundance*, 173, 176, 181–84.

the abundance of cosmetic procedures, we hope to show that a somewhat more affordable health care is possible, even for poorer Americans.⁵⁷

Note that "the delivery of health care is heavily regulated, subsidized, and influenced by third-party insurance policies and payments. As such, the normal functioning of the law of supply and demand is heavily compromised."⁵⁸ To this, one could also add the escalating prices caused by the conflicts of interest of the pharmacy benefit managers, which strongly influence medication prices in the US.⁵⁹ More recently, media reports indicate that easily detected but often overlooked fraud from bogus healthcare companies is wasting many billions of taxpayer dollars in the United States. This is a situation that would not exist without heavy government involvement.

The British East India Company as a Potential Counterexample

Another counterexample raised as a critique during peer review of this paper was the harm that came from the greed and evil of the British East India Company. This was cited as "the apogee of unrestrained free market capitalism in which the never-ending pursuit of wealth for the shareholders resulted in the creation of a completely amoral independent state beholden only to a few oligarchs."⁶⁰ We agree that terrible harm was done by forcing Chinese leaders to reluctantly accept destructive opium because it was highly profitable to the East India Company. Great harm was also done to India through oppressive land taxation, forced conversion of food crops to poppies for opium production, the great extraction of wealth, and cruel economic policies that exacerbated famine.

However, we disagree that the East India Company was a fruit of economic freedom. It operated not as a free-market institution but as a government-chartered monopoly backed by military force. It was an arm of a powerful state supported with gunboats, navies, and armies, able to compel its will with violence. Its activities in India

57. Tupy and Pooley, *Superabundance*, 181.

58. Tupy and Pooley, *Superabundance*, 135.

59. Chris Hamby, "Giant Companies Took Secret Payments to Allow Free Flow of Opioids," *New York Times*, 17 December 2024, nytimes.com/2024/12/17/business/pharmacy-benefit-managers-opioids.html.

60. Feedback from an anonymous reviewer, received 20 April 2025.

and China—including the coercive imposition of the opium trade—were marked by the suppression of local agency, the violation of law, and the use of violence to obtain wealth. Economic freedom, on the other hand, requires voluntary exchange, the rule of law, and respect for human agency. Far from illustrating the weaknesses of economic freedom, the East India Company demonstrates the dangers when “private-public partnerships” are used to expand the scope and power of government by giving a business monopolistic and coercive powers contrary to economic freedom. The ugly results often undermine moral agency and human rights while destroying abundance for the masses.

While economic freedom is essential, it is not a panacea. It functions best within a moral framework of honesty, justice, and voluntary charity—the very principles emphasized in Doctrine and Covenants 104. Corruption, theft, and the abuse of agency can still occur and must be restrained by just laws (see Doctrine and Covenants 101:77).

Implications for Latter-day Saints

The message of a world running out of basic resources because it is overrun with people contradicts divine messages to mankind such as the biblical command to marry and multiply and to live joyfully with one’s spouse. It contradicts the possibility of abundance inherent in the Lord’s promises to those who covenant with him. See, for example, the Book of Mormon promise that the Lord’s people would “prosper in the land” if they keep the commandments (1 Nephi 4:14; 2 Nephi 1:20; 4:4). Also, see passages such as Deuteronomy 28:1–14, Proverbs 3:9–10, Joel 2:21–27. We can trust God’s word that he is “able to do mine own work” (2 Nephi 27:20–21).

One might argue that those ancient assurances don’t apply today when the world is suffering from massive population growth. Fortunately, the Lord has provided modern revelation that is even more to the point about the capacity of the planet that he has engineered. The Lord reveals that the earth is not a world of inherent scarcity and overpopulation, but of abundance with more than enough resources (see Doctrine and Covenants 104:14–18). There is plenty that can be provided to lift the poor—not by compulsory government seizure and redistribution, but in a system that respects the agency of man. As Tupy and Pooley note, abundance requires economic freedom. In the Lord’s law of the gospel, the rich are expected to voluntarily give of their abundance. They may choose not to, but will be held

accountable and face torment for their selfishness. Abundance is a gift to be shared.

Returning to the Book of Mormon, the potential for abundance is an important and recurring theme. The word *prosper* and related forms such as *prosperity* occur eighty-three times in the Book of Mormon, often echoing words from the Lord in the opening pages of the text about how the people might "prosper in the land":

And inasmuch as ye shall keep my commandments, ye shall *prosper*, and shall be led to a land of promise; yea, even a land which I have prepared for you; yea, a land which is choice above all other lands. (1 Nephi 2:20)

And now, when I, Nephi, had heard these words, I remembered the words of the Lord which he spake unto me in the wilderness, saying that: Inasmuch as thy seed shall keep my commandments, they shall *prosper* in the land of promise. (1 Nephi 4:14)

And he hath said that: Inasmuch as ye shall keep my commandments ye shall *prosper* in the land; but inasmuch as ye will not keep my commandments ye shall be cut off from my presence. (2 Nephi 1:20)

Subtle teachings on prosperity have also recently been uncovered based on the name *Helam* having Hebrew connections to the concepts of *abundance* and *prosperity*, used in apparent wordplays in the Book of Mormon, as shown in recent work by Matthew Bowen:

Did the naming of this "very beautiful and pleasant land" [so described in Mosiah 23:4] as "Helam" (*ḥêlām*) have the [Hebrew] meaning of "their wealth" or "their abundance" in view? Mormon's repetition of Helam in a clustered repetition that emphasizes the people's prosperity points in this direction:

And it came to pass that *they began to prosper exceedingly in the land*; and they called the land *Helam*. And it came to pass that *they did multiply and prosper exceedingly in the land of Helam*; and they built a city, which they called the city of *Helam*. (Mosiah 23:19–20)

Mormon also gives double emphasis to Alma's people "prosper[ing] exceedingly in the land" of "Helam"; that

is, “prosper[ing] exceedingly in the land of their wealth/abundance.”⁶¹

Bowen also explores other lessons taught through the meaning of *Helam*, including ironic aspects when economic fortunes may be temporarily reversed in some of the trials that the Lord’s people may face.

Just as the Book of Mormon’s teachings on prospering in the land are nuanced and worthy of careful study for life in a complex world, so must Latter-day Saints also carefully consider the Lord’s words in Doctrine and Covenants 104 with his teachings on prosperity and keeping his commandments, including the need to care for others.

Informed Latter-day Saints can better recognize the spiritual implications associated with the world’s misinformation about families and population growth. The scriptures and “The Family: A Proclamation to the World”⁶² teach that healthy families raising children are a vital part of God’s work. Even with a much higher world population today than in the past, “God’s commandment for His children to multiply and replenish the earth remains in force” (paragraph 4 of the proclamation).

On the other hand, Satan seeks not only “to destroy the agency of man” (Moses 4:3) but also “to destroy the world” (Moses 4:6). Reducing population and preventing families from participating in the sacred role of bringing children into the world are goals in his opposition to God. When famous pundits say, for example, that “The best thing you can do for the earth is to not have kids, die and stay dead,”⁶³ one must recognize the ultimate source of such sentiments. Attacks on the family and on having children contain a chilling spiritual dimension that is countered by the inspired truths in the “Proclamation on the Family,” which is rooted in the doctrines of the Restoration that came through Joseph Smith.

61. Matthew L. Bowen, “‘They Did Multiply and Prosper Exceedingly in the Land of Helam’: Naming and Narrative Irony in Mosiah 23,” *Interpreter: A Journal of Latter-day Saint Faith and Scholarship* 67 (2026): 433, interpreterfoundation.org/journal/they-did-multiply-and-prosper-exceedingly-in-the-land-of-helam-naming-and-narrative-irony-in-mosiah-23.

62. The First Presidency and Council of the Twelve Apostles of The Church of Jesus Christ of Latter-day Saints, “The Family: A Proclamation to the World,” *Ensign* (November 1995), 102, churchofjesuschrist.org/study/ensign/1995/11/the-family-a-proclamation-to-the-world.

63. Ian Schwartz, “Maher: ‘Falling Birth Rates Are a Good Thing’; World Is ‘Too Crowded,’” *Real Clear Politics*, 13 April 2019, realclearpolitics.com/video/2019/04/13/maher_falling_birth_rates_are_a_good_thing_world_is_too_crowded.html.

Irony Among the Doomsayers

In light of Tupy and Pooley's work, a high degree of irony can be seen among modern doomsayers. While fearing that the planet is facing doom and scarcity caused by growing population, they miss the powerful message of real data while thinking they are following the science. In addition, they also often advocate for economic and political systems like Marxism that hinder economic progress and often bring scarcity, if not starvation, to the masses they seek to help. They are enjoying the privilege of education, social media, computers, television, air conditioning, clean water, flush toilets, and abundant food. At the same time, they nostalgically dream of older times when the conveniences they take for granted were nonexistent or scarce. They have been so misled by educators and influencers that they think the modern era is the worst time to bring children into the world, when it could well be the best in human history. They not only lack gratitude for the blessings that have been brought by freedom and a large population, they seek to reduce both for others.

The abundance of the present world becomes clear when one reviews the lifestyles and lifespans of our ancestors. They struggled with severe shortages of food and water, environments burdened with air pollution from untamed coal and wood fires, waste and sewage in the streets, water filled with harmful microbes, and a lack of many things we view as essential for civilized life today. Forcing humanity to go back to a less abundant, less populous, and less sanitary past is not only foolish but inhumane. Seeking to reduce births and to shrink the population is not an act of service to the planet and humanity, but an ignorant and harmful step backwards.

Some doomsayers believe that through more powerful central government (meaning less freedom for individuals), resources will be distributed more uniformly and the poor will be lifted. This has never succeeded. Some make the claim that communism did succeed in lifting China out of poverty, for a country where starvation was once rampant has now become one of the wealthiest and most innovative in the world. The lie behind this argument is that China faced extreme poverty and widespread starvation until its rarely heralded economic revolution in 1978. China's reforms for greater economic freedom in the late 1970s are what brought prosperity to China.⁶⁴

64. For more details, see Jeffrey D. Lindsay, "How Eighteen Hungry Farmers Beat Collectivism and Helped China Succeed: Lessons from the Village of

Thanks to the revelations given through Joseph Smith, it is evident that humans are the ultimate scarce resource: We are sons and daughters of our Heavenly Father with infinite potential. Our lives matter to God and his glory abounds through the work of inviting all who are born to repent and come unto Christ. That eternal perspective is consistent with the narrower empirical observations of economists who observe that humans are an essential resource because we can work, teach, inspire, lead, nurture, and create. We can transform seemingly worthless materials like sand into silicon chips and fiber optic cables, a once useless mineral into aluminum, water into hydrogen, oil into plastic or rubber or medications, and bacterial cells into powerhouses of chemical production.

The earth abounds with opportunity and resources, plenty for many billions, and resources that are enough and to spare for vast economic growth and great population growth. It is the limited numbers of corrupt men, not swelling numbers of mankind, that we must fear and curtail by exposing their fraud, limiting their power, and strengthening the freedom of the individual.

Summary and Conclusions

Long after Malthus warned of impending doom from the growth of human population and long before so many influential modern voices united to echo the message that too many children being born is a disastrous problem, the Lord's words to Joseph Smith taught us that "the earth is full, and there is enough and to spare" (Doctrine and Covenants 104:17). It is a message that calls for gratitude, offers hope, and demands personal stewardship and charity with respect to the resources we are blessed with. That statement has long required a great deal of faith in light of the dire proclamations of allegedly wise men, but now there is abundant evidence that the Lord's message is correct in that prophecy and in the many related messages in the revelations of Joseph Smith.

As a data-rich resource to understand the weakness of the world's teachings and the solid foundation of the optimistic perspectives in Joseph's revelations, *Superabundance* may provide insights that we need today to understand just how full the world can be. It shows

Xiaogang," Foundation for Economic Freedom, 27 December 2022, fee.org/articles/how-eighteen-hungry-farmers-beat-collectivism-and-helped-china-succeed-lessons-from-the-village-of-xiaogang/.

how progress and abundance can come with even more children being raised when economic freedom and other liberties are maintained. In fact, for those wanting to make the world a better place, few options outshine the potential of bringing more children into the world. Arguably, there has never been a better and safer time to do so than now. Denying oneself the blessings and opportunities of raising a family because of failed Malthusian prophecies of doom may be a terrible mistake.

Joseph's revelations related to the issues of scarcity and abundance have not only been vindicated; they give us hope for the abundance that can be realized on our world. This can happen when families do more than just raise children, but create happy, diligent, good people who make the world a better and more prosperous place. The earth truly has enough and to spare, but the key limiting factor is humans who can not only work and create but exercise their moral agency in righteous ways. The ultimate result of such a society may be found in Enoch's ancient Zion, the righteous city united in kindness with the remarkable consequence that "there was no poor among them" (Moses 7:18).



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Interpreter: A Journal of Latter-day Saint Faith and Scholarship is a peer-reviewed academic journal published by The Interpreter Foundation. Our mission is simple: Supporting The Church of Jesus Christ of Latter-day Saints through scholarship.