#### CHAPTER 2

# The Best of All Possible Worlds

By the mediation of a thousand little mosses and fungi the most unsightly objects become radiant with beauty. . . . For seen with the eye of a poet, as God sees them, all things are alive and beautiful.

-Henry David Thoreau, Early Spring in Massachusetts

proposed in the last chapter that God's love, his care for us, stretches out of sight in both directions, back before our birth and far into the future after our death. That love, I might add, is synonymous with his saving work, which, according to scripture, is bound up not merely with the rise and fall of civilizations but also with the coming and going of worlds:

The Lord God spake unto Moses, saying: The heavens, they are many, and they cannot be numbered unto man; but they are numbered unto me, for they are mine. And as one earth shall pass away, and the heavens thereof even so shall another come; and there is no end to my works, neither to my words. For behold, this is my work and my

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glory—to bring to pass the immortality and eternal life of man. (Moses 1:37–39)

Amid this coming and going of worlds, God's eye lights upon each individual and providentially guides him or her along a path that redounds to the happiness and exaltation of all people. Thus the long arc of God's love also entails the care with which God threads each life into the vast tapestry of cosmic history, a small stretch of which is our earthbound passage through mortality.

As the scripture just cited indicates, the restored gospel assigns value to the physical universe: as worlds roll into and out of existence, God performs the long miracle of his saving work. His love, one might venture, is astronomical, both in the sense that the cosmos is his sphere of action ("Behold, all these [astronomical bodies] are kingdoms, and any man who hath seen any or the least of these hath seen God moving in his majesty and power," Doctrine and Covenants 88:47) and in the sense that his patience exceeds the familiar temporal reckonings of mortality. "God sees the truth, but waits," wrote the great Russian novelist Leo Tolstoy.<sup>1</sup> Seeing the truth of who we can be, our celestial potential, God situates us in spiritually promising circumstances and then patiently waits for us to repent. Given the profound disparity between our mortal frailty and our Abrahamic longing for a "city . . . whose builder and maker is God" (Hebrews 11:10), the journey to be traveled may require a setting no less vast than the physical universe, the spatial and temporal bounds of which stagger the mortal imagination. Indeed, the immensity of the universe, when viewed naturalistically, is often seen as evidence of human insignificance: we are so tiny and short-lived compared to the grand totality of things that it almost seems that human history cannot be anything more than a random blip on the long ticker tape of cosmic history. But Moses, while expressing a similar sentiment after being shown a mere fraction of God's creation ("Now, for this cause I know that man is nothing, which thing I never had supposed," Moses 1:10), came to realize that while humans are vanishingly small when compared to the universe, that smallness diverges to infinity once they understand that God created the universe with each one of them in mind. This is another manifestation of God's love and its capacity to make our way to heaven heavenly.

## WITH EACH PERSON, PARTICLE, AND WORLD IN MIND

"The idea of primordial revelation," wrote Hugh Nibley, "is that a complete knowledge of the world from its beginning to its end is already written down and has been vouchsafed to certain chosen spirits from time to time, a doctrine familiar to Latter-day Saints."<sup>2</sup> Latter-day scripture portrays Moses, Enoch, Abraham, and the brother of Jared as having received this knowledge in cosmological vision. The experience, of course, was overwhelming, but not for reasons we might suppose. What would it be like to see in one revelatory sweep every person who has lived or will live upon the earth, all the while seeing as well every particle of the earth, as "numberless as the sand upon the sea shore"? (Moses 1:27-28). Mind-dilating, to be sure, but the sheer numerosity of *everything*, when compressed within a single experience, did not of itself elicit expressions of contrition and gratitude. These came with the understanding that all of reality is shot through with the redemptive love of God.

The cosmos is not an arena wherein God's love is put on display, but is itself a manifestation of that love down to the least particle and lowliest sinner. Thus no person and no thing lies beyond the reach of that love, for each is at some level constituted by it.

Enoch grasped the unfathomable nature of God's love when he saw God weeping over a "residue" of sinners who refused to be caught up to Zion (Moses 7:28). But he was puzzled by that love-why would God, the creator of "millions of earths like this," mourn a few backsliders? (v. 30)until it washed over him in full measure, whereupon he also "wept and stretched forth his arms, and his heart swelled wide as eternity" (v. 41). Although his puzzlement dissipated, he remained enraptured and astonished by the depth of God's love. Similarly, Moses's understanding of the Creation widened without limit when he learned that the entire cosmic project is underwritten by God's love: "For mine own purpose have I made these things. Here is wisdom and it remaineth in me. And by the word of my power, have I created them, which is mine Only Begotten Son, who is full of grace and truth.... For behold, this is my work and my glory-to bring to pass the immortality and eternal life of man" (Moses 1:31-32, 39).

So the "grace and truth" of God's love registers in at least three ways: at the level of the individual, at the level of human history where individuals bump and jostle each other across the centuries, and at a cosmic level where worlds pass into and out of existence. The last level is the most surprising perhaps, for though the starry heavens are beautiful, they also seem remote and lifeless. We do not, in any evident way, interact with extraterrestrial beings; our social sphere, wherein we often feel God's love as it is conveyed by others, does not reach that far. Scripture nevertheless indicates that God's love and goodness suffuse all his creation: "And God saw every thing that he had made, and, behold, it was very good" (Genesis 1:31).<sup>3</sup> Perhaps the immense cosmos marks the distance we have yet to travel into "the breadth, and length, and depth, and height" of God's love (Ephesians 3:18).

Which is to suggest that we already live within the cosmic embrace of God's love. In some manner hard to grasp, God fully attends to each person without risking oversight of any other. Here one is reminded of Galileo's comment that "God and Nature are so employed in the governing of human affairs that they could not apply themselves more thereto if they truly had no other care than only that of mankind." To illustrate this thought, Galileo notes the action of light: "And this, I think, I am able to make out by a most pertinent and most noble example, taken from the operation of the Sun's light, which . . . in ripening that bunch of grapes, nay, that single grape, . . . does apply itself so that it could not be more intense, if the sum of all its business had been the maturation of that one grape."<sup>4</sup>

God's love, Galileo is suggesting, is not diminished by distribution or apportionment. It is so superabundant that, like sunlight, it invariably overflows its target—whether one grape or many, whether one person or a vast multitude. The scriptural parallel here is the multiplication miracles when Christ divided a small quantity of food among great crowds of people (see Matthew 14; Mark 8). Afterward his disciples gathered up more food as leftover remnants than was originally given out. Division or sharing led to multiplication, to increase for all, at least within the gospel economy Christ introduced. This is the economy—an infinite sum game that overwhelms Moses: God's love is so free and gracious that he is able to focus attention on each detail of the world *as if it were the whole world*.

What the Book of Moses is giving us is a larger window through which to witness the love of God, and through which to contemplate the possibility that God organized the physical universe with no other aim than to save many if not all of his children. Perhaps every detail of one's life, no matter how seemingly trivial or haphazard, serves a salvific purpose, and not just for the individual immediately involved but for all persons, no matter how remote. Perhaps, of course, this is not the case, but the proposition would be consistent with Moses's realization that God is perfectly and simultaneously mindful of large and small. There is no foreground-background duality to his love: all is foreground.

To my knowledge only one person has tried to describe God's creative, salvific work with this possibility in mind, and that was Gottfried Wilhelm Leibniz, the German mathematician and philosopher. I do not believe that Latter-day Saints should uncritically embrace Leibniz, nor should they assume that he was right in all particulars. He was constantly revising his theology and left the project unfinished at death. All the same, his description of God is deeply resonant with Moses's theophany. What is more, Leibniz, in working out his ideas, settles on propositions that readily line up with Latter-day Saint thought. Underpinning these propositions is his belief in a loving God; that is, a God who, while respecting the agency of human beings, would do everything within his power to facilitate their growth and happiness. The divine result would be, as Leibniz first asserted in his 1710 work Theodicy, "the best of all possible worlds." Not a perfect world, but a world perfectly suited

to our growth and therefore the best possible world given God's aims and his need to respect our free will.

#### THE BEST POSSIBLE WORLD?

Do we really believe that things will get better in some distant afterlife? Yes, of course, but not in the fairy-tale sense of living happily ever after in a state of unchallenged ease. Rather, we aspire to live "after the manner of happiness" (2 Nephi 5:27) as we confront opposition and evil and, with the help of God, grow into larger spheres of happiness. It seems to me that this latter sensibility is part of the restored gospel, for the Bible tends to characterize happiness as a final destination, a state of arrival wherein we are freed from all care and worry. For example, in the book of Revelation, John sees the New Jerusalem "coming down from God out of heaven" and God dwelling among the persecuted Saints, comforting them. He writes that "God shall wipe away all tears from their eyes; and there shall be no more death, neither sorrow, nor crying, neither shall there be any more pain: for the former things are passed away" (21:2, 4).

I find this beautiful and fully believe that it will happen, just as John foretells. But as a Latter-day Saint I cannot believe that it is the full story. Other scriptural passages suggest that there "must needs be . . . opposition in all things," a principle that Lehi states is essential to our eternal growth (2 Nephi 2:11). What is more, even God appears to struggle with his creation, not just rejoicing in its goodness but also weeping over its sinful inhabitants (see Moses 7:28–37).<sup>5</sup> So while I can appreciate the beauty and power of John's description, and have many times wished away pain in my own life, I can also—owing to Latter-day Saint scripture that

slants things differently—acknowledge the cogency of playwright George Bernard Shaw's remark that "a perpetual holiday is a good working definition of hell."<sup>6</sup> Who would want a perfect surcease of pain?

But if pain is something we *do* want, at least in limited quantities, why are we so quick to decry it as part of the imperfection of mortality? Might the truth rather be, as Leibniz proposed, that our present home is the best of all possible worlds when judged by God's world-making, soul-saving criteria? If the universe is a vehicle for making godlike beings, would it help to eliminate, say, bedbugs or the possibility of famine, earthquake, and nuclear holocaust? Or would the elimination of such remove some of the opposition we need to grow through firsthand experience with pain and evil?

It may be that, given our reason for being here, we live in a world *perfectly calculated* to promote our growth. This would be something like Leibniz's world. He assumed that God, possessing the divine wherewithal—the power, knowledge, and benevolent intent—to create the best possible world, would naturally do so. The universe—even in its fallen state, which, after all, is the *via dolorosa* we must travel back to God—would not be a second-rate production; nor would it be marred by haphazard properties that do not dovetail toward God's aim of saving his children.

The task for Leibniz, then, was to determine which criteria God would act on to achieve his purpose. Since antiquity, cosmic harmony—the beauty and order of the physical world—had struck thinkers as the mark of the divine, and Leibniz followed the lead of Plato and generations of subsequent thinkers by proposing that cosmic balance, proportion, and harmony not only reflect God's mind and will but also testify of his existence. He further proposed that harmony arises from the give-and-take of two principles, order and fecundity. Order implies lawfulness, simplicity, and economy, while fecundity connotes variety and richness. Leibniz contended that God achieved maximal cosmic harmony by optimizing the relation between these two principles.

To some degree, order and fecundity work against each other: a world dominated by order would not admit variety of expression, while one utterly characterized by fecundity would be confused and chaotic. So God had to find the perfect balance between these two regulating principles, an immensely complex task, as we shall soon see. Incidentally, this notion of optimizing the relation between order and fecundity has long informed human endeavor. For instance, artists instinctively balance themselves between predictable order and surprising novelty, or between what is sometimes called "white music" (mechanical repetition of tones) and "brown music" (random succession of tones).<sup>7</sup> For Leibniz, the necessary tension between order and fecundity was the recipe for cosmic beauty and goodness, and God implemented that recipe *perfectly* at the world's creation.

The implementation was extremely complex, at least by human standards. It entailed a divine inventory of all possible entities and a review of how those entities would interrelate when placed in differing combinations (i.e., when differently arranged). Each combination represented a possible universe, but in most of these imaginary universes God discovered the incompatibility of two or more entities. The existence of event G, say, ruled out the existence of event Y. Such incompatibilities rendered their respective universes unusable, for given each system's holistic mutuality, the incompatibilities would quickly snowball to involve other entities. And even where there was no incompatibility, there might be other combinations that would allow for greater goodness.

Leibniz goes on to theorize that eventually God hit upon that combination in which all parts or entities were adjusted to each other in the best possible way, and this is the universe he created. Implicit in this process is Leibniz's concept of preestablished harmony. The concept derives from Leibniz's supposition that each possible world is a system of *perfectly* interacting parts. Here is how philosopher Nicholas Rescher explains it: "The substances of each possible world are thus reciprocally adjusted to one another in a thoroughgoing, total way. To use one of Leibniz's favorite metaphors, the substances of a possible world 'mirror' one another in their mutual accommodation."<sup>8</sup> But from this long list of possible worlds, only the best was chosen for actualization.

From a Christian point of view, there appears to be a problem with Leibniz's universe: the apparent lack of freedom. With everything prearranged or preestablished in God's mind, there would seem to be no allowance for spontaneity. Leibniz responded to this objection by explaining that while it is true that every detail of the world was determined at the moment of creation, God's foreknowledge of those details does not necessitate their actualization, just as my knowing the multiplication tables does not necessitate particular arithmetical facts. In either case, outcome is fixed but knowledge thereof is merely incidental.

The analogy is not perfect. In mathematical systems numbers have assigned values, and so the outcomes (answers) they produce when variously combined are reiterative of earlier (though different) arrangements. For example, the number 4 is just another way of saying 2 + 2. And although we may be surprised by a particular mathematical result, it

was implicit all along in other terms just waiting, so to speak, to be brought to light by a clever mathematician. This suggests that mathematical systems do not produce novelty, at least not in any absolute sense. Another example: who would ever guess that among twenty-three people there is a better than 50 percent chance that two will share the same birthday? (Indeed, it seems counterintuitive given that the probability of a person being born on any particular day is just 1/365.) Nevertheless, this result is not, in any absolute way, a new fact, even for the person who first arrived at it. It is just a different arrangement or expression of already-known facts—none of which are free to vary.

Within the system God anticipated, however, people are free to grow and vary, and so novelty and spontaneity are real. This difference would have made God's task of discovering the best possible world immeasurably more difficult than any conceivable mathematical calculation. To be sure, the labor may have been so great that nothing but love would have inclined him to undertake it. Like caring parents who attend to every imaginable detail before their children leave home for the first day of kindergarten, God may have similarly anticipated our needs, albeit in a vastly more comprehensive manner. Neither parent (earthly or divine), however, would seek to control everything, though they each would do all within their power to ensure a happy outcome.

Human freedom is the wild card that sets Leibniz's universe apart from mathematical systems. Factoring it in made God's creative work immensely difficult, a true labor of love. Further, it lengthens out the salvific process, for humans are free to proceed at their own pace, and some will progress toward salvation more quickly than others. But God remembers backsliders and has prepared a way

for their return, on condition of repentance. To reinvoke Tolstoy's aphorism: "God sees the truth, but waits." He sees or foreknows the end from the beginning owing to the loving care with which he has ordered and harmonized creation; he cannot, however, speed things up, because he will not infringe on our agency. He chooses to wait for us to find our way onto an upward, repentant path so that many if not all of us can ultimately be saved. Again, the rhyme of salvation is long, but it may also be lovingly crafted down to the smallest detail; further, it may be universally harmonized so that each person's quest for happiness redounds in the greatest possible way to the happiness of all people. Leibniz concluded that "if only we could sufficiently understand the order of the universe, we should find that it surpasses all the desires of the wisest [thinkers], and that it is impossible to make it any better than it is, not only for the whole generally, but also for ourselves in particular."9 Each person is interesting to God because the loss of any individual would render the universe something less than the best of all possible worlds. No person is superfluous; no person represents wasted effort on God's part. The mutual accommodation of every individual thing is so perfectly orchestrated that no person or part can deputize for any other.

## WORLDS WITHIN WORLDS, ALL PLEASINGLY DIFFERENT

Leibniz's cosmos incorporates other features that Latter-day Saints generally find praiseworthy. The physical creation is not fully contingent on God, for although God created the universe, he did not create the possibility of its existence. That possibility, along with the numberless other possibili

ties that God scanned prior to creation, exists independently of God. What is more, God deserves our praise for having selected the best possibility, and even though in this best of all possible worlds evil yet exists, he is not responsible for its existence. Evil, said Leibniz, is built into the creative tension between order and fecundity. God's task, then, was to find that world where evil is minimized while goodness is optimized.

Finally, there is in Leibniz's universe the clear suggestion of unending growth and progress. He took note of the microscopic discoveries of his day, wherein smaller worlds kept showing up as magnifying lenses became more powerful. This for him was evidence of a living, growing cosmos, and some of his statements to this effect resonate with pronouncements offered by Latter-day Saint thinkers. He stated in his *Monadology*, for example:

From this [the ongoing emplacement or nesting of smaller parts] one sees that there is a whole world of creaturesof organisms, animals, entelechies, and souls-even in the least piece of matter. Every bit of matter can be conceived as a garden full of plants or a pond full of fish. But each branch of the plant, each member of the animal, each drop of its bodily fluids, is also such a garden or such a pond. And though the earth and the air emplaced between the plants of the garden or the water emplaced between the fish of the pond are certainly neither plant nor fish, they contain yet more of them, though mostly of a minuteness imperceptible to us. Thus nothing is fallow, sterile, or dead in the universe: there is no chaos, no disorder save in appearance. It is somewhat like what appears in a distant pond, in which one might see the confused and, so to speak, teeming motion of the pond's fish, without distinguishing the fish themselves.<sup>10</sup>

Worlds within worlds, with no bottommost world because each newly discovered world is a new cosmological narrative embracing other worlds and other narratives as far as the mind can reach. "And there are many kingdoms," we read in the Doctrine and Covenants, "for there is no space in the which there is no kingdom; and there is no kingdom in which there is no space, either a greater or a lesser kingdom" (88:37). Kingdoms or worlds fill up space, but space in turn fills kingdoms, thereby deepening their expanse so that new kingdoms issue up by the courtesy of new space, and so the dialectic of creation continues. By this account, space is not static vastness but creative graciousness, spaciousness, or goodness that is at once spontaneous and inflationary. Hence there are, as Moses tells us, kingdoms or "worlds without number" (Moses 1:33) because the process expresses the pure love of Christ, which issues forth "without compulsory means" (Doctrine and Covenants 121:46).

None of this would make sense if worlds rolled off an assembly line according to a static, repeatable pattern. What would be the purpose of Moses seeing *every* particle and *every* inhabitant of the earth if duplicates existed? According to Leibniz, however, difference, not sameness, is the keynote of creation. Brigham Young expressed the same sentiment:

Endless variety is stamped upon the works of God's hands. There are no two productions of nature, whether animal, vegetable or mineral, that are exactly alike, and all are crowned with a degree of polish and perfection that cannot be obtained by ignorant man in his most exquisite mechanical productions. Man's machinery makes things alike; God's machinery gives to things which appear alike a pleasing difference.<sup>11</sup>

This may seem an obvious truth, particularly as one leaves the city to witness "endless variety" among the "productions of nature." But even here "man's machinery," which aims at redundancy and sameness, tends to condition our thinking. Every rock reduces to self-similar microconstituents, each atom or subatomic particle being perfectly identical with its namesake counterparts. If you have seen one iron atom you have seen them all, according to science as it has developed in the West since the Greek atomists. Leibniz pushed back against this tradition that reduces visible difference to invisible sameness. Arguing that rational choice is possible only if one option is intrinsically different from another. he insisted that God could not act in a world composed of self-similar building blocks, homogenous units of assembly that science further defined as lifeless. His concern was that with the reduction of difference to sameness. we get not just a world that is boring in its essential detailseach part being duplicated again and again ad nauseambut so boring as to be deadening, even to itself. And with that boredom, we get a world so absent of intrinsic difference as to be a qualitative flatland offering God no traction for making rational choices.

The great upside to this qualitatively redundant world was that it was simple in its construction and therefore in principle fully explicable. As Richard Westfall, an eminent historian of science, put it, the older vision of reality was one in which every physical body possessed "active principle, which partook at least to some extent of the characteristics of mind or spirit"; the view of modern science, however, "excise[d] every trace of the psychic from material nature with surgical precision, leaving it a lifeless field knowing only the brute blows of inert chunks of matter. It was a conception of nature startling in its bleakness—but admirably contrived for the [explanatory] purposes of modern science."<sup>12</sup>

As depressing as it may sound, this is the worldview that we have inherited from classical physics and that has seeped into virtually every other field of science so as to desacralize and render monotonous our vision of nature. Because it pays no allegiance to a loving Creator, we often find ourselves switching tracks as we contemplate nature from first a religious and then a scientific perspective. Leibniz, however, believed that intellect could be folded into faith to empower both endeavors, and not just after the two had staked out opposing truth claims.

Like other scientists of his era, Leibniz was trying to rethink the thoughts of God at the creation of the universe. But his great philosophical antagonist, Isaac Newton, was trying to do the same thing, and he came up with a worldview that gave priority to sameness rather than difference. So much for reading God's mind, and so much for the pretense that scientists read the text of nature without philosophical interpolation. Neither Newton nor Leibniz could fully resist the early modern infatuation with machines and the follow-on notion of a clockwork universe operating with perfect regularity according to well-understood mechanical principles. This outlook morphed into the deism of eighteenth-century thought-the view that God had wound up the universe like a clock and then let it operate without outside (divine) interference—but Leibniz's own vision, which saw mechanism as an expression of deeper principles, was much more richly nuanced. For our purposes, his signal contribution was the argument that diversity is the primordial intrigue of reality. Without the spontaneous efflorescence of difference, novelty, and surprise,

everything *really* would be lifeless and no philosopher or scientist would exist to lament or take delight in that fact.

#### CREATIVE DIFFERENCE

While I have no way of knowing whether Leibniz's outlook is correct, I like to keep it in mind because it purports that no detail of reality is irrelevant or inadvertent. Every detail brims with divine love, so much so that even small, seemingly insignificant things turn out to be inexhaustibly deep reservoirs of creative possibility. Perhaps if we could reverse the nesting process we would see God's love exploding out of every pore and particle of reality, no matter how minute. In any event, Latter-day Saint thinkers have proposed that there is more going on with so-called brute matter than meets the eye. Brigham Young, for example, stated that "there is not a particle of element which is not filled with life.... There is life in all matter, throughout the vast extent of all the eternities: it is in the rock, the sand. the dust, . . . [the] air."<sup>13</sup> And Elder Neal A. Maxwell insisted that life becomes real as it surrenders itself to God, which surrender entails the flowering of individual difference. "Some presume," he said "that we will lose our individuality if we are totally swallowed up [by God's will], when actually our individuality is enhanced by submissiveness and by righteousness and by being swallowed up in the will of the Father. It's sin that grinds us down to a single plane, down to sameness and to monotony."14

In the Doctrine and Covenants we read of a white stone "given to each of those who come into the celestial kingdom, whereon is a new name written, which no man knoweth save he that receiveth it" (130:10–11). The white stone is also mentioned in the book of Revelation, along with a similar promise to those who are faithful (2:17). What would be the point of receiving such in confidence with God if every new name were the same? C. S. Lewis developed this idea:

What can be more a man's own than this new name which even in eternity remains a secret between God and him? And what shall we take this secrecy to mean? Surely, that each of the redeemed shall forever know and praise some one aspect of the divine beauty better than any other creature can. Why else were individuals created, but that God loving all infinitely, should love each differently?<sup>15</sup>

Lewis maintains that we best glorify God when we symphonically and synergistically blend our differences. This is the way of the gospel, and also the way of nature. To be sure, there are unvarying standards that structure the world, constants and regularities that give nature its predictability. But there are also moments of escape and surprise that track back to difference. Since the late nineteenth century many of the so-called laws of nature, once viewed as absolutely binding and determinative of given results, have been reconceptualized as matters of statistical likelihood There is no nature-ordained mandate that an ice cube will melt when dropped into a glass of water, but the probability of its not melting is unimaginably more remote than shuffling playing cards and getting a perfectly ordered deck. Put differently, laws of nature are now often regarded as descriptions of what will probably happen, not prescriptions of what must happen; and surprise, some have suggested, fills the space between prescription and description. To follow scientific philosopher Charles Sanders Peirce, this is where nature goes "sporting" to produce "infinitesimal departures from law continually, and great ones [like

ourselves] with infinite frequency."<sup>16</sup> Such departures are the stuff of pleasing difference, which is integral to God's work, according to Brigham Young, and the reason God's eye lights upon every person, part, and particle of creation because each is pleasingly different. Each finds a place in the universe, and in the heart of God, no other can find.

Snowflakes illustrate this principle. Although trillions fall every year, no two are exactly alike. Each begins as a simple six-sided crystal that then falls along a unique path whose microconditions shape and develop the flake differently. The world is such that the likelihood of two flakes falling along identical paths even for a single millimeter is vanishingly small. And yet all snowflakes share a common architecture whose infinitely variegated beauty bespeaks a larger theme. "They are about a tenth of an inch in diameter," wrote Henry David Thoreau, "perfect little wheels with six spokes . . . whirling to earth, pronouncing thus, with emphasis, the number six. Order,  $k \dot{\sigma} m os...$  And they all sing, melting as they sing of the mysteries of the number six-six, six, six."<sup>17</sup> There is a law behind all this, Thoreau insists, but it is not geared toward mechanical, mind-numbing production of sameness. Rather, it excites the mind heavenward by allowing space for creative difference in its repetitive elaboration of hexagonal crystals: "How full of the creative genius is the air in which these are generated! I should hardly admire more, if real stars fell and lodged on my coat. Nature is full of genius, full of divinity, so that not a snow-flake escapes its fashioning hand."<sup>18</sup> As Leibniz proposed, God's creation strikes the perfect balance between order and fecundity; thus the world is "full of genius, full of divinity," so that nothing, ourselves included, "escapes its fashioning hand."

### NOTES

- Leo Tolstoy, "God Sees the Truth, but Waits," Walk in the Light and Twenty-Three Tales, trans. Louise and Aylmer Maude (Maryknoll, NY: Orbis, 2003), 69–77.
- Hugh W. Nibley, "Genesis of the Written Word," Nibley on the Timely and the Timeless: Classic Essays of Hugh W. Nibley (Provo, UT: Religious Studies Center, Brigham Young University, 1978), 110.
- 3. Note also that in the original Greek the word for "world" in John 3:16 ("For God so loved the world, that he gave his only begotten Son...") is kosmos, which is cognate with the English cosmos. One may accordingly think of the universe—the whole of God's creation—as the object of God's redeeming love.
- 4. Galileo Galilei, *Dialogue on the Great World Systems*, ed. Giorgio de Santillana (Chicago: University of Chicago Press, 1953), 378–79.
- 5. See Terryl Givens and Fiona Givens, *The God Who Weeps: How Mormonism Makes Sense of Life* (Salt Lake City: Ensign Peak, 2012).
- 6. George Bernard Shaw, Misalliance, in Misalliance, The Dark Lady of the Sonnets, and Fanny's First Play, with a Treatise on Parents and Children (Cambridge: Wildside, 1914), xlv.
- Martin Gardner, "Mathematical Games: White and Brown Music, Fractal Curves and One-Over-F Fluctuations," *Scientific American* 238, no. 4 (April 1978): 16–32.
- Nicholas Rescher, Leibniz: An Introduction to His Philosophy (Oxford, UK: Basil Blackwell, 1979), 17.
- Quoted in Nicholas Rescher, G. W. Leibniz's Monadology: An Edition for Students (Pittsburgh, PA: University of Pittsburgh Press, 1991), 295.
- 10. Quoted in Rescher, G. W. Leibniz's Monadology, 26.
- 11. Brigham Young, in *Journal of Discourses*, 26 vols. (London: Latterday Saints' Book Depot, 1854–86), 9:369–70.
- 12. Richard S. Westfall, The Construction of Modern Science: Mechanisms and Mechanics (New York: John Wiley and Sons, 1971), 31.
- 13. Brigham Young, in Journal of Discourses, 3:277.
- 14. Elder Maxwell's remarks were delivered at the FARMS Annual Recognition Banquet, September 27, 1991, Brigham Young University campus; quoted in Daniel C. Peterson, "Elder Neal A. Maxwell

on Consecration, Scholarship, and the Defense of the Kingdom," Interpreter: A Journal of Mormon Scripture 7 (2013): xvii.

- 15. C. S. Lewis, The Problem of Pain (New York: Touchstone, 1996), 134.
- Charles Sanders Peirce, "The Architecture of Theories" and "The Doctrine of Necessity Examined," in *Philosophers of Process*, ed. Douglas Browning and William T. Myers (New York: Fordham University Press, 1998), 8 and 26 respectively.
- 17. Henry David Thoreau, *The Heart of Thoreau's Journals*, ed. Odell Shepherd (New York: Dover Publications, 1961), 149–50.
- 18. Thoreau, The Heart of Thoreau's Journals, 149.