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RECORD-KEEPING TECHNOLOGY AMONG GOD'S PEOPLE IN ANCIENT AND MODERN TIMES

Richard E. Turley Jr. and Stephen O. Smoot

Abstract: In a fascinating survey of the efforts of ancient and modern Saints to honor the Lord's commandment to keep reliable records of their doings, the authors take us on a colorful tour of the past, present, and future of technology for records preservation. These efforts are not only aweinspiring, but have had and will have important consequences for the faith and memory of the goodness of God and the fulfillment of His purposes in history.

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See Richard E. Turley Jr. and Stephen O. Smoot, "Record-Keeping Technology among God's People in Ancient and Modern Times," in "*To Seek the Law of the Lord*": *Essays in Honor of John W. Welch*, ed. Paul Y. Hoskisson and Daniel C. Peterson (Orem, UT: The Interpreter Foundation, 2017), 467–94. Further information at https://interpreterfoundation.org/books/to-seek-the-law-of-the-lord-essays-in-honor-of-john-w-welch-2/.]

A ccording to Latter-day Saint scripture, the first commandment God gave to the newly organized Church of Christ on April 6, 1830, was,

"Behold, there shall be a record kept among you" (D&C 21:1).¹ Over the course of succeeding decades, members of the church—later renamed The Church of Jesus Christ of Latter-day Saints—have taken this commandment to heart, becoming renowned for their record keeping.² In the Church History Library in Salt Lake City, completed in 2009, the April 1830 charge appears over the door leading from the front lobby to the main reading room.³ This new library, together with the Family History Library and the Church History Museum a block away, the Granite Mountain Records Vault in Little Cottonwood Canyon southeast of Salt Lake City, and thousands of Family History Centers around the globe, show the church's continuing commitment to keeping records.

Yet the 1830 charge is not the only scriptural justification for Latterday Saints to keep records. Rather, they also look to numerous other verses in the Bible and other scriptures for examples of record keeping and for reasons why it is important. A survey of the techniques used for record keeping over time also helps illuminate how the church should keep its records in the future.

The text originally read: "Behold there Shall a Record be kept among you." In preparing the revelation for publication, editor John Whitmer revised the text to read, "Behold there Shall be a Record kept among you." Robin Scott Jensen, Robert J. Woodford, and Steven C. Harper, eds., Manuscript Revelation Books, facsimile edition, first volume of the Revelations and Translations series of The Joseph Smith Papers, ed. Dean C. Jessee, Ronald K. Esplin, and Richard Lyman Bushman (Salt Lake City: Church Historian's Press, 2009), 27. Whitmer and his fellow editors had authority from the church's Literary Firm to "make all necessary verbal corrections" to the text for publication. See the April 30, 1832, minutes of the firm in Far West Record: Minutes of The Church of Jesus Christ of Latter-day Saints, 1830-1844, ed. Donald Q. Cannon and Lyndon W. Cook (Salt Lake City: Deseret Book, 1983), 46. There were limits, however, to the editors' authority to change the wording of the revelations. "I will exhort you," Joseph Smith wrote, "to be careful not to alter the sense of any of them for he that adds or diminishes to the prophecies must come under the condemnation written therein." Joseph Smith Jr. to William W. Phelps, July 31, 1832, in Personal Writings of Joseph Smith, revised edition, ed. Dean C. Jessee (Salt Lake City: Deseret Book, 2002), 273.

² See Charles P. Adams and Gustive O. Larsen, "A Study of the LDS Church Historian's Office, 1830–1900," *Utah Historical Quarterly* 40, no. 4 (Fall 1972): 370-89; Glenn N. Rowe, "The Historical Department and Library of the LDS Church," in *Mormon Americana: A Guide to Sources and Collections in the United States*, ed. David J. Whittaker (Provo, UT: BYU Studies, 1995), 154-71; James B. Allen, Jessie L. Embry, and Kahlile B. Mehr, *Hearts Turned to the Fathers: A History of the Genealogical Society of Utah*, 1894–1994 (Provo, UT: BYU Studies, 1995). On the change of the church's name, see D&C 115.

³ R. Scott Lloyd, "'A Record Kept' Among His People," *LDS Church News*, June 27, 2009, 3, 5.

The Rationale for Record Keeping

Latter-day Saints look to their canon—the Bible, the Book of Mormon, the Doctrine and Covenants, and the Pearl of Great Price—for the rationale to keep records. The New Testament, for example, explains that someday all humanity will stand before God to be judged from written records. The Revelation of John describes the future Judgment Day, which the writer has seen in vision. "And I saw the dead, great and small, standing before the throne," the text reads, "and books were opened. Also another book was opened, the book of life. And the dead were judged according to their works, as recorded in the books" (John 20:12).⁴

The founding prophet of The Church of Jesus Christ of Latter-day Saints, Joseph Smith, wrote an epistle to his followers on September 6, 1842. In it, he expounded on this New Testament passage. "The books spoken of," he concluded, "must be the books which contained the record of their works, and refer to the records which are kept on the earth." Speaking of the practice of baptism for the dead, which by this point had been practiced by Latter-day Saints for two years, he added an important doctrinal gloss: "Now, the nature of this ordinance," the Prophet explained, "consists in the power of the priesthood...wherein it is granted that whatsoever you bind on earth shall be bound in heaven, and whatsoever you loose on earth shall be loosed in heaven. Or, in other words,...whatsoever you record on earth shall be recorded in heaven, and whatsoever you do not record on earth shall not be recorded in heaven" (D&C 128:8).

Joseph Smith recognized that this doctrine—that an ordinance (rite or ceremony) must be recorded to be valid—might surprise some people. "It may seem to some to be a very bold doctrine that we talk of—a power which records or binds on earth and binds in heaven," he confessed. "Nevertheless, in all ages of the world, whenever the Lord has given a dispensation of the priesthood to any man by actual revelation, or any set of men, this power has always been given. Hence, whatsoever those men did in authority, in the name of the Lord, and did it truly and faithfully, and kept a proper and faithful record of the same, it became a law on earth and in heaven, and could not be annulled, according to the decrees of the great Jehovah" (D&C 128:9).

The doctrine takes on additional meaning because Latter-day Saints believe that human beings cannot reach the highest heaven—what they

 $^{4\,}$ All biblical citations are from the New Revised Standard Version unless otherwise noted.

call the highest degree of the celestial kingdom—without participating in certain prescribed ordinances (cf. D&C 84:20–22; 131:1–4; Moses 1:39; Article of Faith 3).⁵ In his 1842 epistle, Joseph Smith essentially stated that without records of these ordinances, they are not complete and, therefore, not valid. In short, in Mormon theology, no one can reach the highest heaven without proper record keeping.

Although the scriptures accepted by Latter-day Saints provide some reasons for record keeping, they are also clear that not all purposes for keeping records may be known to the record keepers themselves. In 1 Nephi 9, for example, the Book of Mormon prophet Nephi records, "Wherefore, the Lord hath commanded me to make these plates for a wise purpose in him, which purpose I know not" (1 Ne. 9:5). Later in his account Nephi adds, "And after I had made these plates by way of commandment, I, Nephi, received a commandment that the ministry and the prophecies, the more plain and precious parts of them, should be written upon these plates; and that the things which were written should be kept for the instruction of my people, who should possess the land, and also for other wise purposes, which purposes are known unto the Lord" (1 Ne. 19:3). Nephi thus understood that his record keeping would serve an important didactic purpose, as well as other purposes unknown to him.

While abridging the small and large plates, the prophet-historian Mormon similarly admitted a level of uncertainty in precisely why he was abridging them the way he was, insisting that his editorship was the result of revelatory aid. "And I do this for a wise purpose; for thus it whispereth me, according to the workings of the Spirit of the Lord which is in me. And now, I do not know all things; but the Lord knoweth all things which are to come; wherefore, he worketh in me to do according to his will" (Words of Mormon 7). Like Nephi, Mormon bowed to the will of God, even if the Lord's will concerning the record remained somewhat inscrutable.

Alma the Younger, another Book of Mormon prophet-historian, in passing the sacred records to his son Helaman, charged him to "keep a record of this people, according as I have done, upon the plates of Nephi,

⁵ Gospel Principles (Salt Lake City: The Church of Jesus Christ of Latter-day Saints, 2009), 275–80; Handbook 2: Administering the Church (Salt Lake City: The Church of Jesus Christ of Latter-day Saints, 2010), 1.1.2, 1.1.5, 1.2, 1.3.1, 20.1. The church's official handbook explains, "The ordinances of baptism, confirmation, Melchizedek Priesthood ordination (for men), the temple endowment, and temple sealing are required for exaltation for all accountable persons. These are called the saving ordinances." Handbook 2: Administering the Church, 20.1.

and keep all these things sacred which I have kept, even as I have kept them; for it is for a wise purpose that they are kept" (Alma 37:2). Alma understood the gravity and significance of maintaining the record and gave several reasons in his account for doing so (Alma 37:8–10). At the same time, he refrained from speculating on other purposes, telling Helaman, "Now these mysteries are not yet fully made known unto me; therefore I shall forbear" (Alma 37:11). Alma simply explained, "And it may suffice if I only say they are preserved for a wise purpose, which purpose is known unto God; for he doth counsel in wisdom over all his works, and his paths are straight, and his course is one eternal round" (Alma 37:12).

Modern Latter-day Saint scripture is emphatic about record keeping. While incarcerated in Liberty, Missouri, Joseph Smith and his companions emphasized in an 1839 epistle, canonized in 1876, that keeping records of the Saints' persecutions was "an imperative duty that we owe to God, to angels, with whom we shall be brought to stand, and also to ourselves, to our wives and children" (D&C 123:7).6 Driving the point home, the Prophet and his companions repeated that record keeping was not only a duty to God, but "an imperative duty that we owe to all the rising generation, and to all the pure in heart" (D&C 123:9, 11).

As if that weren't explicit enough, the letter directs, "These should then be attended to with great earnestness. Let no man count them as small things; for there is much which lieth in futurity, pertaining to the saints, which depends upon these things" (D&C 123:14–15). Joseph Smith clearly understood that his record keeping, as well as the record keeping he required of his followers, would serve important purposes. He recognized and insisted that record keeping in the Church would serve both his contemporary Church membership and future generations.

As this sampling of scriptures show, Latter-day Saints believe that record keeping has been an important characteristic of God's people throughout history. The specific techniques of this record keeping, however, have varied over time.

⁶ Richard E. Turley Jr. and William W. Slaughter, *How We Got the Doctrine and Covenants* (Salt Lake City: Deseret Book, 2012), 85, 87; Lyndon W. Cook, *The Revelations of the Prophet Joseph Smith: A Historical and Biographical Commentary of the Doctrine and Covenants* (Salt Lake City: Deseret Book, 1985), 239. The original of this letter and a transcript is viewable at http://www.josephsmithpapers.org/paper-summary/letter-to-the-church-and-edward-partridge-20-march-1839/1.

Record Keeping from Antiquity to 1830

The kinds of records that the ancients kept indicate how seriously ancient peoples thought of record keeping. They took record keeping so seriously, in fact, that some even pronounced curses on those who would change, efface, or destroy a record. The celebrated law code of Hammurabi famously invokes a series of curses on anyone who should tamper with the record. "[But] should that man...alter my engraved image, erase my inscribed name and inscribe his own name (in its place)...that man, whether he is a king, a lord, or a governor, or any person at all" would suffer divine curses from the Babylonian pantheon, according to the text's epilogue. Historically, record keepers used what twenty-first century observers might consider primitive and even awkward methods for record keeping. Laboring with often intensive care, they resorted to the media of their day, including stone, clay, metal, wood, animal skins, and papyrus, as reflected in the scriptures accepted by Latter-day Saints.

Stone Monuments

Some of the earliest texts that have survived in the archaeological record were made of stone and generally took two forms. One type of large stone record was the monument, something meant to stay in one place as part of the landscape or an edifice (such as a temple or palace). The other type of stone record, ranging from light to heavy, was meant to be portable and usually took the form of chiseled rock.

The Old Testament patriarch Jacob, the son of Isaac and grandson of Abraham, made a covenant with his father-in-law Laban, who proposed that they erect a stone monument to memorialize their covenant. "Come now, let us make a covenant, you and I," Laban invited Jacob, "and let it be a witness between you and me." The narrative explains that "Jacob took a stone, and set it up as a pillar. And Jacob said to his kinsfolk, 'Gather stones,' and they took stones, and made a heap; and they ate there by the heap." During what could be described as a ritual meal, Laban is reported to have said, "This heap [of stone] is a witness between you and me today" (Gen. 31:44–48). The significance of this

⁷ Martha T. Roth, *Law Collections from Mesopotamia and Asia Minor* (Atlanta: Society of Biblical Literature, 1995), 135–140, quote at 136.

⁸ On the phenomenon of "commensality," or communal feasting, in the ancient Near East, see Ronan James Head, "The Politics of Feasting in the Ancient Near East," in *By Our Rites of Worship: Latter-day Saint Views on Ritual in Scripture, History, and Practice*, ed. Daniel L. Belnap (Provo, UT: Religious Studies Center, BYU, 2013), 69–82.

passage is the use of a stone pillar (Heb.: מצבה) as a sign or token of the covenant entered into by Jacob and Laban. Although the text does not specify that anything in particular was written on this pillar, its use as a memorial seems to link it with other media (e.g. written records) used to preserve or memorialize significant events. This is only to be expected, as Lee I. Levine explains that maṣṣēbôt anciently "served as memorials, legal monuments, commemorative markers, or objects of worship and veneration for cultic purposes."

Later in Genesis, after Jacob left Laban and journeyed from Paddanaram to Canaan, the Lord renewed the Abrahamic covenant with him, as noted in Genesis 35: "God said to him, 'Your name is Jacob; no longer shall you be called Jacob, but Israel shall be your name.' So he was called Israel." After receiving his new name, Jacob, now Israel, was blessed as follows, "God said to him, 'I am God Almighty: be fruitful and multiply; a nation and a company of nations shall come from you, and kings shall spring from you. The land that I gave to Abraham and Isaac I will give to you, and I will give the land to your offspring after you." After receiving his blessing from God, Israel then commenced to erect another stone pillar, just as he had done after making his covenant with Laban. "Jacob set up a pillar in the place where he had spoken with him, a pillar of stone; and he poured out a drink-offering on it, and poured oil on it. So Jacob called the place where God had spoken with him Bethel" (Gen. 35:10-15). As in Genesis 31, the Hebrew of Genesis 35 employs and מצבת and מצבת for "stone" and "pillar of stone" respectively. The covenantal/ritual significance of Jacob receiving a new name at a location that literally translates as "house of El" (בית־אל) will not be missed by attentive Latter-day Saint readers. Nor will the attentive reader fail to see that Jacob's behavior in erecting another stone memorial, accompanied by offering libations, casts this passage in definite covenantal terms.

⁹ For an overview of the מצבה in the biblical record, see Dale W. Manor, "Massebah," in *The Anchor Bible Dictionary*, ed. David Noel Freedman (New York: Doubleday, 1992), 4:602.

¹⁰ Manor describes Jacob's מצבה in Gen. 31 as one example of the מצבה (cf. Exod. 24:3–8) being used to signify "the completion of a ceremonial covenant agreement." See Manor, "Massebah," 4:602. Miles V. Van Pelt notes that the Hebrew and Aramaic names given by Jacob and Laban to the stone (גלעד) and גלעד arrespectively) "describe the covenantal function of the monument." Miles V. Van Pelt, Basics of Biblical Aramaic: Complete Grammar, Lexicon, and Annotated Text (Grand Rapids, MI: Zondervan, 2011) 165

¹¹ Lee I. Levine, Visual Judaism in Late Antiquity (New Haven: Yale University Press, 2012), 23.

Many generations later, after the children of Israel sojourned in Egypt and wandered in the wilderness, they finally passed over the Jordan River into the promised land under the leadership of Joshua, for whom the Lord replicated the miracle of parting the Red Sea by parting the Jordan River as priests bearing the ark of the covenant entered the stream:

When the entire nation had finished crossing over the Jordan, the Lord said to Joshua: "Select twelve men from the people, one from each tribe, and command them, 'Take twelve stones from here out of the middle of the Jordan, from the place where the priests' feet stood, carry them over with you, and lay them down in the place where you camp tonight." Then Joshua summoned the twelve men from the Israelites, whom he had appointed, one from each tribe. Joshua said to them, "Pass on before the ark of the Lord your God into the middle of the Jordan, and each of you take up a stone on his shoulder, one for each of the tribes of the Israelites, so that this may be a sign among you. When your children ask in time to come, 'What do those stones mean to you?' then you shall tell them that the waters of the Jordan were cut off in front of the ark of the covenant of the Lord. When it crossed over the Jordan, the waters of the Jordan were cut off. So these stones shall be to the Israelites a memorial for ever." The Israelites did as Joshua commanded. They took up twelve stones out of the middle of the Jordan, according to the number of the tribes of the Israelites, as the Lord told Joshua, carried them over with them to the place where they camped, and laid them down there. (Joshua set up twelve stones in the middle of the Jordan, in the place where the feet of the priests bearing the ark of the covenant had stood; and they are there to this day.) (Josh. 4:1-9)

Although the text does not employ the familiar Hebrew noun מצבה to describe this stone memorial (instead it uses the Hebrew word "sign," "token," or "omen"), as it does with the accounts of Jacob's covenant ceremonies with Laban and God, the stones in this passage effectively serve the same purpose. They served as a memorial for the occasion, or otherwise to signify the importance of the event for future generations, as is made clear in the text.

After Joshua led his people into the Promised Land, and after he and the Israelites had victoriously overcome their Canaanite rivals, he issued an ultimatum and put the children of Israel who chose to do so under a covenant of their own free will. "Now if you are unwilling to serve the Lord," Joshua instructed, "choose this day whom you will serve, whether the gods your ancestors served in the region beyond the River or the gods of the Amorites in whose land you are living; but as for me and my household, we will serve the Lord" (Josh. 24:15). In response to this directive, as well as to Joshua's command to "put away the foreign gods that are among you" (Josh. 24:23), the Israelites proclaimed, "The Lord our God we will serve, and him we will obey" (Josh. 24:24). Wasting no time, Joshua "wrote these words in the book of the law of God; and he took a large stone, and set it up there under the oak in the sanctuary of the Lord," informing the Israelites that "this stone shall be a witness against us; for it has heard all the words of the Lord that he spoke to us; therefore it shall be a witness against you, if you deal falsely with your God" (Josh. 24:26–27).

Most striking about this passage is that Joshua wrote both the words of the covenant and the people's response on a ספר or scroll, as well as commissioned a stone memorial to act as a witness of the event. As with Joseph Smith later, Joshua evidently understood the importance of recording the transaction of the covenant in some kind of record, which presumably would have served as additional testimony against the people should they fail to uphold their covenant obligations.

In subsequent generations, as the Israelites faced battle with their perennial nemesis, the Philistines, the prophet Samuel offered a sacrifice, as recorded in 1 Samuel 7. "So Samuel took a sucking lamb and offered it as a whole burnt-offering to the Lord; Samuel cried out to the Lord for Israel, and the Lord answered him. As Samuel was offering up the burnt-offering, the Philistines drew near to attack Israel; but the Lord thundered with a mighty voice that day against the Philistines and threw them into confusion; and they were routed before Israel" (1 Sam. 7:9–10).

This victory—granted to the Israelites in a supernatural display of godly power on account of their faithfulness—prompted Samuel to erect a stone monument commemorating their deliverance. "Then Samuel took a stone and set it up between Mizpah and Jeshanah, and named it Ebenezer; for he said, 'Thus far the Lord has helped us'" (1 Sam. 7:12). As we see from this passage, the erection of a stone memorial in ancient Israel could serve not only as a sign or token for a covenant, but also an expression of gratitude for divine aid.

¹² Manor once again sees Joshua's מצבה in this passage as a witness of "the covenant renewal between YHWH and Israel." See Manor, "Massebah," 4:602.

Portable Stone Records

In addition to using large stone monuments to memorialize covenants, ancient peoples employed stone for making portable records. The most famous example of this use, of course, was the stone tables on which were written the law revealed by God on Sinai, as noted in several scriptural passages, including Exodus 24. "The Lord said to Moses, 'Come up to me on the mountain, and wait there; and I will give you the tablets of stone [Heb.: לחת האבן], with the law and the commandment, which I have written for their instruction" (Exod. 24:12).

The use of stone to record God's law undoubtedly served a pragmatic purpose, which was preservation. But it may also have had covenantal significance, serving as a witness of the covenant entered into between Israel and God. This is reinforced later in the book of Exodus, where these tablets are explicitly identified as "tablets of the covenant, tablets of stone" (Exod. 31:18; Heb.: לחת אבן).

But the stone tables received by Moses were not the only portable stone records or inscriptions mentioned in the Hebrew Bible. Exodus 28 describes inscribed stones on the ephod, part of the ancient Israelite high priest's temple regalia. "You shall take two onyx stones, and engrave on them the names of the sons of Israel, six of their names on one stone, and the names of the remaining six on the other stone, in the order of their birth" (Exod. 28:9-10). Significantly, the text of Exodus makes it clear that the engraver of the names on the stones of the ephod was to work "[a]s a gem-cutter [who] engraves signets" (Exod. 28:11), leaving little ambiguity as to what the process was in the creation of the ephod. There is likewise little ambiguity what purpose these stone inscriptions served in the temple system of worship. "You shall set the two stones on the shoulder-pieces of the ephod, as stones of remembrance for the sons of Israel; and Aaron shall bear their names before the Lord on his two shoulders for remembrance" (Exod. 28:12). Thus, the high priest's holy vestures contained a stone memorial or record of the children of Israel by name.

One final example of the use of stone as a writing material is in Deuteronomy 27. The text relates that "Moses and all the elders of Israel charged all the people" of the house of Israel to write "the words of this law" on "large stones" (Heb.: אבנים גדלות) when they had crossed over the Jordan (Deut. 27:2–3). These stones were to be placed "on Mount Ebal" next to an altar, in what would effectively become a worship site for the Israelites (Deut. 27:4).

In turning to the archeological record, we find ready confirmation that stone was used abundantly in the ancient Near East as a writing material. "Monumental inscriptions on stone, often associated with reliefs, are well attested in Anatolia, N Syria, Persia, Phoenicia, and Egypt," according to André Lemaire. In particular, the use of the stele (Gk.: $\dot{\eta}$ $\sigma\tau\dot{\eta}\lambda\eta$; "upright stone") to record monumental inscriptions, as well as sundry smaller stone inscriptions, is so widely attested in the ancient Near East that to list every example would be tedious. Here are just a few examples that are pertinent to the Bible:

- The famous Tell Dan Stele, discovered at Tell Dan in northern Israel in 1993 and dating to the 8th century BCE, contains the earliest extra-biblical reference to the "house of David." The stele is one of the most important pieces of evidence for the historicity of the Davidic kingdom.¹⁵
- The Moabite Stone, also known as the Mesha Inscription, chronicles "the details of the military actions of Mesha king of Moab, contemporary with Ahab king of Israel and Jehoshaphat and Jehoram, kings of Judah." It was inscribed on a black basalt stele and besides offering an important glimpse into ancient Moabite history serves as the "earliest occurrence of the name of Israel's god [Yahweh] in an inscription." It dates to the mid-9th century BCE. 17
- Although not technically a stele, the Siloam inscription, which documents the efforts of king Hezekiah of Judah's engineers to create a water tunnel to connect the pool of Siloam in Jerusalem with the Gihon Spring, is an

¹³ André Lemaire, "Writing and Writing Materials," in *The Anchor Bible Dictionary*, ed. David Noel Freedman (New York: Doubleday, 1992), 6:1001.

¹⁴ The Septuagint translates $maşṣēb\hat{a}$ as στήλη in the passages reviewed above, including Gen. 31 and 35.

¹⁵ Alan Millard, "The Tell Dan Stele," in *The Context of Scripture, Volume 2: Monumental Inscriptions from the Biblical World*, ed. William W Hallo (Leiden: Brill, 2003), 161–62. See also André Lemaire, "The United Monarchy: Saul, David, and Solomon," in *Ancient Israel: From Abraham to the Roman Destruction of the Temple*, 3rd edition, ed. Hershel Shanks (Washington, DC: Biblical Archaeology Society, 2011), 121, 134–35, 144, 152.

¹⁶ Shmuel Aḥituv, compiler, trans. Anson E. Rainey, Echoes from the Past: Hebrew and Cognate Inscriptions from the Biblical Period (Jerusalem: CARTA, 2008), 389.

¹⁷ K. A. D Smelik, "The Inscription of King Mesha," in *The Context of Scripture, Volume 2*, 137–38, and note 17. See also Siegfried H. Horn and P. Kyle McCarter, Jr, "The Divided Monarchy: The Kingdoms of Judah and Israel," in *Ancient Israel*, 144–46.

important text written on "the lower half of a prepared [stone] panel" and dates to circa 700 BCE. It is almost certainly "a product of Hezekiah's reign." The text, which also serves as an important specimen of pre-exilic Hebrew script, "was inscribed in beautiful letters in straight lines on the lower half of a rectangular area in the rock that had been smoothed beforehand." 19

The celebrated victory stele of pharaoh Merneptah, son of Ramses II, provides crucial information on the formation of Israel in the late Bronze Age. Discovered in 1896 in Thebes by the eccentric Sir Flinders Petrie, this stele commemorates the military victories of Merneptah in Libya and the Levant (circa 1211–1208 BCE) and contains "the earliest occurrence of [the name] Israel outside of the Bible." This reference to Israel "has considerable interest for biblical historians as they attempt to explain Israel's origins in Canaan apart from the Bible." This interest is largely due to the fact that "the writing of Israel uses the determinative (semantic indicator) for an ethnic group, and not for a geographic region or city. This scenario is in complete agreement with the picture portrayed in the books of Joshua and Judges, viz. the Israelites had no clearly defined political capital city, but were distributed over a region."20 John A. Wilson likewise comments that the stele "seem[s] to have the Children of Israel in or near Palestine" at the end of the 13th century BCE, "but not yet as a settled people. This would have important bearing on the date of the Conquest."21

As these examples show, some of our most important non-biblical texts that elucidate or provide some level of historical context to parts of the Bible were recorded on stone.

¹⁸ K. Lawson Younger, Jr., "The Siloam Tunnel Inscription," in *The Context of Scripture, Volume 2*, 145–46. See also Siegfried H. Horn and P. Kyle McCarter, Jr, "The Divided Monarchy: The Kingdoms of Judah and Israel," in *Ancient Israel*, 188–91.

¹⁹ Ahituv, Echoes from the Past, 19.

²⁰ James K Hoffmeier, "The (Israel) Stela of Merneptah," in *The Context of Scripture, Volume 2*, 40–41.

²¹ John A. Wilson, "Hymn of Victory of Mer-ne-Ptah," in *The Ancient Near East: An Anthology of Texts and Pictures*, ed. James B. Pritchard, revised edition (Princeton, NJ: Princeton University Press, 2011), 328.

Outside of the biblical tradition, Latter-day Saints are familiar with examples in their unique Restoration scriptures of recording texts on stone. The Book of Mormon, for instance, mentions an engraved stone record containing an account of the Jaredites. "And it came to pass in the days of Mosiah, there was a large stone brought unto him with engravings on it; and he did interpret the engravings by the gift and power of God. And they gave an account of one Coriantumr, and the slain of his people....It also spake a few words concerning his fathers. And his first parents came out from the tower, at the time the Lord confounded the language of the people" (Omni 20–22). Archaeologically, as John L. Sorenson and others have noted, the use of stone as writing material is well attested in ancient Mesoamerica.²²

Clay Tablets

Stone, of course, was heavy and difficult to engrave. Ancient Near Eastern peoples discovered how to make records in soft clay to create tablets (often firing them in the process). Surviving clay tablets help clarify the culture of Old Testament times.²³ Often, these tablets were impressed with seals, with the intention of giving the record official sanction or approval. The use of clay as a writing material is so abundant from the archaeological record that it is unnecessary to list examples here. Levantine and Mesopotamian cultures (e.g. Ugarit, Assyria, and Babylonia) in particular stand out as notable for their large corpuses of clay tablet records.

Many Latter-day Saints know the famous passage in Job 38 in which the Lord speaks to Job out of the whirlwind and asks where he was "when the morning stars sang together and all the heavenly beings shouted for joy" (Job 38:7). The same chapter describes how the Lord created and controls the earth and its systems, comparing that to how a record keeper controls clay and impresses it with a seal. The Lord asks Job, "Have you commanded the morning since your days began, and caused the dawn to know its place, so that it might take hold of the skirts of the earth,

²² John L. Sorenson, Images of Ancient America: Visualizing Book of Mormon Life (Provo, UT: FARMS, 1998), 160; Mormon's Codex: An Ancient American Book (Provo, UT: Neal A. Maxwell Institute for Religious Scholarship, 2013), 230–31; Brant A. Gardner, Second Witness: Analytical and Contextual Commentary on the Book of Mormon, Volume 3: Enos–Mosiah (Salt Lake City: Greg Kofford Books, 2007), 64.

²³ Kerry M. Muhlestein, "From Clay Tablets to Canon: The Story of the Formation of Scripture," in *How the New Testament Came to Be: The Thirty-fifth Annual Sidney B. Sperry Symposium*, ed. Kent P. Jackson and Frank F. Judd Jr. (Provo, UT: Religious Studies Center, BYU, 2006), 44–45.

and the wicked be shaken out of it? It is changed like clay under the seal, and it is dyed like a garment" (Job 38:12–14). Some commentators think this verse refers to a practice of applying a lump of clay to letters made of other materials and using a signet to impress it with a seal.²⁴

To Latter-day Saints, there is meaningful symbolism in being "sealed" by the Lord, thereby taking his name, a reminder of the tie between record keeping and the validity of ordinances.

Metal

Latter-day Saint sacred history includes accounts of records being kept anciently on metal plates. The best-known example is the story of the Book of Mormon, which Joseph Smith testified was engraved on gold plates. In addition to this well-known example, the narrative of the Book of Mormon refers to other records kept anciently on metal plates. In Mosiah 8, for example, King Limhi refers to gold plates kept by the Jaredite people. "I caused that forty and three of my people should take a journey into the wilderness," the king informs the Nephite missionary Ammon.

And they were lost in the wilderness for the space of many days, yet they were diligent, and found not the land of Zarahemla but returned to this land, having traveled in a land among many waters, having discovered a land which was covered with bones of men, and of beasts, and was also covered with ruins of buildings of every kind, having discovered a land which had been peopled with a people who were as numerous as the hosts of Israel. And for a testimony that the things that they had said are true they have brought twenty-four plates which are filled with engravings, and they are of pure gold. (Mosiah 8:7–9)

Metal plates abound elsewhere in the Book of Mormon narrative,²⁵ such as the brass plates that Nephi recovered from Laban. They are described by Nephi as containing "the record of the Jews and also a genealogy of my forefathers" (1 Ne. 3:3). Besides acquiring the brass plates, Nephi made two sets of plates for his and his family's records.

²⁴ For a discussion on the use of seals anciently, see B. S. J. Isserlin, *The Israelites* (London: Thames and Hudson, 1998), 226–28.

²⁵ See the various entries in Dennis L. Largey, ed., *Book of Mormon Reference Companion* (Salt Lake City: Deseret Book, 2003), 643–47; Grant R. Hardy, "Book of Mormon Plates and Records," in *Encyclopedia of Mormonism*, ed. Daniel H. Ludlow (New York: Macmillan, 1992), 1:195–201.

The first was the large plates, which he said contained "the record of my father, and also our journeyings in the wilderness, and the prophecies of my father; and also many of mine own prophecies" (1 Ne. 19:1). Then there were the small plates, which Nephi said contained "an account of my proceedings in my days" and "an abridgment of the record of my father" (1 Ne. 1:17).

Some Latter-day Saints might be surprised to find gold plates in the Bible as well. Exodus 28 includes the command to add a gold plate to the high priest's temple clothing. "And thou shalt make a plate of pure gold, and grave upon it, like the engravings of a signet, HOLINESS TO THE LORD. And thou shalt put it on a blue lace, that it may be upon the mitre; upon the forefront of the mitre it shall be" (KJV Exod. 28:36–37). "Holiness to the Lord" appears on the exterior of Latter-day Saint temples throughout the world, hearkening back to the priestly ordinances of ancient Israel.

The use of metal as a writing material occurs elsewhere in the Old Testament as well. In one of the prophet Isaiah's early oracles, the Lord instructed him to "take a large tablet and write on it" with a heret (Isa. 8:1). A heret (Heb.: חרט), is more than a simple pen. It is a stylus, and in later Hebrew means "to chisel." According to Kevin Barney, it "is not a 'pen' in the sense of an instrument that would use ink but rather a stylus that engraves in a hard surface." Barney also notes that this "tablet" (Heb.: גליון) on which the Lord commanded Isaiah to write appears not to have been "a papyrus or leather scroll but rather a tablet of some kind, whether of metal, stone, or wood."27 It appears that in the context of Isaiah 8:1 and Exodus 32:4, a heret is a stylus, not a pen, as the KJV translates it. Accordingly, Donald Parry, writing for The New Interpreter's Bible Dictionary, notes that a heret is "a graving-tool or stylus for inscribing stone or metal. Aaron employed this tool when fashioning the calf (Exod. 32:4), as well did Isaiah when he inscribed a tablet (Isa. 8:1)."28

²⁶ Ludwig Kohler and Walter Baumgartner, *The Hebrew and Aramaic Lexicon of the Old Testament* (Leiden: Brill, 2001), 1:352.

²⁷ Kevin Barney, "A More Responsible Critique," FARMS Review 15, no. 1 (2003): 107. Kohler and Baumgartner, *Hebrew and Aramaic Lexicon*, 1:193, indicate that the word has a range of meaning, from papyrus to tablet. It also seems to connote a fine garment or gauze. The fact that the Lord commands Isaiah to write with a *heret* (בחרט), which appears to specifically be an engraving stylus, would lend plausibility to Barney's contention that the medium is a stone or metal tablet.

²⁸ Donald W. Parry, "Pen," in *The New Interpreter's Dictionary of the Bible*, ed. Katharine Doob Sakenfeld (Nashville: Abingdon Press, 2009), 4:430.

The Apocrypha, which is derived from the ancient Greek translation of the Bible known today as the Septuagint and included in Roman Catholic and Orthodox scriptural canons (as well as the 1611 KJV and Joseph Smith's 1828 Phinney Bible, for that matter), contains another example of metal plates being used as a writing medium. In their attempt to stop "the Greeks [from] enslaving Israel completely" during the Maccabean-Seleucid conflict of the mid-second century BCE, Judas Maccabeus sent an envoy to Rome in hopes of "establish[ing] friendship and alliance" with the powerful ancient state (1 Macc. 8:17). Accordingly, the Jewish envoys "went to Rome, a very long journey; and they entered the senate chamber and spoke as follows: 'Judas, who is also called Maccabeus, and his brothers and the people of the Jews have sent us to you to establish alliance and peace with you, so that we may be enrolled as your allies and friends."

Impressed with the Jewish delegation, the Romans agreed to enter a treaty with the Maccabean forces, and sent "a copy of the letter that they wrote in reply, on bronze tablets (ἐπὶ δέλτοις χαλκαῖς), and sent to Jerusalem to remain with them there as a memorial of peace and alliance" (1 Macc. 8:22). As Daniel J. Harrington clarifies, "The original treaty is said to have been inscribed on bronze tablets and kept in Rome. The copy was presumably written in Latin or Greek, translated into Hebrew in the original version of 1 Maccabees, and translated [back] into Greek in the extant text of 1 Maccabees."29 This example further shows that metal was used later in the ancient world as a writing medium, including for documents of diplomatic or national importance.³⁰ Indeed, 1 Maccabees records additional instances of bronze plates being used for important writings. 1 Maccabees 14 records the renewal of a diplomatic alliance between Rome and Sparta under Simon, who replaced his brother Jonathan as high priest and became ruler "over the country and the towns in it" (1 Macc. 14:16-17). As part of this diplomatic renewal, Rome (and evidently also Sparta) "wrote to [Simon] on bronze tablets to renew with him the friendship and alliance that they had established with his brothers Judas and Jonathan." These bronze tablets, the text explains, "were read before the assembly in Jerusalem" (1 Macc. 14:18-19). Bronze

²⁹ Daniel J. Harrington, "First Maccabees," in *The HarperCollins Study Bible*, ed. Harold W. Attridge (San Francisco: HarperOne, 2006), 1499, emphasis in original.

³⁰ Interestingly, specimens of inscribed Roman bronze plates have been recovered and documented. See John W. Welch and Kelsey D. Lambert, "Two Ancient Roman Plates," *BYU Studies* 45, no. 2 (2006): 55–76. It is likely that the bronze tablets mentioned in 1 Maccabees were similar to those discussed by Welch and Lambert.

tablets are also described as having been used as a writing medium for different occasions later in the same chapter (1 Macc. 14:25–27, 46–49).

Archaeological evidence for the use of metal as a writing medium has been found throughout the Mediterranean region. Although the use of metal as a writing medium was rather limited when compared to papyri or stone, some important examples have survived.

- The Ketef Hinnom scrolls are two small silver amulets, discovered in 1980 by Gabriel Barkay, that "include blessings almost identical to the so-called priestly or aaronid Benediction of Num 6:24–26." Although the dating of the scrolls is disputed, most scholars assign a preexilic date.³¹
- Among the corpus of texts discovered at Qumran is the so-called Copper Scroll (3Q15). As William J. Hamblin summarizes, "Although the origin and purpose of the Copper Scroll is widely debated, it is a clear example of an attempt to preserve an important sacred record by writing on copper/bronze (Heb. nechushah) plates and then hiding the document."³²

Numerous other examples of writing on metal or metal plates from the ancient Near East, including both Semitic and Greek inscriptions, are attested.³³

Wood

Although far less frequently attested, the biblical text does speak of wood being used as a writing material. In the famous passage about Aaron's miraculously sprouting rod or staff, Numbers 17 records:

The Lord spoke to Moses, saying: Speak to the Israelites, and get twelve staffs [Heb.: מטה] from them, one for each ancestral house, from all the leaders of their ancestral houses. Write

³¹ P. Kyle McCarter, "The Ketef Hinnom Amulets," in *The Context of Scripture, Volume 2*, 221. See also King and Philip J. King and Lawrence E. Stager, *Life in Biblical Israel* (Louisville, KY: Westminster John Knox Press, 2001), 305–306.

³² William J. Hamblin, "Sacred Writing on Metal Plates in the Ancient Mediterranean," FARMS Review 19, no. 1 (2007): 41. See also King and Stager, *Life in Biblical Israel*, 305.

³³ Hamblin, "Sacred Writing on Metal Plates in the Ancient Mediterranean," 42–52. As Hamblin, ibid. 52–53, concludes, "Based on these examples of Hebrew, Phoenician, Greek, and Italic practices, we can conclude that writing and preserving sacred bronze and gold plates was a widespread phenomenon in the eastern Mediterranean world."

each man's name on his staff, and write Aaron's name on the staff of Levi. For there shall be one staff for the head of each ancestral house. Place them in the tent of meeting before the covenant, where I meet with you. And the staff of the man whom I choose shall sprout; thus I will put a stop to the complaints of the Israelites that they continually make against you. (Num. 17:1–5)

Then there are the "sticks" of Ezekiel 37 that Latter-day Saints frequently cite and have cited since the nineteenth century.³⁴ The passage speaks of Ezekiel being commanded by the Lord to write on wood. "The word of the Lord came to me: Mortal, take a stick and write on it, 'For Judah, and the Israelites associated with it'; then take another stick and write on it, 'For Joseph (the stick of Ephraim) and all the house of Israel associated with it'; and join them together into one stick, so that they may become one in your hand" (Ezek. 37:15–17). The Hebrew word underlying the English "stick" is simply the word for "wood" or "tree" (Heb.: pp). In addition, many books—including scriptures—up through the Middle Ages had text blocks that were sandwiched between slabs of wood, which helps explain why even today the core of the front and back covers of hardbound books are called "boards." ³⁵

Unfortunately, because wood is a highly perishable material, there remains almost no archaeological evidence for the use of wood as a writing medium during biblical times. The vast majority of any wood media have long eroded in the climes of the Near East. That being said, a few examples have miraculously survived. As Lemaire explains, "Wooden tablets, often coated with stucco, were frequently used in Egypt, especially for schoolboys' exercises. Such tablets have little chance of surviving in Mesopotamia or Syria-Palestine because of the climate. Only one example is known from Palestine: a letter sent by Bar Kosiba/Kokhba and found in Nahal Hever." Wooden tablets have also been recovered from the oasis of Dakhla, attesting to the use of wood as a writing medium in the classical era. Also attested in the archaeological

³⁴ See D&C 27:5; Orson Pratt, Divine Authority, or the Question, Was Joseph Smith Sent of God? (Liverpool: R. James, 1848), 4; Franklin D. Richards discourse, October 5, 1895, as reported in Millennial Star 58, no. 9 (February 27, 1896): 129.

³⁵ John Carter and Nicolas Barker, *ABC for Book Collectors*, 8th edition (New Castle, DE: Oak Knoll Press, 2006), 47–48.

³⁶ Lemaire, "Writing and Writing Materials," 1002.

³⁷ Adam Bülow-Jacobsen, "Writing Materials in the Ancient World," in *The Oxford Handbook of Papyrology*, ed. Roger S. Bagnall (New York: Oxford University Press, 2009), 12–13.

record are a precious few wax-coated wooden writing boards used "in Assyria and N Syria in the 8th century B.C." It is possible that these Assyrian wax-coated wooden writing boards are the type of "sticks" used by the prophet in Ezekiel 37, as has been suggested by one Latterday Saint scholar.³⁹

Animal Skins

Another common writing material in antiquity was animal skin, referred to generally as parchment.⁴⁰ Several Bible verses refer to frontlets or phylacteries, described in the Latter-day Saint Bible Dictionary as "[s] trips of parchment on which were written four passages of scriptures (Exod. 13:1-10, 11-16; Deut. 6:5-9; 11:13-21) and that were rolled up and attached to bands of leather worn (as an act of obedience to Exod. 13:9, 16; Deut. 6:8; 11:18) around the forehead or around the arm."41 Parchment was also used in early Christian times, as evidenced in the New Testament. In writing to his friend and missionary companion Timothy, the apostle Paul asked him not only to bring some clothing but "also the books, and above all the parchments [Gk.: τὰ βιβλία μάλιστα τὰς μεμβράνας]" (2 Tim. 4:13). This passage is significant in that it distinguishes between papyrus scrolls and animal skin parchment as writing media. From a Latter-day Saint perspective, it is interesting to study the headnote to Doctrine and Covenants section 7, which explains that the section is a "Revelation given to Joseph Smith the Prophet and Oliver Cowdery, at Harmony, Pennsylvania, April 1829, when they inquired through the Urim and Thummim as to whether John, the beloved disciple, tarried in the flesh or had died. The revelation is a translated version of the record made on parchment by John and hidden up by himself."

Papyrus

Papyrus served as one of the most common writing media in biblical Israel and throughout the ancient Mediterranean world.⁴² "It is likely that the biblical texts were [originally] written on papyrus or leather

³⁸ Lemaire, "Writing and Writing Materials," 1002.

³⁹ Keith H. Meservy, "Ezekiel's Sticks and the Gathering of Israel," *Ensign*, February 1987, 4–13.

⁴⁰ Bülow-Jacobsen, "Writing Materials in the Ancient World," 11.

⁴¹ *Bible Dictionary*, s.v. "Frontlets or phylacteries," online at https://www.lds.org/scriptures/bd/frontlets?lang=eng.

⁴² See the discussion in Bülow-Jacobsen, "Writing Materials in the Ancient World," 4-10.

scrolls," observes Paul D. Wegner.⁴³ The evidence for this comes not only from the archaeological record but also from the text of the Bible itself, which speaks repeatedly of scrolls or rolls (e.g. Ezra 6:1; Isa. 34:4; Jer. 36:14; Ezek. 2:9–10; Zech. 5:1; Rev. 6:14).

The example of writing on papyrus in Jeremiah 36 serves as one of the best examples in the biblical text. In this chapter, Jeremiah was commanded to "take a scroll and write on it all the words that I have spoken (Jer. 36:2). Accordingly, Jeremiah employed a scribe, Baruch, who wrote "on a scroll at Jeremiah's dictation" (Jer. 36:4). This scroll was written "with ink," and subsequently reproduced when king Johiakim burned the first scroll out of frustration (Jer. 36:18, 20–32). The word used for "scroll" in the Hebrew text is *sēper* and means "writing, inscription." It commonly translated as "scroll" throughout the Bible. ⁴⁴ That this scroll was made of papyrus or leather is evident in king Jehoiakim's ability to "cut [the scroll] with a penknife and throw [it] into the fire" (Jer. 36:23), a feat that would have been impossible with metal or stone.

As with the numerous archaeological examples of texts being written on stone and clay, the examples of texts being written on papyrus are so abundant that it would take an inordinate amount of time to describe every single known instance, and a whole sub-discipline (papyrology) in ancient Near Eastern studies has developed to catalogue and study the abundance of surviving papyri from the ancient world. Indeed, the very word for "Bible" comes from the Greek $\tau \acute{\alpha}$ $\beta \iota \beta \lambda \acute{\alpha}$ ("the books"), which is also the Greek word for "papyrus." Papyrus in particular was used throughout the span of Egypt's history, and frequently exported to neighboring locales. "The proximity of Palestine to Egypt made papyrus easy to obtain there, all the more so during the [Late Bronze] period, when Canaan was an Egyptian protectorate," notes Lemaire. 46

The earliest complete extant biblical manuscripts thus far discovered are among the Dead Sea Scrolls. They date from circa 150 BCE to 68 CE.⁴⁷ The materials used in the composition of these manuscripts

⁴³ Paul D. Wegner, A Student's Guide to Textual Criticism of the Bible: Its History, Methods & Results (Downer Groves, IL: IVP Academic, 2006), 62.

⁴⁴ The meaning of this term, however, can range from "letter" or "document" to even "inscription" in both biblical and non-biblical usage.

⁴⁵ James I. Cook, "Books and Bookmaking in Antiquity," in *The Oxford Companion to the Bible*, ed. Bruce M. Metzger and Michael D. Coogan (New York: Oxford University Press, 1993), 93.

⁴⁶ Lemaire, "Writing and Writing Materials," 1003.

⁴⁷ Donald W. Parry, *Illuminating the Dead Sea Scrolls* (Provo, UT: Neal A. Maxwell Institute for Religious Scholarship, 2014), 24.

include both papyrus and tanned leather, and were collected as both individual sheets and bound scrolls. Besides the Qumran manuscripts, the overwhelming number of biblical manuscripts (besides a few ostraca) that have survived from the Hellenistic period onward into the Christian era are written on papyrus, parchment, and early forms of paper. Given the fact that papyrus sheets were, relatively speaking, easily manufactured—as well as the fact that papyrus was relatively cheap—papyrus, and later parchment, served as an extremely common writing medium in antiquity. Paper of the papyrus was relatively cheap—medium in antiquity.

Pottery Sherds

Like papyrus, broken pieces of ceramic pots, called ostraca (Gk.: ὄστρακα), were used abundantly in the ancient Near East to record numerous texts, from administrative records and letters to receipts of exchange and commerce. ⁵⁰ "Since ostraca are virtually indestructible," notes Lawrence E. Toombs, "numerous examples have been found by archaeologists." Perhaps the ostraca best well known to Latter-day Saints, thanks to the work of Hugh Nibley and subsequent Latter-day Saint scholars, ⁵² are the Lachish letters, written on the eve of the Babylonian conquest of Judah in the early 6th century BCE. ⁵³ Of these letters, the so-called Hošayahu letters provide great insight into the military situation of Judah shortly before the Jewish diaspora. ⁵⁴

This review of ancient record-keeping media is by no means exhaustive. Rather, it is meant to illustrate broadly the sort of technology used by ancient peoples to write and preserve their most important inscriptions and texts. Much more could be said about each of these different kinds of writing material, as well as other forms of material

⁴⁸ Emanuel Tov, Scribal Practices and Approaches Reflected in the Texts Found in the Judean Desert (Leiden: Brill, 2004), 31–56.

⁴⁹ Wegner, A Student's Guide to Textual Criticism of the Bible, 28, 62, 79–82, 150, 201, 208, 232–34, 304, 307.

⁵⁰ Again see Bülow-Jacobsen, "Writing Materials in the Ancient World," 14–17.

⁵¹ Lawrence E. Toombs, "Ostraca," in *Harper's Bible Dictionary*, ed. Paul J. Achtemeier (San Francisco: Harper & Row, 1985), 736.

⁵² Hugh Nibley, *The Prophetic Book of Mormon* (Provo, UT: FARMS, 1989), 380–406; Dana M. Pike, "Israelite Inscriptions from the Time of Jeremiah and Lehi," in *Glimpses of Lehi's Jerusalem*, ed. John W. Welch, David Rolph Seely, and Jo Ann H. Seely (Provo, UT: FARMS, 2004), 205–210.

⁵³ Ahituv, *Echoes from the Past*, 59, dates the ostraca "to the conquest of the city by Nebuchadnezzar's army in 586 BCE."

⁵⁴ See generally Ahituv, *Echoes from the Past*, 56–91; Siegfried H. Horn and P. Kyle McCarter, Jr., "The Divided Monarchy," in *Ancient Israel*, 201–05.

(e.g. bone and linen mummy wrappings), and their use anciently for record keeping. Notwithstanding, these examples illustrate what record-keeping technology was like anciently. They also demonstrate how seriously the ancient peoples viewed the records that they kept.

Record Keeping in the Modern Church

Record-keeping technologies in ancient times provide an interesting comparison and background to record-keeping technologies used over the course of the history of The Church of Jesus Christ of Latter-day Saints, beginning with its founding in 1830 by Joseph Smith.

Paper

The most common technology used for records in Joseph Smith's day was paper impressed with ink applied by a pen or printing press. ⁵⁵ When Joseph Smith dictated his translation of the record contained on the golden plates, scribes recorded his dictation on paper. In terms of volume, paper constitutes the principal medium for most of the records contained in the Church History Library today. ⁵⁶

Metal

Some records of the restored church appear on some of the same types of mediums as were used anciently, including stone and metal. For example, some early photographs were captured on metal. The earliest commercially viable photographic technology was the daguerreotype, invented in 1839 in France. Nelson B. Wadsworth, an expert on early Latter-day Saint photography, has described how daguerreotypes captured images on metal.

"Basically," he explains, "the daguerreotype was a silver-coated copper plate polished to a high luster and sensitized in a box by vapors of iodine....After the plate was exposed in a camera..., development was achieved by heating mercury to 167 degrees and subjecting the plate to the resulting vapor." The Church History Library in Salt Lake

⁵⁵ Ultimately, virtually all of the papers of Joseph Smith will be available for public view and searching on the Joseph Smith Papers website, josephsmithpapers.org. For an overview on the history and evolution of paper see Dard Hunter, *Papermaking: The History and Technique of an Ancient Craft* (New York: Dover, 1978).

⁵⁶ See Behold, There Shall Be a Record Kept Among You: Collections of the Church History Library of The Church of Jesus Christ of Latter-day Saints, ed. Richard E. Turley Jr., et al. (Salt Lake City: Church History Library, 2009), 8–25, 36–41.

⁵⁷ Nelson B. Wadsworth, Set in Stone, Fixed in Glass: The Great Mormon Temple and Its Photographers (Salt Lake City: Signature Books, 1992), 20.

City holds daguerreotypes of early Church leaders, such as Brigham Young and Eliza R. Snow, as well as of the Nauvoo Temple and of the groundbreaking for the Salt Lake Temple.⁵⁸

A later form of metal photograph is the tintype, which, as Wadsworth describes, "was made on black japanned iron....Tintypes, most with a grayish cast, were easily colored and were made in a variety of sizes, often larger than daguerreotypes." The wide-ranging photograph collections in the Church History Library in Salt Lake City include tintypes too. 60

Glass

As technology advanced, metal photographs gave way to images captured on glass and paper. Nelson Wadsworth explains, "Wet plate photography came to Utah in the late 1850s and made the daguerreotype obsolete. The first wet plate images were called ambrotypes and were often referred to as 'daguerreotypes on glass.' They were actually small glass negatives converted to positives and placed in miniature daguerreotype cases." The Church History Library in Salt Lake City and the Churchowned Brigham Young University in Provo hold numerous glass plates used as negatives for photographs during succeeding decades of the church's history.

Film

Over time, plastic film replaced glass as the main medium for photographic negatives and slides. It also became the medium for motion pictures. Motion pictures were originally silent. ⁶⁴ In October 1916, the Clawson Film Company took silent footage of the Latter-day Saint general conference in Salt Lake City on 35mm nitrate film stock. As audiovisual archivist Christine Marin points out, "From 1919 to 1929 the Clawsons recorded moving film images of Church leaders such as Joseph F. Smith, Heber J. Grant, George Albert Smith, David O. McKay,

⁵⁸ William W. Slaughter, *Life in Zion: An Intimate Look at the Latter-day Saints*, 1820–1995 (Salt Lake City: Deseret Book, 1995), 18, 24, 33, 185–86; Nelson B. Wadsworth, Through Camera Eyes (Provo, UT: BYU Press, 1975), 45, 49.

⁵⁹ Wadsworth, Set in Stone, Fixed in Glass, 33-34.

⁶⁰ William W. Slaughter, "Photographs. 'Like Apples of God in Pictures of Silver," in *Behold, There Shall Be a Record Kept Among You*, 28.

⁶¹ Beaumont Newhall, *The History of Photography: From 1839 to the Present* (New York: Little, Brown and Co., 1982).

⁶² Wadsworth, Set in Stone, Fixed in Glass, 28.

⁶³ Wadsworth, Through Camera Eyes, 117-70; Slaughter, "Photographs," 28.

⁶⁴ Newhall, The History of Photography, 121–30.

and Joseph Fielding Smith walking outside the Salt Lake Temple and Church Administration Building." Regrettably, much of the Clawsons' film footage went up in flames in 1929, though precious pieces remain in the Church History Library.⁶⁵

The Church History Library also has later film recordings, such as of the first general conference television broadcast in 1949 and the live satellite broadcast of conference on April 6, 1980 to mark the Church's sesquicentennial.⁶⁶

In 1938 the Church adopted microfilm technology as a means of capturing genealogical information. Over time, the Granite Mountain Records Vault, a record preservation facility for the Church in a canyon southeast of Salt Lake City, came to contain some 2.4 million reels of microfilm.⁶⁷

Wax

In the latter part of the nineteenth and early twentieth centuries, Thomas Edison and others discovered how to capture sound on metal foil, wax, and plastic. The earliest known sound recordings by a member of The Church of Jesus Christ of Latter-day Saints are wax cylinder recordings that captured the voice of Church president Wilford Woodruff as he spoke into a "talking machine" in March 1897.⁶⁸

Shellac and Vinyl

Popular as they were at the time, cylinders eventually gave way to recording disks. The Mormon Tabernacle Choir made its first sound recordings in 1910 using acoustic equipment. Sound that was funneled into a recording horn vibrated a needle that made impressions on a wax

⁶⁵ Christine R. Marin, "Audiovisual Materials. 'The Hearing Ear, and the Seeing Eye, the Lord Hath Made Even Both of Them,'" in *Behold, There Shall Be a Record Kept Among You*, 33.

⁶⁶ Marin, "Audiovisual Materials," 34. In the twentieth century, the state of Utah, with its heavy Latter-day Saint population, became a mecca for commercial movie-making, and the films created there sometimes featured Mormon characters or themes. See James V. D'Arc, When Hollywood Came to Utah: A History of Moviemaking in Utah (Layton, UT: Gibbs Smith, 2010).

⁶⁷ Allen, Embry, and Mehr, Hearts Turned to the Fathers, 216-58.

⁶⁸ Richard Neitzel Holzapfel and Stephen H. Smoot, "Wilford Woodruff's 1897 Testimony," in *Banner of the Gospel: Wilford Woodruff*, ed. Alexander L. Baugh and Susan Easton Black (Provo, UT: Religious Studies Center, Brigham Young University, 2010), 327–64; Marin, "Audiovisual Materials," 30–31, 33.

master that was taken to New York and used to create shellac records.⁶⁹ These were "78 rpm 10-inch records with one song per side."⁷⁰

As time marched on, these disk technologies were replaced by ever more dense recordings on better materials, such as vinyl. Throughout much of the twentieth century, the Tabernacle Choir issued its recordings on vinyl disks.⁷¹

Tape

Eventually, magnetic tape superseded vinyl recordings as the preferred technology for recording sound and video. Reel-to-reel recordings gave way, for the most part, to cassette tapes. The Church History Library in Salt Lake City has decades of magnetic reels and tapes of various sizes and types that record historical events and interviews with Church members.⁷²

Magnetic Disks

In the relentless progress of technology, magnetic tape for some purposes over time gave way to magnetic disks. Many readers of this article will recall the familiar 5.25 and 3.5 inch versions that were used with personal computers in the late twentieth century. As the Church automated with the rest of the world, numerous such disks were used to store information at Church headquarters.

CDs, DVDs, and Flash Drives

Magnet media was ultimately replaced with compact disks, DVDs, flash drives, and other technologies that should be familiar to technologically savvy readers. All of these have been employed not only at the Church's headquarters in Salt Lake City but also in area offices and many local units around the world.

⁶⁹ Richard E. Turley Jr., "Epoch in Musical History: The Mormon Tabernacle Choir's First Recordings," *Utah Historical Quarterly* 79, no. 2 (Spring 2011): 100–121.

⁷⁰ Marin, "Audiovisual Materials," 32-33.

⁷¹ The most complete discography of the Mormon Tabernacle Choir can be found at http://www.josephsons.org/slmtc/mtc_rec.htm.

⁷² Matthew K. Heiss, "Oral History. 'For the Good of the Church and for the Rising Generations," in *Behold, There Shall Be a Record Kept Among You*, 28–31; Marin, "Audiovisual Materials," 35.

The Future of Record Keeping in the Church

The multi-millennium survey in this paper exposes an imposing challenge for The Church of Jesus Christ of Latter-day Saints and every other institution that seeks to preserve its records. Generally, the more record-keeping technology has advanced, the shorter the shelf life has become for the new media.

The earliest surviving media—stone, baked clay, and metal—were inorganic and could last tens or even hundreds of thousands of years, depending on storage conditions. Organic media like wood, animal skins, papyrus, and paper might last hundreds or thousands of years, again depending on original quality and storage conditions, though low-quality media like highly acidic paper can deteriorate much more quickly. Glass can last for thousands of years, though given its fragile nature, it tends to break. Shellac and vinyl records are also fragile, making the practical lifetimes of these items more like hundreds or just tens of years. Magnetic tape deteriorates in tens of years. Disks like CDs and DVDs, for the most part, cannot be reliably trusted for more than just a few years.

In order to employ modern technology to preserve digital records in perpetuity, the Church and other institutions may need to think of records in different terms. In the past, a record has often been considered to be the combination of (1) the information it contains and (2) the medium on which it is recorded. Both elements have been considered important. Given the transient nature of digital media today, more emphasis in the future will probably be given to the information and less to the medium.

With pre-digital technologies, each subsequent copy of a record—whether paper, film, or tape—generally lost quality in the copying. That meant records on original media were of better quality than copies on later media. Today, however, digital technology makes it theoretically possible to make perfect copies without a loss of quality. By making multiple copies of digital records and copying them to new media as they develop, it may be possible to preserve the information in a record perpetually with virtually no degradation.

Already, The Church of Jesus Christ of Latter-day Saints has begun storing digital records in a modern Digital Records Preservation System that keeps duplicate copies in multiple locations to help assure their preservation in the event of a natural or man-made disaster.

Conclusion

Given the importance of record keeping in Latter-day Saint theology, historians and record keepers in the Church will continue to preserve records kept to date using old technologies and will continue to track new technologies to see what they can offer in the future. A now canonized epistle of Joseph Smith to the Saints of his day contains doctrine that they will continue to find relevant: "There is much which lieth in futurity, pertaining to the saints, that depends upon these things" (D&C 123:15).

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