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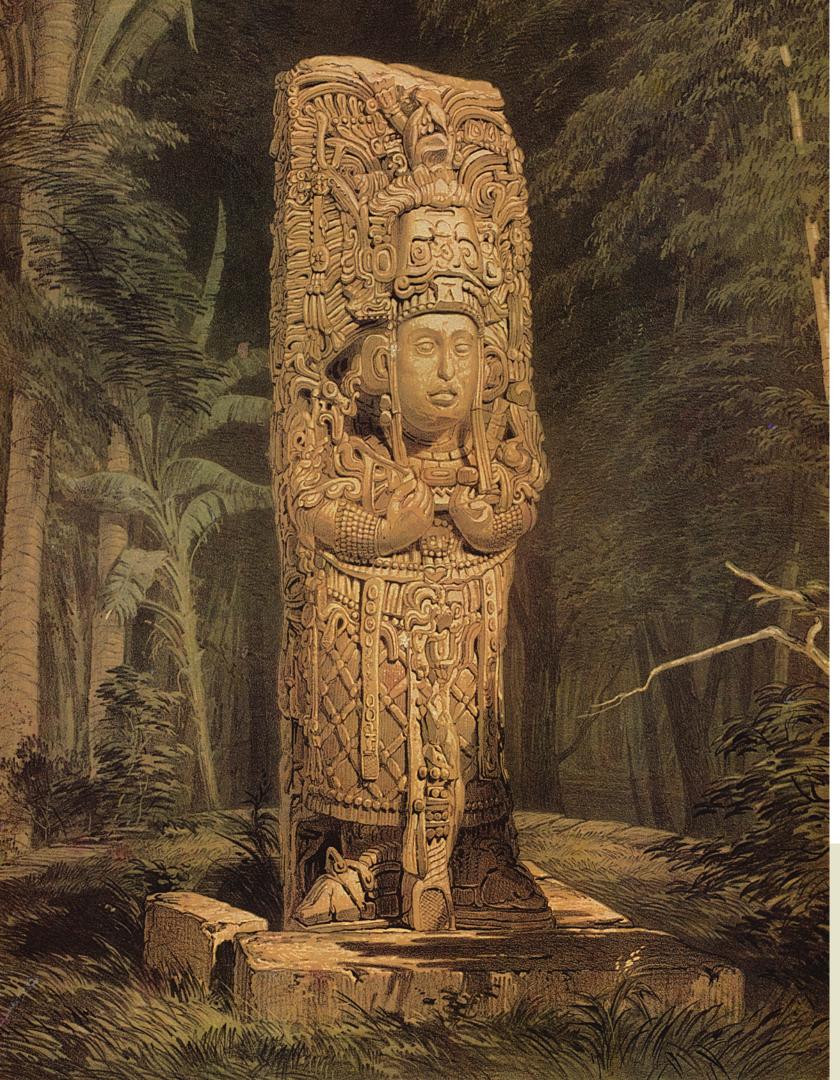
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- **Title** Joseph Smith, the *Times and Seasons*, and Central American Ruins
- Author(s) Matthew Roper, Paul J. Fields, and Atul Nepal

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- During the time the Latter-day Saints lived in Nauvoo, Abstract John Stephens and Frederick Catherwood published Incidents of Travel in Central America, an illustrated report of the first discovery of ancient ruins in Central America by explorers. These discoveries caused great excitement among the Saints, and subsequently five editorials appeared in the *Times and Seasons* commenting on what these meant for the church. Although the author of the editorials was not indicated, historians have wondered if Joseph Smith penned them since he was the newspaper's editor at the time. We examined the historical evidence surrounding the editorials and conducted a detailed stylometric analysis of the texts, comparing the writing style in the editorials with the writing styles of Joseph Smith, John Taylor, and Wilford Woodruff—the only men involved with the newspaper during the time the editorials were published. Both the historical and stylometric evidence point toward Joseph Smith as the most likely author of the editorials. Even if he did not write them alone, he took full responsibility for the contents of the newspaper during his editorial tenure when he stated, "I alone stand for it."



JOSEPH SMITH, THE TIMES AND SEASONS, AND CENTRAL AMERICAN RUINS

MATTHEW ROPER, PAUL J. FIELDS, AND ATUL NEPAL

n 1841, explorers John Lloyd Stephens and Frederick G. Catherwood published an account of L their travels and discoveries in Southern Mexico, Guatemala, and Honduras entitled Incidents of Travel in Central America, Chiapas, and Yucatan.¹ Stephens's well-written narrative, with accurate and detailed sketches of the ruins and monuments by Catherwood, was well received by American readers. Latter-day Saints also greeted these discoveries with enthusiasm in large part because of their potential relevance to the ancient historical setting of the Book of Mormon. During the Prophet Joseph Smith's tenure as editor of the Nauvoo Times and Seasons, five articles were published endorsing Stephens and Catherwood's work. Historians have wondered if Joseph Smith authored these articles or if they were actually written by someone else. Some have gone so far as to suggest that the articles were written without his supervision or authorization and that

the unknown writer's or writers' efforts to associate the Central American discoveries with the Book of Mormon contradicted revelations of the Prophet.² In order to address these questions we will review the historical evidence of Joseph Smith's knowledge of the work of Stephens and Catherwood, the content of these articles, and the Prophet's activities as editor of the *Times and Seasons*. After establishing this historical foundation, we will then apply the statistical tool of stylometry (wordprint analysis) to the question of Joseph Smith's authorship of these articles and examine the implications of these findings.

Historical Background

Latter-day Saints in Nauvoo became aware of Stephens and Catherwood's discoveries through an article published in the 15 June 1841 issue of the *Times and Seasons*. At this time the periodical was under the editorship of the Prophet's brother Don Carlos Smith

"Idol at Copan," Honduras. Drawing from the Past: Maya Antiquity through the Eyes of Frederick Catherwood. Mortimer Rare Book Room, Smith College, Northampton, MA. www.smith.edu/libraries/libs/rarebook/exhibitions/catherwood/plate1.htm.

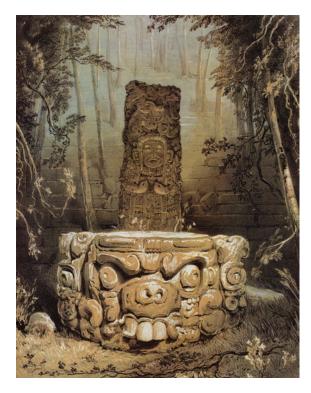
FROM THE EDITOR:

For over three decades now, computer analyses (using human-written programs, of course) have been used to differentiate the writing styles of authors. Over these decades, the analyses have become more sophisticated and more accurate, though accuracy is still relegated to probability, never certainty. Matt Roper, Paul Fields, and Atul Nepal have applied the latest iteration of computer analyses to the unsigned editorials that appear in 1842 in the *Times and Seasons*. Did Joseph Smith write the LDS editorial comments on Stephens and Catherwood's book on Central American ruins? Read and see.

and Robert B. Thompson, who noted the significance of the explorers' discoveries for Latter-day Saints in an article entitled "American Antiquities—More Proofs of the Book of Mormon."³ Several months later, John Bernhisel, a recent convert then serving as a bishop over the Saints in New York City, purchased a copy of the two-volume work, and on 8 September he wrote to Joseph Smith to inform him that he was sending a copy of the set "as a token of my regard for you as a Prophet of the Lord."⁴ Bernhisel asked Wilford Woodruff, who was returning home from his apostolic mission in Great Britain, to carry the set back to the Prophet in Nauvoo, which he did.⁵

On the way home, Woodruff spent part of his time reading the work and was enthusiastic about its contents. On 13 September he recorded the following in his journal:

I spent the day in reading the 1st vol of INCIDENTS OF TRAVELS IN Central America Chiapas AND Yucatan BY JOHN L STEPHEN'S I felt truly interested in this work for it brought to light a flood of testimony in proof of the book of mormon in the discovery & survey of the city Copan in Central



"Idol and altar at Copan," Honduras. Drawing from the Past: Maya Antiquity through the Eyes of Frederick Catherwood. Mortimer Rare Book Room, Smith College, Northampton, MA. www.smith.edu/libraries/libs/rarebook/exhibitions/ catherwood/plate5.htm.

America A correct drawing of the monuments, pyramids, portraits, & Hieroglyphics as executed by Mr Catherwood is now presented before the publick & is truly a wonder to the world. Their whole travels were truly interesting.⁶

On 16 September he recorded that he had

perused the 2d Vol of Stephens travels In Central America Chiapas of Yucatan & the ruins of Palenque & Copan. It is truly one of the most interesting histories I have read.⁷

Woodruff arrived in Nauvoo on 6 October.⁸ Then, on 16 November 1841 Joseph Smith dictated a letter to John Bernhisel thanking him for the gift:

I received your kind present by the hand of Er [Elder] Woodruff & feel myself under many obligations for this mark of your esteem & friendship which to me is the more interesting as it unfolds & developes many things that are of great importance to this generation & corresponds with & supports the testimony of the Book of Mormon; I have read the volumes with the greatest interest & pleasure & must say that of all histories that have been written pertaining to the antiquities of this country it is the most correct luminous & comprihensive.⁹

This letter shows that Joseph Smith had read Stephens and Catherwood's work and shared the excitement these discoveries generated among his associates. It also, in effect, signaled his approval of such interests in connection with the Book of Mormon, an interest that can be seen in subsequent Latter-day Saint literature. Of particular interest are five articles that appeared in the Times and Seasons in 1842 when Joseph Smith served as editor. These articles, two signed "Ed." (presumably indicating editor) and three left unsigned, promoted the work of Stephens and Catherwood among Latter-day Saints. The five editorials highlight Latter-day Saint interest in the discoveries and also encouraged the view that they were consistent with and supportive of the claims of the Book of Mormon.

Times and Seasons Editorials on Central America and the Book of Mormon

It was common for Latter-day Saint writers and missionaries to welcome any reported evidence of pre-Columbian civilization as evidence in support of the Book of Mormon. The 2 May 1842 issue of the *Times and Seasons* printed an article reporting the discovery of what appeared to be mummified bodies found in some caves in Kentucky. The editor then suggested that that find could be considered evidence for the Book of Mormon since a knowledge of Egyptian embalming was in accordance with the Bible and was known to the ancient Israelites; however, no geographical correlation between the Kentucky site and the Book of Mormon was made.¹⁰

The *Times and Seasons* printed another editorial signed "Ed." on 15 June 1842 that referenced reported Mexican traditions of a flood and the confounding of languages. The editor then quoted Book of Mormon passages showing that the Jaredites and the Nephites also knew of these things and argued that the Mexican accounts "support the testimony of the Book of Mormon, as well as that of the Mosaic history." The editor thought that "the coincidence is so striking that further comment is unnecessary."¹¹

The 15 July 1842 issue contained another editorial signed "Ed." that cited an extract from Joseph Priest's *American Antiquities*, which discussed reported discoveries found in Tennessee and along the Mississippi River, including evidence for silver, gold, copper, iron, and brass as well as evidence of swords and cities. The author of the editorial, after observing that these North American evidences of pre-Columbian civilization were consistent with the Book of Mormon, further observed:

Stephens and Catherwood's researches into Central America abundantly testify of this thing. The stupendous ruins, the elegant sculpture, and the magnificence of the ruins of Guatemala, and other cities, corroborate this statement, and show that a great and mighty people—men of great minds, clear intellect, bright genius, and comprehensive designs inhabited this continent. Their ruins speak of their greatness; the Book of Mormon unfolds their history.¹²

Two additional editorials (unsigned) on the Central American ruins appeared on 15 September 1842. The first of these reprinted a lengthy extract from *Incidents of Travel in Central America* that described the ruins of Palenque in southern Mexico and concluded that "the foregoing extract has been made to assist the Latter-day Saints, in establishing the Book of Mormon as a revelation from God. It affords great joy to have the world assist us to so much proof, that even the credulous cannot doubt." Regretting that they could not reprint a longer extract from Stephens and Catherwood, the writer suggested that "these wonderful ruins of Palenque are among the mighty works of the Nephites" and compared them with Nephi's description of the temple in the land of Nephi. The Nephites in the Book of Mormon "lived about the narrow neck of land, which now embraces Central America, with all the cities that can be found." The editorial is significant in that the writer went beyond the earlier general arguments for pre-Columbian civilization to making specific correlations between Central American ruins and cities mentioned in the Book of Mormon.¹³

The second unsigned editorial quoted from a Guatemalan tradition reported by Stephens and Catherwood that claimed that the Toltecs who ruled the region in pre-Columbian times were originally of the house of Israel who fled from Moses before they migrated to that land. This "goodly traditionary account" seemed to provide additional "circumstantial evidence" for the Book of Mormon.¹⁴

The 1 October 1842 issue contained yet another unsigned editorial on the Central American ruins. This one reprinted another extract from *Incidents of Travel* that described the ruins of Quirigua near the Gulf of Honduras and a large stone monument with hieroglyphic writing that reminded the writer of the "large stone" found by the people of Zarahemla and deciphered by King Mosiah (Omni 1:20-21):

Since our "Extract" was published from Mr. Stephens' "Incidents of Travel," &c., we have found another important fact relating to the truth of the Book of Mormon. Central America, or Guatamala, is situated north of the Isthmus of Darien and once embraced several hundred miles of territory from north to south.-The city of Zarahemla, burnt at the crucifixion of the Savior, and rebuilt afterwards, stood upon this land.... It is certainly a good thing for the excellency and veracity, of the divine authenticity of the Book of Mormon, that the ruins of Zarahemla have been found where the Nephites left them: and that a large stone with engravings upon it, as Mosiah said; and a "large round stone, with the sides sculptured in hieroglyphics," as Mr. Stephens has published, is also among the left remembrances of the, (to him,) lost and unknown.

Then with a little more caution, the writer continued:

We are not agoing [*sic*] to declare positively that the ruins of Quirigua are those of Zarahemla, but when the land and the stones, and the books tell the story

so plain, we are of opinion, that it would require more proof than the Jews could bring to prove the disciples stole the body of Jesus from the tomb, to prove that the ruins of the city in question, are not one of those referred to in the Book of Mormon.... It will not be a bad plan to compare Mr. Stephens' ruined cities with those in the Book of Mormon: light cleaves to light, and facts are supported by facts. The truth injures no one, and so we make another.¹⁵

The Acquisition of the Times and Seasons

Between 1839 and 1841, the Quorum of the Twelve Apostles fulfilled an important mission to Great Britain, resulting in the conversion of several thousand British Saints.¹⁶ This mission proved to be a blessing to the church as well as to the quorum itself, but it was sometimes difficult for the Prophet to be separated from some of his closest and most diligent associates. This is reflected in some of the challenges associated with publishing the *Times and Seasons*.

In the spring of 1839, Elias Smith, Hiram Clark, and others traveled to Far West, Missouri, where they had retrieved the printing press and the type that had been used to print the short-lived Elder's *Journal* in the summer of 1838.¹⁷ These were brought back to Nauvoo, and the first issue of the Times and Seasons was printed in November 1839 under the editorship of Ebenezer Robinson and one of the Prophet's younger brothers, Don Carlos Smith.¹⁸ On 1 December 1840, this partnership was dissolved and Don Carlos became the sole editor of the paper. Sometime afterward, the Prophet's scribe and friend Robert B. Thompson joined Don Carlos as editor. When Don Carlos died in August 1841, Ebenezer Robinson joined Thompson. Thompson died just twenty days later, and Robinson again became the editor and was joined by Gustavus Hill. Both served as editors until early 1842.

In the fall of 1841, the Prophet began expressing concerns about Robinson and Hill's ownership and operation of the paper. By this time, most of the Twelve had returned from Great Britain, and Joseph was increasingly anxious to place someone else in charge of the church newspaper. On 20 November, Brigham Young recorded:

I met with six others of the Twelve in council, at my house, on the subject of the *Times and Seasons*, the Quorum not being satisfied with the manner Gustavus Hill had conducted the editorial department.¹⁹



Monument from Quirigua, southeastern Guatemala. An unsigned *Times and Seasons* editorial suggests that Quirigua is the location of Zarahemla. Stuardo Herrera from Guatemala, Guatemala.

Then on 30 November it was voted that Ebenezer Robinson be solicited to give up the department of printing the *Times and Seasons* to Elder Willard Richards:

Voted, that if Brother Robinson does not comply with this solicitation, Elder Richards be instructed to procure a press and type, and publish a paper for the Church.

Moved by Elder Young, and seconded by Elder Woodruff, that Lyman Wight and John Taylor present these resolutions to Brother Robinson.²⁰

On 17 January 1842, Brigham Young recorded that he

met in council with the Twelve at Joseph's office. We consulted in relation to the printing and publishing, the council being unanimously opposed to E. Robinson's publishing the Book of Mormon and other standard works of the Church, without being counseled so to do by the First Presidency.21

On 28 January the Prophet received a revelation in which the Lord told him,

Go and say unto the Twelve, that it is my will to have them take in hand the editorial department of the *Times and Seasons*, according to that manifestation which shall be given unto them by the power of my Holy Spirit in the midst of their counsel, saith the Lord. Amen.²²

On this same day Brigham Young wrote the following:

The Lord having revealed, through Joseph, that the Twelve should take in hand the editorial department of the *Times and Seasons*, I bought the printing establishment, for and in behalf of the Church, from Ebenezer Robinson, at a very exorbitant price. The reason I paid such a price was, because the Prophet directed the Twelve to pay him whatever he asked. One item of his bill was \$800, for the privilege of publishing the *Times and Seasons*, or good will of the office.²³

On 3 February Wilford Woodruff recorded that

after consulting upon the subject the quorum appointed Elders J. Taylor & W Woodruff of the Twelve to Edit the *Times & Seasons* & take charge of the whole esstablishment under the direction of Joseph the Seer. Accordingly I left my station at the Nauvoo provision store & commenced this day to labour for the church in the printing esstablishment.

Elder Taylor & myself spent the afternoon in taking an invoice of the printing esstablishment & met in council in the evening at Joseph['s] store.²⁴

On 19 February 1842, Woodruff indicated that Joseph Smith had become the *Times and Seasons* editor:

Joseph the Seer is now the Editor of that paper & Elder Taylor assists him in writing while it has fallen to my lot to take charge of the Business part of the esstablishment.²⁵

Woodruff did not specify precisely what Taylor's writing assistance to the Prophet entailed. Then, in the 1 March 1842 issue of *Times and Seasons*, the Prophet announced that he was undertaking editorship of the paper:

This paper commences my editorial career. I alone stand for it, and shall do for all papers having my signature henceforward. I am not responsible for the publication, or arrangement of the former paper; the matter did not come under my supervision.²⁶

It seems clear that this statement disavows Joseph's sanction for previous editions of the *Times and Seasons*, the "former paper," for as we noted above, Joseph and the Twelve disapproved of how Hill and Robinson had been handling things. In this statement Joseph also declares his willingness to endorse "all papers having my signature henceforward," which is more than an endorsement of individual articles, but rather of all content in all issues of the newspaper for which he is listed as editor. The term *papers* does not mean "documents" in this context; it means issues of the newspaper published with Joseph as editor.

The 1 March 1842 issue of the paper bore the note "The *Times and Seasons* is edited by Joseph Smith."²⁷ However, the Prophet's tenure as editor was short-lived as he subsequently transferred editorial responsibilities for the paper to John Taylor and Wilford Woodruff around 12 November 1842.²⁸

Joseph Smith as Editor

What are we to make of Joseph's role during his time as editor? The historical evidence suggests that this title was not an empty one. In addition to Joseph's known contributions, sources indicate that he read page proofs and sometimes collected and supplied content material to be used for the paper.²⁹ For most of his tenure, he was in or near Nauvoo and frequently visited and worked at the printing office and counseled with fellow apostles, including John Taylor and Wilford Woodruff.

Regardless of who wrote the *Times and Seasons* editorials linking the Book of Mormon to Central America, it is difficult to argue that Joseph Smith was unaware of or would have disapproved of the content of the editorials.

Although the Prophet was in hiding from his enemies during August and September 1842, he stayed close enough that he could continue to work quietly and address church business as opportunity allowed.³⁰ Sometimes he was able to stay at home, where he even managed to pose for a portrait for several days.³¹

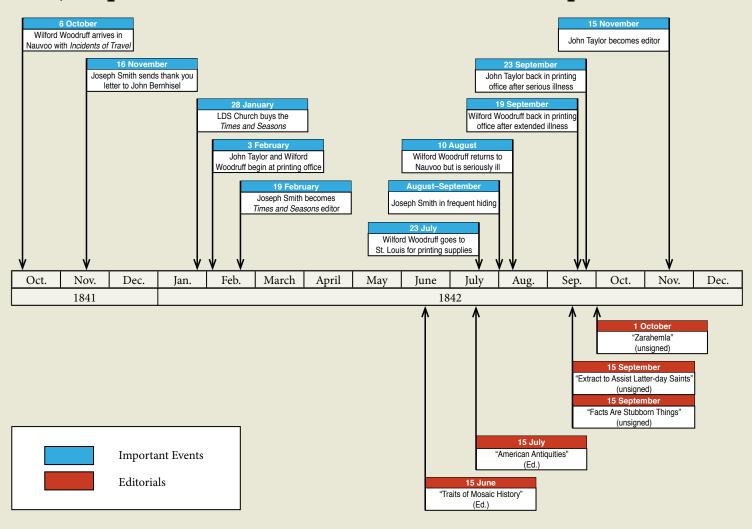
Significantly, both Woodruff and Taylor were seriously ill during this time. For example, Woodruff recorded on 19 September, "I commenced work this day for the first time for 40 days."³² This means that Woodruff had been absent from the printing office for more than five weeks because of illness from 10 August to 19 September. Prior to that Joseph had sent him to St. Louis on 23 July to purchase supplies for the printing office, a journey that took almost three weeks, up to 10 August. Thus Wilford was absent for nearly two months.

On 21 September the Prophet recorded that he met with John Taylor—"who is just recovering from a severe attack of sickness" and had therefore also been absent from the printing office—and that he counseled him "concerning the printing office."³³ The two men met again two days later. We do not know how long Taylor had been sick, but the fact that both he and Woodruff had been seriously ill

suggests that the Prophet must have had to bear alone the full editorial burdens during an extensive period of time, during which two of the unsigned editorials were published. The accompanying timeline graphically displays the chronological events related to the *Times and Seasons* during 1842.

In any case, the fact that he met with Taylor several times suggests that Joseph was actively involved in editorial matters even when in hiding. Regardless of who wrote the *Times and Seasons* editorials linking the Book of Mormon to Central America, it is difficult to argue that Joseph Smith was unaware of or would have disapproved of the content of the editorials.

The events surrounding Joseph Smith's editorship of the *Times and Seasons* in 1842 as they intersect with the editorials about Central America. Designed by Justin Kelly.



Joseph Smith's Times and Seasons Editorship Timeline

During Joseph Smith's tenure as editor, the *Times* and Seasons published numerous articles of doctrinal and historical significance to the church. This content included the Prophet's translation of the Book of Abraham, the Wentworth letter containing the Articles of Faith, early installments of the *History of Joseph Smith*, and two important letters from him on instructions relating to baptism for the dead. When we examine the content of the *Times and Seasons* during this period, we find that he signed his name "Joseph Smith" only when he was reproducing a letter or document written for a publication other than his own paper.

Excluding items attributed to other contributors to the paper, two kinds of editorial articles and commentary remained—those signed "Ed." and those left unsigned. Material attributed to the editor(s) included articles on doctrinal subjects such as baptism, baptism for the dead, the Holy Ghost, detecting false spirits and evil influences, revealed knowledge, and the government of God. In addition, several articles dealt with the Book of Mormon. Unsigned editorial material touched on persecution, the city of Nauvoo, the temple, apostasy, local events, and the Central American ruins.

The time came when Joseph Smith needed to turn his attention elsewhere. In early November Wilford Woodruff wrote that the Prophet "wished us to take the responsibility of the printing Office upon ourselves & liberate him from it."³⁴ John Taylor formally took over as editor with the 15 November 1842 issue, in which the Prophet wrote:

I beg leave to inform the subscribers of the *Times* and Seasons that it is impossible for me to fulfil the arduous duties of the editorial department any longer. The multiplicity of other business that daily devolves upon me, renders it impossible for me to do justice to a paper so widely circulated as the *Times* and Seasons. I have appointed Elder John Taylor, who is less encumbered and fully competent to assume the responsibilities of that office, and I doubt not but that he will give satisfaction to the patrons of the paper. As this number commences a new volume, it also commences his editorial career.

John Taylor wrote immediately thereafter:

The patrons of the *Times and Seasons* will unquestionably be painfully disappointed on reading the above announcement. We know of no one so competent as President Joseph Smith to fill the editorial chair, of which the papers that have been issued since he has been editor are sufficient evidence.

We do not profess to be able to tread in the steps, nor to meet the expectation of the subscribers of this paper so fully as our able, learned and talented prophet, who is now retiring from the field; but as he has promised to us the priviledge of referring to his writings, books, &c., together with his valuable counsel, when needed, and also to contribute to its columns with his pen when at leisure, we are in hopes that with his assistance, and other resources that we have at our command, that the *Times and Seasons* will continue to be a valuable periodical, and interesting to its numerous readers.³⁵

To summarize the historical data:

- Joseph Smith, having read the work of Stephens and Catherwood, was well aware of the discoveries in Central America they reported.
- 2. Joseph Smith was, as were his close associates, very interested in the Central American discoveries and felt that they were important and that Latter-day Saints should know about them; in his view they corresponded with and supported the claims of the Book of Mormon.
- 3. Joseph Smith was the editor of the *Times and Seasons* from about 19 February to 15 November 1842, at which point he announced in the *Times and Seasons* that John Taylor was taking over as editor.
- 4. Between February and November 1842, the only men said to be working in the printing office were Joseph Smith, John Taylor, and Wilford Woodruff.
- Five articles discussing Central America and endorsing the work of Stephens and Catherwood were published while Joseph Smith was editor.
- While acting as editor, Joseph Smith took full responsibility for the content of the material published in the *Times and Seasons*.
- Although he may have received "assistance in writing" from John Taylor, Joseph Smith authored articles "with his pen."

The Question of Authorship

Authorship attribution attempts to identify the author of a text based on the writing style displayed in the text. Using quantitative measures to describe an author's writing style is formally called stylometry or stylometric analysis, but it is commonly referred to as wordprint analysis. The premise behind wordprint studies is that an author has a unique style of writing and that his or her written work can be identified by a stylistic fingerprint discernible in a document as evidenced by his or her choice of words.

Our area of interest is the authorship of the five *Times and Seasons* editorials on the Book of Mormon that appeared in 1842. Because of the many pressures that Joseph Smith was under during 1842, the editorials signed "Ed." on 15 June and 15 July and the unsigned editorials of 15 September and 1 October 1842 could have been written by John Taylor.³⁶ Or because of Wilford Woodruff's enthusiasm for the subject of the Central American discoveries, perhaps he wrote those articles. Then again, the editorials were possibly produced collaboratively and therefore were published without a claim of sole authorship.

One mathematical tool used in a stylometric investigation is discriminant analysis. This technique finds combinations of features (discriminant functions) that can categorize (discriminate) items into known classes, just as plants or animals can be categorized into species based on distinguishing features.

While the contextual [lexical] words are the content words that convey the authors' message, the noncontextual [grammatical] words are the function words an author uses to construct his or her message.

> The discriminant functions can be used to classify a new item of unknown group membership into its appropriate group based on its features.

Two types of words appear in the structure of language: (1) grammatical words, which are noncontextual words, and (2) lexical words, which are contextual words. While the contextual words are the content words that convey the authors' message, the noncontextual words are the function words an author uses to construct his or her message. Examples of noncontextual words include *and*, *but*, *however*, *in*, *on*, *the*, *above*, *upon*, and so forth. In a text such words do not impart the author's message, but they do tell us how the author forms his or her message. Interestingly, the frequency with which an author uses noncontexual words distinctively characterizes his or her writing style and can reveal an author's identity in comparison to other authors for a text of unknown authorship. Consequently, we can use noncontextual words to distinguish among authors' writing styles and thereby form a basis to attribute authorship of a text.

To investigate the probable authorship of the five small editorials (two signed "Ed." and three unsigned) in the *Times and Seasons* that referred to Central America, we put them into one composite block of text so there would be sufficient data to measure word frequencies. Next we took writing samples from Joseph Smith's signed editorials, editorials signed "Ed.," and unsigned editorials appearing in the *Times and Seasons* from March through October 1842. These were segmented into thirty-five 1,000-word blocks to correspond in size with the composite "Central America" text.

So that we could characterize Joseph Smith's writing style, we compiled twenty-nine 1,000-word blocks of text known to have been written by Joseph Smith in his own hand (other than the few Times and Seasons editorials he had signed with his name). We also took writing samples from John Taylor and Wilford Woodruff, who were reasonably the only other possible contributors to the editorials. We selected texts that were as close to the editorial genre as were available and encompassed the 1842 time frame. Thus we did not utilize texts from Woodruff's diaries since his personal writing style differs from his more public exposition; we did likewise for Taylor. We compiled thirty 1,000-word blocks for Taylor and twenty-four 1,000-word blocks for Woodruff, giving a total of one hundred and eighteen blocks of text for use in building the discriminant functions to test the probable authorship of the composite Central America text.

Next we identified seventy noncontextual words in the writing samples that best distinguished the writing styles of Smith, Taylor, and Woodruff. Using these words as the distinctive literary features for the candidate authors, we developed a set of discriminant functions that could classify each writing sample as belonging to the correct author over 98 percent of the time.

Although this is a seventy-dimensional problem (one dimension for each noncontextual word), we can project the relative relationships between the three authors and the three types of editorials into a three-dimensional plot in the shape of a

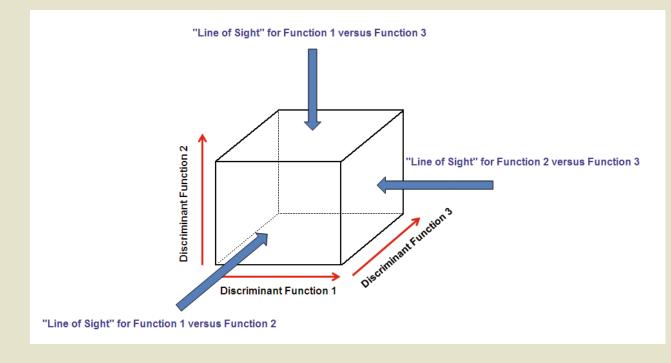


Figure 1. Three-dimensional representation of the discriminant functions showing the line of sight when looking at the authors' texts within the framework of the orthogonal discriminant functions from the front, top, and side.

cube in which each edge of the cube is one of the orthogonal discriminant functions. Figure 1 shows the line of sight from which we can view the positions of each author's texts within the threedimensional space when looking from the front, top, and side of the cube.

Shown in the figures below are plots of the texts within the framework of the three discriminant functions when looking from the front. In the first plot (fig. 2) we see that the three authors—Smith (yellow dots), Taylor (maroon dots) and Woodruff (green dots)—can clearly be distinguished from each other as their respective texts group together separately from the texts of the other authors. We notice that the discriminant function along the base of the cube (the horizontal axis) separates Smith from the other two authors, and the discriminant function along the vertical axis separates Woodruff from Smith and Taylor.

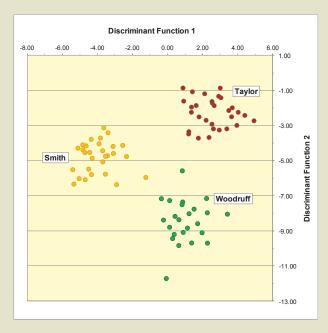
In the next plot (fig. 3) we add the editorials signed "Joseph Smith" (brown dots). We see that these obviously group with the other Smith texts, indicating that Joseph's editorial style was not much different from his noneditorial style. Interestingly, in the editorials signed "Joseph Smith" the word *I* was used far more frequently than it was used in any of the other editorials.

In the next plot (fig. 4) we add the additional unsigned editorials during Joseph's editorship (gray dots). These editorials group closely with the Smith texts and the "Joseph Smith" editorials, indicating that these texts have similar stylistic features. In figure 5, when we add the texts signed "Ed." (or editor texts; blue dots), we see that here again these editorials are closer to the Smith texts and the other editorials than they are to either of the other two possible authors.

The relative positions of the texts are evidence that the editorials signed "Ed." and the unsigned editorials were likely written by Joseph Smith. However, there does appear to be some influence from Taylor in the style of the editor texts since they are pulled somewhat away from the grouping of the Smith texts in the general direction of the Taylor texts.

In figure 6 we add the Central America editorials composite text (black dot). This text is clearly closer to the Smith texts than it is to the texts of the other authors, providing evidence that Joseph Smith is the most likely author, if there was in fact only one author of the Central America editorials.

In the final two plots we look at the cube from the top and the side. In the top view (fig. 7) we see that the discriminant function along the vertical axis separates the Smith text from the editorials and it separates the editor texts the farthest. As in the front



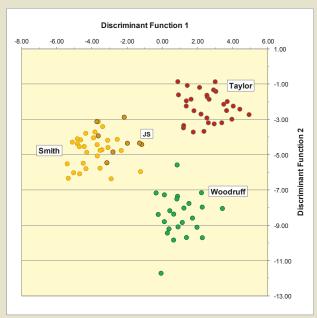


Figure 2. A front view of Joseph Smith's texts (yellow dots), John Taylor's texts (maroon dots), and Wilford Woodruff's texts (green dots) showing that each author's texts can clearly be categorized into separate groups. Figure 3. A front view of the three authors' texts with the texts for editorials signed "Joseph Smith" added (brown dots), showing that Joseph's signed editorials group closely with his other texts.

view, in the top view the Central America composite text groups with Joseph Smith's texts and within his grouping it is closest to the editor texts.

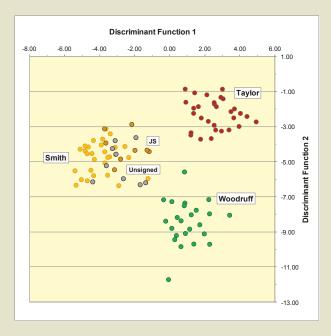
In the side view (fig. 8) the Woodruff texts (green dots) are pulled toward the bottom of the plot, separating his texts from the editorial texts, including the Central America composite text. Consequently, the evidence does not indicate that he contributed strongly, if at all, to the editorials. As in the front and top views, the Central American composite text is closest to the editor texts, and we can also see the possible influence of Taylor on the editor texts since his texts (maroon dots) are toward the top of the plot as are the editor texts.

As Wilford pointed out, John assisted Joseph in the editor role, so perhaps he was Joseph's scribe and in that capacity contributed to the wording of the editorials as they were dictated by Joseph. Or perhaps Joseph and John collaborated in writing the editor texts and unsigned editorials. Perhaps their collaboration included interactive discussion of the topics and exchange of draft copies of the editorial texts. If the editorials were the product of their combined collaborative work, then it would make sense for the editorials to be signed "Ed." or left unsigned.

Conclusions

Our analysis suggests that the editorials on the Central America ruins and the Book of Mormon, published during Joseph Smith's tenure as editor of the *Times and Seasons* show a strong alignment with his personal writing style and the editorials to which he signed his name. Consequently, the evidence points to Joseph Smith as the author of the Central America editorials.

However, we need not presume that the five Central America editorials were the work of only one author. The evidence is more supportive of a collaborative effort within the *Times and Seasons* office between Joseph Smith and John Taylor.³⁷ Wilford Woodruff's observation appears to be correct that Joseph Smith as editor wrote for the paper and was assisted in his writing by John Taylor. We conclude that Joseph was not editor in name only but was an active and conscientious participant in the work of writing as well as of editing the *Times and Seasons*,



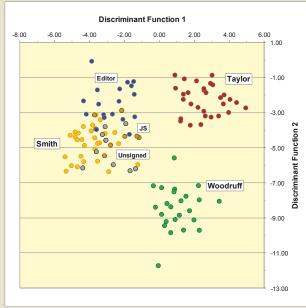
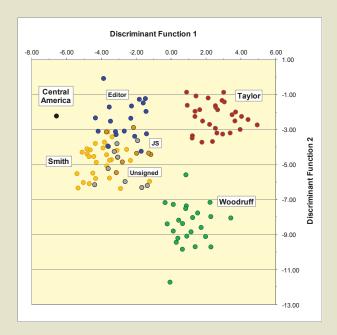
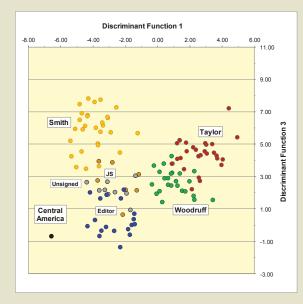


Figure 4. A front view of the three authors' texts with the texts for the additional unsigned editorials during Joseph Smith's editorship added (gray dots), showing that the unsigned editorials also group closely with Joseph Smith's texts.

Figure 5. A front view of the three authors' texts with the texts signed "Editor" added (blue dots) showing that these editorials also group closest to Joseph Smith's texts, but they seem to be pulled toward John Taylor's texts, which could indicate his influence on those editorials.







Discriminant Function 3 11.00 -+ 1.00 -3.00 -1.00 1.00 3.00 5.00 7.00 9.00 -1.00 Central America -3.00 unction -5.00 ninan -7.00 Discr Woodruff -9.00 -11.00 • -13.00

Figure 7. A top view of the three authors' texts showing the relative position of the Joseph Smith texts and the editorials with the texts signed "Editor" spread away from the other texts, indicating that those texts are somewhat distinguishable from the others. The Central America composite text is closest to the Joseph Smith text and the "Editor" texts.

Figure 8. A side view of the three authors' texts showing that the Wilford Woodruff texts are the most distinguishable from the editorial texts; however, John Taylor's texts are about as close on average as Joseph Smith's texts, indicating John Taylor's possible influence in writing the texts signed "Editor." The Central America composite is closest to the Joseph Smith texts and the "Editor" texts.

although he was influenced by his two apostolic brethren.

Even if the Central America editorials were a collaborative work, that still does not reduce the authoritative nature of the statements in the articles since Joseph clearly stated that he took full responsibility for what was published in the paper under his editorship. So, whether he penned the words in their entirety or only partially or even not at all, he authorized the publication of the words and thereby made them his own, since he stated about the content of the paper, "I alone stand for it."

Claims that Joseph Smith was unaware of what was written in the Central America editorials, or that he considered their geographical opinions and interpretations to be inconsistent with his revelations, is not sustained by the historical and stylometric evidence.



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NOTES

- 1. John Lloyd Stephens, *Incidents of Travel in Central America, Chiapas, and Yucatan,* 2 vols. (New York: Harper and Brothers, 1841). Both volumes were reprinted in their entirety by Dover publications in 1969.
- 2. Bruce H. Porter and Rod L. Meldrum, Prophecies and Promises: The Book of Mormon and the United States of America (New York: Digital Legend, 2009), 107; Rod L. Meldrum, Exploring The Book of Mormon in America's Heartland: A Visual Journey of Discovery (New York: Digital Legend, 2011), 60. Examination of the historical evidence does not support the claim that the details of Book of Mormon geography were ever revealed to Joseph Smith. See Matthew Roper, "How Much Weight Can a Single Source Bear? The Case of Samuel D. Tyler's Journal Entry," Journal of the Book of Mormon and Other Restoration Scripture 22/1 (2013): 54-57; Roper, "Joseph Smith, Revelation, and Book of Mormon Geography," *FARMS Review* 22/2 (2010): 15-85; Fredrick G. Williams, The Life of Frederick G. Williams: Counselor to the Prophet Joseph Smith (Provo, UT: BYU Studies, 2012), 437-51; Kenneth W. Godfrey, "What Is the Significance of Zelph in the Study of Book of Mormon Geography?" Journal of Book of Mormon Studies 8/2 (1999): 70-79; John A. Widtsoe, "Is Book of Mormon Geography Known?" Improvement Era, July 1950, 547; Frederick J. Pack, "Route Traveled by Lehi and His Company," Instructor, April 1938, 160; Anthony W. Ivins, James E. Talmage in Conference Report, April 1929, 16-17, 44; George Q. Cannon, "The Book of Mormon Geography," Juvenile Instructor, 1 January 1890, 18-19.
- "American Antiquities More Proofs of the Book of Mormon," *Times and Seasons* 2/16 (15 June 1841): 440-42.
- John Bernhisel to Joseph Smith, 8 September 1841, in Dean C. Jessee, *Personal Writings of Joseph Smith*, rev. ed. (Salt Lake City: Deseret Book, 2002), 533.
- 5. "I received \$40 dollars of Dr John M Bernhisel for President Joseph Smith also Stephens travels in cen-

tral America in 2 volums also one letter." Wilford Woodruff Journal, 9 September 1841, in Scott G. Kenney, ed., *Wilford Woodruff's Journal* (Midvale, UT Signature Books, 1983), 2:124. All further citations from the Wilford Woodruff Journal can be located in the Kenney source by date.

- 6. Wilford Woodruff Journal, 13 September 1841.
- 7. Wilford Woodruff Journal, 16 September 1841.
- 8. Wilford Woodruff Journal, 6 October 1841.
- 9. Joseph Smith to John Bernhisel, 16 November 1841, in Jessee, Personal Writings of Joseph Smith, 533. The letter to Bernhisel, written in the hand of John Taylor, belongs to a class of historical documents that are extant only in the hand of scribes but are included in the Joseph Smith corpus (see, for example, Jessee, Personal Writings of Joseph Smith, 527-28, 551–52). The letter could suggest that Joseph Smith either dictated the letter or directed the apostle to write to Bernhisel on his behalf. In either case, it would be unlikely for Taylor to knowingly attribute views to the Prophet that were not his own.
- Ed., "A Catacomb of Mummies Found in Kentucky," *Times and Seasons* 3/13 (2 May 1842): 781-82.
- Ed., "Traits of Mosaic History Found among the Azteca Nations," *Times and Seasons* 3/16 (15 June 1842): 818-20.
- Ed., "American Antiquities," *Times* and Seasons 3/18 (15 July 1842): 858-60.
- "Extract From Stephens' Incidents of Travel in Central America," Times and Seasons 3/22 (15 September 1842): 914-15.
- 14. "'Facts Are Stubborn Things," *Times* and Seasons 3/22 (15 September 1842): 921-22.
- 15. "Zarahemla," *Times and Seasons* 3/23 (1 October 1842): 927.
- For a superb treatment of the subject, see James B. Allen, Ronald K. Esplin, and David Whittaker, *Men with A Mission: The Quorum of the Twelve Apostles in the British Isles*, 1837-1841 (Salt Lake City: Deseret Book, 1992).
- 17. History of the Church, 4:398; and Kyle R. Walker, "'As Fire Shut Up in My Bones': Ebenezer Robinson, Don Carlos Smith, and the 1840 Edition of the Book of Mormon,"

Journal of Mormon History 36/1 (2010): 6-9.

- 18. *Times and Seasons* 1/1 (November 1839): 1-2, 16.
- Manuscript History of Brigham Young, 20 November 1841; compare *History of the Church*, 4:454.
- 20. *History of the Church*, 4:463.
- 21. Manuscript History of Brigham Young, 17 January 1842.
- 22. *History of the Church*, 4:503.
- 23. Manuscript History of Brigham Young, 28 January 1842.
- 24. Wilford Woodruff Journal, 3 February 1842. The price was \$6,600. Wilford Woodruff Journal, 4 February 1842.
- 25. Wilford Woodruff Journal, 19 February 1842.
- 26. *Times and Seasons* 3/9 (1 March 1842): 710.
- 27. *Times and Seasons* 3/9 (1 March 1842): 718.
- 28. Wilford Woodruff Journal, 7-12 November 1842.
- 29. "Brought some poetry to printing office. & got some Newspapers," Joseph Smith Journal, 12 June 1842, in *The Joseph Smith Papers: Journals. Volume 2*, ed. Andrew H. Hedges, Alex D. Smith, and Richard Lloyd Anderson (Salt Lake City: Church Historian's Press, 2011), 66.
- 30. See Joseph Smith Journal entries for 19-21, 24, 26-31 August and 1-3, 10-14, 16-30 September 1842 in *Joseph Smith Papers*, 96-97, 120-21, 124, 143, 151, 153, 157, 159.
- 31. Joseph Smith Journal, 16-17, 19-20 September 1842, in *Joseph Smith Papers*, 157.
- 32. Wilford Woodruff Journal, 19 September 1842.
- 33. Joseph Smith Journal, 21 September, 1842, in *Joseph Smith Papers*, 157.
- 34. Wilford Woodruff Journal, 7-12 November 1842.
- 35. *Times and Seasons* 4/1 (15 November 1842): 8.
- Matthew Roper, "Limited Geography and the Book of Mormon: Historical Antecedents and Early Interpretations," *FARMS Review* 16/2 (2004): 245-48.
- 37. In fact, LDS church history bears record of other incidences of collaboration in writing documents to be distributed to church members for their instruction and edification. The *Lectures on Faith* are one example of such a possible collaborative work product.