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The Next Big Thing in LDS Apologetics: Strong Semitic and Egyptian Elements in Uto-Aztecan Languages

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THE NEXT BIG THING IN LDS APOLOGETICS: STRONG SEMITIC AND EGYPTIAN ELEMENTS IN UTO-AZTECAN LANGUAGES

Jeff Lindsay

Review of Brian D. Stubbs, *Changes in Languages from Nephi to Now* (Blanding, UT: Four Corners Digital Design, 2016) and *Exploring the Explanatory Power of Semitic and Egyptian in Uto-Aztecan* (Provo, UT: Grover Publications, 2015).

Abstract: Following several articles and presentations over the past two decades on tantalizing finds linking Uto-Aztecan languages with Near Eastern languages, LDS linguist Brian Stubbs has recently published two significant works offering extensive details and documentation. The more comprehensive volume intended for scholars and serious students of language is Exploring the Explanatory Power of Semitic and Egyptian in Uto-Aztecan, a highly technical work providing 1,528 sets of cognates with intricate details linking Uto-Aztecan languages with two versions of Semitic and with Egyptian. This is followed by an analysis of puzzles in Uto-Aztecan explained by Egyptian and Semitic ties as well as an exploration of grammatical and morphological parallels and many other details that further strengthen the case for an ancient connection to Near Eastern languages. Stubbs has made his work more accessible to general LDS readers with a less technical and highly readable work, Changes in Languages from Nephi to Now, that relates his findings to the Book of Mormon and what we can infer about the languages of Book of Mormon peoples. The changes in those languages, correspond remarkably well with the infusions of Near Eastern language that can be seen in abundance in Uto-Aztecan. Numerous questions remain that may require lifetimes of further research, but the meticulous foundation Stubbs has laid must not be treated like past amateurish and erroneous efforts over the centuries

to find Hebrew in Native American languages. This is a serious, scholarly work that rises above the standards typically used to establish authentic language families. The evidence for, say, Hebrew in Uto-Aztecan is actually more impressive than the linguistic evidence for Hebrew influence in Yiddish. While implications for these finds on the Book of Mormon can be overstated, what Stubbs has uncovered may be among the most impressive scholarly finds related to the Book of Mormon.

When asked what the most impressive evidence is for Book of Mormon authenticity, serious students of the Book of Mormon often point to one of a small handful of items: the finding of candidates for Bountiful, Nahom, and the River Laman in the Arabian Peninsula;¹ the existence of chiasmus² and Hebraisms, particularly Hebraic wordplays;³ the diverse and consistent testimony of the witnesses of the gold plates;⁴ and the strength of numerous cultural and geographical correspondences between Mesoamerica and the Book of Mormon.⁵ Of these, I think the Arabian evidence has the most easily appreciated “wow” factor. It takes serious effort and a great deal of advanced scholarship to minimize the growing body of evidence from Arabia — and so far those failed efforts have only helped to highlight how improbable it was that Joseph could have fabricated the details of Lehi’s trail.⁶

While the attacks of critics have failed to diminish the luster of the Arabian evidence, two new works from an LDS scholar may actually achieve that unintended effect⁷ — not by attacking past scholarship but by uncovering what may be an even more exciting line of evidence for the Book of Mormon that may displace Arabia as the “go-to” topic for Book of Mormon defenders. Brian Stubbs’s decades of exploration of the Uto-Aztecan language has uncovered what could become the “next big thing” in LDS apologetics. The challenge, however, is that his evidence is far more technical than, say, showing photographs of the proposed Bountiful site at Khar Kharfot in Oman and listing how perfectly the leading candidate accords with Nephi’s text. The strong and compelling evidence of ancient Semitic elements in Uto-Aztecan (UA) from a skilled linguist, thoroughly aware of what it takes to establish relationships between languages, demands a good deal from a reader to appreciate the linguistic data that now exists and may take decades before its explanatory power is widely recognized in the Church and among other hesitant scholars. But what has been achieved already is so remarkable and so interesting, it may well be the next big thing for some of us.

Let me jump to the big picture and put it in context: Stubbs has documented 1500 correspondences between Uto-Aztecan and ancient Semitic languages, particularly Semitic (Hebrew/Aramaic, and Phoenician) and Egyptian. LDS and non-LDS audiences, upon hearing a brief summary of Stubbs's work, are likely to make similar assumptions. Non-believers are likely to dismiss the work as fantasy based upon contriving a meaningless list of imaginative links that Stubbs has found by scanning dozens of languages to cherry-pick a few purported links. Book of Mormon believers might conclude that Stubbs has actually found a few tantalizing and possibly legitimate traces of ancient Near Eastern influence that have survived as faint echoes in Native American languages. Both initial assumptions may be wildly wrong.

After examining the details of Stubbs's analysis first in his *Changes in Languages* and then in the much more academic *Explanatory Power*, the impact to this observer is far more dramatic, even overwhelming, than most voices in the LDS community recognize. Stubbs has shared several aspects of his works in recent years,⁸ but the buzz in the LDS community has been disproportionately muted. There is a magnitude of correspondences that go far beyond mere whispers and traces, with Egyptian and Semitic influence affecting a huge portion of UA vocabulary, well over 10% (possibly 30%), in ways that follow reasonable linguistic relationships and help resolve many puzzles in UA studies. The parallels identified frequently have significant depth, involving multiple words across multiple UA languages and sometimes showing surprising relationships in meaning or behavior. The large quantity of cognates, coupled with the evidence of systematic sound changes one expects to find between related languages and even some evidence of grammatical influence (typically fossilized), creates a compelling case that exceeds the standards commonly used by linguists to establish connections between languages. The correspondences are at a level far beyond mere chance and highly contrived pattern seeking.

Stubbs's work is based on linguistic rigor, not an amateur list of imagined parallels. There is a depth and beauty in this work that merits much more investigation and attention, along with bigger headlines.

Stubbs's work is in two volumes, one intended for LDS readers and one intended for linguists. The lighter work for LDS audiences is *Changes in Languages from Nephi to Now*.⁹ This 210-page book includes useful background material on the evolution of languages and the relationships that link languages, as well as some background on the Book of Mormon. The meat of the book is the large sections exploring patterns

of relationships with many specific examples creating impressive cases for relationships between Uto-Aztecan and Near Eastern languages, including Hebrew and Egyptian.

Stubbs's larger, more technical volume is *Exploring the Explanatory Power of Semitic and Egyptian in Uto-Aztecan*. This book has 436 large pages and small print with extensive technical detail, offering 1500 detailed examples of parallels meaningfully grouped according to the Near Eastern languages and key sound changes. There are also very useful sections listing English words and the corresponding UA words that are considered, and there are sections listing Semitic and Egyptian words to allow readers to locate the relevant item numbers quickly among his 1500-plus. *Exploring the Explanatory Power* also has helpful introductory chapters on Semitic, Egyptian, and Uto-Aztecan, and concluding sections highlight key sound changes and other patterns, plus there is an extensive bibliography. It is a thorough and thoroughly impressive work.

To put things in perspective, compare Stubbs's collection of cognates with the works that have inaugurated other new language groupings in previous linguistic work:

After Sapir (1913, 1915) established Uto-Aztecan as a viable family of related languages, Voegelin, Voegelin, and Hale (1962) produced the first numbered list of 171 cognate sets Klar (1977) brought the Chumash languages to clarity with 168 sets. Taylor (1963) established Caddoan (a language family of the central plains), assembling 107 cognate sets. Hale (1962, 1967) did the definitive study for Kiowa-Tanoan with 99 sets. This work's proposal may better compare to tying two distant language families, as did Haas (1958) by ending four decades of controversy in uniting Algonkian-Ritwan, an eastern US family with a west coast family, by means of 93 sets. Chamberlain (1888) began the union of Catawba with Siouan via 17 comparisons, and Siebert (1945) secured it with mostly morphological correlations, as not enough clear cognate sets were known at the time to establish correspondences Thus, the going rate is between 50 and 200 sets to establish most Native American language families. So this case of 1500 sets merits proportionate consideration.¹⁰

Further perspective comes from considering the presence of Hebrew and Egyptian in other languages where the influence is widely

appreciated and obvious, namely, Yiddish and Coptic. Yiddish is a Germanic language with obvious Hebrew roots from the Jewish peoples who speak it, yet the Hebraic content is relatively minor and generally weaker, according to Stubbs, than is found in UA. A similar situation occurs in considering Coptic, which is derived directly from Egyptian and evolved over a smaller timeframe than the two millennia or so which separate UA from Egyptian, yet in many cases the vowels and consonants of Egyptian appear to be better preserved in UA than in Coptic.¹¹

The Semitic influence shows patterns consistent with two different infusions, an infusion of one type of Hebrew/Aramaic along with Egyptian showing common sound changes. This first infusion could correlate with the entry of Lehi and his group. Another infusion of a different Semitic dialect shows different sound changes as if it evolved in a different environment before influencing UA, and this could be related to an infusion of Hebrew and Phoenician from the Mulekites:

In UA, we see a substantial amount of Egyptian, and we also find two separate Semitic dialect infusions. One (Semitic-p) has the same sound correspondences as the Egyptian, which suggests that Semitic-p and the Egyptian were spoken by the same people, nicely matching the Book of Mormon's description of the language of the Nephites. The other Semitic infusion (Semitic-kw) has quite a different set of sound correspondences which is probably the Mulekite language. The Mulekite language reflects a Hebrew/Phoenician dialect more like Phoenician than Israelite Hebrew of 600 BC. The Nephite Semitic dialect, in contrast, is either a heavily Aramaicized Hebrew or more Aramaic than Hebrew. Though data on most dialects of Northwest Semitic is limited or unavailable, some scholars (Young 1993, 54–62, 85–86) note that Aramaic did influence the dialects of ancient Israel, especially northern Israel. What is not known is the degree or extent, though it may have been more significant or pervasive than presently known. The American data may prove enlightening to that void in present knowledge.¹²

Semitic-p refers to a Semitic language that has undergone a common set of sound changes, most notably the change of b in Semitic to p in UA. Cognates of Egyptian in UA reflect similar sound changes. But another group of Semitic words shows different sound changes, most

prominently the change of Semitic *b* to *kw*. The sound changes involving the various H sounds in Semitic suggest that Semitic-p has Hebrew phonology dating before 300 BC, when the H sounds merged. Examples for these proposed correlations will be given below.

Is the nature of the relationships Stubbs finds sufficient to identify a genuine ancient relationship between the languages in question, or could it be due to chance? After all, false cognates can almost always be found between unrelated languages.

In many New World languages, 100 to 200 pairs of cognates have been used to show a legitimate connection between languages. Cognates and parallels in words and grammar happen by chance all the time in languages. But when they are due to chance, you'll find a few handfuls, as we sometimes do between Chinese and English. Some, like *mama* for mother, may point to some ancient roots shared by many languages, while others appear to be just random and don't fit any kind of meaningful pattern. For example, in Mandarin Chinese, *fei* can correspond to *fee* in English, and *song* can mean a song of praise. But apart from many modern words recently borrowed directly or indirectly from English, these parallels are rare and don't fit into any meaningful patterns that show systematic changes in sounds reflecting shared ancestry or ancient infusion. Much stronger and consistent similarities can be seen between Mandarin and White Hmong from Laos, which, though in a different language family than Chinese, has borrowed many words and patterns through contact over the centuries.¹³ On the other hand, sometimes sound changes between known cognates are so severe that absent a knowledge of the word's origins, it might be very difficult to recognize a connection. One example is the Sanskrit word *chakra* which is actually a cognate of *wheel* in English, although the two words don't share a single letter. Both apparently derive from Proto-Indo-European **k^wek^wlos* and display fairly regular sound changes.¹⁴

In closely related languages like German and English, however, numerous cognates can be found, and they often reflect sound changes that follow some common patterns, like the hard "h" sound of German's *buch* being related to the *k* in *book* and in many other cognates (e.g., *kuchen* and *cook*, *suchen* and *seek*). (As a young missionary in German-speaking Switzerland, I was so grateful for the bounty of cognates we had to work with.) Also consider Latin's *fabulare*, to speak, and its relatives, *falar* in Portuguese (losing the *b*) and *hablar* in Spanish (losing the *f*). Sound changes include simple shifts in a sound, loss of a sound, addition of a sound, or sometimes moving a sound such as a glottal stop to a

different place in the word. The 1500-plus cognates from Stubbs (over 400 for Egyptian and over 1000 for the infusions of Semitic) reveal many intriguing patterns that point to a strong relationship between these languages and UA.

An impressive aspect of Stubbs's work discussed more fully later is the ability to provide explanatory power in tracing the history of Uto-Aztecan and in evaluating language issues in Book of Mormon studies (this requires a careful reading of the text which Stubbs demonstrates well). One such question, the subject of ongoing debate among LDS scholars, is what Nephi meant when he spoke of the Egyptian language in 1 Nephi 1:2.¹⁵ Was the role of Egyptian merely as a script for writing Hebrew, or was the actual Egyptian language used? Since Stubbs's data shows a significant influence of the Egyptian language in Uto-Aztecan, with sound changes paralleling an infusion of Hebrew or Semitic into Uto-Aztecan, Stubbs argues that Nephi meant that at least some significant aspects of the actual Egyptian language were in use, along with Semitic.

Another question addressed is why the Mulekites, after just 400 years of separation from fellow Hebrews, would find their language mutually unintelligible with the Nephite language when the two groups met. Stubbs offers three possible reasons, one of which is particularly illuminated by his work:

1. The Mulekites may have developed different accent or tone patterns.
2. They may have started with different languages.
3. The languages involved may have changed differently due to contact with other local languages.¹⁶

Among these possibilities his results point to the possibility of other Near Eastern languages entering early Uto-Aztecan that could help strengthen possibility #2 above as a contributing factor to the Mulekite-Nephite language barrier.

Relevant to the issue of the Mulekites, Stubbs sees evidence of a second infusion of Semitic into Uto-Aztecan that shows features of Phoenician and displays different patterns of sound change consistent with plausible readings of the Book of Mormon account. Based on Stubbs's analysis, he hypothesizes that the language of the Mulekites persisted among the Nephites and contributed roughly 25% of the combined Nephite peoples' vocabulary after their merger.¹⁷ There is the reasonable assumption here that the only significant infusions of Semitic into the UA language

base are those described in the Book of Mormon. There is also the underlying uncertainty as to how infusions into the Nephite language(s) would later influence UA, an issue which Stubbs discusses but remains a topic requiring further research and data.¹⁸ He also points out that the presumably Phoenician vessel on which the Mulekites arrived in the New World could have brought other Mediterranean peoples and linguistic influences (e.g., names like Timotheus) and that we should not assume the immigrants were homogenous in language nor that they were alone once they arrived in the Americas. Rather, it is likely they, like the Nephites, encountered other local peoples and languages that influenced their own language over the centuries.

This merger alone would have the language in Alma's day being very different from Nephi's vernacular. That merger, plus the five centuries of steady change from the influences of several surrounding languages, would already make Alma's contemporaries have to study to learn the languages of Lehi's and Nephi's writings. Indeed, King Benjamin had to cause that his sons "should be taught in ALL the language of his fathers" so that they could read the records (Mosiah 1:2–4). In other words, it seems that they could not have read the ancient records with only a knowledge of their language in their day. What's more, "all the language of his fathers" may suggest multiple varieties and stages of the starter languages — Egyptian, Hebrew, and Aramaic — plus the various language mixtures that had surely developed among them since arriving in the Americas.¹⁹

An important finding of Stubbs is that the Near Eastern influences on UA are not just from Hebrew but also from Egyptian and other branches of Semitic languages. The Northwest Semitic languages referred to in his study are Hebrew/Phoenician/Canaanite (essentially different dialects of the same language), and Aramaic/Syriac, and Ugaritic. Aramaic is particularly important in his work, as it was in the Near East where it was frequently a dominant language. Stubbs draws upon the scholarship of Rendsburg²⁰ and others regarding the early presence of Aramaic in Israel, especially in the north, where it could have been part of the heritage of Lehi as a member of the tribe of Joseph:

This all aligns well with the likelihood of Aramaic substrata serving as underlying dialects to the literary language of Canaanite/Hebrew, perhaps throughout the Northern

Kingdom's centuries. What language did the mothers of Israel (Rebekah and Leah and Rachel) speak? Aramaic! Genesis 25:20 speaks of Laban, the Arammiy (in Hebrew) or Aramean, though King James English translates it as the Syrian; and Laban, the Aramean, was Rebekah's brother, and Leah and Rachel's father. So besides Israel's roots being from Aramaic-speaking areas, Aramaic was also a *lingua franca* ... throughout many or most areas through most of Israel's BC centuries. So did Israel's population really set aside Aramaic upon entering Canaan to learn Canaanite/Hebrew? More likely are degrees of bilingualism while adding the Phoenician/Canaanite literary language to their native Aramaic, and thus the sizable amount of Aramaic apparent in Uto-Aztecan²¹

Lehi as an Aramaic speaker is consistent with the strong strand of Aramaic in UA and may add clarity to a complex issue in Book of Mormon studies:

Lehi as Aramaic speaker may clarify Nephi's statement [in 1 Nephi 1:2] better than any previous explanation: that the language of his father consisted of the language of the Egyptians and the learning of the Jews. Note that Nephi did not say "the language of the Jews" as if Lehi's language did not consist of the language of the Jews (Hebrew), but "the learning of the Jews" or the scribal learning among the Jews for writing the literary language Hebrew, though Lehi's family may have spoken Aramaic best or an Aramaic-Hebrew mix. First Nephi 1:2 hints at such, and the large amount of Aramaic in UA's Semitic-p vocabulary suggests the same. The characters for both Hebrew and Aramaic were the same, so with them one could write either Hebrew or Aramaic. So Lehi was an Aramaic-speaker knowledgeable in Egyptian and in "the learning of the Jews" or the scribal craft for reading and writing Hebrew and Aramaic.²²

However, the presence of Hebrew in particular cannot be minimized:

Many UA features match reconstructable Hebrew/Phoenician better than they match other Semitic languages:

Uto-Aztecan Hebrew	/	early Northwest Semitic
(1) *-ima (pl suffix) (but not like Arabic -uuna/-iina; Aramaic -iin; Akkadian -uu)		masc pl: *-iima
(904) *-te (pl suffix) (but not like Arabic -aat; Aramaic -aat; or Akkadian -aat)		fem pl: *-ooteey
(2) *na- 'reciprocal/passive'		earlier Hebrew *na-
(3) *yasipa 'sit / dwell' (but not like Arabic waṯaba; or Aramaic yəṯeb) ²³		earlier Hebrew *yašiba

The possibility of multiple Near Eastern languages playing a role among the Nephites is suggested not only by the presence of both Hebrew and Aramaic in Uto-Aztecan but also Egyptian. The complex linguistic situation after five centuries in the New World is evident in Stubbs's analysis of the text, which points to a mix of languages initially (Hebrew, Aramaic, and Egyptian) and a later mix of languages with the joining of the Mulekites to the Nephites, creating a situation where multiple languages apparently had to be mastered to understand and teach the Nephite scriptures.

In *Changes in Languages*, Stubbs sometimes digresses from the issue of language into areas that ultimately relate to the linguistic data. Thus, there are discussions of the DNA controversy and the debate over Book of Mormon geography, which are still meaningful though they are difficult topics to treat thoroughly in a brief section in a book about language. He also reviews the basics of the Book of Mormon along with a good review of some key evidences for its authenticity, giving readers a section that is useful but may take the focus away from the strengths of his work. Nevertheless, the cumulative impact of his work is frankly breathtaking. Below we will examine specific examples from his work and further discuss its significance.

Is This a Credible Work?

Brian Stubbs is a linguist whose credential and skills cannot be lightly dismissed. He is among a handful of specialists in Uto-Aztecan and has published significant works in the field²⁴ that appear to have been well received among linguists,²⁵ particularly his significant scholarly work, *Uto-Aztecan: A Comparative Vocabulary*,²⁶ with over 400 pages of analysis exploring 2700 cognate sets among the Uto-Aztecan languages. In his review of Stubbs's work for the *International Journal of American*

Linguistics, fellow Uto-Aztecan specialist Kenneth C. Hill described it as “a monumental contribution, raising comparative UA to a new level.”²⁷

Stubbs earned an MA in linguistics from the University of Utah and completed coursework and comprehensive exams (ABD) toward a PhD in Near Eastern languages and linguistics at the University of Utah. He has studied Hebrew, Arabic, Egyptian, Aramaic, and many Native American languages. While he does not have a PhD, he is among key publishers of articles on the Uto-Aztecan language family in linguistic journals. His book *Uto-Aztecan: A Comparative Vocabulary* is the largest in the field, doubling the size of previous works on comparative Uto-Aztecan studies. He recently retired from teaching at the College of Eastern Utah.

The “elephant in the room” for critics, at least, is why this work linking the Near East and the New World has not been published in a peer-reviewed journal. Based on personal correspondence with Brian Stubbs, peer review is his goal. His work, inherently highly controversial since it clearly supports Book of Mormon claims, has been sent to his fellow Uto-Aztecan specialists, with no public but several private comments so far and eventually will be ready for the challenges and pains of the peer-review process, but this takes time and faces some practical and political considerations.

One must recognize that this work is highly controversial and easy to dismiss without serious consideration, based not just on its ties to the Book of Mormon but also on the centuries of past abuse from amateurs claiming linguistic connection between Native American languages and Hebrew. This abuse is reflected in a statement on the *Native American Languages* website (Native-languages.org):

Q: Are Amerindian languages descended from Hebrew, Ancient Egyptian, Scandinavian or Celtic languages?

A: No. The people who claim this are trying to prove that American Indians arrived in the Americas very recently I have seen many websites claiming to “prove” that Amerindian languages are descended from Semitic or Germanic languages. 90% of these websites are deliberately lying, making up nonexistent “Algonquian” words that resemble words from Semitic languages. A quick glance at a dictionary of the Amerindian language in question will reveal these websites for what they are. The other 10% are using linguistically unsound methods — searching two languages for any two vocabulary words that begin with the same letter,

essentially, and presenting them as evidence. Using this method, English can be “proved” to descend from Japanese — English “mistake” sounds a little like Japanese “machigai.” In fact, if you randomly generate some vocabulary with a computer program, you will be able to find a few words with surface resemblance to any language you want. Real linguistic analysis requires dozens of vocabulary relationships which are regular and predictable, as well as similarities in phonology and syntax, to show that one language is related to another No linguist has ever shown a relationship between any Amerindian language family and a Semitic, Germanic, or Celtic language.²⁸

Naturally, with or without a favorable review from other scholars, the critics will have plenty of opportunities to cry foul. Already critics have dismissed his work by mischaracterizing it as merely compiling a list of random hits, and they justify their dismissal by pointing to a handful of examples of chance coincidences that can occur in any language. Some anti-Mormon forums, for example, cite a few random coincidences or point to a list of “Amazing Coincidences” among languages to show how chance can lead to apparent correspondences.²⁹ That list does illustrate how chance can lead to a few interesting parallels between two unrelated languages, and also reflects the very small number of such correspondences, a mere handful, that one tends to find between any specific pair of unrelated languages. As stated in the quotation from the *Native American Languages* site above, “Real linguistic analysis requires dozens of vocabulary relationships which are regular and predictable” (emphasis added) — dozens, not a handful. Perhaps 1500 might be considered a good start.

Is 1500 genuinely significant? Relative to the 2700 cognates in UA languages published by Stubbs in his well regarded scholarly work, *Uto-Aztecan: A Comparative Vocabulary*,³⁰ his 1500 cognates with Near Eastern languages may involve roughly 30% of the 2700 entries in his *Comparative Vocabulary* (some of the 1500 Near Eastern words are reflected in UA words that don’t belong to the set of 2700, or sometimes a single Proto-Uto-Aztecan (PUA) cognate may have related UA words connected to multiple items on the Near Eastern list, so the ratio is not simply 1500/2700). That percentage may be shifted up or down with future work and peer review, but this is a level of relationship that far exceeds the minimal criteria to establish a legitimate linguistic relationship.

However, critics can also argue that combing through *three* languages to find cognates for the 30 languages of the UA family will unfairly inflate the odds of finding random hits to proclaim as amazing successes. But the body of cognates for all three Near Eastern languages, Hebrew, Aramaic, and Egyptian are each independently large enough (hundreds, not just dozens, and vastly more than chance would explain) to demand respect. Further, the hits reported by Stubbs are frequently cognates to PUA with many related descendants among the 30 individual languages.

Further still, the consistent patterns of sound changes are a vital issue that show meaningful relationships beyond random chance. Indeed, it is the explanatory power of Stubbs's work that demands particular attention and further scholarship, perhaps several lifetimes of scholarship, for that is the level of commitment such challenges tend to require of those who bring major breakthroughs in understanding language.

Laying a Linguistic Foundation

While some readers will want to dive into the “wow” factors in the evidence right away, Stubbs properly demands more patience from his readers, particularly in *Changes in Languages from Nephi to Now*, where a basic foundation is laid regarding the approach linguists take in exploring the changes in languages over time and the methodologies required to establish plausible connections between languages. I found these sections engaging and interesting without being overly technical, and they should be enlightening to lay students of languages.

Stubbs offers many words of caution in presenting his work and recognizes that linguists will look dimly at his proposal, at least initially. Over the past three centuries, they have grown weary of amateurish attempts to link Egyptian or Hebrew to New World languages. “Most such claims have been bogus to borderline or amateurish at best, ... void of sound methodology” and “lacking what linguists have found to be established principles and patterns for verifying language relatedness: rules of sound change that create consistent sound correspondence, hundreds of vocabulary matches consistent with those sound correspondences, and some grammatical and morphological alignments, which sum constitute *the comparative method*. Thus, the language similarities in this work are presented within such a framework of sound correspondences, etc. In fact, the Semitic or Egyptian forms proposed to underlie the UA forms often answer questions and explain puzzles in UA that Uto-Aztecanists have not yet been able to explain, and

explanatory power is a cherished quest among linguists.”³¹ Nevertheless, many details remain to be worked out. Stubbs is cautious in presenting his work as an initial effort that may yet require lifetimes of further research, just as many decades of work were required to unravel sound shifts in Germanic and other languages.

Let us now turn to the details in these recent works of Stubbs.

Abbreviations and Other Notes

Several abbreviations will be used here, following Stubbs. UA = Uto-Aztec, PUA = Proto-Uto-Aztec, a proto-language that is reconstructed from the evidence available from related languages and hypothesized to have existed as an ancient parent language, like Proto-Indo-European for the Indo-European language group. An asterisk denotes a proto-language. Thus PUA *p represents the p sound in Proto-Uto-Aztec.

A capital C denotes an unspecified consonant and a capital V denotes an unspecified vowel. Thus –Cr– denotes a word with a consonant before an “r.” Capital N denotes a nasal consonant: n, m, or ŋ.

Inequality signs denote the direction of change: > means the preceding word or sound changed to or became another as in b > kw, and < means the preceding word or sound changed from or derived from the following word or sound.

Some abbreviations of UA languages:

Ca Cahuilla; Ch Chemehuevi; Cm Comanche; CN Classical Nahuatl; Cp Cupeño; Cr Cora; CU Colorado Ute; EU Eudeve; HP Hopi; KTN Kitanemuk; KW Kawaiisu; LS Luiseño; LP Lower Pima; MN Mono; My Mayo; NP Northern Paiute; NT Northern Tepehuan; NU Northern Ute; NUA Northern Uto-Aztec; NV Nevome; OP Opata; SH Shoshoni; SP Southern Paiute; SR Serrano; ST Southern Tepehuan; SUA Southern Uto-Aztec; TB Tübatülabal; TBR Tubar; TO Tohono O’odham, in Arizona; TR Tarahumara; TSh Tümpisha Shoshoni; UA Uto-Aztec; UP Upper Pima; WC Huichol; WMU White Mesa Ute; YQ Yaqui (and AYq Arizona Yaqui).

The Semitic-p Infusion

The Semitic-p infusion into Uto-Aztec includes words where Semitic b became p in Proto-Uto-Aztec, a concept written as Semitic b > UA *p. Examples below are listed with the cognate number from Stubbs’s 2015 technical publication, *Explanatory Power*:

- (527) *baraq* ‘lightning’ > UA **p̄irok*; MY *berok* ‘lightning’
 (528) *byt* / *bayit* / *beet* ‘house, spend the night’
 > UA **p̄iti*; TR *bete* ‘house’
 > UA **p̄iti* ‘lie down, spend night’; Numic **payiC* ‘go home’
 [recall that the “C” denotes an unknown consonant]
 (528) Semitic *bytu* / *bat-uu* ‘spend the night, pl’
 > UA **p̄itu* ‘lie down, spend the night, pl’
 (531) Hebrew *boo*’ ‘coming (used as ‘way to’)’
 > UA **pooC* ‘road, way, path’
 (534) Hebrew *batt* ‘daughter’ > UA **patti* ‘daughter’
 (550) Aramaic *bəsár* ‘flesh, penis’ > UA **pisa* ‘penis’
 (559) Semitic **baka*’; Syriac *baka*’ ‘cry’ > UA **paka*’ ‘cry’³²

Just as *b* changes to *p*, the other voiced stops also tend to devoice in this infusion. Thus, Semitic *b*, *d*, *g* > UA *p*, *t*, *k*; also Semitic *q* > *k*. Several examples include:

- (606) *dubur* ‘buttocks, rear’ > UA **tupur* ‘hip, buttocks’
 (607) *dober* ‘pasture, vegetation’ > UA **tupi* ‘grass, vegetation’
 (1484) *dwr* / *duur* ‘go round, turn, revolve’ > UA **tur* ‘whirl, roll, twist’
 (1103) *dakka* ‘make flat, stamp, crush’ > UA **takka* ‘flat’
 (1279) Aramaic **yagar* ‘hill, heap of stones’ > UA **yakaR* / **yakaC* ‘nose, point, ridge’
 (608) *gd̄f* ‘cut off’ > UA **katu*’ ‘cut, wound’
 (57) **siggoob* ‘squirrel’ > UA **sikkuC* ‘squirrel’
 (1014) *qədaal* ‘neck, nape of neck’ > UA **kutaC*.³³

Another characteristic of this infusion is that “Proto-Semitic **ḏ* (> Arabic *ḏ*, Aramaic *d*, Hebrew *z*), corresponds to UA **t* (note that UA *t* best matches Aramaic *d* (> *t*) and the vowelings also match Aramaic).”³⁴ Examples:

- (616) Aramaic *dakar* ‘male’ > UA **taka* ‘man, person’

(617) Aramaic diqn-aa ‘beard / chin-the’

> UA *tīna ‘mouth’ (not Hebrew zaaqaan)

(618) Aramaic di’b-aa ‘wolf-the’ > UA *tīpa ‘wolf’ (not Hebrew hazzə’eb)

(620) Semitic *ḏabboot(eey) ‘flies’ > UA *tīpputi ‘flea’³⁵

Another sound change here is Semitic aleph or glottal stop ’ > w in UA (also known in Arabic), or other times a glottal stop and round vowels occur (o, u). A few of Stubbs’s many examples include:

(566) Hebrew ’ariy / ’arii ‘lion’ > UA *wari ‘mountain lion’

(567) Hebrew ya’amiin-o ‘he believes him/it’ > UA *yawamin-(o) ‘believe (him/it)’

(569) Hebrew ’egooz ‘nut tree’ > UA *wokoC ‘pine tree’

(571) Semitic ya’ya’ / yaa’ayaa’ ‘(be) beautiful’ > LS yawáywa, SR yi’aayi’a’n ‘be pretty, beautiful’

(572) Hebrew ’iis ‘man, person’ > UA *wisi ‘person’

(574) Hebrew ’išaa / ’ešet / ’išt- ‘woman, wife of’ > UA *wiCti ‘woman, wife’ (reminder: C = unknown consonant; V = unknown vowel)

(577) ’aas- ‘myrtle willow’ > UA *wasV ‘willow’

(579) pa’r- ‘mouse’ > UA *pu’wi(N) ‘mouse’

(1333) Hebrew m’n / *me’an ‘refuse’ > HP meewan- ‘forbid, warn’³⁶

Another common and logical sound change is Semitic initial r- > t- in UA:

(600) r’y / raa’aa ‘see, v’ > UA *tīwa ‘find, see’

(603) Aramaic rima / rimə-taa ‘large stone-the’ > UA *tīmi-ta ‘rock’

(604) Aramaic rə’emaan-aa / reemaan-aa ‘antelope-the’ > UA *tīmina ‘antelope’

(99) Semitic rakb-uu ‘they mounted, climbed’ > UA *tī’pu / *tīppu ‘climb up’³⁷

Other readily understandable sound changes include the loss of a final -r, as in:

(565) makar ‘sell’ > UA *maka ‘give, sell’

(616) dakar ‘male’ > UA *taka ‘man, person’³⁸

and the Semitic initial voiceless pharyngeal ḥ > UA *hu, or w/o/u, and non-initially ḥ > w/o/u, as in:

(672) ḥbq ‘break wind’ > UA *hupak- ‘stink’ (*q > k)

(673) ḥnk ‘train, dedicate’; Hebrew ḥanukka ‘dedication, consecration’ > UA/CA huneke ‘to take an Indian bath’; YQ húnak-te ‘show, direct, raise (young)’

(671) ḥmm ‘heat, bathe, wash’ > UA *huma ‘wash, bathe’³⁹

But many sounds remain much the same, such as t, k, p, s, m, and n. Examples include:

(52) Hebrew mukke ‘smitten’ > UA *mukki ‘die, be sick, smitten’

(769) *taqipa (sg), *taqipuu (pl) ‘overpower’ > UA *takipu ‘push’ (*q > k)

(755) Hebrew kutónet ‘shirt-like tunic’ > UA *kutun ‘shirt’

(754) Hebrew participle pone ‘turn to, look’ > UA *puni ‘turn, look, see’

(851) Hebrew panaa-w ‘face-his’ > UA *pana ‘cheek, face’

(852) pl. construct paneey- (< *panii) ‘face, surface of’ > UA *pani ‘on, on surface of’

(1339) šippaa ‘make smooth’ > UA *sipa / *sippa ‘scrape, shave’

(56) šekem / šikm-, Samaritan šekam ‘shoulder’ > UA *šika ‘shoulder, arm’, Numic *sikum ‘shoulder’

(563) sapat ‘lip’ > UA *sapat ‘lip’

(879) šwy / šawaa ‘broil, roast’ > UA *sawa ‘boil, apply heat, melt’ ...

(1105) kali / kulyaa ‘kidney’ > UA *kali ‘kidney’

(1409) Aramaic kuuky-aa’ ‘spider-the’ > UA *kuukyanʿw ‘spider’⁴⁰

An interesting subtlety is that Semitic-p apparently distinguishes between two H sounds in Proto-Semitic, written as *x and *ḥ, that merged in Hebrew after the Exile and were merged much earlier in Phoenician. Thus, while ḥ > UA *hu or w/o/u, Semitic *x > UA k:

(630) *xole ‘be sick, hurting’ > UA *koli ‘to hurt, be sick’

(631) xmr ‘to ferment’; *xamar ‘wine’; Arabic ximiir ‘drunkard’
> UA *kamaC ‘drunk’

(632) *xnk ‘put around the neck’ > UA konaka ‘necklace, string of beads’⁴¹

The Semitic-kw Infusion

The data for the Semitic-kw infusion were noticed by Stubbs first as he became curious about the possibility of a Near Eastern connection to UA. The Semitic-p cognates appeared to be exceptions to what he was finding from Semitic-kw, so he overlooked their significance for years until he later noticed Egyptian cognates showing similar sound changes to the Semitic-p “exceptions.” At that point, he realized there could have been two separate Semitic infusions with different sound changes due to contact with different peoples or being in a different environment.⁴² Then the current hypotheses came together.

Stubbs sees the Semitic-kw infusion as evidence for the Mulekites’ migration to the Americas and their later merger with the Nephite people. This infusion is suggestive of a Phoenician-like Semitic in which Semitic b > UA *kw. There are other logical sound changes for this set of cognates. The change of -r- > -y- is consistent with changes seen in other languages. In contrast to the data from Semitic-p where a final -r causes no vowel change, “the final -r of Semitic-kw causes the last vowel to rise and front to -i or -y.” Further, the voiced pharyngeal ʕ > w/o/u consistently. Some examples follow:

(4) Hebrew baašel ‘boiled, cook, ripen’ > UA *kwasiC ‘cook, ripen’

(5) Hebrew bááśaar ‘flesh, penis’ > UA *kwasi ‘tail, penis, flesh’ (r > y/i)

(6) Hebrew baalaʕ ‘swallow’ > UA *kwīluC ‘swallow’

(7) Semitic *bahamat ‘back’ > UA *kwahami ‘back’

(24) bky / bakaaʕ ‘cry’ > UA *kwīkī ‘cry’

(19) barr-‘land (as opposed to sea)’ > UA *kwiya / *kwira ‘earth’ (r > y/i)

(27) brm ‘worn out, weary, bored with’ > UA *kwiyam ‘be lazy, do lackadaisically’ (r > y/i)

(1457) Arabic ṣabba ‘pour, drip, overflow’ > UA *cikwa ‘rain’

(11) Hebrew -dabber ‘speak’ > UA *tikwi ‘say, talk, speak’ (r > y/i)

(26) Hebrew ben ‘son’; pl: bənee^y ‘children (of)’ > Nahuatl *konee ‘child, offspring’ (bə/bV > kwV > ko) ...

(88) šalaqat ‘leech’, šlq ‘stick, adhere’, > UA *walaka ‘snail’ (of similar slimy adhering texture)

(89) šeeṣaar ‘hair’; Arabic šaṣr / šaṣar ‘hair’ > UA *suwi ‘body hair’ (-r- > y/i)

(92) yáṣar ‘wood, forest, thicket’ > UA *yuwi / yuyi ‘evergreen species’ (-r- > y/i) ...

(78) Hebrew ḥeṣ ‘arrow’ > UA *huc ‘arrow’

(79) Hebrew ḥmr ‘cover with, smear on’ > UA *humay ‘smear, spread, rub, paint’ (r > y/i)⁴³

While the glottal stop is often rounded in the Semitic-p data, the Semitic-kw glottal stop is not rounded. Further, it is often lost, as in these examples:

(991) Hebrew ni-qra’ ‘he/it is called/named’ > UA *nihya ‘call, name’

(1214) Hebrew mee-’ayn ‘from where?’ > Tb maa’ayn ‘where from’⁴⁴

In contrast to Semitic-p where doubled *-bb- > UA *-pp-, Semitic-kw data shows doubled *-bb- > UA *-kw-, similar to Semitic b > UA *kw, as in:

(1457) Arabic ṣabba ‘pour, drip, overflow’ > UA *cikwa ‘rain’

(11) Hebrew -dabber ‘speak’ > UA *tikwi ‘say, talk, speak’⁴⁵

An interesting correspondence with -bb- > -kw- is Hebrew ṣaab, “lizard,” cognate with Arabic ḍabba, “cleave to the ground, take hold, keep under lock.” With Semitic -bb- > UA -kw-, these may correspond with UA cakwa that can also mean “grasp, lock, lizard.”⁴⁶

In reading Stubbs, the proposed change of b to kw initially seemed puzzling. The idea of b becoming p seemed natural enough, but as I am a non-linguist, a relationship between b and kw struck me as odd. I initially wondered if this might be an implausible sound change that shows more about creative cherry picking or the Texas Sharp Shooter fallacy⁴⁷ than a legitimate linguistic possibility. I think linguists may more readily appreciate the plausibility of such a sound shift, since similar relationships are found in other languages, and there are linguistic reasons for the relationship between the stops p, b, and kw.⁴⁸ Stubbs does mention that b > kw proposed for UA is like the relationship between p in Greek and kw in Latin, but this comes in Chapter 8 long after the Semitic-kw hypothesis has been introduced.⁴⁹ Further discussion and illustration from other languages would be helpful. For example, the kw sound of *quattro*, the number four in Italian, corresponds to the p of *patru* (four) in Romanian. Other relationships between p and kw are found in a few Indo-European languages⁵⁰ and even in some Native American languages,⁵¹ and given the closeness of p and b, to me this strengthens the case for the possibility of Semitic b > UA kw.

In an early publication comparing the vocabularies among several UA languages, B.L. Whorf notes that the kw of PUA, while preserved as a kw in four UA languages, corresponds to b in two languages, Tepecano and Papago.⁵² This seems consistent with Stubbs's hypothesis, wherein Semitic b was preserved in some cases but became kw or p in other cases. In any case, Whorf provides another example of a relationship between kw and b that strengthens the plausibility of the Semitic-kw hypothesis. (Whorf's paper, by the way, mentions many words treated by Stubbs in *Exploring the Explanatory Power*.) Perhaps Stubbs's future works for general LDS audiences might include some related examples to help readers better appreciate the plausibility of his argument. In fact, Stubbs himself has already published an entire article (peer reviewed) dealing with the relationship between kw and b in the Uto-Aztecan family, which could be valuable to mention after introducing the Semitic-kw hypothesis.⁵³

There are many more examples and details in Stubbs's work from a number of perspectives that strengthen the case for Semitic infusion, whether of the p or kw variety. The parallels between Semitic pronouns and UA pronouns, for example, seem particularly noteworthy.⁵⁴ There are approximately 1100 Semitic cognates, an overwhelming quantity. Some are easy-to-recognize matches, while others may be more of a stretch but still plausible, such as:

(724) Semitic parfoš ‘flea (jumper)’ (from the Semitic verb prfš ‘jump’) > UA *par’osi / *paro’osi ‘jackrabbit’; the jackrabbit, like the flea, is also a jumper, and in UA *par’osi ‘jackrabbit’ we see all four consonants and two identical vowels in two of the most extraordinary jumpers of the animal kingdom.⁵⁵

A final example from the Semitic-kw data:

(853) Arabic xunpusaa’ / xunpus ‘beetle’; Aramaic ḥippuušit ‘beetle, n.f.’ > UA *wippusi ‘stink beetle’. ... Arabic xunpus shows that Semitic *x was the original consonant, and Aramaic ḥippuušit reflects the Northwest Semitic merger (*x and *ḥ > ḥ). So UA *wippusi shows Phoenician/Mulekite ḥ > UA w, and UA also shows the doubled *-pp- and the exact vowels of Aramaic. An amazing match!⁵⁶

Indeed, there are numerous amazing matches in the body of data Stubbs has provided.

The Egyptian Infusion

The over 400 Egyptian terms in UA that Stubbs has found generally have the same sound correspondences as the Semitic-p data, such as b > p, etc. The Egyptian infusion is not as strong as the two Semitic infusions but on its own still exceeds the threshold in terms of number of cognates required to establish a language family.

Stubbs leads the Egyptian discussion in *Changes in Languages* with the observation that -i, the old perfective/stative verb suffix in Egyptian corresponds with -i in UA, which is the intransitive/past/passive/stative verb suffix. Further, “the stative of Old Egyptian 3rd person verbs ended with -i and perfectly matches UA * - a/-i ‘alternation on the end of verbs,’ i.e., UA *-a ‘transitive, active’ and *-i ‘intransitive, passive, stative.’”⁵⁷ Further, Egyptian’s -w / -iw ‘passive verb suffix’ appears to be reflected well in UA -wa / -iwa, a ‘passive verb suffix.’⁵⁸ But generally, the grammar of both Egyptian and Semitic is much different than that of UA.

A few examples of Egyptian cognates follow:

(115) sbk / *subak ‘crocodile’ > UA *supak / *sipak
‘crocodile’ (b > p)

(124) tks ‘pierce’ > UA *tikso ‘pierce, poke’

(125) km ‘black’ > UA *koma ‘dark, gray, brown, black’

- (126) nmi ‘travel, traverse’ > UA *nimi ‘walk around’
 (129) wnš, pl wnšiw ‘jackal’ > UA *wancio / wonia
 ‘fox’ (-ns- > -nc- as in sense/cents)
 (131) šm ‘go, walk, leave’ > UA *sima ‘go, leave’
 (219) iqr ‘skillful, excellent, capable, intelligent’
 > UA *yikar ‘knowing, intelligent, able, good’⁵⁹

The subak/supak cognate between Egyptian and Nahuatl was actually noted by Cyrus Gordon before Stubbs completed his work. As Stubbs puts it, “I merely added another 400 Egyptian-with-UA similarities to what he started.”⁶⁰ As seen in the subak/supak example above, the Egyptian infusion is like Semitic-p in the way *b* becomes *p* in UA. Several examples include:

- (132) sbq ‘calf of leg’ > UA *sipika ‘lower leg’ (b > p)
 (133) sbty ‘enclosure’ > UA *sapti ‘fence of branches’
 (134) qbb ‘cool; calm, quiet, cool breeze’ > UA *koppa ‘quiet, calm’
 (137) bbyt ‘region of throat’ > UA *papi ‘larynx, throat, voice’
 (138) bši ‘spit, vomit’, bšw ‘vomit, vomiting’ > UA *piso-(ta)
 ‘vomit’
 (139) bnty ‘breast’ > UA *pitti / *piCti ‘breast’
 (141) bit ‘bee’ > UA *pitV > *picV ‘bee, wasp’
 (142) bik ‘falcon’ > UA *pik ‘hawk species’
 (154) sb’ ‘star’ > UA *sipo’ > *si’po ‘star’⁶¹

Also following a trend in the Semitic-p data, Egyptian *x* > UA *k, as in:

- (170) txi ‘be drunk, drink deep’, txw ‘drunkard’ > UA *tiku
 ‘drunk’
 (294) xpš ‘foreleg, thigh’ > UA *kapsi ‘thigh’
 (295) xpd ‘buttock’ > UA *kupta ‘buttocks’
 (295) xpdw ‘buttocks’ > UA *kupitu ‘buttocks’ ...
 (452) xt ‘fire, heat’ > UA *kut ‘fire’⁶²

The Egyptian infusion also demonstrates other sound changes found in the Semitic-p infusion, including “‘Egyptian glottal stop’ > w,

or glottal stop next to round vowels (o, u),” for which many examples are given,⁶³ and “Egyptian initial pharyngeal ḥ > UA *hu, and non-initially ḥ > w/o/u.”⁶⁴ Among the many examples of the latter, two should suffice:

(181) ḥnqt ‘beer, drinkers’ > UA *hunaka ‘drunk, alcohol’

(182) ḥtp / hotpe ‘be gracious, peaceable, set (sun), bury’
> UA *huppi ‘peaceable, go down, sink, dive’⁶⁵

UA *huppi is related to the Hopi tribal name, meaning “peace.” Stubbs discusses this word in a section on sound clusters and their behavior on sound change patterns. Sound clusters often lose some of the original sounds, just as the -ght- in “daughter” and “night” has become merely -t- as pronounced in English. A sound cluster can also preserve a sound that otherwise would have changed. For example:

[M]any UA languages have intervocalic *-p- > -v-. That happens in Hopi, the Numic languages, and others. So when we see a -p- between vowels, it is due to an underlying consonant cluster being reduced to -p- but showing -p- (instead of -v-) because of -Cp- or the cluster strengthening the -p-: [thus] Egyptian ḥotpe ‘peace’ > UA *hoppi > **Hopi** hopi ‘peace, peaceable’; otherwise, *hopi > hovi.⁶⁶

Stubbs also notes that Egyptian d corresponds to Semitic ṣ, so there are many examples of Egyptian d > UA *s, just as Semitic ṣ > UA *s in the Semitic infusions. A few of many examples include:

(200) dbt / *dubat ‘brick, adobe brick’ > UA *supa ‘adobe’

(199) db ‘to clothe, garment, clothing’ > UA *sipu > *si’pu ‘slip, skirt, shirt, clothing’ ...

(197) dṣb ‘coal-black’, dṣbt ‘charcoal’ > UA *so’opa ‘black, dark’

(194) d’i ‘pierce, transfix’ > UA *so’a/*so’i ‘pierce, sew, shoot arrow’

(390) dwt ‘mosquito, gnat’ > UA *suti ‘mosquito, gnat’⁶⁷

Egyptian initial r- > UA t-, though the Tarahumara (TR) language retains r-. Thus, for example, Egyptian rmt “man, person” > UA *timati “young man” but TR *remarí*.⁶⁸ The behavior of Tarahumara in this aspect is one of several puzzles in UA studies that Stubbs’s work helps resolve.

The puzzle, discussed in detail in *Exploring the Explanatory Power*, is that the initial t in Proto-UA was retained in all UA languages except Tarahumara (TR), where it became initial r; i.e., PUA *t- > UA t- but TR r-, yet surprisingly, TR also retains initial t in many words. Stubbs states that this is explained by Egyptian and Semitic t and d sounds being retained as t in TR, while initial r in Egyptian and Semitic are retained as r in TR, yet Egyptian and Semitic r > t in the other UA languages.

Of the 40 TR words with initial r- or t- having cognates with Near Eastern languages, 37 (93%) follow the pattern that TR initial r- corresponds to Semitic or Egyptian initial r, while an initial t- corresponds to Semitic or Egyptian initial t or d sounds (t, t, or d in Hebrew or t, d, or t in Egyptian).⁶⁹ The 93% correlation is meaningful if the identification of cognates was done by considering TR initial t as possibly coming from either initial t- or r- in Near Eastern languages, which appears to be the case, otherwise possible Near Eastern cognates that underwent the r- > t- sound change would have been excluded, and the (already high) number of cognates under consideration would have been reduced in a way that would skew the numbers. The resolution of this puzzle is one of many subtle indicators that Stubbs's work is not an artifact of chance alone and does indeed provide explanatory power.

In addition to resolving the puzzle of initial t- in Tarahumara, there are six other technical and fascinating UA puzzles that Stubbs's work clarifies, treated in Chapter 6 of *Exploring the Explanatory Power*.⁷⁰

Stubbs argues that "the language of the Egyptians" spoken of by Nephi in 1 Nephi 1:2 "means the language of the Egyptians, that the learning of the Jews means the education Lehi received in the Jerusalem environment for writing Hebrew (or Aramaic) in the Phoenician alphabet and that Lehi, Nephi, and later record keepers to varying degrees (lesser degrees later) knew both Hebrew and Egyptian."⁷¹

In *Changes in Languages*, Stubbs provides 100 cognates with Egyptian, a small fraction of his total but enough, as with the Semitic cognates, to be startling and often impressive. The relationship between Egyptian stative/passive features and Uto-Aztecan was particularly surprising and nicely documented.⁷²

Explanatory Power: The Lamanite Term *Rabbanah*

Stubbs's framework also helps resolve questions about a rare glimpse at a Lamanite term in the Book of Mormon record, where a Lamanite servant after Ammon's miraculous victory at the Waters of Sebus addresses him with the honorific title Rabbanah. Stubbs adds this insight:

Returning to *Rabbanah*, the final *-anah* may be entirely different than any of us are guessing, possibly an unknown suffix from a deceased Native American language. However, in agreement with [the Book of Mormon Onomasticon at <https://onoma.lib.byu.edu>, I think it more probable that *Rabbaan-* has the Semitic noun suffix *-aan* (Book of Mormon orthography does not distinguish long and short vowels). As mentioned in the Onomasticon, *-aan* (in Aramaic and Arabic) is cognate with Hebrew *-oon* due to the Canaanite vowel shift of long *aa* > *oo*. LDS scholars have tended to contort explanations for Aramaic in Lehi lingo, because the assumption has been that the Lehi-Ishmael party spoke Hebrew, not Aramaic, which I assumed also, until after I found UA suggesting much Aramaic, and after I found renowned Semitists also suggesting a continued Aramaic substrate among northern Israel's areas Nevertheless, UA shows both *-aan* in some terms and *-oon* in other terms (though Hebrew also has some *-aan* terms among the more frequent *-oon*), and the UA *-aan* / *-oon* mix is consistent with what we see as Lehi's Semitic being a heavy Aramaic-Hebrew mix. The New Testament *Rabboni* 'my master' (John 20:16) has the same Semitic stem *rabb-* with the Hebrew suffix *-oon* and *-i* 'my'. Yet interestingly this Lamanite term has the *-aan* suffix like Aramaic and Arabic, not the *-oon* more common in Hebrew, because the Lamaniyyiim would be continuing the spoken language of the Lehi-Ishmael party, without access to the records containing Egyptian and Hebrew writing and vocabulary. In other words, the evidence in UA would suggest that the Lamanite languages would probably have had more Aramaic and less Hebrew and Egyptian than the Nephite languages had, and *Rabbanah* is consistent with that

After the *-aan*, the Onomasticon suggests a feminine abstract noun ending *-aa*. Possibly. However, more likely in my mind is a continuation with Aramaic morphology in the suffix *-aa* 'the'. In some Syriac / Aramaic dialects, the suffix *-aa* 'the' becomes part of the citation form or part of the noun, similar to English 'the horse' to mean 'horse', and to Aramaic *reemaan-aa* 'antelope-the' > UA **timina* 'antelope'. Similarly, Aramaic *Rabbaan-aa* 'great one-the' or 'great one',

consistently Aramaic throughout all 3 morphemes, seems at least as viable as other proposals, if not more so.⁷³

This is one of many tentative insights that Stubbs offers from his analysis. There may be many more to consider in the future.

Broad Explanatory Power

It is the explanatory power of Stubbs's work that most clearly points to the value of his find. This is not just a zealous hodge-podge of rather meaningless random parallels like, say, the parallels often collected through the passionate work of some Book of Mormon critics whose theories of plagiarism and borrowing fail to provide any explanatory power for Book of Mormon origins and leave the strengths of the Book of Mormon untouched or even ironically amplified. The parallels between Semitic languages and UA identified by Stubbs follow demanding methodologies and show consistent, plausible sound changes that not only provide large groupings of related words, but also help explain some previous puzzles in UA, including:

- (1) The phonology of medial (middle) consonant clusters,⁷⁴ a topic Stubbs describes as a huge problem in UA, is clarified by considering the influence of Semitic and Egyptian on the effect of adjacent consonants (see Section 7.2 of *Exploring the Explanatory Power*).
- (2) Proto-Uto-Aztecan (PUA)'s *p has clear reflexes (sound shifts) in the various UA languages. But five languages (Tarahumara, Mayo, Yaqui, Arizona Yaqui, and Eudeve) show both initial b and p corresponding to PUA *p.⁷⁵ This is generally viewed as an inconsistency, but Stubbs's work adds a significant insight: "The initial b forms in these languages correspond to Egyptian b or Semitic b of Semitic-p, and the initial p forms in these languages to Semitic/Egyptian p. How can such an alignment be coincidental? For the various UA forms of b vs. p to match Semitic/Egyptian b vs. p is significant."⁷⁶ See Section 6.2 of *Exploring the Explanatory Power*, where numerous examples are analyzed, including the Hebrew word for lightning, *baraq*, which became *pirok / perok, "lightning," in UA, while the initial b is preserved as berok- in Mayo, be'ok in Yaquif, or becomes a v in ve'okte of Arizona Yaqui, viriki-t of TaraCahitan, and vonaq-q of Serrano. Many more examples are offered. The great

majority of these puzzling occurrences of both p- and b-/v- from PUA *p- can now be explained by origins from Near Eastern words with initial p and b.⁷⁷

- (3) PUA initial t* at the beginning of words corresponds to the initial t in most of the UA languages, with a notable exception of Tarahumara initial r, as mentioned with some examples above. “So if PUA *t became Tarahumaran r, then where does Tarahumara initial t come from? The data in this work suggest that Semitic/Egyptian initial r became t, so in most UA languages initial r and initial t merged to look like PUA *r, but Tarahumara kept them separate. Thus [Section] 6.1 [of *Exploring the Explanatory Power*] clarifies the Tarahumara r vs. t puzzle, which see.”⁷⁸
- (4) A variety of other issues in sections 6.3 through 6.7 of *Exploring the Explanatory Power* are also explained by Stubbs’s work.

Many specific puzzles are also explained, as an understanding of the Near Eastern roots of UA helps clarify relationships between many of the words in UA languages. For example, Hebrew makteš “mortar, grinding stone” is reflected in *ma’ta of Proto-UA, “mortar, grinding stone.” But in Cahuilla (Ca), the noun-made-verb mataš suggests derivation from a verb that has the geminated *-tt- (< *mattaš) because otherwise a single *-t- will become -l- in Cahuilla. The geminated *-tt- could readily derive from a cluster such as -kt-, and helps explain why the Ca word preserves the -t-. The final š is also more consistent with Hebrew makteš, strengthening the case for Hebrew makteš > PUA *ma’ta.⁷⁹

One phenomenon of interest is the occasional existence of two related UA words from related Semitic cognates, one from Semitic-p and one from Semitic-kw. An example is item 617, UA *ti’na ‘mouth’ < Aramaic diqn-aa (Semitic-p), and item 628, UA ca’lo ‘chin’ < Hebrew zaaqn-o ‘chin-his,’ where the Hebrew and Aramaic words are a cognate pair.⁸⁰ This is consistent with two infusions that evolved differently or among different groups of people before being united in some way. Stubbs’s work may help explain the presence of some pairs of similar words in UA.

Impressive Depth

The entries in *Exploring the Explanatory Power* are far more than the amateur list of stray parallels some critics are imagining from Stubbs.

I've been impressed with how consistently deep and expansive Stubbs's analysis is, though I speak as a non-expert. To let readers judge for themselves, I provide a couple of his 1500 entries.

824 Hebrew **hayyownaa** / hayyoonat 'dove': UA ***hayowi** 'dove'. Note loss of -n- also in Ktn[Kitanemuk] payo' 'handkerchief' < Spanish paño; similarly, Sapir claims that single *-n- disappears and only geminated *-nn- survived in SP:

UA_{cv}-696 ***hayowi** 'dove': M88-h03; KH.NUA; KH/M06-h03: Two languages (Hp, Tb) agree with *howi: HP höwi, pl: höwiit 'dove, mourning dove, white-winged dove'; Tb 'owii-t 'dove'. In contrast, three Numic languages show hewi: Mn heewi' 'mourning dove'; TSh heewi-cci 'dove'; Sh heewi 'dove'. Numic forms showing hewi (Mn, TSh, Sh) leveled the V 's from -ai- / -ay- in *hayowi > heewi, o shortened to be perceived as part of -w-; so as CU 'ayövi and Wc häimī suggest the first vowel was *a*. Kw hoyo-vi 'mourning dove'; CU 'ayövi 'dove'; Ch(L) hiyovi; and Sapir's SP iyovi- 'mourning dove' with the final syllable as part of the stem, as in CNum, all show -y-. Kw and CU seem to have reinterpreted the final -vi as an absolutive suffix, but Ch, SP, and CNum suggest otherwise, and we again see -w- > -v- in Num [Numic]. Most of NUA suggest *hayowi. NP ihobi 'dove' transposed the h.

*hayowi > hewi (Sh, Mn, TSh)

> hayo	>	'ayö- (CU), iyovi (SP)
> hoyo-	(Kw),	hiyo(vi) (Ch) > ihobi (NP)
> *howi		> höwi (Hp)
		> 'owii-t (Tb)

Only the -n- is missing. Wc häimī/'áimī 'dove' and the -howa- of Tr čohówari / čohóbari 'turtle dove' are probably related as well. Wc ī could be a leveling of -yow- (*hayow > hai). TO hoohi 'mourning dove' is probably related in some way, perhaps with preservative consonant harmony (*howi > hoohi), and TO does keep PUA *h sometimes.

[TO keeps *h; wN>m in wc?, -n- > Ø] [1h,2y,3w,4n] [NUA: Num, Hp, Tb; SUA: Tep, TrC, CrC]⁸¹

Having recently discussed the significance of several Hebrew words related to dust-motifs in the Book of Mormon, particularly 'pl related to

darkness and obscurity, where an interesting wordplay may occur with the word 'pr meaning "dust" in 2 Nephi 1:23, I wished to look at the details Stubbs had uncovered regarding a relevant term:

871 Hebrew 'pl 'be dark'; Hebrew 'opl 'darkness'; Hebrew 'aapel 'dark'; Hebrew 'apelaa 'darkness'; Arabic 'afala (< *'apala) '**go down, set** (of stars); like 'set' and 'go down', this Semitic root also means 'be late, in the day or in the season'; a causative Hebrew form in Jastrow's Aramaic(J) is later Hebrew h'piil 'make dark' with unattested impfv ya'piil (m.) and ta'piil (f.). The unattested huqtal 3rd sg masc and fem passive of the above root would be Hebrew ***yu'pal** and ***tu'pal** 'become dark, be gone down (light)' aligning perfectly with UA *yu'pa(l) and *tu'pa(l) in the sets below; in UA *cuppa, the palatalization t > c- due to the high vowel u, and the cluster doubles the -pp-: Semitic ***tu'pal** > **cuppa**:

UAcv-891 ***cuppa** 'fire go out'; M67-171 *cupa 'fire go out'; 236 'go out (of fire)'; M88-cu9; KH/M06-co21:

Tb cupat, 'ucup 'be out (of fire)'; Tb(H) cuppat 'fire to be out, go out'; Wr co'a 'put out fire'; Wr co'i 'be out (of fire)'; Tr čo'á-ri- 'have another put out fire'; Tr čo'wi 'dark'; NV tubanu 'bajar de lo alto [go down from high up]'. ...

In the following, the semantic tie goes from 'set, go down, end (day)' to 'end (of whatever)':

UA cv-871a ***cuCpa/i** / ***cuppa** 'finish, be end of s.th.': I.Num258 *cu/*co 'disappear'; M88-cu1 'finish'; KH/M06-cul: Mn cúppa 'disappear'; NP coppa 's.th. sinking'; My cúppe 'terminarse, vi'; My cúppa 'terminar, vt';

AYq čupa 'finish, complete, fulfill (vow)'; AYq hi(t)čuppa 'completing, fulfilling (vow), harvesting', AYq čupe 'get completed, finished, married, ripe'; AYq čupia 'be complete'; Yq čúpa 'terminar (bien)'; Wr cu'piba-ni 'acabar'; Sr 'ičo'kin 'make, fix, finish'; Wc sīi 'finish'. Note Mn 'disappear' and NP 'sinking' reflect 'sun going down'. The over-lapping semantics (finish/harvest) in Cah (My, AYq) may have us keep in mind *cuppV 'gather, close eyes'. Does Sr 'ičo-kin 'make, fix, finish' have hi- prefix or is it from Hebrew ya-suup 'come to an end'?

UAcv-871b ***copa** / ***cupa** 'braid, finish weaving': Tr čobã/čo'ba- 'trenzarse, hacerse la trenza', Tb tadzuub 'braid it'; CN

copa ‘finish weaving/constructing s.th.’; CN copi ‘piece of weaving or construction to get finished’... [NUA: Num, Tak, Tb; SUA: TrC, CrC, Azt].⁸²

Other groups of UA words related in different ways to Hebrew *yu’pal and *tu’pal include, in the abbreviated format from *Changes in Languages*:

(872) ’pl / *yu’pal ‘be dark, go down, m’ > UA *yu’pa > *yuppa
‘be dark, black, (fire) go out’

(873) ’pl / *yu’pal ‘be dark, go down, m’ > UA *yu’pa(l) > Aztecan *yowal, CN yowal-li ‘night, n’ (The Aztecan branch regularly loses a single -p-)⁸³

Several other dust-related correspondences include item 591, Hebrew ’adaama and UA *tima, “earth”;⁸⁴ item 150, Egyptian t’, “earth, land, ground, country,” cf. Coptic to, and UA *tiwa, “sand, dust,” and also UA *to’o, “dust”;⁸⁵ item 162 Egyptian šfy ‘sand’ (Coptic šoo) > UA *siwa(l) ‘sand’;⁸⁶ and item 665, Aramaic ħirgaa’, “dust,” and UA *huCkuN (C again means an unknown consonant, and N is a nasal sound), “dust”.⁸⁷

The richness of linkages in the vocabulary related to dirt, dust, earth, and sand is reflected in many other areas, ranging from body parts and functions, animals, pronouns, numerous details of daily life, etc.

A Note on Metals

Stubbs’s work touches directly or indirectly upon a variety of Book of Mormon topics such as the issue of metals. Metals are some of the weak spots in the Book of Mormon, for their presence among the early Nephites is said to be an anachronism. Many scholars claim metals were unknown in Mesoamerica until roughly 900 A.D. In addition to disputing this conclusion on the basis of numerous finds of ancient metals that can push the date of metal use to much earlier, John Sorenson has also appealed to linguistics to show that metals must have been known much earlier. In *Mormon’s Codex*, for example, Sorenson states that “decisive evidence for the presence of Classic and Pre-Classic metallurgy” can be found in the linguistic data showing “that words for *metal* or (*metal*) *bell* appear in five reconstructed proto-languages of major families in Mesoamerica: Proto-Mayan, Proto-Mixtecan, Proto-Mixe-Zoquean, Proto-Huavean, and Proto-Otomanguean.”⁸⁸ Since Huastecan split from the main Mayan group by 2000 BC, and both have words for metal, knowledge of metals must have been very ancient.

Data from Proto-Mixtecan also supports a date of 1000 BC or earlier for a word for metal.⁸⁹ Interestingly, Sorenson then points to an early speculation from Hyacinthe de Charency, who suggested that the Mayan term *nab* (gold) is related to Egyptian *nb* or *nbw* (or *noub*).⁹⁰ Though uncertain of the merit in that proposal, Sorenson also notes that Yucatec Mayan *tau* or *taau* (lead or tin, but literally “moon excrement”) may relate to Arabic *taws* (moon) and wonders if Zoquean *hama-tin* (gold, silver) might relate to Egyptian *hmty* (copper) or if Zoquean *?anak* (lead, tin) could be connected to Akkadian (Babylonian) *annakum* (tin).⁹¹ He calls for further study on this issue, and I would concur.

Stubbs pays little attention to the issue of metals, but some linguistic hints appear in the data. In *Exploring the Explanatory Power*, item 465 looks at ties to the Egyptian word meaning metal, ore, or iron as well as sky (the place where [meteoric] iron comes from), though the linkage may point to flint knives. More relevant is item 466, where Egyptian *nm*, “knife,” and *p'-nm*, “the knife,” may relate to UA **panomi*, “knife, iron, tool,” which undergoes a **p > v/w* shift in several UA languages to give words meaning “iron, tool,” “metal, money,” or “knife, metal.”⁹²

Item 98 brings a Hebrew connection: Hebrew *raqf* ‘stamp, beat out (metal), spread out’; Hebrew *raaqiaf* ‘extended surface, expanse, sky’ > UA **tukuN-in* and **tukuN-pa* ‘sky’ and ‘metal’. The analysis in *Exploring the Explanatory Power* has nearly a full page on this connection. “Of interest is that Hebrew **raqiif* literally means ‘beat broad or flat,’ used in beating metal flat but also means sky as a broad expanse, and the Ca [Cahuilla], Cp [Cupeño], Sr [Serrano], and Ls [Luiseño] forms all mean both ‘sky’ and ‘iron/knife.’”⁹³ A related word in Kw (Kawaiisu) means “pounded metal.”⁹⁴ Such words need not imply that metallurgy was known but could point to ancient work with iron ore, a material treasured by the Olmecs.⁹⁵ The apparent sky/metal correspondences in the Old and New Worlds are worth further exploration.

With further work, perhaps the UA language family might be added to the five Mesoamerican language families Sorenson has listed providing linguistic evidence of an early knowledge of metals in the Americas.

Weak Spots

The introduction of the core hypothesis and supporting evidence comes somewhat piecemeal and may leave a reader initially confused in a few sections. For example, there are several initial examples presented from Semitic-kw and Semitic-p before the meaning of these terms, and the evidence for two infusions is clearly presented. I think an introductory

chapter could lay out the key findings to provide a foundation for the examples given while laying the linguistic foundation for the work, all this before the detailed examples are provided.

Some of the cognates are a stretch, and Stubbs often makes that clear, while keeping the possibility open. One example used in illustrating Egyptian r- > UA t- is:

(508) [Egyptian] rmn ‘side, row of rowers’ > UA *taman ‘tooth’
(animal jawbone of teeth on the ground looks like two rows;
this is not a match of meanings, but the change is fathomable)

It is possible — English and other languages sometimes have even stranger pathways — but also less convincing than most of Stubbs’s cognates.

In *Exploring the Explanatory Power*, one might also wish for the Near Eastern languages also to be written in their respective scripts to make the work more useful to experts in those languages. Instead, everything has been transliterated, but this should not present any serious problem.

Conclusion

Overall, these two new works are impressive contributions not just to the study of language in the Americas but also to the study of the Book of Mormon. In terms of Book of Mormon evidence, what Stubbs has begun here may be one of the most significant advances in our ability to relate the Book of Mormon to New World data. Stubbs’s conclusions were driven by data and unexpected discoveries, not by a desire to prove anything or see something that isn’t really there. It can only be hoped that others will consider the data as well and the impressive case it makes for Old World infusions into the New.

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Endnotes

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2. John W. Welch, ed., *Chiasmus in Antiquity: Structures, Analyses, Exegesis* (Hildesheim, Germany: Gerstenberg Verlag, and Provo, UT: Research Press, Brigham Young University, 1981). See also John W. Welch, “Chiasmus in the Book of Mormon,” *BYU Studies* 10/1 (1969): 1–15; <http://byustudies.byu.edu/content/chiasmus-book-mormon>.
3. Examples of recent publications treating newly uncovered word plays in the Book of Mormon include the following works by Matthew L. Bowen: “‘O Ye Fair Ones’ — Revisited,” *Interpreter: A Journal of Mormon Scripture* 20 (2016): 315–344; <http://www.mormoninterpreter.com/o-ye-fair-ones-revisited/>; “The Scalp of Your Head: Polysemy in Alma 44:14–18,” *Interpreter:*

- A Journal of Mormon Scripture* 20 (2016): 39–45; <http://www.mormoninterpreter.com/the-scalp-of-your-head-polysemy-in-alma-4414-18/>; “Alma — Young Man, Hidden Prophet,” *Interpreter: A Journal of Mormon Scripture* 19 (2016): 343–353; <http://www.mormoninterpreter.com/alma-young-man-hidden-prophet/>; “‘See That Ye Are Not Lifted Up’: The Name Zoram and Its Paronomastic Pejoration,” *Interpreter: A Journal of Mormon Scripture* 19 (2016): 109–143; <http://www.mormoninterpreter.com/see-that-ye-are-not-lifted-up-the-name-zoram-and-its-paronomastic-pejoration/>; “‘My People Are Willing’: The Mention of Aminadab in the Narrative Context of Helaman 5–6,” *Interpreter: A Journal of Mormon Scripture* 19 (2016): 83–107; <http://www.mormoninterpreter.com/my-people-are-willing-the-mention-of-aminadab-in-the-narrative-context-of-helaman-5-6/>; and “Onomastic Wordplay on Joseph and Benjamin and Gezera Shawa in the Book of Mormon,” *Interpreter: A Journal of Mormon Scripture* 18 (2016): 255–273; <http://www.mormoninterpreter.com/onomastic-wordplay-on-joseph-and-benjamin-and-gezera-shawa-in-the-book-of-mormon/>.
4. Richard Lloyd Anderson, *Investigating the Book of Mormon Witnesses* (Salt Lake City: Deseret Book Co., 1981).
 5. John L. Sorenson, *An Ancient American Setting for the Book of Mormon* (Salt Lake City: Deseret Book, 1985); John L. Sorenson, *Mormon’s Codex* (Provo, UT: Neal A. Maxwell Institute, 2013); Brant Gardner, *Traditions of the Fathers: The Book of Mormon as History* (Salt Lake City: Greg Kofford Books, 2015); and Jerry D. Grover, *Geology of the Book of Mormon* (Vineyard, UT: n.p., 2014); https://archive.bookofmormoncentral.org/sites/default/files/archive-files/pdf/grover/2016-01-27/jerry_d._grover_geology_of_the_book_of_mormon_2014.pdf or https://www.academia.edu/18172439/Geology_of_the_Book_of_Mormon.
 6. See, for example, the consequences of the attacks on the Arabian evidence for the Book of Mormon treated in Jeff Lindsay, “Joseph and the Amazing Technicolor Dream Map: Part 1 of 2,” *Interpreter: A Journal of Mormon Scripture* 19 (2016): 153–239; <http://www.mormoninterpreter.com/joseph-and-the-amazing-technicolor-dream-map-part-1-of-2/> and “Joseph and the Amazing Technicolor Dream Map: Part 2 of 2,” *Interpreter: A Journal of Mormon*

Scripture 19 (2016): 247–326; <http://www.mormoninterpreter.com/joseph-and-the-amazing-technicolor-dream-map-part-2-of-2/>.

7. Brian D. Stubbs, *Changes in Languages from Nephi to Now* (Blanding, UT: Four Corners Digital Design, 2016) and Brian D. Stubbs, *Exploring the Explanatory Power of Semitic and Egyptian in Uto-Aztecan* (Provo, UT: Grover Publications, 2015).
8. E.g., Brian D. Stubbs, “Egyptian and Semitic in Uto-Aztecan,” *Book of Mormon Archaeological Forum*, Jan. 2015, <http://bmaf.org/node/487>; Brian Stubbs, “Changes in Languages from Nephi to Now,” FAIRMormon Conference presentation, Aug. 2016; <http://www.fairmormon.org/perspectives/fair-conferences/2016-fairmormon-conference/changes-languages-nephi-now>.
9. Stubbs, *Changes in Languages from Nephi to Now*, (Blanding, UT: Four Corners Digital Design, 2016).
10. Stubbs, *Exploring the Explanatory Power*, 1.
11. Stubbs, *Changes in Languages from Nephi to Now*, 111–3. For more on Yiddish, see Stubbs, *Exploring the Explanatory Power*, 360.
12. Stubbs, *Changes in Languages from Nephi to Now*, 86–87.
13. “Hmong and Mien Languages,” *Wikipedia*, https://en.wikipedia.org/wiki/Hmong%E2%80%93Mien_languages, accessed Nov. 29, 2016. See also Brian McKibben, *English-White Hmong Dictionary* (Provo, UT: B. McKibben, 1992). Before moving to China, I lived in a Wisconsin community with many Hmong speakers and new Hmong members, and spent a couple of years studying White Hmong. My family attended a Hmong-speaking branch of the Church for two years. When we moved to Wisconsin in 1994, I heard Hmong speakers at church and thought they must be Chinese, but their tonal language proved to be significantly different from Chinese, which I had studied to some degree at that time. Later I would see numerous connections, often with consistent patterns of sound change.
14. Taraka Lara and Lars Borin, “Comparative Evaluation of String Similarity Measures for Automatic Language Classification,” in *Sequences in Language and Text*, ed. George K. Mikros and Ján Macutec (Berlin: Walter de Gruyter, 2015), 48–65, citation at 48; <https://books.google.com/books?id=kpUoCQAAQBAJ&pg=PA48-IA2>. See also “Chakra and Wheel,” *Bradshaw of the Future*, Dec. 2007,

<http://bradshawofthefuture.blogspot.my/2007/12/chakra-and-wheel.html>.

15. Some of the issues in this debate are addressed in Neal Rappleye, "Learning Nephi's Language: Creating a Context for 1 Nephi 1:2," *Interpreter: A Journal of Mormon Scripture* 16 (2015): 151–159; <http://www.mormoninterpreter.com/learning-nephis-language-creating-a-context-for-1-nephi-12/>.
16. Brian Stubbs, "Changes in Languages from Nephi to Now," FAIRMormon Conference presentation, Aug. 2016.
17. Stubbs, *Changes in Languages from Nephi to Now*, 9.
18. See discussions of possible models for the expansion of Nephite language into the northern lands in Stubbs, *Changes in Languages from Nephi to Now*, 160–163.
19. Stubbs, *Exploring the Explanatory Power*, 9.
20. Gary A. Rendsburg, Chapter 5, "Ancient Hebrew Phonology," *Online offprint from Phonologies of Asia and Africa*, ed. Alan S. Kaye (Eisenbrauns, 1997); Gary A. Rendsburg, "Hurvitz Redux: On the Continued Inattention to a Simple Principle of Hebrew Philology," in Ian Young, ed., *Biblical Hebrew: Studies in Chronology and Typology* (London: T & T Clark, 2003), 104–128; Gary A. Rendsburg, "A Comprehensive Guide to Israelian Hebrew: Grammar and Lexicon," *Orient* 38 (2003): 5–35; Gary A. Rendsburg, "Aramaic-like Features in the Pentateuch," *Hebrew Studies* 47 (2006): 163–176; all as cited by Stubbs, *Changes in Languages from Nephi to Now*, 87–88, 192.
21. Stubbs, *Changes in Languages from Nephi to Now*, 87.
22. *Ibid.*, 88.
23. *Ibid.*, 112.
24. For example, Brian D. Stubbs, "More Palatable Reconstructions for Uto-Aztecan Palatals," *International Journal of American Linguistics* 66/1 (Jan. 2000): 125–137; <http://www.jstor.org/stable/1265962>.
25. See, for example, multiple references to Stubbs in William L. Merrill, "The Historical Linguistics of Uto-Aztecan Agriculture," *Anthropological Linguistics*, 54/3 (Fall 2012): 203–260; <http://www.jstor.org/stable/23621084>.

26. Brian D. Stubbs, *Uto-Aztecan: A Comparative Vocabulary* (Blanding, UT: Rocky Mountain Books and Publications, 2011).
27. Kenneth C. Hill, “Uto-Aztecan: A Comparative Vocabulary by Stubbs,” *International Journal of American Linguistics* 78/4 (October 2012): 591–592; <http://www.jstor.org/stable/10.1086/667453>.
28. “Setting the Record Straight About Native Languages: Linguistic Relationships,” *Native Languages of the Americas*, <http://www.native-languages.org/iaq3.htm>, accessed Nov. 29, 2016.
29. “Amazing Coincidences,” archived at <http://web.archive.org/web/20060618231054/http://members.aol.com/yahyam/coincidence.html>.
30. Brian D. Stubbs, *Uto-Aztecan: A Comparative Vocabulary*.
31. Stubbs, *Exploring the Explanatory Power of Semitic and Egyptian in Uto-Aztecan*, 9.
32. Stubbs, *Changes in Languages from Nephi to Now*, 96.
33. *Ibid.*, 97.
34. *Ibid.*, 98.
35. *Ibid.*
36. *Ibid.*, 98–99.
37. *Ibid.*, 99.
38. *Ibid.*, 100.
39. *Ibid.*
40. *Ibid.*, 101–102.
41. *Ibid.*, 103.
42. *Ibid.*, 114.
43. *Ibid.*, 115–116.
44. *Ibid.*, 117.
45. *Ibid.*, 118.
46. Stubbs, *Exploring the Explanatory Power*, 69.
47. The Texas sharpshooter fallacy is refers to an alleged sharpshooter drawing a target around a bullet hole after firing a shot at the side of a barn, claiming a bull’s-eye. See “Texas Sharpshooter Fallacy,”

- Wikipedia*, https://en.wikipedia.org/wiki/Texas_sharpshooter_fallacy, retrieved Nov. 23, 2016.
48. “Labialized Velar Consonant,” *Wikipedia*, https://en.wikipedia.org/wiki/Labialized_velar_consonant; accessed Nov. 27, 2016.
 49. Stubbs, *Changes in Languages from Nephi to Now*, 114.
 50. Henry M. Hoenigswald, “Criteria for the Subgrouping of Languages,” in *Ancient Indo-European Dialects: Proceedings of the Conference on Indo-European Linguistics, Held at the University of California, Los Angeles, April 25–27, 1963*, ed. Henrik Birnbaum and Jaan Puhvel (Berkeley and Los Angeles: University of California Press, 1966), 1–12; see particularly 7; <https://books.google.com/books?id=5pCBRsfJMv8C&pg=PA7>. In that volume also see Calvert Watkins, “Italo-Celtic Revisited,” in *Ancient Indo-European Dialects*, ed. Birnbaum and Puhvel, 29–50; see particularly 33, 34; <https://books.google.com/books?id=5pCBRsfJMv8C&pg=PA33>. A discussion of the transition of a specific form of *p*–*kw* sound changes in several languages, namely **p* ... *kw* > **kw* ... *kw*, is discussed in L. Nakhleh, “Coding of the phonological characters in the datasets (PDF),” *CPHL Project (Computational Phylogenetics in Historical Linguistics)*, Rice University, July 2007; project page at <http://www.cs.rice.edu/~nakhleh/CPHL>, PDF file at <http://www.cs.rice.edu/~nakhleh/CPHL/code-p-07.pdf>. Further, see Domenico Pezzi, *Aryan Philology According to the Most Recent Researches (Glottologia Aria Recentissima)*, transl. E.S. Roberts (London, Trübner & Company, 1879), 13, 18; <https://books.google.com/books?id=wF0MAQAIAAJ&pg=PA13>. See also the discussion of Fick’s hypothesis at 11–12 regarding two *k* sounds in PIE, one of which became *p* in some languages and the other becoming *c*, with an intermediate sound in some languages similar to *kv*, which would could be the source for *kw* in Fick’s view. On the shift involving *p* and *kw* in Irish and Celtic, see Peter Schrijver, *Language Contact and the Origins of the Germanic Languages* (New York and London: Routledge, 2014), 80–82; <https://books.google.com/books?id=MUVJAgAAQBAJ&pg=PA80>.
 51. Brent D. Galloway, “Some Proto-Central Salish Sound Correspondences,” in *In Honor of Mary Haas: From the Mary Haas Festival on Native American Linguistics*, ed. William Shipley (Berlin: Mouton de Gruyter, 1988), 293–343, see particularly 320–1

and 326–7; <https://books.google.com/books?id=GNHjuqXiIJMC&pg=PA298#v=onepage&q=kw&f=false>.

52. B. L. Whorf, “The Comparative Linguistics of Uto-Aztecan,” *American Anthropologist*, 37/4 (Oct.–Dec., 1935): 600–608, citation at 607; <http://www.jstor.org/stable/662643>.
53. Brian D. Stubbs, “The Labial Labyrinth in Uto-Aztecan,” *International Journal of American Linguistics*, 61/4 (Oct. 1995): 396–422; <http://www.jstor.org/stable/1265830>.
54. Stubbs, *Changes in Languages from Nephi to Now*, 68–69.
55. Ibid., 121.
56. Ibid., 124.
57. Ibid., 104.
58. Ibid., 105.
59. Ibid.
60. Brian Stubbs, “Changes in Languages from Nephi to Now,” FAIRMormon Conference presentation.
61. Stubbs, *Changes in Languages from Nephi to Now*, 105–106.
62. Ibid., 106.
63. Ibid., 107–108.
64. Ibid., 106.
65. Ibid., 106–107
66. Ibid., 55.
67. Ibid., 108.
68. Ibid.
69. Stubbs, *Exploring the Explanatory Power of Semitic and Egyptian in Uto-Aztecan*, 303.
70. Ibid., 303–319.
71. Stubbs, *Changes in Languages from Nephi to Now*, 86.
72. Ibid., 64–65.
73. Ibid., 142–143.
74. Stubbs, *Exploring the Explanatory Power of Semitic and Egyptian in Uto-Aztecan*, 10.

75. Ibid.
76. Ibid.
77. Ibid, 304–8.
78. Ibid., 10.
79. Stubbs, *Changes in Languages from Nephi to Now*, 111.
80. Stubbs, *Exploring the Explanatory Power*, 362.
81. Ibid., 210.
82. Ibid., 218
83. Stubbs, *Changes in Languages from Nephi to Now*, 99.
84. Stubbs, *Exploring the Explanatory Power*, 171.
85. Ibid., 96.
86. Stubbs, *Changes in Languages from Nephi to Now*, 109; Stubbs, *Exploring the Explanatory Power*, 99.
87. Stubbs, *Exploring the Explanatory Power*, 185.
88. John L. Sorenson, *Mormon's Codex* (Provo: Neal A. Maxwell Institute, 2013), 331–5. See also John L. Sorenson, “An Open Letter to Dr. Michael Coe,” *Interpreter: A Journal of Mormon Scripture* 1 (2012): 91–109; <http://www.mormoninterpreter.com/an-open-letter-to-dr-michael-coe/>.
89. Sorenson, *Mormon's Codex*, 331–2.
90. Hyacinthe de Charency, “Les noms des metaux chez differents peuples de la Nouvelle Espange,” *Proceedings of the 8th International Congress of Americanists* (Paris, 1890; rept. Nendeln, Lichenstein: Draus, 1968), 536–47, as cited by Sorenson, *ibid.*, 343.
91. Sorenson, *Mormon's Codex*, 343.
92. Stubbs, *Exploring the Explanatory Power*, 148–9.
93. Stubbs, *Exploring the Explanatory Power of Semitic and Egyptian in Uto-Aztecan*, 83.
94. Ibid.
95. Jane Wheeler Pires-Ferreira and Billy Joe Evans, “Mössbauer Spectral Analysis of Olmec Iron Ore Mirrors: New Evidence of Formative Period Exchange Networks in Mesoamerica,” in *Cultural Continuity in Mesoamerica*, ed. David L. Browman

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