Looking Over vs. Overlooking: Native American Languages: Let's Void the Void

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Abstract: The time-depth of the Romance language family (ca. 2,000 years) yields an abundance of similarities among languages descended from Latin: Spanish, French, Italian, and so forth. The time-depth of Lehi is not much greater (2,600 years), yet no similar abundance of accepted linguistic evidence for Lehi's presence in the Americas has emerged. Is this because of a lack of evidence or a lack of looking? We cannot know until we look. The relative absence of effort in Native American languages relevant to Book of Mormon research is a huge void in Latter-day Saint scholarly endeavor. This paper discusses the value of and need to void this existing void, and presents from one Native American language family an example of the possibilities.

Our traditional approach to language-related research regarding the Book of Mormon has been fairly thorough and productive in traditional directions, but an established imbalance in that approach has left a void in what should be an important sphere of Latter-day Saint research: linguistic analysis of Native American languages. Though the void is understandable for the past—because of limited data and too few scholars—both limits are now changing sufficiently to allow efforts toward voiding this void.

As believers in the Book of Mormon, we adhere to the actuality that parties accompanying Lehi and Mulek left Jerusalem and

arrived in the Americas some 2600 years ago and that their descendants are among the Native Americans. The writings of John Sorenson and others suggest that descendants of those immigrant parties and the geographical locations they originally occupied were much less than the pan-American assumptions of earlier generations.[1] The immense linguistic variety in the Americas suggests the same. Some 2,000 Native American languages comprise nearly 100 separate language families. That diversity leaves little doubt that many peoples besides the groups of Lehi and Mulek contributed to pre-Colombian populations and languages. Nevertheless, whatever the original parameters of geography and language for the Book of Mormon peoples, it is not unreasonable to expect that evidences of Hebrew or possibly Egyptian may survive in some languages of the Americas.

Thus far the focus of Book of Mormon language research has been Hebrew, Egyptian, and the translated English text. This logical starting place, subject to careful thought and study, has yielded enlightening results; nevertheless, another dimension awaits attention. Though the number of Latter-day Saint scholars knowing Hebrew, Egyptian, or related languages has increased, we hardly suffer from an overabundance of those knowledgeable in ancient Near Eastern languages. In terms of employability or marketability of that knowledge, some individuals may feel part of an overabundance, but in a strict academic sense for collective research purposes, in light of what remains to be done, our resources are still fairly limited, especially if we consider the other sphere of research that remains quite untouched: Native American languages.

What was the language of Mormon and Moroni? Debates among Latter-day Saint scholars center on Hebrew and Egyptian; however, both may be near misnomers for the Lehi languages of A.D. 400. Between Lehi and Moroni was a span of approximately 1,000 years, and between Moroni and European contact was a lit-

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1   See particularly John L. Sorenson, *An Ancient American Setting for the Book of Mormon* (Salt Lake City: Deseret Book and FARMS, 1985); and John L. Sorenson, "When Lehi's Party Arrived in the Land, Did They Find Others There?" *Journal of Book of Mormon Studies* 1/1 (1992): 1–34. These two sources delineate evidence suggesting much-less-than-hemispheric limits to Book of Mormon geography and populations.

tle more than 1,000 years. Thus Moroni was about midway between Lehi and European contact. The extent that Book of Mormon groups had been in contact with or had mixed with non-Hebrew speakers by Moroni's time would likely parallel the degree of change in the languages of Lehi's posterity by A.D. 400. No known Native American language is very similar to Hebrew (or Egyptian). Suppose that the American language(s) most similar to Hebrew were identified and that the amount of change from Hebrew was interpolated over the more than two millennia since Lehi's arrival. If the Lehi languages of A.D. 400 had undergone about half the lexical and grammatical change observable in the Native American language(s) most similar to Hebrew, that amount of change would leave Moroni's and the Lamanites' language(s) of A.D. 400 more significantly different from either Hebrew or Egyptian than most suspect. Old English, largely because of foreign influences over the last 1,000 years, is essentially a foreign language to modern English speakers, though both forms are called "English"; and the language differences between Lehi's Hebrew and the languages of his posterity 1,000 years later may have exceeded the changes in English in a similar length of time. Therefore, if Native American languages are not much further removed in time from Moroni than was Lehi, maybe the contemporary end of the timeline can provide as many clues as Lehi's end, if not a greater number and clearer clues. Thus why not investigate both ends of the language spectrum?

In any case, we know practically nothing about the languages in Moroni's day, but we do know something about the Hebrew and Egyptian of the Old World that Lehi left, and we have hundreds of languages in the New World where he arrived. Why is nearly all of our Book of Mormon-related language research confined to only one of two ends of the language spectrum? The two-language end is certainly easier to deal with than the 2,000-language end, but that cannot be perpetual justification for a body of scholars in search of truth to ignore indefinitely a huge reservoir of research potential—Native American languages. An adjustment now seems desirable. In fact, the present may be an optimum time for some to consider this larger sphere of research, since just now substantive quantities and qualities of data are

accumulating for comparative research in many Native American languages.

Since research in this "larger picture" requires a combination not common in scholarly preparation, most interested persons would need to expand their backgrounds. Three prerequisites—a knowledge of Hebrew or other Near Eastern languages, a foundation in historical linguistics, and a knowledge of a Native American language family—qualify one for the work, so to speak. For those who already know Hebrew, adding a background in historical linguistics would allow investigation of a Native American language family with some potential for results. For linguists accomplished in Native American languages, adding Hebrew or related languages to their language repertoire would provide a similar package of prerequisites. Perhaps this oblique invitation might better apply to young prospective scholars still in the stage of preparation than to established scholars already set in research specialities.

Though I want to encourage, I must also, in all fairness, first caution against romanticized expectations of swift results. The realm of research in Native American languages is infinitely fascinating, but for mortals possessing a mere lifetime, infinite fascinations can also be frustrations. Though most scholarly accomplishment requires sizable portions of a lifetime, contrast the required language base for research endeavor in the ancient Near East vs. the Americas. A knowledge of half a dozen languages (Hebrew/Phoenician, Arabic, Aramaic, Egyptian or Coptic, Akkadian, and Greek) provides one with a fairly complete array of ancient Near Eastern languages. Would that six languages could do the same for a specialist in Uto-Aztecan, Hokan, or Penutian (each consisting of ca. 30 languages), or for one interested in proposed relationships between Uto-Aztecan, Penutian, and Kiowa-Tanoan (involving three language families totaling more than 60 languages), or for one like myself interested in a dozen language families, totaling a few hundred languages.

A second caution worth mentioning is that one not assume that Native American languages are less complex or easier to learn than Hebrew, Arabic, or Egyptian. Let me express my own opin-

ion on the matter.[2] Though Arabic (but not necessarily Hebrew) may have a richer lexicon than what has been preserved or recorded for most Native American languages, the structural complexities (phonological, morphological, and syntactic) of many, if not most, Native American languages leave Hebrew, Arabic, and Egyptian easier to learn than, for example, Navajo (or any other Athapaskan language), Ute, Cora, most Hokan, most Penutian, or Kiowa-Tanoan languages. On the other hand, not all Native American languages are so complex: for example, Hopi, Tarahumara, Quechua, and Muskoguean languages are no more difficult and probably easier to learn than Arabic or Egyptian.

A third caution not to be overlooked is that Native American language families are, for the most part, linguistically more complex than Semitic. Few language families on earth are so neat, clear-cut, and problem-free as Semitic. Though every language family has unresolved problems (e.g., exceptions to sound correspondences, etc.), such problems apply to perhaps less than 10% of the Semitic lexicon, while 50% of the Uto-Aztecan cognate sets are complicated by departures from the understood sound correspondences (cognates are words in related languages descended from the same word in a former parent language). Hokan and Penutian are still hypotheses, since no one has yet been able to produce a convincing system of sound correspondences for either group. Though most linguists see sufficient similarity within each

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[2]   This opinion is based upon the following experience: two years on a Navajo-speaking mission; five years of Hebrew; three years of Spanish; three years of Arabic; two years of German; one year each of Ancient Egyptian, Aramaic, and Sanskrit. Beyond languages backed by college credit, I am also presently compiling the largest Tewa dictionary in existence and a dictionary on the White Mesa Ute dialect. I have also studied to varying degrees Tarahumara, Hopi, Papago, Nahuatl, Quechua, Choctaw, and Samoan, and I have engaged in brief perusals of dozens of other languages. As a Uto-Aztecanist, I have published "The Labial Labyrinth in Uto-Aztecan," in *The International Journal of American Linguistics* 61/4 (1995): 394-420; "The Comparative Value of Tubar in Uto-Aztecan" is scheduled to be published in a memorial volume for Professor Wick Miller; I have a third article "The Elusive Liquids of Uto-Aztecan" in preparation for *IJAL*; and I am presently completing a book entitled *A Comparative Vocabulary of Uto-Aztecan Languages*, which will be the largest work on comparative UA linguistics, adding comment and cognate sets to all noticed thus far in the literature; and I have started another book entitled *The Language Puzzle of the Ancient Pueblo or Anasazi*.

group to think that they are separate groups of related languages, neither is yet a proven language family. I recently heard Margaret Langdon, the foremost Hokanist for decades, say, "Some days I wonder if Hokan is a fantasy." As for elusiveness from definitive linguistic analysis, Indo-European is somewhere between Semitic and most Native American language families. One difference is that a virtual army of linguists has contributed solutions to Indo-European over the last century and a half, while Native American language families typically attract perhaps ten to twenty linguists working on individual languages and three or four interested in comparative work on the language family as a whole.

These observations hint at the volume of data and difficulties an Americanist faces; and in an effort to be both an Americanist and a Semitist, which I see as the only total approach to Book of Mormon language matters, one can feel overwhelmed and wonder at the imbalance—that nearly all interested Latter-day Saint scholars seem to focus on the two-language end, while ignoring the equally important 2,000-language end.

In any case, we must be cautious in our expectations of what we might find and in our interpretations of those findings. Even if a connection between Hebrew (or Egyptian) and a Native American language family were established, it would not necessarily *prove* the Book of Mormon, since a Semitic element, if found, could possibly have arrived independent of Lehi and Mulek. On the other hand, a lack of a connection would not necessarily disprove it either, since lack of a Near East language element could be because of language loss or change among a people, as has happened often in the histories of language groups. For example, Aramaic had replaced Hebrew as the common vernacular among the Jews by Jesus' time, and the Iberian populations adopted Latin under Roman rule. Yet the language of a conquering people does not always prevail. In the Iberian Peninsula the Germanic Visigoths actually adopted the language of the people they conquered, speaking later forms of Latin. Most Native Americans now speak English or Spanish, though hardly of Indo-European ancestry. Many more examples could be cited. In other words, language and lineage may or may not have much to do with each other.

Nevertheless, a language element traceable to Northwest Semitic found among American languages would only strengthen the plausibility of the sacred record's historicity in ancient America. Beyond that, if some tribal names or place names were found to match Hebrew forms of Book of Mormon peoples or places, or if written records were discovered and deciphered, and their language found to be something linguistically between Old World Semitic and New World languages, or their deciphered contents were to align with events or peoples mentioned in the Book of Mormon text, then it would be refreshing to have some answers and a new set of questions.

In any case, we are admonished to "study and learn, and become acquainted . . . with languages, tongues, and people" (D&C 90:15), and comparative linguistic research among Native American groups should hold a higher priority among Latter-day Saint scholars than it has, since those efforts can apply or relate to so many interests relevant to Book of Mormon scholarship. Yet it seems fair to say that serious comparative linguistic investigation with respect to the Book of Mormon has been a void in Latter-day Saint endeavor. Not only is it relevant to the other disciplines focusing on the Book of Mormon, but comparative linguistic research may prove to be the very key to answers thus far evading other modes of investigation. It has the potential of giving us the basic vocabulary of certain ancient American groups; relative percentages of Hebrew and Egyptian; possible identification of dialects, ethnic compositions, and places of departure; and more.

Also worth noting is the relative strength of comparative linguistic evidence. The nature of comparative linguistic evidence provides large bodies of data—several thousand words per language—that is nonforgeable. Ruins and buildings yield some facts, though who built them is not always one of the facts revealed. Words of a translation can be debated endlessly, and written records can feasibly be forged, but no one can fabricate a language family of several Native American tribes speaking a variety of related languages.

In spite of the potential, it is important to note that no American Indian language has yet been shown to descend from or relate to a Near Eastern language, at least to the satisfaction of the linguistic community. My research of over a hundred languages and

several language families thus far has convinced me that no Native American language so obviously and solely descends from Hebrew or Egyptian in the way that Spanish, French, and Italian so clearly descend from Latin. Nevertheless, even though no pervasive appearance of Hebrew in the Americas has surfaced, hints of Hebrew occur in a number of language families.

Some language families contain more similarities to Hebrew than could be attributed to chance, while other language families tease with enough promising leads to merit further investigation. However, in all such cases, if a Near Eastern linguistic element should prove verifiable, it seems clear that this element has mixed heavily with other languages quite dissimilar to Hebrew or Egyptian, because all Native American languages have many features very different from Hebrew and Egyptian. This accords well with Sorenson's views of "others in the land."[3] Nonetheless, some languages may contain a Hebrew component. Because of the immensity of American linguistic diversity, the nature of responsible linguistic investigation, and a current severe shortage of those interested and prepared to investigate, progress in rigorously sifting and tracing the leads will necessarily be slow. Nonetheless, an example of the possibilities is in order.

The language family that I have dealt with most is Uto-Aztecan (UA), in which I have identified substantial similarities with Hebrew. A short preview of the growing case for a Hebrew element in UA seems appropriate for students of the Book of Mormon. Let me emphasize the word *element*, for UA languages are very different from Hebrew in many ways. In other words, in addition to a Hebrew element in UA, any Hebraist learning or reading a UA language can readily see more differences than similarities, supporting the other half of my thesis, that this Hebrew element is mixed heavily with non-Near Eastern elements.

In addition to numerous lexical similarities, some features of Northwest Semitic morphology are still productive in UA, i.e., are still functionally active, such as the masculine plural suffix and niqtal prefix, while much more is fossilized, i.e., nonfunctional "frozen" patterns are detectable such as the feminine plural, qittēl

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3   Sorenson, "When Lehi's Party Arrived in the Land, Did They Find Others There?" 1–34.

forms, hiqtîl and huqtal forms, etc. With that in mind, consider a few of some 1,000 identified similarities between Hebrew and Uto-Aztecan.[4]

A Hebrew Element in Uto-Aztecan

The UA language family consists of the following languages:

Branch	Language (abbreviation)	Locale
North UA		
Western Numic	Mono (Mn); Northern Paiute (NP)	CA, OR, NV
Central Numic	Panamint (Pn);	NV
	Shoshone (Sh);	NV, UT, ID, WY
	Comanche (Cm)	TX
Southern Numic	Kawaiisu (K); Chemehuevi (Ch);	S. CA
	Southern Paiute (SP); Ute (U)	UT, CO
Takic	Cahuilla (Ca); Luiseño (Ls); Serrano (Sr); Cupeño (Cp); Gabrielino (Gb)	S. CA
single-language branches	Tubatulabal (Tb)	S. CA
	Hopi (Hp)	AZ
South UA		
Tepiman	O'odham/Papago/Pima (Od)	AZ, Mex
	Northern Tepehuan (NT)	Mex
	Southern Tepehuan (ST)	Mex
Cahitan	Yaqui (Yq); Mayo (My)	Mex

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4 Among Latter-day Saint scholars are a few Semitists, to whom queries regarding the validity of the Semitic data can be directed. As for Latter-day Saint Uto-Aztecanists, I know of no others besides myself. Therefore, because it may be difficult for nonspecialists to assess the merit of proposed linguistic connections, it may be well to mention that I have privately shared this material with five Uto-Aztecanists (linguists who have studied and published in UA linguistics) and four of the five were quite overwhelmed at the quantity and quality of the evidence—two spoke very highly of it; two, in surprise, could hardly speak at all after seeing it; and the fifth did not like the proposal generally, but offered no substantive refutations. For publications in Uto-Aztecan linguistics, see n. 2.

Sonoran	Tarahumara (Tr); Guarijio (Wr)	Mex
	Tubar (Tbr); Eudeve (Eu)	Mex
Corachol	Cora (Cr); Huichol (Hch)	Mex
Aztecan	Nahuatl (N)	Mex

For a pronunciation guide to the sounds as represented in this paper, see the appendix, Orthography and Pronunciation (pages 43–45), which I encourage the reader to consult now. Abbreviations other than those listed above are found at the end of the appendix. Sources for lexical items from the various Native American and Semitic languages are listed in the bibliography. A proto-language is a hypothesized parent language from which a group of related languages descended; an asterisk (*) before a form or word signifies that it has been reconstructed by linguists as an unattested ancient or intermediate form in the parent language on the basis of comparisons of related words (cognates) in the descendant languages.

Among the most interesting discoveries are certain similarities of UA forms to archaic voweling patterns in Northwest Semitic, the branch to which Hebrew belongs.

			Hebrew	UA
1.	plural suffix		-îm	*-ima
2.	passive/rfl/rcp prefix		ni-	*na-
3.	perfect of yšb	sit/dwell	yāšaḇ	*yasipa

UA morphemes show some similarity with Masoretic Hebrew, though nothing exact: -îm and -ima; ni- and na-; yāšaḇ and yasipa. However, the facts that Hebrew -îm came from an earlier *-īma; the Hebrew niqtal (or nipᶜal) prefix ni- from an earlier *na-; and Hebrew yāšaḇ from an earlier *yašiba, all establish a nearly perfect identity between pre-Hebrew (proto-Northwest Semitic) and proto-UA forms:

	NW Sem	UA
plural suffix	*-īma	*-ima
reflexive/reciprocal prefix	*na-	*na-
sit, dwell	*yašiba	*yasipa[5]

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[5]   *-īma/*-ima: For NW Sem *-īma, see Sabatino Moscati, ed., *An Introduction to the Comparative Study of the Semitic Languages* (Wiesbaden:

Harrassowitz, 1964), 88 and 97, and John Huehnergard, *Ugaritic Vocabulary in Syllabic Transcription*, ed. Frank Moore Cross (Atlanta: Scholars Press, 1987), 296. For UA, the plural suffixes in a representative sample of UA languages are as follows:

Cp	-im	Hp	-m	N	-me < *-ma
Ca	-em	Sr	-m	Hch	-ma
Yq and My	-im	Tbr	-m	K	-mï
Wr	-ima				

All UA languages having this suffix show *m*; some show a vowel after the *m* (*a*, *e*, *ï*); and some show a high front vowel (*i*, *e*) before the *m*. Yq and My have -*m* suffixed to words ending in a vowel and -*im* suffixed to words ending in a consonant. UA languages tend toward CVCV patterns; thus, two adjacent vowels usually level to something between the two or the second often is eliminated, which process would explain the reduction of -*im* to -*m* after vowels. Something similar probably happened in the other UA languages that have no vowel before *m*, leaving -*m* or -*mV* in most UA languages. However, the presence of a high front vowel in at least four UA languages is a reality to be reckoned with that Uto-Aztecanists have ignored. If the vowel before *m* were excrescent in some way, a round vowel (*o*, *u*) would be more likely, but not *i* or *e*. The presence of a high front vowel before m strongly suggests an original high front vowel before *m* that was lost in the other languages. A reconstruction of *-*ima* seems most plausible since all variations from that can be attributed to vowel leveling— final *a* lowering *i* to *e* in Ca; and preceding *i* raising *a* to *e* or *ï* in some languages. As for N, Karen Dakin, "Phonological Changes in Nahuatl: The Tense, Aspect, Mood Systems," *International Journal of American Linguistics* 45/1 (1979): 48– 71, demonstrated that N -*me* came from an earlier *-*ma*. Wr has pairs like the following (morpheme divisions are Wick Miller's in "Guarijío: Gramatica, Textos y Vocabulario," 1989):

sg. suʔka-ni	pl. suʔki-ma	to sew
sg. neha-ni	pl. nehi-ma	to hand over
sg. ola-ni	pl. ori-ma	to shell corn

A morpheme division that includes the preceding vowel (which seems at least as reasonable) would yield sg. -*ani* and pl. -*ima*.

*na-: Joshua Blau, *A Grammar of Biblical Hebrew* (Wiesbaden: Harrassowitz, 1976), perhaps the foremost Hebrew linguist-grammarian, renders the earlier voweling of the niqtal prefix as *na*- rather than *ni*-. He also lists examples that illustrate all three uses of the *na*- prefix: reflexive, reciprocal, and passive (ibid., 51). Though reflexive and reciprocal are the most common uses of the prefix in UA and passive is the most common use in biblical Hebrew, all three meanings are employed in Semitic and two of the three in UA. The semantic notions of reflexive, reciprocal, and passive often overlap in languages; for example, Spanish *se* is employed for all three uses, and in English the same event could be described with either "he burned himself" (reflexive) or "he got

Furthermore, the verbal forms of both Northwest Semitic and UA contain semantic dimensions of *yašiba*, which means "sit" and "dwell" in both families. That the UA voweling patterns are quite equivalent to proto-Northwest Semitic voweling patterns is striking. The Hebrew Old Testament text as we have it, also known as the Masoretic text, was voweled by the Masoretes some 1,200 to 1,300 years after Lehi and Mulek left Jerusalem. Thus that form of Hebrew known as biblical Hebrew is only one dialect of ancient

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burned" (passive). Illustrations of the *na-* prefix in three UA languages are as follows:

SP	paqï	vt. bathe	na-vaqï	bathe oneself
SP	wï-ton'noi	vt. shake	na-ŋwï-ton'noi	shake oneself
Hp	'öqala	vt. greet s.o.	naa-'öqala	cheer oneself up
Hp	wïïsi	brush, broom	naa-wïïsi	comb one's hair
Hp	qöy-ta	to start a fire	naa-qöy-na	burn oneself
Tr	co-	vt. hit with the fist	na-co-	fight with each other
Tr	paba-	vt. throw rocks at	na-paba-	throw rocks at each other

*yašiba/*yasipa*: Verbs of temporary state in Semitic (such as *yašiba* "sit") generally exhibited *i* as the medial vowel of the perfect (Moscati, *Comparative Study of the Semitic Languages*, 122). However, the medial *i* later changed to *a* in most Hebrew verbs because of the closed stressed syllable created by the perfect suffixes (Blau, *Grammar of Biblical Hebrew*, 36; William Gesenius, *Gesenius' Hebrew Grammar*, ed. E. Kautzsch and trans. A. E. Cowley, 2nd ed. [London: Oxford University Press, 1910], 120). Medial *i* is still apparent in the Aramaic form *yǝṯib* and Ugaritic *'aṯib*. In addition, the short final vowels of proto-Semitic were lost in Hebrew (Moscati, *Comparative Study of the Semitic Languages*, 122, 170; Blau, *Grammar of Biblical Hebrew*, 30). Thus, UA showing *yasipa* in light of pre-Hebrew *yašiba*, even though classical Hebrew has *yāšaḇ*, is rather astounding. The UA forms are as follows:

Hopi	yesiva
Tr	'asiba
Od	dahiva
ST	daivo
Yq	yesa

Od and ST, as members of the Tepiman branch of UA, have *d* corresponding to UA *y*, and *h* corresponding to UA *s*. So they also point to UA *yasipa*. For the *b* and *v* elements, Uto-Aztecanists reconstruct *p*, though *b* and *v* are exactly the allophonic variants of Hebrew/Semitic *b* (Hebrew *yāšaḇ* < *yašiba*). Some Uto-Aztecanists consider the final *-pa* element to be a fossilized suffix of some sort, since Hp *yesi* and Tr *'asi* and Od *dahi* are also verb forms of those verbs in those languages.

Hebrew, and is a very late dialect at that, far removed from Lehi and David. Though the consonants of the text, written much earlier, are more reliable, the voweling patterns of the Masoretic dialect of Hebrew are as far removed in time from Lehi's Hebrew as U.S. Southern English is from Old English, which two forms of English are also 1,200 years apart and are very different. Hebrew, as we know it, lost the short final vowels of proto-Semitic, but as seen in 1 and 3, those vowels are apparent in UA. However, not all UA forms preserve the phonology so well, for in most cases UA has phonologically reduced Semitic forms greatly; nevertheless, archaic features do turn up sporadically.

It is worth noting that the above items help point to Northwest Semitic (as opposed to other branches of Semitic or Semitic generally) and sometimes, specifically Hebrew, as having the closest affinity to UA.

	masculine plural	sit/dwell
Arabic (South Sem)	-ūna/-īna	wataba
Aramaic	-în	y∂tib
Akkadian (East Sem)	-ū/-ī	ašabu
Ugaritic	-ūma/-īma	ʾatib
pre-Heb/NW Semitic	*-īma	*yašiba
UA	*-ima	*yasipa

One can see that *n* and not *m* appears in the masculine plural suffix in Arabic and Aramaic, while East Semitic lacks both *n* and *m*. Only Northwest Semitic shows *-īma*. Ugaritic belongs to Northwest Semitic as Hebrew does. So these all point to Northwest Semitic for the plural suffix. The forms for "sit/dwell" point even more specifically to Hebrew. Proto-Semitic and South Semitic *w* corresponds to Hebrew *y*, and Ugaritic and East Semitic lack either initial *w* or *y*, all of which suggests Hebrew. Likewise, Aramaic, Ugaritic, and South Semitic all show *t* (*θ*) rather than *š*; the intersection of these two sets (*y* and *š*) points only to Hebrew in the verb "sit/dwell," though UA shows the pre-Masoretic vowel *i*.[6] UA *o* for Hebrew *ō* (< proto-Semitic *ā*) to be seen in later examples also points to Hebrew.

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6   See *yašiba* in n. 5.

For the data below, the left column generally contains a Hebrew form (an occasional Arabic or other Semitic form will be specified in the notes), and on the right are UA forms. Consider additional lexical similarities:

	Heb/Sem		UA	
4.	bārāq	lightning	berok	lightning[7]
5.	*kilyāh/kolyāh	kidney	*kali	kidney[8]
6.	kātēp/katpa	shoulder	*kotpa	shoulder[9]
7.	šəkem/šikm	shoulder	*sïka/siku	shoulder[10]
8.	ʾāḏām	man	*otam	man, person[11]

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[7]   Wick R. Miller, *Uto-Aztecan Cognate Sets* (Berkeley: University of California Press, 1967), abbreviated as (UACS). UACS #262 lightning: My *berok-tiria*; Yq and My *berok/beʾok*; Andres Lionnet, *Los Elementos de la Lengua Cahita* (Mexico City: Universidad Nacional Autonona de Mexico, 1977); NT *vïpïdoxudami*; ST *vïpgi*; Od *vïpïgi*; Od *bebedki* "thunder." In these words Hebrew *b* appears to correspond to UA **p*, as it usually does, except in initial position. However, considering that the vowels have assimilated to the consonants' point of articulation (*bārāq* > *berok*, raising and fronting before alveolar *r*, and raising and backing before uvular *q*), the NT *-dox-* and Yq/My *-rok-* syllables help show nicely the presence of all three consonants: a bilabial, *r*, and *k/q*. The two Od forms may be Tepiman dialect variants or borrowings within Tepiman. Nevertheless, Od *bebedki* "thunder" shows nicely all three consonants as expected for Sem *brq*, with a slight semantic change.

[8]   SP *kani* "kidney" and Hp *kele-vosna* "kidney" suggest PUA **kali*. That form is possible in Northwest Semitic. Aramaic has both *kolya* and *kulya*. The Hebrew form appears only in the pl. *kəlāyôt*, with a presumed singular of *kilya*, though the sg. is unattested. Nevertheless, a number of UA forms show *a* where Masoretic Hebrew shows *i*.

[9]   In light of Hebrew *kātēp* "shoulder" and Ar *katip/katp* "shoulder," consider Od *kotva/kotova* "shoulder"; Wr *tehpóba* "back" and "shoulder"; and Tr *na-ʔapu* "push with the shoulder." Wr alone shows the Sem vowel, though it is missing the first consonant; however, Tr is nearly missing the first consonant, but shows the frequently occurring ʾfor *k* in clusters, which makes the Wr clearer since it is nearly identical to Tr—Tr/Wr **ʔep/*ʔtap*. Nevertheless, all three Semitic consonants are well represented in their expected forms: UA **k, *t, *p*.

[10]   Hebrew *šekem/šikm* "shoulder": Pn *sikkum-pï* "shoulder blade"; Sh *sikkum-pï* "shoulder blade"; Mn *sihkuhpi* "shoulder blade"; WM Ute *sku-pï* "shoulder"; Sr *sūka* "shoulder"; Ls *sōka* "shoulder"; Ca and Cp *sekʾa* "shoulder"; Tr and Wr *seka* "arm, hand"; NT *ïka* "arm"; My *koxm-im* "arm(s)"; Yq *kōmim* "arm"; Hp *sïkapci* "scapula of sheep"; Hp *sïkakci* "shoulder blade."

[11]   Hebrew *ʾāḏām* "man"; NT *odami* "person"; Od *oʾodham* "person, tribesman, man"; ST *odam* "man"; Yq and My *ʾōʾow* "man, person," pl. *ʾōʾow-im*; Tbr *oñwi* "man"; Tr *owí* "male, macho"; Wr *oí* "male, macho."

9.	mayim/mēm	water	*mēme-t	ocean[12]
10.	šippāh	smooth, plane off	*sipa	shave, scrape[13]
11.	*siggôḇ	squirrel	*sikku	squirrel[14]

The rounding effect of the ʾaleph or glottal stop causes the initial vowel to be ʾo (cf. 52–64). The Tepiman languages (NT and Od) preserve all else fairly well. Yq and My often have r and ʾalternations (cf. *berok/beʾok* "lightning") and with intervocalic *d* easily being perceived as intervocalic *r* (as it is in English), it only remains to explain *m > w* (*odam > orom > oʾow*). In Tbr the intervening vowel was lost to create an alveolar-nasal cluster (*dm*) in which the alveolar became a nasal (*n*), and the *m* a *w*, which was probably nasalized in this now extinct UA language; for *m becomes a nasalized *w* in Ute very often. From that Tr and Wr *owí* "male" were probably derived, whether by similar development as Tbr or by borrowing from Tbr.

[12] Cp *mēme-t* "ocean" and Ls *mōma-t* both fit a reconstruction of *mēme-t "ocean," since the Ls *o* does correspond to Cp *e*.

[13] Hebrew *šapa(y)* "sweep bare, smooth"; Gesenius gives "scrape off"; in later Hebrew qiṭṭēl *šippāh* "plane off"; Mn *sipa* "shave"; Cm *sibe* "scrape, shave"; Tb *siip* "shave"; Hp *sipaw-ta/sispa* "shave." Not only does the *i* vowel in UA suggest a qiṭṭēl form rather than qal, but *p* in Hp instead of *v* also suggests qiṭṭēl with its doubled medial consonant; otherwise, intervocalic *p* in Hp allophonically becomes *v*. A note convenient at this point is that *lamed-he* verbs (those which end with h in Hebrew writing) will be represented *rmy/ramah*, even though the final *h* in written Hebrew is basically an orthographic device to demonstrate a final vowel sound. However, *h* is not the third consonant and never was pronounced unless it is mappiq with a dot in it. This is quite apparent in the Hebrew and Arabic forms of rmy: *rama* רָמָה, *ramīti* רָמִיתִי, rama(y) رمى, ramaytu رميت, rumiyat رميت. Nevertheless, even in English transcriptions that final *h* has become something of an orthographic institution among Semitists that we shall momentarily conform to.

[14] The Hebrew Old Testament constitutes the majority of ancient Hebrew texts. Because not all spoken vocabulary would have found its way into the ancient text(s), certain items in other Semitic languages found to correspond to UA are worth noting, since those items could well have been in the spoken Hebrew language regardless their lack in an ancient text. The word for "squirrel" is an example. There is no word for "squirrel" in the Old Testament text; it simply did not occur in the writings of the scribes and prophets. However, the Arabic word for "squirrel" *sinjāb* would correspond to Hebrew *siggôḇ* (< *singāb), and curiously we find UA *sikku* "squirrel," exactly as expected with the typical raising of vowels, loss of final consonant, and even the geminated medial consonant.

When *n* is the first element in a consonant cluster, Hebrew typically assimilates it to double the second consonant, whereas Arabic does not:

12. ṣippôr   bird   *cipu(ri)   bird[15]

Sound Correspondences

Linguists have found that even though sounds change over time, the changes are not haphazard; sounds change in consistent patterns, such that a sound in one language will quite consistently correspond to a particular sound in a related language. For example, the sound correspondences of English in the Indo-European language family include $f < *p$ (i.e., f is from an original p or reconstructed proto-Indo-European $*p$); $th < *t$; and $h < *k$; and all three show a general trend of stops (p, t, k) becoming fricatives (f, th, h):

English	Latin
father	pater
foot	ped-
three	tres
thin	tenuis
hound	kan-is
heart	kord-is
hundred	kentum

Though many details remain to be worked out, a comparison of Hebrew or Semitic with Uto-Aztecan produces a fairly consistent pattern of sound correspondences, which is perhaps the most

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Ar	ʾanfuhu	Heb	ʾappô	his nose
Ar	bint	Heb	batt-	daughter
Ar	ḥinṭa	Heb	ḥiṭṭa	wheat

In addition, long $\bar{a}$ of Arabic and proto-Semitic correspond to $\bar{o}$ in Hebrew; therefore, an Arabic form of *sinjāb* "squirrel" would yield *siggôḇ* in Hebrew. And SP *sikku* "squirrel" is exactly what we would expect with the usual rising of vowels in UA and loss of a final segment. Some might argue *s* or *š* (sh), but Arabic's *s* (*sin*) can correspond to either Hebrew *samech* or *shin*; it hardly matters, however, since all three Semitic *s*'s (s^1, s^2, s^3) merge to UA *s*.

[15] Hebrew *ṣippôr* "bird, small bird." Tr *cíburi* "chicks, baby birds"; Od *sipug* "bird, cardinal"; Ca and Cp *cíip* (in compound words for birds); Wr *cuʾrukí* "bird." Od *s* does correspond to UA *c*; therefore, Od *sipu* < UA *cipu*. The final *g* in Od is probably related to the final *-kí* syllable in Wr, both of which are probably another morpheme of an older compound.

important linguistic criterion for establishing a relationship between languages. Some of the basic Semitic-UA correspondences are as follows:

Proto-Semitic/

Arabic	Hebrew	UA
*b	b	*kw/p[16]
*p	p	*p
*r	r	y/i
*ᶜ	ᶜ	w/o/u
*ḥ	ḥ	ho/w/o/u
*ᵓ	ᵓ	w/o/u
*ṣ	ṣ	c
*ḍ	ṣ	c
*ẓ	ṣ	c
*ṭ	ṭ	c
*z	z	c
*δ	z	t

Similar to the sound correspondence of Latin *kw* with Greek *p* in the Indo-European language family, UA *kw* corresponds to Hebrew *b* in predictable (dageshed) positions.[17] One exception to

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16 See n. 17 below.

17 The correspondence of bilabials (*b*, *p*, *w*) and labio-velars (k^w, g^w) occurs often: in Indo-European (Greek *p*, Latin k^w), Uto-Aztecan (**kw > b, bw, w, kw*), Spanish dialects, etc. Where my wife, Silvia Canelo, grew up, the Spanish dialect had such pronunciations as *gweno* (< *bueno* "good"), *gwevo* (< *huevo* "egg"), and *gweso* (< *hueso* "bone").

In the phonology of the Masoretic dialect of Hebrew, Semitic *b* became spirant or fricative *v* when following vowels and not doubled. Its pronunciation remained the voiced bilabial stop when geminated (doubled) or in initial position or when following another consonant. Interesting in regard to UA is that Hebrew dageshed *b*'s correspond to UA **kw*, but non-dageshed *b*'s correspond to UA **p*, and thus merged with Sem *p*, which also corresponds to UA **p*. However, a doubled *pp* often also corresponds to UA **kw*, as does the doubled *bb*. The Wr form for bird in 13 above (Wr *cuᵓrukí*) is an example, since *uᵓ* is a typical reflex of *kw* in a cluster (with *r*, in this case). The whole matter requires more investigation; nevertheless, it generally appears that the nearer a Hebrew allophone is to the upper left corner in the paradigm below, the greater the probability of a correspondence with UA **kw*, and the nearer it is to the lower right corner, the more likely is a correspondence with UA **p* (> *p/v*).

kw is the Tepiman branch of UA, in which Tepiman *b* corresponds to UA **kw*; thus Tepiman *b* also corresponds to Hebrew *b*. Similar to the correspondence of *r* to *y/i* in English creoles, Mayan, Athapaskan, and other language families, Hebrew/Semitic *r* corresponds to PUA **y/i* for most UA languages.[18] The correspondences for Hebrew **r* yield *y* in most UA languages, *r* in a few, and *d* in the Tepiman branch. The vowel *i* (as in free) is very similar phonologically to y, as realized in repeating the sequence *aia* quickly, which comes to sound like *aya*. With those two sound changes in mind (Hebrew *b* > UA **kʷ*; Hebrew *r* > UA **y/i*), consider the following:

13. bšl/bašal   boil, ripen   **kʷasï*   boil, cook, ripen
14. ḍabba (Ar)   keep locked   **cakʷa*   lock
     ḍabb/ṣāḇ   lizard   **cakʷa*   lizard[19]
     (Ar/Heb)

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	bb	b	v
	pp	p	f

A thorough treatment of the labial complexities from a strictly Uto-Aztecan point of view is treated in Stubbs, "The Labyrinth in Uto-Aztecan," 374–420.

    18   A clear correspondence of *r* to *y* exists in the Mayan language family. Lyle Campbell, *Quichean Linguistic Prehistory* (Berkeley: University of California Press, 1977), 97–100. A less clear correspondence of *r* to *y/i* exists in Athapaskan. Harry Hoijer, *Studies in Athapaskan Languages* (Berkeley: University of California Press, 1963), 19:

Ingalik:	sruš	bear	sran	summer	zruŋ	black
Kutchin:	syí	bear	syín	summer	zrei	black
Navajo:	šaš	bear	šị	summer	žin	black

English creoles show similar phenomena: *for* > *fo, fi, foe*. Derek Bickerton, *Roots of Language* (Ann Arbor: Karoma, 1981), 61. So to find an *r* to *y/i* correspondence in the Hebrew-UA connection is not so unusual; nevertheless, though *y* is the reflex in most of UA, UA **y* corresponds to Tepiman *d*, and *r* itself appears on occasion in some of the Sonoran languages.

    19   Arabic *ḍabb* "lizard" and *ḍabba* "take hold of, keep under lock, to bolt"; Hebrew *ṣāḇ* "lizard" (< **ṣabb*). (Keep in mind Ar *ḍ* = Hebrew *ṣ*.) This is an unusual semantic pair from the same root, which I assume to be understood in the lizard's grasp being perceived like a lock. Nevertheless, regardless of the semantic connection, UA has the same unusual pair of meanings as Semitic: Ca *caxwa-l* (< **cakwa*) "lizard" and N *cakwa* "to enclose, lock up." Consider also Ls *čakwi* hold, catch; Cp *čakwe* "grab, cling to"; Eu *capa-* "grab," and Od *šāku* "hold in the palm," for Od *š* = UA *c*.

15.	bāśār	flesh, penis	*kwasiy	tail, penis, flesh[20]
16.	šabbēr	break	*sak^{w}i/ sak^{w}ay	break, mess up, ruin[21]
17.	dabbēr	speak	*tïk^{w}i	tell, say[22]
18.	krr	go in circles, dance	*kiya	have a round dance[23]
19.	mrr	go	*miya	go, travel, run[24]
20.	brr/bar(r)	purify, select	*kwiya	take, keep[25]
		land, field	*kwiya	land, earth
		grain	*kwiya	acorn
21.	šrq	comb, card	*siyuk	comb[26]
22.	bṣr	cut off, enclose	*kwacay	wrap around, to corner[27]

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[20] Hebrew *bāśār* "flesh" has a secondary meaning of penis (Ezekiel 16:26; 23:20). In UA it means "tail" in most languages, "penis" in Hp, and "flesh" in NT. Interestingly, Coptic *sat/sēt* means both "tail" and "penis," a Near Eastern language with a similar semantic combination as is found in UA. Thomas O. Lambdin, *Introduction to Sahidic Coptic* (Macon, GA: Mercer University Press, 1983), 266.

[21] Hebrew *šabbēr* (qiṭṭēl impf stem) "to break, break in pieces"; Hp *sakwita* "break off, tear down, ruin"; Ca *sakway* "to mess up" SP *čukk^{w}i* "crush."

[22] Hebrew *dabbēr* (qiṭṭēl impf) "to speak, talk." Mn *tïïhkwii* "tell, say"; SP *tïkwïnna* to tell a story. Also of interest, from the Sem root is a noun Hebrew *dābār* "word, thing." Consider Tr *tabiri* "thing," and N *tepi* "small thing." Note also the UA *kw* correspondence for Hebrew doubled *bb*, and the UA *p* correspondence for intervocalic nongeminated Hebrew *b* (cf. n. 18 above).

[23] Sem *krr/krkr* (a derived form of *krr*; see BDB 502) "go in circles, dance." SP *kiya* "to have a round dance."

[24] Ar *mrr/marra* "go, travel." UA *miya* "go"; Mn *miya*; Sh *mia*; Ute *miya*; Sr *mi, miaaTo*ʔ, Tb *miy*; Od *med* (remember Od *d* < UA *y*).

[25] The three diverse semantic dimensions of Semitic *brr* are the verbal meaning "select, choose"; the noun Hebrew *bar* "field," Ar *barr* "land"; and Hebrew *bar* "grain." UA has three similar sets of meanings: the verbal meaning in N *kwi* "take"; the meaning of land in UA *kwiya* "land, earth, dirt" in Ls, Od, Tr, Wr, My, Tbr, Cr; and a grain in UA *kwi/kwiya* "acorn" in SP, Ute, Cp, Ls, Gb, Sr, Hp. In some of those languages, the *kwi* is combined with other suffixed morphemes.

[26] Aramaic and late Hebrew *šrq/šāraq* "to comb, card"; UA *siyuk* "to comb"; Tb *siuk* "to comb"; Ute *čiyu*ʔ*wey* "to comb"; perhaps Ca *suyavis* "comb," n.

[27] Hebrew *bṣr/bāṣar* "to enclose, cut off, make inaccessible." Ute *kwocayai* "to wrap around"; Od *biiš* "to corner." Od *b* corresponds to UA *kw*;

23.	bô	in it	*kwo > ko/bo	in, at[28]

Semitic roots generally consist of three consonants, which employ a variety of voweling patterns for various noun and verb forms. Unless it is a non-qal (not a simple stem) form, only the three consonants will be listed. In the first example of the Hebrew *b*- UA *kw correspondence, note that Hebrew *bšl* means both "boil" and "ripen," and that UA *kwasï* also means "cook, boil, ripen." Among the UA correspondences for proto-UA *kw are *b* in the Tepiman branch, *bw* in Yq and My, and *w* in Tr and others, but *kw* in most UA languages; thus Yq *bwase*, Od *bahi*, Tr *wasi*, and *kwasï* for most other languages means "cook, boil, ripen."

As for $r > y$, note the similar pattern of the Semitic roots ending with double *rr* consistently matching UA *iya* (18–20). That the Semitic root *brr* and the corresponding UA forms *kwiya* have similar sets of three diverse meanings is worth noting: "choose"/"take"; "land"/"land"; "grain"/"acorn." A similar semantic correspondence appears in Sem *ḍabba*/UA *cakʷa* as both semantic dimensions of "lizard" and "lock/imprison" occur in both language families. Also be aware that Sem and Ar *ḍ*, *ṣ*, and *ẓ* all correspond to Hebrew *ṣ* and UA *c* (*ts*, which is the modern Hebrew pronunciation of *ṣ*).

The devoicing of Hebrew voiced stops has generally merged them with the voiceless stops in UA: non-dageshed[29] Hebrew *b* and Hebrew *p* both > UA *p; Hebrew *d* and Hebrew *t* both > UA *t; Hebrew *g* and Hebrew *k* both > UA *k.

24.	gēḇîm	locust	*kïpi	locust[30]
25.	danïy (Ar)	low	*tani	below[31]
26.	dāyēq	siege-wall	*tïyïqa	wall[32]
27.	daqal (Ar)	palm tree	*taku	palm tree[33]

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and Od *s/š* to UA *c. So the consonants all correspond perfectly, though the vowels have other possible explanations.

[28] Hebrew *bô* "in it" actually consists of two parts: the consonant *b* "in" can be prefixed to any noun or pronoun meaning "in something"; the -*o* is a suffix for third person singular masculine nouns.

[29] See n. 17.

[30] Hebrew *gēḇîm* "locust" (< *gebīm*). SP *qï:vi* "locust" (< *kïpi*).

[31] Ar *danïy* "low." N *λani* "below"; and perhaps UACS #35 *tena* "below."

[32] Hebrew *dāyēq* "siege-wall." Hp *tïyïqa* "wall."

28. dqr/dāqar   pierce   *tïkiy   cut, stick in[34]

Both of the Hebrew pharyngeals generally cause rounding. The Hebrew voiceless pharyngeal fricative *ḥ* corresponds to UA *ho/hu* (usually in initial position) or a round vowel *o/u/w* without the *h* quality.

29.	ḥēṣ	arrow	*huc	arrow[35]
30.	ḥrk/ḥārak	vi. move	*hoyok	vi. move[36]
31.	ḥpp	rub, cleanse	*upa	bathe[37]
32.	ḥmr	smear	*humay	smear[38]
33.	ḥll	play the pipe	*ʾululu	play the flute[39]
34.	ʾḥḥ (Ar)	cough	*ʾohoho	cough[40]
35.	ṣrḥ	cry, roar	*cayau	cry, yell[41]
36.	ṣmḥ/yiṣmaḥ	sprout	*icmo-līni	sprout, grow[42]
37.	ṣlḥ	rush	*coloa	flee[43]

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[33] Hebrew *deqel* "palm tree"; Ar *daqal* "palm tree." UA *taku* "palm tree" in My, Tr, Wr, Eu, Tbr, and Hch. We would normally expect *ï* instead of *u*, but the two are close; either a Spanish-speaking ear not hearing the distinction or Spanish influence changing *ï* to *u* could explain it.

[34] Hebrew *dqr/dāqar* "pierce." UA *tekiy* "cut"; N *teki* "cut"; Hp *tïkï* "cut"; Od *čekid* "vaccinate, drive a stake"; Ca *čeki/čiki* "stick in." Od shows the third consonant, since Od *d* corresponds to UA *ʾy* and Hebrew *r*, as well as Od *c* corresponding to UA *t* before high vowels.

[35] Hebrew *ḥēṣ* and *ḥēṣî* "arrow." UACS #9 arrow: SP *uu*; Hp *hō-hï*; NT *ui*; Od *ʾūš arrowhead*; Sr *hōc*. Od *š* and Sr *c* both equate to final *c*; Hp *o* = PUA *ʾu*; and all these forms plus others show initial *hu/u* for the pharyngeal *ḥ*; thus, all add up quite nicely to UA *huc(i)*, exactly as expected for Sem *ḥeṣ(i)*, since in hypothetical *hueci*, the second vowel of a diphthong seldom survives.

[36] Hebrew *ḥrk* "set in motion"; Ar *ḥaruka* "move." UACS #296 move: Tb *ʾōyōg-at/ʾōyōk* "be moving"; Hp *hoyo* (sg.), *hoyok-ya* (pl.) "move."

[37] Hebrew *ḥpp* "rub, cleanse." Tr *úba* "bathe"; Wr *uʾupá* "bathe"; Eu *úva-* "bathe"; Yq *ʾüba* "bathe"; My *ʾubba* "bathe"; Hch *ʾïva* "bathe." Hch *ï* = PUA *ʾu*.

[38] Hebrew *ḥmr* "cover or smear" (with asphalt). Ca *humay* "smear, paint."

[39] Hebrew *ḥll* "to play the pipe." Tb *lūluʾ/ʾūlūluʾ* "play the flute," and others.

[40] Ar *ʾḥḥ/ʾahaḥa* "to cough." UACS #105 to cough: Hp *ʾöhöhö-ta*; Ca *ʾuʾuhu*; Tb *hōh-/ʾohōh*; and others.

[41] Hebrew *ṣrḥ* "cry, roar." Tb *cāyau* "yell."

[42] Hebrew impf *yiṣmaḥ* "sprout" (of trees, grass); N *icmo-līni* "sprout, grow." Nouns in various UA languages meaning "grass" also fit, but require more explanation.

[43] Hebrew *ṣlḥ* "rush." N *coloā* "flee, run swiftly."

The Hebrew voiced pharyngeal—the Semitic ʿain—is a deep back guttural (voiced pharyngeal fricative) that simply yields rounding in UA—o, u, w—like the other pharyngeal.

38. ṣʿq	cry out	*coak	cry[44]
39. šgʿ	be mad	*sikoa	feel envy, suffer[45]
40. šʿʿ	delight in	*ta-soa	cherish, value, love[46]
41. blʿ	swallow	*kwïlo	taste[47]
42. regaʿ	(in a) moment	*rïko	shortly, soon[48]
43. šēʿār/šʿr	hair/ be hairy	*sui/suwi	hair[49]
44. naʿar	boy	*nowi	have a son[50]
45. yaʿar	forest	*yuy	evergreen tree[51]
46. dʿk	to go out (of fire)	*tuk	go out (of fire)[52]
47. pṣʿ	to bruise	*pācoā/ pāciwi	to bruise[53]
48. ʿly/ʿālāh	go up	*wal	go up[54]

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[44] Hebrew ṣʿq/ṣāʿaq "cry, cry out, call." UACS #114 *coak "to cry."

[45] Hebrew šgʿ "be mad." N sikoa "feel envy, suffer."

[46] Hebrew šʿʿ "delight in." N λa-soa "love, value, cherish."

[47] Hebrew blʿ "swallow. " Hp kwelo "to taste"; Tb welēh "swallow" (UA *kw = Tb w).

[48] Hebrew regaʿ "(in a) moment." Tr rekó "soon, in a short time."

[49] Hebrew šēʿār "hair"; Ar šaʿr/šaʿar "hair"; šaʿira "be hairy." UA *suwi "hair" in several languages.

[50] Hebrew naʿar "boy, young man"; naʿăra "girl." Tr nowi "have a son"; Tr no "son"; Wr nuʔti/nuʔinti "child"; UACS #472a *nawi "girl": Pn nawiccibi; Tb ʔānāwiš-t; Ls nawíi-l; Ca náwiš-mal.

[51] Hebrew yaʿar "forest, wood." Ca yuyi-l "California Juniper"; Ca yuyivaš "pines with long needles"; SP yïvi "long-needled pine" (w > v in SP); Hp yo-völö "chipmunk" (< tree-innards).

[52] Hebrew dʿk "to go out" (of fire). UA *tuk "to go out" (of fire): SP tukwa; Ca tuq; Od cuuk. Also UA *tuk "become dark, night." "Black" in several languages.

[53] Hebrew pṣʿ "to bruise." N pācoā "to bruise"; N pāciwi "be bruised."

[54] Hebrew ʿly/ʿālāh "to go up, ascend, climb." Ca wel "rise up high, grow";Tb ʔool- "get up, fly"; Hp ʔo-miq "up-toward" (-miq = toward); N wal "come/hither"; however, in Nahuatl compounds the general meaning of "go up, increase" is left after subtracting the meaning of the other compounded element:

N walkisa "come up" (of sun, or out of water) (N kisa come out);

N walweci "to fall from a high place" (N weci fall);

49.	maˁălāh	stairs, ascent	iʔmola	stairs[55]
50.	ˁgz	grow old (of women)	*wïgaca	grow old (of women)[56]
51.	dˁw/daˁā (Ar) to name		*tïwa	name[57]

Note the consistent pattern that when ˁ and *r* are the second and third consonants in Hebrew (43–45), that UA shows *uwi/uy* ("hair, boy, forest"). Most interesting about 43 is that the root *šˁr* "be hairy" yields a unique semantic combination in three Hebrew words meaning "hair," "barley" (as "hairy or bearded grain"), and a "buck-goat" (as a hairy animal). Note that the same three semantic categories are contained in the Hopi stem *sowi: sowi* "hair"; *sowiwa* "a poor grade of corn" (hairy grain); *sowi-t* "jackrabbit"; *sowiŋwa* "deer" (both as hairy animals). Besides a three-way semantic correspondence, all three consonants agree as expected: *š* > *s*; ˁ > *o/w*; *r* > *i*.

The Semitic *ʔaleph* or glottal stop (ʔ) is also prone to rounding effect in UA, as it is in Semitic on occasion (e.g., Ar *saʔala*, and V *tasawwala*).

52.	ʔărî	lion	wori	mountain lion[58]
8.	ʔăḏām	man	*otam	man, person Od, NT, ST

N *wallalia* "to augment, increase" (N *λalia* "to be placed, situated");

Consider also, in connection with the hiqtîl meaning of "cause to go up in smoke, sacrifice" (participle *maˁăleh*), Wr *molo* "to make smoke." Consider also Hebrew *maˁal* "upward, above" and Tr *mo* "up, upward."

[55] Hebrew *maˁălāh* "steps, stairs, ascent." Wr *iʔmola* "stairs"; Wr *iʔmola-ni* "to have an ascent or climb" (of a road, path).

[56] Ar *ˁagaza* "to grow old" (of women); *ˁagūz* "old woman, old man." Tr *wegaca* "to grow old" (of women); Od *oks* "old woman." The Semitic and Tr verbs not only match phonologically and semantically in "grow old," but specifically "of women." The Od form may also be a likely match in that Od *s* corresponds to UA *c*; thus, outside of a vowel reduction between the two consonants, Od as well as some of the following may be connected with this root also: UACS #473 *ʔok "woman": NT *oks*; Cr *ʔüka-ri* "old woman"; Hch *ʔükā*. Perhaps also N *okič-λi* "man," if originally "old man."

[57] Ar *dˁw/daˁā* "to call, summon, name." UACS #300 *tewa* "name"; this common UA word has either a nominal or verbal reflex in a number of UA languages.

[58] Hebrew *ʔărî* "lion." Wr *wori* "mountain lion"; cognate forms also in Tbr, Yq, and My.

53.	ʾîš	man	*wïsi	person Tr[59]
54.	ʾišt-	woman	*wïti	woman Hp[60]
55.	gʾl/gāʾal	buy, redeem	*kowa	buy[61]
56.	qrʾ (Heb/Ar)	call, cry	te-koyoa	howl N
			koyo-λ	coyote N[62]
57.	plʾ/pālāʾ	be wonderful	*palaw	be pretty Ca
58.	nbʾ (Ar)	tell, inform	navo-	learn by hearing Hp
59.	pēʾāh	corner, sideburn	powa/poʾa/ po	hair (several languages)[63]
60.	*paʾr (Ar)	mouse	puwe-/puʾi-	mouse[64]
61.	ʾĕgôz	nut	*woko	pinion pinenut and tree (several)
62.	ya-ʾămîn	he believes	yawamin	believe Sr
63.	ya-ʾămîn-ô	he believes it	yawayno	believe it Gb
64.	kamʾ (Ar)	truffle	kamoʾ-λi	sweet potato N;
	kamaʾātu(m) (Ug)	truffle	kamwah	sweet potato Cr
65.	tirmania	truffle	tïmna/tïmön	potato Hp[65]

The two forms for *believe* (62–63) are especially striking. First of all, seven segments (vowels or consonants) are present in the Hebrew form—four consonants and three vowels. All seven segments (of the third person masc. sg. Hebrew form *ya-ʾamîn*) match exactly as expected in the Sr form (*yawamin*). With four consonants and three vowels, the probability of a word as lengthy

[59] Hebrew *ʾîš* "man"; with negatives "no one." Tr *wesi* (<*wïsi*) "someone": with negatives "no one."

[60] Hebrew *ʾešet/ʾišt-* "woman, wife." Hp *wïïti* "wife." All quite as expected, if from the possessed form *ʾišt-*, since *š* in clusters disappears but often leaves its trace in the vowel *ï*. Perhaps SP *wicci* "great grandmother."

[61] Hebrew *gʾl/gāʾal* "redeem, pay for." N *kowa* "buy"; Ca *ʾuʾuwe* "buy."

[62] Hebrew and Ar *qrʾ* "call, cry." N *te-koyoa* "howl"; N *koyo-λ* "coyote."

[63] Hebrew *pēʾāh* "corner, sideburn." UA *powa/poʾa* "hair" in several languages.

[64] Ar *paʾr* "mouse." Mn *puwe-*; SP *puʾï-* ; Ute *puʾúy-*; Sr *paʾïš*; Hp *pöhsa* all meaning "mouse."

[65] The term *tirmania* "truffle" is probably not of Semitic origin, but it is a Mediterranean term for a kind of truffle, whatever its origin. Charles Heimsch, *The Encyclopaedia Americana* (New York: Americana Corporation, 1962), s.v. "truffle."

as the Sr form, in light of 12 proto-UA consonants and 5 PUA vowels, aligning with the Hebrew form by chance is one in two and a half million ($1/12 \times 5 \times 12 \times 5 \times 12 \times 5 \times 12 = 1/2,592,000$). The Gb form lost only *m* (*yawain* < *yawamin*), but profoundly compelling for a Hebrew connection is its slightly different meaning: "believe it," instead of "believe." To add a third person singular object to a verb in Hebrew, -*o* is suffixed, which yields "he believes him/it." And in Gb we have both the meaning ("believe it") and exactly the Hebrew suffix (-*o*) to match the meaning that includes an object. Fossilized as the morphology is, I might mention that most of the discernible Semitic morphology in UA is fossilized rather than productive. And as examples of fossilized Hebrew morphology, the Sr and Gb pair (62 and 63) are astounding in themselves.

Note also the two Near East words for truffle that are similar to UA words for potato. *Tirmania* is not a Semitic word, but is a Near East word for truffle. Though the truffle and potato are not exactly the same thing, they are both fleshy edible nodules appendaged to a root system growing underground, and UA has two words for potato similar to two Mediterranean words for truffle.

Somewhat similar to the correspondence of English *t* and German *ss* in foot/*fuss* and street/*strasse*, Hebrew emphatic *ṭ* and emphatic *ṣ* (see the appendix) both generally correspond to UA *c*, sometimes *s*, though *s/c* alternations are common within UA itself also. Following are examples of emphatic *ṭ*:

66.	ṭll (Ar)	sprinkle/ drizzle	cölölö	sprinkle/ start raining (Hp)
67.	ʾabaṭṭîḥ/ biṭṭīḥ (Ar)	melon	baci	pumpkin (Tr)
68.	ṭwy/ ṭawā (Ar)	spin (thread)	cawa	spin (thread)[66]
69.	ṭʿm	taste, eat	cuʾmi	sip (Wr)
70.	ḥûṭ/xayṭ	thread, twine	wic	string[67]

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[66] N *cawa* "spin"; Od *šō(m)* "sew a seam on."

[67] Hebrew *ḥûṭ* "thread, cord"; Ar *xayṭ* "thread, twine." UACS #419 string: Sr *wiciʾ-t*; Mn *wihsi*; My *witeri*, *wĩʾi*; Hch *wiita*; Wr *wohci* "cord." The expected reflex for Sem *ṭ* would be UA *c*; UA shows *t*, *c*, and *s*, of which *c* is somewhat a phonological mean; as well, UA within itself has many *c/s* or *c/t* alternations.

71. ḥaṭab (Ar)	firewood	*ucakwi	resin, pitch[68]
72. maṭṭeh	branch, rod	ko-maci	firewood[69]
73. ṭāḇal	dip s.th.	čakwā-	soak s.th. (N)

Hebrew initial *r* corresponds to UA *t* in initial position, except in Tr, in which it remained *r*:

74. rʾy/raʾāh	see	*tïwa	see, find (several languages)
75. rābaḇ/rbb	shoot (an arrow)	*tokwa	snap (of bow)[70]
76. rᶜm	to thunder	*tom	thunder, cloud, winter[71]
77. rbṭ (Ar)	to tie, bind	*tapic	to tie[72]
78. rāqîaᶜ	sky	*tuku	sky (several languages)
79. ršᶜ	bad, wicked	*tïsïw	cause/do bad[73]
80. rajul (Ar)	man	*tïhoy	man[74]

Many Semitic roots of medial semivowel can show both *w* or *y*; the UA forms agree with *y*.

68   For Od *ušabi* "resin, pitch," the *š* of Od corresponds to UA *c*, so all is as expected, though most non-dageshed Hebrew *b*'s would be p/v in Od rather than b (=UA *k^w*).

69   Hebrew *maṭṭeh* "staff, rod, branch." Hp *komaci* "firewood" (*ku/ko = fire).

70   Two closely related roots, Hebrew *rbb/rābāb/rōbb* "shoot" and Hebrew *rby/raba* "shoot" compare with Ute *toŋkwa* "snap" (of bow) for the doubled *b* and Ch *tavi* "hit, stone s.th." for the second form, as well as perhaps Hp *tïïva* "throw" and several other UA languages.

71   Hebrew *rᶜm* "to thunder"; Hebrew *rāᶜam* "thunder," n. Sh *tōmpai* "thunder"; Ca *tawva-l* "thunder"; Od *toahim* "thunder"; words for "thunder," "cloud," and "winter" seem to overlap in UA. (Hp L < *w*) UACS #93 *tom "cloud": Mn *tō* "cloud"; Mn *tō-yaqa* "thunder"; Cm *tomoa-* "cloud"; Ls *tōma-wut* "thunder"; ST *tuvaʾ*; Wr *tōmuari* "cloud." Miller also compares these forms with UACS #467 *tomo* "winter" (several languages).

72   Ar *rbṭ/rabaṭa/-rbiṭ* "to tie, bind." UACS #438 *tapi/tapic* "to tie": SP *tahpica-*; Cr *rātapiʾïste*; Hch *-tapi* "knot, tie a knot."

73   Hebrew *ršᶜ* "be wicked, guilty." Tr *rasewa* "fornicate"; Tr *rasewa-me* "permissive person"; Tb *tïsawïn* "cause s.o. evil"; Tb *tïšï* "be bad"; SP *-rïssuʾaina ʾai* "not heeding, paying no attention"; perhaps Tr *risiwa/risoa* "pain, suffering, hardship."

74   Ar *rajul* "man" (<*ragul*). Tr *rehoy* "man"; Wr *tihoé* "man"; Od *ceʾoj* "man"; Kiowa *togul* "young man." The three UA forms (Tr, Wr, Od) point to *tïhoy, suggestive of Sem *ragul*, with a change of *g > h*, and *l > y/i/e* like *r*

| 81. rōš | head | *toci | head[75] |
| 82. ʾarnāḇ-ôt | rabbits | *tavo-t | rabbit(s) (several languages) |

The velar and uvular stops—k, q, and g—often reduce to glottal stop (ʾ) or nothing in initial position or in consonant clusters.

83. kānāp	wing	*ʾanap	wing[76]
84. kinnîm	gnats	*ʾani	mosquito[77]
85. geled/gild	skin	ʾeld	skin[78]
86. gll/golla	roll/ ball	ʾola/ŋola	ball[79]
87. qārôḇ	near,soon	ʾayobe	soon (Tr)
88. qereḇ	midst, inside	*ʾïrap	in the middle of[80]
89. maḵtēš	mortar, grinding stone	*maʾta-	grinding stone, metate
90. kā/kî	you, your sg.	*ʾï	you, your sg.
91. -kem, -kum	you, your pl.	*ʾïm	you, your pl.

The term for grinding stone (89) is found throughout UA languages; in fact, the Aztec word *meλa-λ* is the source for *metate*,

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(which happens often but is not treated in this brief summary). The second consonant's sound change could use stronger support; the first and third, however, are common and consistent. Most intriguing and supportive for UA *tïhoy* "man" is Kiowa *togul* "young man," which shows perfectly all three consonants, including the g and l (initial *r > t; *g = g; *l = l), with the first vowel assimilating to the second.

[75] Hebrew *rōš* "head"; Ar *raʾs-* "head." SP *tocci* "head"; Ch *toc*(i) "head." A short paper does not allow treatment of all matters; nevertheless, items 16, 21, and 54 are additional examples that show the tendency of Semitic *š* corresponding to Numic *c*.

[76] Hebrew *kānāp* "wing." UACS #465 *ʾana* "wing" (also "arm" and "feather"): Tr *ʾana*; Hch *ʾānā*; SP *aŋapu-/aŋapï*; Tb *ʾānāmbïï-l*; Od *ʾaʾan*; and others. SP and Tb show the third consonant *p*, the others only the first and second.

[77] Hebrew *kinnîm* "gnats." UACS #288 mosquito: SP *ʾaŋi-*; Mn *ʾanipi*; Cm *ʾanimui*; Cr *huna*.

[78] Hebrew *geled/gild-* "skin." Od *ʾeldag* "skin" (of person); Od *ʾeldaj* "hide" (of animal).

[79] Hebrew *gll/gālal* "to roll"; *gullāh* "basin, bowl" (from round shape); *gel/galal* (ball of) "dung." Hp *ŋölö* "loop, circle, coil"; Hp *ŋöla* "hair-whorl, tire"; Hp *ŋölöla* "bend"; Od *ʾola* "ball, sphere," and other UA forms.

[80] Hebrew *qereḇ* = "inside." Tepiman languages show *ʾera/*erap* "in."

borrowed into Spanish and English. Though *mata* is the usual reconstruction, the forms Tr *ma²ta*, Wr *mahta*, Od *maccud*, and My *matta* all suggest a consonant cluster, with Tr showing something very much like *k*, since *k* in a cluster becomes a glottal stop very often, not only in this connection, but in English (dictate > di²tet), Polynesian, and many other languages. In addition to the word for mortar or grinding stone matching quite well, two verbs in UA languages match the Hebrew perfect and imperfect, respectively. Hebrew *maḵtēš* is a nominal form from the verb *ktš* "pound, bray, grind": Aramaic *kðtaš;* Hebrew *kāṯaš*. The imperfect stem in Hebrew is *-ḵtôš* and no less than 17 UA languages have forms showing **tus* "grind," which is exactly what we would expect with the general rising of vowels (though Hebrew *o* < **u* of proto-Semitic) and the disappearance of *k* in a cluster (*-ḵtôš* > *²us* > *tus*), as it also disappeared in the noun forms (*maḵtēš* > *ma²ta*). In addition, consider Yq *kítte* "grinding flour" and Yq *kíttasu* "make into pieces." Though this stem does not exhibit the qiṭṭēl form in the Masoretic text, the Yq forms match qiṭṭēl forms of the perfect.

Consider the likelihood of all this matching by chance:

Heb	kāṯaš/ *kittēš	grind	Yq	kitte/ kittasu	grind, smash
Heb	-ḵtôš	grind (impf)	UA	*tus	grind (in 17 UA languages)
Heb	maḵtēš	mortar	UA	*ma²ta	mortar or grinding stone

The probability of three separate UA forms matching three very different and highly specific morphological patterns built on the same Semitic stem, all by chance, with corresponding meanings, seems slim.

Pronouns

In any comparative study, pronouns are an important consideration. Elaborating on the second person pronouns cited above (90 and 91), we note that the UA second person pronouns correspond to the suffix (object and possessive) pronouns of Hebrew. Consider a more complete array of forms:

	singular	plural
Tb	imbi	imbūmu
Ch	ïmi	mïmi
Hp	ʔïm	ʔïma
Yq	ʔempo	ʔemeʔe
SP	immi-	mwïmmwi-
Cp	i-/e-/eʔe	imi-/eme-/emʔem
Ca	ʔe	ʔem
Hp	ʔï-	ʔïmi- (possessive pronouns)
Cr	muʔē	muʔēn
Yq	-aʔe	-aʔem (enclitic pronouns)
My	-ʔe	-ʔem (enclitic pronouns)
Heb/Sem	-kā/-k(i)	-kem/*-kum

Given $k > ʔ$, those UA languages below the line show a similar singular and plural distinction as Hebrew. The others appear to correlate with something similar to what happened in English; just as English pl. *you* replaced sg. *thou* as second person singular, such that sg. and pl. *you* in English both derive from what was originally only plural, likewise half the UA languages (above the line) appear to derive both their second person sg. and pl. forms from the plural as seen by an abundance of *m*, which signifies plural in Hebrew (and UA). However, some UA languages—those below the line—appear to have maintained the singular-plural distinction, as seen by lack of final *m* in the singular forms, but inclusion of final *m*'s in the plural forms.

Though UA second person pronouns generally parallel Hebrew suffix pronouns, one UA language shows both the independent/subject pronouns and the above object/possessive pronouns for second person plural. Consider the Tarahumara forms:

92.

Ar/PrSem	ʔantum (indep prn)	-kum (obj/suffix prn)
Heb	ʔattem (indep prn)	-kem (obj/suffix prn)
Ar/PrSem	-tum (sbj prn on pf v)	
Heb	-tem (sbj prn on pf v)	
Tarahumara	tumuhe (sbj prn)	emi (dative/obj prn)

The above are a profound match of subject pronouns (left column) and object pronouns (right column) for Semitic and Tarahumara. In addition to the subject pronoun suffixes for perfect verb forms, Hebrew also has prefixes on imperfect verb forms, and the second person singular Hebrew prefix is identical with the Nahuatl second person singular prefix (*ti-*):

93.	Hebrew			Nahuatl	
verb stem	-rbaṣ	lie down		-koč	sleep
you sg.	ti-rbaṣ	you sg. lie down		ti-koč	you sg. sleep

The above verb, by the way, also corresponds. The consonant cluster in Hebrew causes a dageshed (doubled) *b*, which in turn corresponds to UA *kw*, and *r* (which is *y/i* in UA) after *i* is basically invisible, and the vowel reduces or assimilates to the *kw*, as happens often in UA itself. Thus Hebrew *ti-rbaṣ* > **ti-kwac* > **ti-kwc* > N *ti-koc*.

Unlike other UA languages, whose pronouns agree more with Hebrew independent and suffix pronouns, Nahuatl singular pronouns parallel Semitic imperfective verb prefixes, as if derived from a verb form:

94.	NW Sem sg.		NW Sem pl.		Nahuatl	
1st person	ʾe-/ ʾa-	I (verb)	ni-/na-	we (verb)	neʾwa	I
2nd "	ti-/ ta-	you (verb)	ti-/ta-		teʾwa	you
3rd "	yi-/ ya-	he (verbs)	yi-/ya-		yeʾwa	he

Note the pattern of *n* as first person, *t* as second person, and *y* as a third person consonant in both Nahuatl and Semitic, though the 1st person singular verb prefix in Semitic is an exception. Moving from second person to first person pronouns, consider some UA first person singular pronouns (I, me, my):

95.	Independent (I)		suffix (object and possessive: me, my)
Heb	ʾănî, ʾănōkî		-nî, -î
Ch	nïï		
SP	nï		
Tb		nik	
Hp	niʾ		i-
Ca	neʾ		
Od	ʾāni		
Tr	ne		

96. One other first person pronoun in Tr is highly specific. In addition to independent pronouns, subject-of-verb prefixes, and object/possessive suffixes, Hebrew also has nonaffixed object pronouns in the form of *'ōti* "me," *'ōto* "him," *'ōta* "her," etc. Though I have not noticed any of the others, the first—*'ōti* "me"—is quite comparable to the Tr accusative (object) pronoun of Tr *ti* "me, " only missing the first segment (o), but Tr tends to lack first segments in comparative UA as well.

Many third person pronouns appear similar as well:

97.	sg. he/she/him, his	pl. they/them/their
Semitic	hu/huwa/hi/hiya/-ô	hēm/hum/-ām
SP	uŋwa	humwi
Yq	hu (that)	hume (those), 'am, -ame
Ca	he-, hi-	hem-
Hp		-'am

These four languages represent four separate branches of UA—Numic, Sonoran, Takic, and Hopi respectively. The functions of third person pronouns in UA languages are often served by demonstratives, thus eliminating older third person pronouns; however, many of those demonstrative pronouns (that/those) are similar to Semitic third person pronouns. As Langacker notes, the pronominal systems of UA "have undergone extensive modification, so that definitive reconstruction will have to await extensive research."[81] That is exactly correct; nevertheless, numerous Semitic-looking elements are to be found in UA pronominal systems, though mixed considerably with other, non-Semitic characteristics—thus again the conclusion of substantial mixing of some kind.

Vav-consecutive Fossilized in Nahuatl

98. A partial and oversimplified explanation of the *vav*-consecutive in Hebrew is that a prefixed *wa-* changes imperfect verb stems to past. Most Nahuatl verbs form the past tense by prefixing *o-* and dropping the last vowel:

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[81] Ronald W. Langacker, *An Overview of Uto-Aztecan Grammar*, vol. 1, *Studies in Uto-Aztecan Grammar* (Arlington: The University of Texas at Arlington and Summer Institute of Linguistics, 1977), 124, 126.

peλawa	undress	o-peλaw-	undressed
(if not 3rd sg., insert pron.)		o-ti-peλaw	you undressed
neki	want	o-nek-	wanted
pawia	chew	o-pawi-	chewed
posoni	boil	o-poson-	boiled, bubbled (of liquid)

In Hebrew, the jussive is used with the *vav*-consecutive, and the jussive also drops existing final vowels in Hebrew and Arabic, as do the Nahuatl verbs with prefixed *o-*:

Heb prefix	Heb wa- + juss	Ar indic	Ar juss
yišbeh take captive	wa-yišb took captive	yaktubu write	yaktub

For *wa-* to become *o-* is natural enough. Consider Spanish *ojalá* "would that" from Arabic *wa-šāʾa-allāh* "and/if God wills." Therefore, the Hebrew *vav*-consecutive and the Nahuatl past tense have these things in common: they both prefix rounded elements (*wa-* and *o-*), then a pronominal prefix, then the stem, then they both drop final vowels, and they both change an imperfect stem to perfect (loosely stated).

99. Another curious set in UA which parallels Hebrew morphology has to do with the Hebrew root *nky/naka* "to smite." This stem does not appear in the simplest or *qal* form in Hebrew much, but is very commonly used in the *hiqṭîl* and *huqṭal* in Hebrew. Forms parallel to the Hebrew participles of *hiqṭîl* and *huqṭal* are also common words in UA languages.

The Hebrew participles are *makke* (< **mankey*) "smiter, smiting" and *mukke* "(one) smitten." One of the most pervasive stems in UA is **muki* "die, be sick, dead" found in no less than 13 UA languages (UACS #128a), which matches the passive (*huqṭal* participle *mukke*) both phonologically and semantically. In addition are words in several UA languages reconstructing to **mek* "kill" (UACS #128d) and **mak* "hit" (UACS #233), which again parallel the Hebrew active participle (Hebrew *makke*), both phonologically and semantically. The Cahuilla pair show both in the same language: Ca *-muk-* "get sick, die"; Ca *-mek-* "kill." (Again note the general rising of vowels in the changes from Semitic to UA.)

Another dimension of the Hebrew verb is "punish, send judgment." In light of that compare the Nahuatl *na-* form: N *miki*

"die"; N *na-miki* "bring upon oneself, incur a fine or punishment."

The similarities (lexical, morphological, and semantic combinations) between UA and Semitic number about 1000. Therefore, this brief summary contains only 10% of them. One question that naturally comes to the mind of an Hebraist or Semitist is the lack of some of the basic words, such as *šemeš* "sun" and *yad* "hand." Three possibilities come to mind. First, as emphasized throughout this paper, UA is not solely descended from Hebrew in any sense, but rather appears to have a Northwest Semitic element that has mixed heavily with non-Semitic elements. Second, UA could be more a Mulekite base with a Lehite overlay (both in addition to whatever else). We know next to nothing about the composition of the Mulekite group. We do not know whether they built a ship or hired one. If the latter, the crew or those aboard were likely an international mix—perhaps Phoenicians, Greeks, and Arabs—and if so, the Mulekite language within a generation could well have been a creole or hybrid of who knows how many languages. That would be one possible explanation among many for the Nephites' inability to understand them after only four centuries. The river Sidon being named after the Phoenician capital Sidon speaks for a Phoenician element among them, since Sidon is hardly part of the ancient Israelite domain. Third, we do not know Lehi's nor Ishmael's dialect; that eventual knowledge is bound to be surprising in some ways. Nibley elaborates the Arab-like qualities of the Lehi-Ishmael party: that Ishmael's name is reminiscent of the father of the Arabs; that Manasseh, of all the tribes, mixed and associated with the Arabs more frequently than any of the twelve tribes; and the Arabic nature of names like Lehi, Laman, Lemuel, and Sam.[82] Nibley's observations and the surprising proportion of Arabic vocabulary in UA are mutually consistent with each other.

Returning to the whereabouts of some basic Hebrew vocabulary, a look at UA occasionally suggests that some basic vocabulary could have been replaced by semantic extensions of other Semitic vocabulary. For example, the common Semitic word *laila*

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[82] Hugh W. Nibley, "Lehi and the Arabs," in *An Approach to the Book of Mormon*, 3rd ed. (Salt Lake City: Deseret Book and FARMS, 1988), 71–83.

"night" is not found. However, the UA word for "night" (found in many UA languages) is *tuk*, and it also means "black," "dark," and the "fire went out." Hebrew *dʿk* means "to go out" (of a fire), and phonologically the match is exactly as expected: devoicing of *d* > *t*; round vowel for the pharyngeal *ʿain*; and *k*. When the "fire goes out" at night, it is then "dark, black, night," and the word from Hebrew *dʿk* appears to be the source of UA *tuk* "night" (as well as "dark, black, fire go out"). Many are the examples of such extensions of some Hebrew words into new semantic domains.

Another array of curiosities involves the UA words for "man." All four of them are traceable to Semitic, but they occur in exactly the opposite frequency typical of Hebrew. The most frequent word for "man" in Hebrew is *ʾĩš*, which is found in only Tr *wesi* (<*wïsi) and only in a certain phrase with a negative, meaning "no one, no man," which is one of the typical uses of Hebrew *ʾĩš*. The second most common word in Hebrew is *ʾāḏām*, and that is found in about five UA languages (*otam). (Keep in mind for both *ʾĩš* and *ʾāḏām*, that the initial *ʾaleph* or glottal stop is a source of rounding in UA.) Least common in Hebrew is *zāḵār* "male/man" (Ar *ðakar*, Aram *dakar*), while most common in UA is *taka "man." Hebrew *z* is a merger of two proto-Semitic consonants, *z and *ð, that appear in Arabic as *z* and *ð*, and in Aramaic as *z* and *d*. Interestingly, some evidence suggests that UA also distinguishes these as UA *c and *t, respectively; thus the stop *t* in UA correspondes to proto-Semitic *ð*.

Heb/Sem		UA	
100. zāḵār (Ar ðakar; Aram dakar)	male, man	*taka	man[83]
101. zə²ēḇ (Ar ði²b)	wolf	*tï²ïp	wolf[84]
102. zaqan/ziqn- (Akk)	chin, beard	*tï²n	mouth[85]

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[83] UA *taka "man" in several languages.

[84] Hebrew *zə²ēḇ* "wolf"; Ar *ði²b* "wolf." SP *tïva* "wolf"; Tb *tïbaic* "wolf"; Cr *ï:ra²abe* "wolf"; Hch *ïrāwe* "wolf"; and perhaps Od *šee²e* "wolf," though Od should show *c* rather than *š* for UA *t*.

[85] Hebrew *zaqan* "beard, chin"; likewise Ar *ðaqan* and Akk *ziqnu*. Several UA languages show *ten(i) "mouth"; however, again Tr shows the crucial glottal stop as a vestige of the lost uvular in a cluster: Tr *re²ha*.

Fourth and most curious is UA *tïhoy* "man," suggestive of the most common Ar word for man: *rajul*.[86]

Egyptian

Of great interest are some UA lexemes that may match Egyptian. For example, both the Hebrew word for "lion" and the Egyptian word for "lion" appear in UA languages. Keep in mind that the glottal stop (ʾ) or Semitic *ʾaleph* corresponds to UA *w* or some round vowel, since both of these words show that correspondence:

52.	Heb	ʾărî	lion	UA	*wori	mountain lion
103.	Eg	mʾi	lion	UA	*mawiya	mountain lion
	Cpt	mui	lion			

Ancient Egyptian, like many ancient Near Eastern languages, exhibited only consonants (*i* or *y* recorded as a consonant). The UA word *mawiya* "mountain lion" is found in several UA languages, and it shows all three consonants of the Egyptian word very nicely. Also of interest is that in Coptic—a later form of Egyptian in which vowels were written—one can see that the glottal stop also resulted in rounding (*u*) as is typical in UA: Coptic *mui* "lion." Though not altogether consistent, the same consonants that yield rounding in the change from Hebrew to UA often exhibit a similar tendency in the change from ancient Egyptian to Coptic:

	Egyptian		Coptic
ḥbs	clothe	hōves	cover, clothe
ḥtp	happy, at peace, set	hōtep	be reconciled, set (of sun)
sʾ	back	soi	back
sꜥy	sand	sō	sand
ꜥ	great	o/ō	great
ꜥnḫ	live/life	ōneh	live
ꜥrf	bag, enclose	ōrev	enclose

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86 See nn. 74 and 82.

However, exceptions also exist: Eg r^c "sun," Cpt *re* "sun." Consider other similarities between Egyptian and UA:

| 104. Eg nmi | travel, traverse | *nïmi | wander, go about |
| 105. Eg rn | young (of animals) | Tr rana | brood, litter, child |

(Remember that initial *r* is UA *t*, except it remained *r* in Tr.)

106. Eg nb	all, every	Tr nepi	a lot, too much
107. Eg r^c	sun	*tawe	sun, day
108. Cpt tevet	fish	*pa-top/ pa-tap	fish (pa=water)

For items 105 and 107, remember that Tr *r* = Hebrew *r* = UA *t* in initial position; therefore, the Tr form *rawe* "day" is equivalent to UA *tawe* found in Eu, Yq, My, Wr, and Hp, all of which match nicely the Egyptian word r^c "sun," with the expected *w* for the pharyngeal *ʿain*. In regard to item 108, we might mention that *v* is an alternate form of *p* in both Coptic and UA.

Other Egyptian examples exist, but these are sufficient to show that if UA was, in part, a Lehite language, then a certain amount of Egyptian vocabulary worked its way into the spoken language, just as Latin words entered English via Latin as a liturgical or written language of religious record. The proportions of Egyptian are not great compared to the amount of Hebrew, as we would expect; nevertheless, any Egyptian vocabulary at all is significant.

Book of Mormon Peoples

One may also wonder if there is any evidence in UA to suggest that UA peoples may be in part remnants of Book of Mormon peoples. From a number of possibilities, consider two.

1. Hopi *masaw/masawï* "supreme deity, supernatural judge" fits nicely the three consonants of *maššîḥ* or *maššîah* (Messiah). The final *ḥ* is the pharyngeal *ḥ*, which yields *w* or rounding in UA; therefore, outside of the missing vowel *i*, all else and especially the three consonants are as expected.

2. The word for Nephite in Hebrew would be *nepi/nefi*, depending on how much the Nephite language was subject to the

spirantization (of **p* to *f*) evident by the time the Masoretes imposed their dialect or allophonic variants on the text. UA languages are split: some show a similar spirantization of Hebrew **p* to *v* rather than *f,* while others retain *p.* This would suggest that the spirantization evident in the Masoretic dialect may not have occurred when this American dialect of Hebrew left Palestine, since some UA languages do not show it, but that a similar (though slightly different) spirantization occurred later in some UA languages also. Either way, the intervocalic form of Hebrew *p* is *p* or *v* in UA, not *f* as in the Masoretic dialect, though Egyptian has both *p* and *f.* In addition, the *-ite* ending of English biblical nationalities is a mistaken adoption of the feminine adjectival ending showing *-t* and is incorrect. In Hebrew, words featuring persons of an ethnic group simply use the suffix *-i* (as the vowel in free); for example, a Moabite is *moabi,* an Ammonite is *ammoni,* an Israelite is *israeli,* as said of Israelis in modern Israel today. Thus a Nephite would be *nepi/nepiy/nepī* (a long vowel at the end, however one chooses to represent it). Plural Nephites would contain the plural suffix *-îm* or earlier *-īma,* and would thus be *nepiyyîm* or with a typical reduction of that long string of fairly identical high front vowels (*i/y*) and the older ending as is found in UA (*-ima*), we would have *nepīma* or *nepima. Pima* happens to be the tribal name of two UA groups in the Tepiman branch of UA and is missing only the first syllable *ne-* of what would otherwise be the expected plural form of Nephites in Hebrew.[87] Another name for a group in the same branch (Tepiman) of UA is *nevome.* Remember that the final *a* of our UA reconstruction **-ima* is often *e* or *ï* in most UA languages. Likewise, for a vowel to assimilate to a round vowel (*i > o*) when adjacent to one bilabial is common enough, and here *i* is caught between two bilabials (*v* and *m*), which would make the change *i > o* even more likely; furthermore, *v* is a form of UA **p* between vowels. In essence, the

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[87] Another etymology has been suggested for Pima; as Dunnigan puts it, "The most frequently cited folk etymology for the origin of the word Pima is that it is a corruption of the O'odham expression *pi ʔanʔmaat,* literally 'I don't know.' Supposedly, this was the native's answer to the first interrogations in Spanish"; quoted from Timothy Dunnigan, "Lower Pima," in *Handbook of American Indians,* vol. 10, ed. Alfonso Ortiz (Washington, D.C.: Smithsonian Institution, 1983), 229.

UA tribal name Nevome is easily derivable from Nepima
(Nephites).

Though it is too early to say definitively, the above tribal
names (e.g., *nevome* < *nepima*) and several other factors suggest
a possibility worth considering: could the UA peoples be in part
surviving Nephite or Mulekite populations in the land northward
or in northern extensions of the land northward, since the UA
tribes form a fairly contiguous chain from Mexico City northward
up through western Mexico to the US Southwest? Of course, few,
if any, UA areas would be the areas that the Book of Mormon
authors referred to as having "large bodies of water and many
rivers" and "houses of cement" (Helaman 3:3–4, 7; 6:6; 7:1);
nevertheless, some of them, at least, could be northern extensions
of the areas spoken of. In 55 B.C. some 5,400 families departed
out of Zarahemla for the land northward, and Hagoth built ships
to transport more to the land northward (Alma 63:3–4). Nearly a
decade later in 46 B.C. "An exceedingly great many . . . went
forth unto the land northward. . . . And they did travel to an
exceedingly great distance" (Helaman 3:3–4). Consider the
following factors:

1. If Mesoamerica is the area of Book of Mormon history, as
proposed by Sorenson[88] and most Latter-day Saint archaeologists,
north of that is a fairly unbroken continuum of UA speaking
groups stretching from Mexico City northward to Southern
California and the US Southwest. The Aztecs arrived (or was it
returned?) well after Book of Mormon times, but what of the
closely related Cora, Huichol, and other UA languages just north
of Nahuatl-speaking areas? Even if the Mexico City area was
inhabited late by UA speakers, points just north have long been
UA areas.

2. Hagoth's ships launched into the west sea to sail to the
land northward (Alma 63:5), and it is precisely the western coastal
and mountainous areas of western Mexico that UA peoples
inhabit. The existence of a regular timber-shipping industry along
the western coasts of a land northward (Helaman 3:10) from
anywhere in Mesoamerica would have the western coast of

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88   Sorenson, *An Ancient American Setting.*

Mexico, the habitat of UA speakers, as a likely candidate for the west coast of the land northward.

3. The Anasazi culture of the US Southwest includes UA peoples (Hopi) and other UA relatives (Tanoan pueblos in New Mexico), and archaeologically the Anasazi appear about the time of Christ, which date accords well with Hagoth and the times of this northward expansion.

4. The Pima and O'odham of Arizona (UA groups) are the most likely candidates as the continuation of the Hohokam culture, though that is yet debated. The Hohokam are known for their connections with Mexico, though they date a little earlier than the Anasazi, perhaps 300 B.C.

5. Some Uto-Aztecanists suggest that the linguistic center of gravity for the northern half of the UA language family is near the California-Arizona border just above the mouth of the Colorado River that empties into the Gulf of Baja California (see fig. 1).[89] If some Nephite ships happened to sail farther northward than usual, keeping near the coastline, they would likely go inside the tongue of Baja California, and the ultimate destination would be the top of the Gulf of Baja California, near the point of origin of the northern UA languages.

6. No matter who built the houses of cement, nearly all the Southern UA languages have a common word for "adobe" (*sami*). The word *adobe* was not in the 1830 edition of *Webster's Dictionary*, and Joseph Smith may not have been familiar with the term *adobe*. If not, his use of *cement* may refer to or at least partly include *adobe*.[90] And if that is so, could not the pueblo builders, who anciently were as much in Mexico as the US Southwest, be northern extensions of those who built houses of cement?

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[89] I heard Wick Miller cite this view, whether his own opinion or in conference with other Uto-Aztecanists, I am not sure. Nor am I sure it matters, since Wick Miller was probably the foremost Uto-Aztecanist until his recent untimely death.

[90] *Adobe* is a borrowing into English from Spanish, though ultimately from Arabic, Coptic, and Egyptian probably; nevertheless, its first occurrence in print in English is 1834, after the Book of Mormon's publication, and it did not become a commonly used word in English until several decades after Joseph Smith's time. *OED* 1:123.

1. Northern Paiute
2. Southern Paiute
3. Shoshone
4. Mono
5. Panamint
6. Ute
7. Hopi
8. Kawaiisu
9. Chemehuevi
10. Comanche
11. Tubatulabal
12. Serrano
13. Gabrielino
14. Cahuilla
15. Cupeño
16. Luiseño
17. O'odham/Papago
18. Upper Pima
19. Opata
20. Eudeve
21. Lower Pima/Nevome
22. Tarahumara
23. Yaqui
24. Guarijio
25. Tubar
26. Mayo
27. Northern Tepehuan
28. Southern Tepehuan
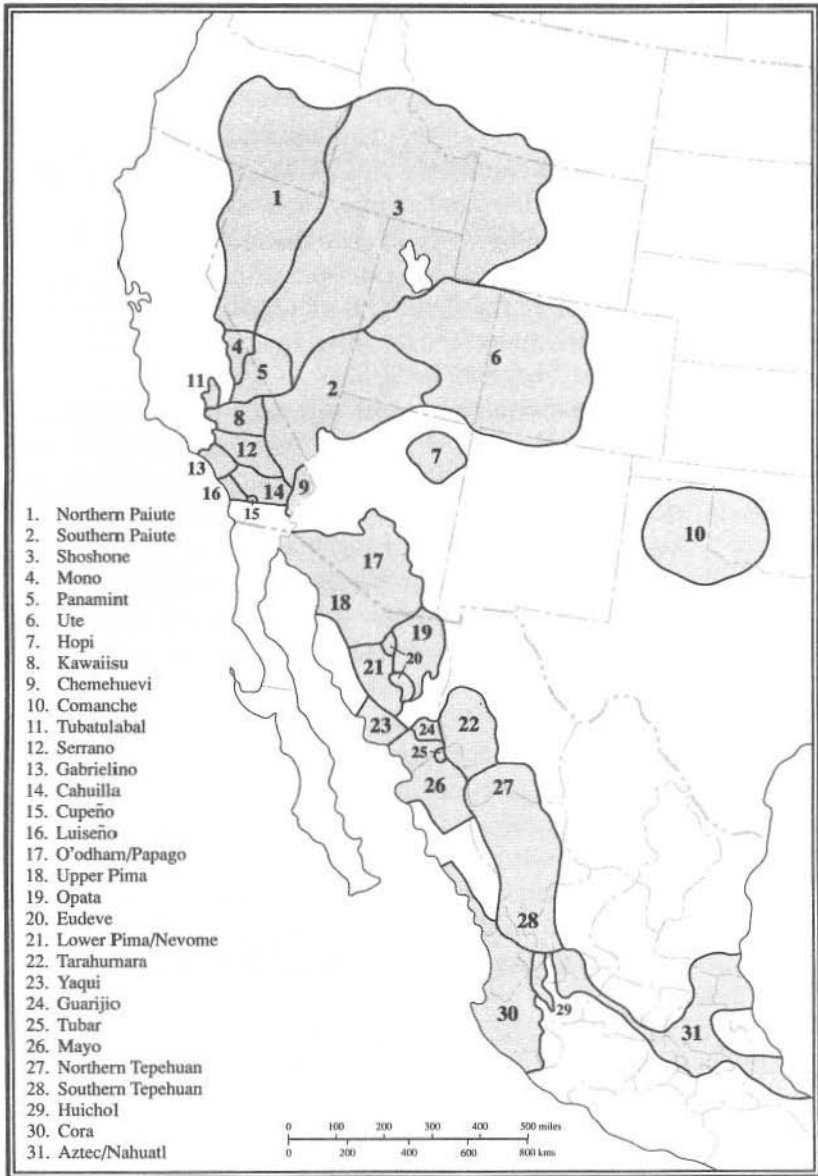29. Huichol
30. Cora
31. Aztec/Nahuatl

Figure 1. Approximate Locations of Uto-Aztecan Languages.

7. Wilford Woodruff expressed a view that the pueblo builders of New Mexico were in part Nephites.[91]

8. The rugged mountains of western Mexico appear to be the homeland of the Southern UA groups. If the Nephite-Mulekite populations were in these mountains around A.D. 400 when Lamanites were striving to hunt down and kill all Nephites, the ruggedness of the terrain would be a wonderful protection and provide thousands of hiding places. Or this area may have been beyond reach of, or not involved in, all that happened through the final destruction of the Nephites. The linguistic evidence suggests that it is from these areas that many of the Southern UA languages appear to have spread.

9. And last, but hardly least, are a few UA tribal names such as *nevome* (< *nepīma* "Nephites") that suggest the UA peoples may be in part remnants of Book of Mormon peoples.

Conclusions

In conclusion, UA as a language family exhibits more similarities with Hebrew than could be attributed to coincidence; nevertheless, that Hebrew element is obviously mixed with other language elements very different from Hebrew. The Hebrew features, along with other factors, combine to suggest that the formation or spread of UA peoples may have involved Book of Mormon peoples in part, and, more specifically, perhaps Nephite or Mulekite populations that had spread northward from lands more central to the Book of Mormon record.

A more balanced approach to Book of Mormon language research could be immensely beneficial in the long run. Hebrew, Egyptian, and the English translation have thus far been the sole focus of Latter-day Saint scholars publishing on Book of Mormon language matters. Exclusive concern with those three areas of interest has left Latter-day Saint scholarship at an impasse on many points, while the huge arena of Native American languages remains largely untouched by Latter-day Saint scholars, though obviously these languages must be dealt with eventually.

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91 Wilford Woodruff in a letter to John Taylor and Council, dated 15 September 1879, expressed this view. "Nephites Found in New Mexico," in *A Book of Mormon Treasury* (Salt Lake City: Bookcraft, 1959), 222–27.

While the English text has yielded important insights to our analysts, only when Latter-day Saint scholars delve into Native American languages as well can we consider a comprehensive approach to Book of Mormon language matters to be underway. The neglected dimension of research (in Native Americana) could well prove to be the key to many questions impossible to answer by means of Hebrew, Egyptian, and the English text alone.

The hints and leads exist, but they must be searched and worked rigorously. Responsible linguistic investigation of Native American languages in conjunction with Near Eastern languages should be a natural realm of research for Latter-day Saint scholarship and interests. We claim and proclaim knowledge of some ancient American groups, yet our void of attention to Native American languages for a century and a half subsequent to those claims could border on embarrassment if allowed to continue. A people's language is a window to their past and is often the most voluminous repository of hard data relevant to their origins and past. In light of the potential of Native American languages, it seems time for a change—a change from overlooking them to looking them over in linguistically competent ways. True, the required research investment would be considerable. Comparable to the difference between miles and light-years, the effort would better be measured in units of linguist-lives than in man-hours. Nevertheless, rather than all interested scholars dipping for linguistic depth in the phrasings of the English translation, would that a few explore the ocean of Native American languages and acquire the necessary background to enter this forgotten realm of research and help void the void.

Appendix

Orthography and Pronunciation

The phonetic representation used in this paper is fairly standard linguistic phonology. The phonetic symbols are as follows:

Vowels

a as in father, saw, rod

e roughly as in fame, say, raid

i as in fee, see, reed

o as in foe, so, road

u as in Sue, rude

ï high central vowel, not in English, a high schwa

∂ the schwa or midcentral vowel, as in but, cut, come

ö midfront rounded vowel as in German and Hopi

Long vowels will be represented with a macron as in ā, ī

Nasalized vowels will be underlined: *a̲*.

The vowels of Masoretic Hebrew—segol *ɛ* and cere *e*—will both be represented as *e*, since both are substantial alterations of earlier Semitic vowels (*i* and *a* usually), and it is pointless to be painfully specific regarding Masoretic vowels anyway, since many of them are phonological variants of a late dialect that come from only three vowels—*a, i, u*—in pre-Hebrew or Northwest Semitic.

Vowels are described according to the tongue's position in the mouth when pronounced; thus *i* is high-front, the schwa *∂* is midcentral, etc.

	front	central	back
high	i	ï	u
mid	e	∂	o
low		a	

Consonants

Most consonants are pronounced more or less as in English; nevertheless, a full presentation of consonants follows:

	bi-labial	dental	alv-eolar	palatal	velar	uvular	pharyn-geal	glottal
stop vcless	p		t		k	q		ꜣ
voiced	b		d		g			
affric. vcless			c,ṣ (Hb)	č				
voiced				ǰ				
fric. vcless	f	θ,t̲ (Hb)	s	š	x		ḥ	h
voiced	v	δ	z	ž	g		ʕ	
nasals	m		n		ŋ			
liquids			r,l					

Explanations and additional sounds

The *c* is a *ts* sound, very common in UA, as in ha*ts*.

The palato-alveolars have the hashmark:

č = ch as in chop; ǰ as in judge; š = sh as in shop; ž = zh as in azure.

The pharyngeals of Semitic are represented by:

ḥ voiceless pharyngeal fricative (as opposed to English *h*);

ʕ voiced pharyngeal fricative, the Semitic *ʕain*, as in Saʕudi ʕArabia.

The velar nasal ŋ as in si*ng*.

The dental fricatives: δ as in breathe and they, and t̲ as in breath and think.

λ is the lateral stop *tl* of Nahuatl, which corresponds to UA *t.

ṭ is the emphatic *t* of Hebrew and Semitic.

Hebrew emphatic ṣ is a merger of three proto-Semitic consonants that are still distinguished in Arabic; that is, Arabic ṣ ص, ḍ ض and ẓ ظ all correspond to Hebrew ṣ.

Three *s* sounds in Semitic are all distinguishable in Hebrew; however, they all merged to simply *s* in UA:

proto-Semitic	Hebrew		Arabic
s^1	š	shin	s
s^2	ś	sin	š
s^3	s	samech	s

The beged-kafat letters, which spirantized in non-dageshed positions in the Masoretic dialect (*b* > *v*, *p* > *f*, etc.) will not show that spirantization in this paper, since it is not a feature of proto- or original Hebrew and may not apply to other dialects of ancient Hebrew. Some of the UA languages show similar spirantization;

others do not. Likewise, Arabic *f* will also be represented in its
original form **p* since that is how it remains in UA.

Abbreviations other than those listed in the text

Akk = Akkadian
Ar = Arabic
Aram = Aramaic
Cpt = Coptic
Eg = Egyptian
Heb = Hebrew
impf = imperfect
indep = independent
masc = masculine
n = noun
obj = object
pf = perfect
pl = plural
prn = pronoun
PrSem = proto-Semitic
PUA = proto-Uto-Aztecan
rcp = reciprocal
rfl = reflexive
sbj = subject
sg = singular
Sem = Semitic
s.o. = someone
s.th. = something
UA = Uto-Aztecan
UACS = Uto-Aztecan Cognate Sets
Ug = Ugaritic
v = verb
vi = verb intransitive
vt = verb transitive

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