

The Exodus: Convergence of Science, History and Jewish Tradition

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I. Introduction

Competing Scenarios

Much has been said and written by the proponents and opponents of the various camps in the interminable debate over when the exodus (of the Israelites from Egypt) occurred and under what circumstances it occurred. The dominant view in the scholarly community today is that the exodus occurred (if it occurred at all, some of them hasten to add) ca. 1250 BCE during the reign of Pharaoh Ramesses II.¹ We will refer to this date as the **Widely Accepted View (WAV)**. Another camp is equally certain the exodus occurred ca. 1450 BCE when Egypt was ruled, they maintain, by Pharaoh Amenhotep II.² We shall refer to this view as the **Fifteenth Century Date (FCD)**. Less known is a third view, subscribed to by many in today's Orthodox Jewish community, who pinpoint the year of the exodus to 1312 BCE, during the reign of Pharaoh Horemheb. We designate

¹ Key proponent: William F. Albright, Kenneth A. Kitchen.

² Key proponent: Evangelical Christian community.

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this as the **Jewish Calendar Based (JCB)** date. Finally, a fourth view has been floating around the margins of the debate, ignored and discredited by most, that associates the exodus with the expulsion of the Hyksos (described later) under Pharaoh Ahmose I, ca. 1550 BCE.³ This we will label the **Very Early Date (VED)**.

Each camp has presented apparently persuasive biblical, archaeological and historical arguments to support its view, and counter-arguments to weaken or negate the arguments put forth by the other camps. This essay brings good and bad news to the discussion, both of which ought to be welcomed by all the camps, since they help bring the debate to a modicum of resolution.

First, the bad news. Recent scientific discoveries make it increasingly unlikely that any of the above scenarios got it quite right. And this leads to the good news. It turns out that the same scientific evidence converges with evidence from other areas to support the scenario depicted by the ancient Jewish sources pertaining to the exodus and the Israelites' experience before, during and after their sojourn in Egypt. Out of this grand convergence will emerge a new date and setting for the exodus for us to consider.

Since our only source for the exodus story is the Hebrew Bible (HB), particularly the Torah, also referred to as the Pentateuch, a text that we accept as having been passed down through the generations going all the way back to Moses at Sinai, and he, and the Israelites whom he led, were intimately involved in all its important events as they occurred, it behooves us to pay serious attention to what this ancient text and its oral traditions have to say about the matter. We shall refer to the views expressed in the ancient Jewish sources about the exodus and the Israelite sojourn in Egypt, both their written and (originally) oral components, as the **Ancient Jewish Tradition (AJT)**. Unless otherwise stated, all dates in this essay refer to years **Before the Common Era (BCE)**, and all biblical translations are from the **New Jewish Publication Society (NJPS)** version of the text.

³ Key proponent: Flavius Josephus.

II. The Sojourn in Egypt

(a) Years and Generations

A key biblical statement with a direct bearing on our analysis appears in the context of the Covenant Between the Parts (CBP) in Genesis. After being informed that he was taken out of Ur “to assign this land (Canaan) to you as a possession,” the Patriarch Abraham asks God, “How shall I know that I am to possess it?” (Gen 15:7-8). Abraham then has a vision in which he is told, among other things, “Know well that your offspring shall be strangers in a land not theirs, and they shall be enslaved and oppressed four hundred years” (Gen 15:13). A few verses later Abraham is told, “And they (his offspring) shall return here (to Canaan) in the fourth generation” (Gen 15:16).

The common reading of v.13 is that the three elements of alienation (not being in their own land), enslavement and oppression all refer to one and the same period, namely the sojourn in Egypt where all three elements applied simultaneously—the land was not their own, they were enslaved and they were oppressed. It follows therefore that the “four hundred years” must refer to the sojourn in Egypt. But the AJT departs significantly from this interpretation.⁴ Abraham’s offspring experienced alienation long before the Egyptian sojourn, in Haran, Philistia and Canaan. This is described at length in Genesis and is summarized succinctly in Deuteronomy. “My father (Jacob, Abraham’s grandson) was a fugitive Aramean. He went down to Egypt with meager numbers...” (Deut 26:5). Abraham himself is already an alien at this time (the CBP), having been taken away from his homeland, Ur. So his son Isaac was born into a state of alienation. The AJT also sees the explicit reference to oppression as not synonymous with enslavement, otherwise the Torah is redundant here. A key principle of the AJT is that there are no superfluous words in the Hebrew text of the Torah. Every

⁴ Babylonian Talmud, tractate *Megillah*, fol. 9a; tractate *Sofrim*, 1:8; *Rashi*, Nachmanides, Ibn Ezra and others on Gen 15:13, 16, Ex 12:40, 41.

word imparts meaning.⁵ The reference to oppression must therefore go beyond enslavement to more acutely oppressive policies such as the killing of the Israelite newborn sons, then throwing their bodies into the (Nile) river (Ex 1:16, 22).⁶ This was decreed by Pharaoh some time after the enslavement began, when it became clear that mere enslavement will not accomplish the goal of shrinking the Israelite population (Ex 1:12). Since this should have taken some number of years to discern, the enslavement and oppression cannot both be assigned the same number of years.

So, if each of the three elements in v.13 is to be associated with a different number of years, which was to endure four hundred years?

The matter is further complicated by the realization that a four-hundred-year sojourn in Egypt cannot be reconciled with v.16, which assigns four generations before “returning here.” Abraham is in Canaan now (at the CBP), so “returning here” must refer to his offspring returning to Canaan after the sojourn in Egypt. But how could four hundred years constitute just four generations? This problem has, of course, been noticed by others, but no satisfactory solution has been forthcoming.

In addition, a four-hundred-year sojourn is contradicted by the facts. Jacob’s grandson Kohath accompanies his father Levi to Egypt (Gen 46:11). His son Amram (Ex 6:18) is the father of Moses (Ex 6:20), who is eighty years old at the time of the exodus (Ex 7:7). Now, even if Kohath is assumed to be only one year old when he arrives in Egypt, and Amram is assumed to have been born on the very last day of Kohath’s long life of 133 years (Ex 6:18), and Moses is assumed to have been born on the very last day of Amram’s life of 137 years (Ex 6:20), the number of years between Kohath’s arrival (with the entire family of Israel) and Moses turning eighty at the exodus is 133 plus 137 plus 80, or 350 years. This is nowhere near

⁵ As epitomized in tractate Pesahim (fol. 22b) of the Babylonian Talmud, where every ‘et’ in the Torah—and there are hundreds of them, normally considered totally useless expressions—is to be turned into a meaningful addition to the text.

⁶ See text of Haggadah (recited at the Passover Seder) for other manifestations of oppression that go beyond enslavement.

four hundred years! And the figure of 350 years must surely be further reduced by the overlap in the lives of Kohath, Amram and Moses.⁷

Just as important, did you notice the number of generations between arrival in Egypt and return to Canaan in this leading family of Israel? Starting with the adult Levi who goes to Egypt, the next generation **in this family** is Kohath, then Amram, then Moses, then Moses' sons who return to Canaan. That is four generations, as prescribed in Genesis 15:16.

Based on these and other considerations, and on passed-down tradition, the AJT associates the four hundred years of Genesis 15:13 only with the first and longest of the three elements enumerated in that verse, namely that of alienation. Abraham's offspring would experience alienation "in a land not theirs" for four hundred years. There is no reason to associate that experience exclusively with Egypt. They would also experience enslavement for a lesser number of years, in Egypt, and oppression for an even smaller duration, also in Egypt.

It is as if the verse stated, "Know well that your offspring shall be strangers in a land not theirs, four hundred years, and they shall

⁷ Some have tried to stretch the meaning of various Hebrew terms to make the genealogy fit a greater time span (K. Kitchen, *On the Reliability of the Old Testament*, Grand Rapids: Eerdmans, 2003, 356-357). The Hebrew *Binai* (Ex 6:18), which usually means 'sons of,' they would stretch to include grandsons and great-grandsons. *Dobdato*, 'his aunt' (Ex 6:20), they would turn into his great-great-aunt. *Vatailed* (Ex 6:20) would mean not the usual 'gave birth to,' but gave rise to or produced, presumably after many generations have passed. While these 'stretched' definitions have their place in the Torah, where the words can so be understood from the context or where the matter is of no great consequence, it is extremely unlikely that these words are so used in Ex 6. For here the subject is the leading family of Israel, including those in the foundational roles of High Priest (Aaron) and greatest Prophet/Teacher (Moses). We expect accuracy and transparency here, not vague and misleading terminology. The AJT never seriously considered applying such definitions in this context; no opinion along these lines was ever offered by anyone among the sages, although these definitions are applied in other contexts. To do so here would violate the AJT principle, "the text comes not to obfuscate, but to clarify" (*Rashi* on Gen 10:25 and others quoting *Seder Olam*, a pre-Talmudic text).

be enslaved and oppressed.” The ancient Hebrew of the Torah displays a multitude of such out-of-order expressions; this is really not unusual at all.⁸ It is probably the way people spoke and wrote millennia ago.

Since Abraham at one hundred years of age is already in a state of alienation when his son Isaac (his designated offspring, as opposed to Ishmael, Gen 21:12) is born, the four hundred years of “your offspring shall be strangers” begins at the moment of Isaac’s birth. Since Isaac is sixty years old when Jacob is born (Gen 25:26) and Jacob/Israel is 130 years of age when his family (the Israelites at the time) arrives in Egypt (Gen 47:9), 190 of the 400 years of alienation (60 plus 130) elapse before the sojourn in Egypt begins. The forty years in the wilderness between the exodus and return to Canaan (when the process of making the land “theirs” began) cannot be reckoned as alienation “in a land not theirs” because the Israelites in the desert were not subject to any alien power. There was no entity to claim that land (the wilderness) as “theirs,” thereby effectively rendering the Israelites as “strangers.” So the AJT concludes that the sojourn in Egypt endured for 210 years (400 minus 190).⁹

⁸ See for example Gen 41:57 with commentators (*Rashi*, Ibn Ezra). The Hebrew there does not say (as is frequently translated for the benefit of the reader) “and all the land came to Joseph in Egypt to procure rations,” but literally “and all the land came to Egypt to procure rations to Joseph.”

⁹ The four generations of Levi, Kohath, Amram and Moses spanning the sojourn of 210 years present no difficulty at all. We may propose that Kohath is a little boy of five upon arrival in Egypt. He has Amram 65 years later at age 70, Amram has Moses 65 years later at age 65, and Moses is 80 at the exodus. The total of 65 plus 65 plus 80 is 210 years.

However, some eyebrow-raising numbers do appear on the women’s side of the genealogy. Amram has Moses after he marries his father’s sister Jokhebed (Ex 6:20) who was born to Levi in Egypt (Num 27:59). To avoid proposing miracles not attested in the Torah (like what happened to Sarah, Abraham’s wife, who gave birth at age 90 Gen 17:17, 21:5), we should assume that Jokhebed is no older than 50 when she gives birth to Moses. Since Moses is 80 at the exodus, Jokhebed was born to Levi 130 years (80 plus 50) before the exodus. This is 80 years (210 minus 130) after Levi’s arrival, when he is 43 years old (sec. IIIa). So Levi is 80 plus 43, or 123 years old, when he fathers Jokhebed.

This is less than 350 years, as expected, and is the longstanding AJT of the duration of the Israelite sojourn in Egypt—210 years.

(b) A Long and Strong Tradition

To see just how longstanding and firmly embedded this view has been in the AJT, let us turn to another verse in the Torah that, at first glance, appears to contradict it. Exodus 12:40 states: “The length of time that the Israelites lived in Egypt was four hundred and thirty years.” This is followed by 12:41 which states: “At the end of the four hundred and thirtieth year, to the very day, all the ranks of the Lord departed from the land of Egypt.” Just in case you miss the point that the exodus occurred “to the very day” the 430 years ended, the following verse not only repeats the declaration but endows it with the status of a separate paragraph all to itself. Verse 12:51 states: “That very day the Lord freed the Israelites from the land of Egypt, troop by troop.”

Do these statements not inform us that the Israelites spent 430 years in Egypt? Not according to the AJT’s interpretation. First, the expression “Israelites” is taken to mean “all the family of Israel” including Israel’s parents (Isaac and Rebecca) and grandparents (Abraham and Sarah). Second, just as there are no superfluous words in the Torah,¹⁰ there frequently are omissions and abbreviations where the text expects the reader to fill in the blanks on his/her own.¹¹ The opening verse here (12:40) alludes to alienation

We know Levi lived 137 years (Ex 6:16), so the text is consistent. But is it reasonable (that is, not miraculous) to postulate a 123-year-old fathering a child? Considering that the oldest documented person to father a child, **before** the advent of Viagra and other pharmaceuticals to artificially assist this process, was a 94-year-old, the answer is yes. (Les Colley, 1898–1998, from Ararat, Western Victoria, fathered his son Oswald in 1992 at age ninety four.) And Levi’s age at the birth of Jokhebed may be lowered by assuming that the “four hundred years” of Genesis 15:13 were rounded upward.

¹⁰ See note 5.

¹¹ See for example Gen 4:8, “And Cain said to his brother Abel. And when they were in the field....” What Cain said to Abel is left to the reader’s imagination. The commentators helpfully provide scenarios (that do not agree with each other).

(the experience of living as sojourner) and not to enslavement and oppression. This despite the fact that it would have been a far more poignant and powerful statement to say that they were liberated after 430 years of slavery and oppression. Now, if all locations of Israelite alienation had been enumerated, it would have made for quite a tedious list. Such a list would of necessity have included Haran (Abraham and Israel), Canaan, Philistia (Abraham and Isaac) and Egypt (Abraham and Israel with offspring). So the Torah abbreviates the list and mentions only the premier experience of alienation, the one in Egypt, and leaves the rest for the knowledgeable reader to fill in.

According to the AJT, it is as if verse 12:40 stated: “The length of time that the Israelites lived (as aliens in a land not theirs) in Egypt, etcetera, was four hundred and thirty years.” Since “etcetera” was unfamiliar to ancient Hebrew (Canaanite, West Semitic) speakers, the text leaves it as a blank for the reader to fill in based on his/her knowledge of the long narrative in the books of Genesis and Exodus.

This approach has the distinct advantage of rendering meaningful the repeated and highlighted statements that the exodus occurred “to the very day” the 430 years ended. What does this tell us? Is it not possible to say that after any number of years? What is so special about the number 430 anyway? Does it tell us that the exodus occurred precisely after 430 complete years, not a day less or more, from some other event? Well then, what is that event? The point being emphasized, according to the AJT, is that the alienation lasted precisely as long as was foretold and intended all along, not a day less nor more, despite the cries of the Israelites and the obstacles planted by their various opponents (including the Egyptians).

But how are we supposed to know that? Those who interpret the 400 years of Genesis 15:13 as referring to the sojourn in Egypt, and the 430 years of Exodus 12:40 and 12:41 as referring to the same sojourn, resolve the conflict by casting the former as a “rounding” of 430 to the nearest multiple of one hundred, and the latter is assumed to be the precise figure. The AJT rejects, out of hand, the notion that numbers in the Torah are approximations unless the text itself states or implies that such is the case (as it does on occasion by the use of the Hebrew letter *Kaf*, which as a prefix means

“about,” as in Ex.12:37). But that aside, how are we—readers of the text—to discern from an approximation (*about* four hundred) that the precise figure of 430 was intended all along and was therefore fulfilled precisely “to the very day”? If the Torah wished to convey this message, should it not in Genesis have simply predicted 430 years, then in Exodus stated that the 430 years were fulfilled to the day? (The four hundred years in Genesis are actually misleading. Anyone taking it at face value would deem it to be contradicted by the 430 years for the same event in Exodus.)

On the other hand, the AJT considers the four hundred years of Genesis 15:13 to be precise—for the time from the birth of Isaac (Abraham’s offspring and the subject of that verse) to the exodus. Since Abraham himself is already an alien when Isaac is born, and he is a bona-fide member of the family of Israel, Exodus 12:40 and 12:41 (whose subject is not limited to Abraham’s offspring) include his years of alienation. Now, Abraham is seventy-five years old when he leaves Haran on the way to Canaan (Gen 12:4) and he is one hundred years old when Isaac is born (Gen 21:5). These twenty-five years are added to the overall period of alienation and wandering of the family of Israel. This brings the total to 425 years. But Abraham’s wandering began even earlier when he was taken out of Ur, on the way to Haran, at the instigation of God, for the purpose of assigning the land of Canaan to him as a possession (Gen 15:7). That leg of his journey, including his sojourn in Haran, we are now informed, lasted five years. Thus we arrive at the grand total of 430 years of alienation for the family of Israel. Exodus 12:40 and 12:41 tell us that this was intended all along and was fulfilled “to the very day.”

To summarize: The expression “to the very day” is akin to saying “precisely as foretold” (by God to Abraham at the CBP). When Isaac was born Abraham was already an alien for thirty years (twenty-five plus five) and God foretold continued alienation for his offspring of *exactly* four hundred years. This was fulfilled “to the very day” when the total period of alienation of Israel’s family reached 430 years.¹²

¹² There is another interpretation offered in the AJT pertaining to the meaning of the Hebrew *etzem*, herein translated (as per the NJPS and others) as ‘to the very (day).’ It is ‘in the center (of the day),’ that is, at

When the Greek ruler of Egypt, Ptolemy Philadelphus II (283–246), drafted seventy Jewish sages to translate the entire HB into Greek (thus the name Septuagint—by seventy), we are informed by the Talmud that he separated them in seventy different locations for as long as it would take to complete the task.¹³¹³ His purpose apparently was to produce seventy independent translations, whereupon he would search for any discrepancies and have them properly resolved. Not willing to create trouble for themselves and their Jewish brethren, and realizing that purely literal translations may be misconstrued or twisted into contradictions, the seventy Jewish sages, each working in isolation of the others, arrived at identical editorial emendations to the text. The Talmud lists these numerous emendations and expresses gratitude and amazement at the miracle that all seventy arrived at the same result.

Some of the emendations enumerated in the Talmud have survived to the present in the widely used version of the Septuagint. One of these emendations is found in Exodus 12:40, which the Talmud informs us was translated as such: “The length of the time that the Israelites lived in Egypt **and in the other lands** was 430

high noon (*Sifri*, Deut 32:48). The point then would be that the Israelites went out in broad daylight, as opposed to sneaking out stealthily in the dark, and yet there was no power capable of stopping them.

No doubt it took many hours for the hundreds of thousands of Israelites to make their way out of their homes and communities, despite the fact that they spent the night in a state of readiness to go, staff in hand, sandals on feet, loins girded (Ex 12:11). The process of leaving began at midnight (Ex 12:29), with the Egyptians driving them out (Ex 12:31, 33, 39). That they were still marching out at high noon and could not be stopped, may indeed be the point of v. 51, which is summative of the entire chapter. It is not, however, the message of v. 41 (as indicated by the *Sifri* itself, which applies its gloss to v. 51 only, and by *Rashi*'s commentary on these verses). This is so not only because the same message would not be superfluously duplicated, but primarily because the context of v. 41 is the completion of (the pre-ordained) 430 years. It is in that context that the Torah adds the meaningful remark “at the end of 430 years, **to the very day**, all the ranks of the Lord departed...” It would be quite incongruous to juxtapose the two disparate messages in one verse (the end of 430 years to the very day and the center of the day).

¹³ See note 4.

years.” The present day common English translation of the Greek Septuagint renders this verse as follows: “The sojourning of the children of Israel, while they sojourned in the land of Egypt **and the land of Canaan**, was 430 years.” Both of these versions carry the same message. That is: the original Hebrew means to abbreviate the list of lands in which the family of Israel sojourned as strangers. It does so by mentioning only the flagship experience of alienation in Egypt while expecting the reader to fill in the gaps based on her/his knowledge of the text up to that point.

The story of Ptolemy Philadelphus II and his seventy Jewish sages occurred very long ago, in the third century BCE. The fact that all seventy of them working independently arrived at this particular emendation can only mean that this interpretation was widely accepted in Jewish circles at even earlier times, as early as the eye could see. Even if one chooses to doubt the veracity of all the particulars of the story as related in the Talmud, the fact that the Talmudists believed it and considered it to be a miraculous act of Godly intervention speaks volumes of how deeply embedded this interpretation of Exodus 12:40 was in the hallowed halls of Jewish scholarship so long ago. And the fact that not one of the Talmudists speaks out to dispute this interpretation adds a few more decibels of support to this tradition.¹⁴

This tradition is a key component of the AJT pertaining to the exodus—that it occurred after an Israelite sojourn in Egypt, not of 430 years, but of 210 years.

(c) The Cities of the Plain

The four-hundred-year interval between the exodus and the birth of Isaac is also important for our purposes. For the birth of Isaac is associated in the Torah with another noteworthy event—the destruction of the ‘cities of the plain.’ The story of that destruction appears in Genesis (19:1–29) juxtaposed between Abraham’s cir-

¹⁴ Some ancient versions of the Septuagint (the original version, the product presented to Ptolemy, is lost) do not contain this emendation. But this does not affect our argument, based as it is not on the Septuagint but on the Talmudists—that they accepted the story as fact, believed it to be a miracle, and had no problem with the emendations cited.

cumcision at age ninety-nine (Gen 17:24) and the birth of Isaac, when Abraham is one hundred years old (Gen 21:5). In addition, the AJT associates the visit of the three wanderers with Abraham's recuperation from that circumcision (Gen 18:1-15).¹⁵ Their statement to Abraham in Genesis 18:10 is translated to mean "I will return to you **next year** and your wife Sarah shall have a son." Virtually the identical message is repeated in v. 18:14. The mysterious visitor-wanderers then proceed immediately to Sodom (one of the cities of the plain) where they become enmeshed in the rescue of Lot (Abraham's nephew) from the destruction that is to befall that city. Sarah soon gives birth to Isaac "at the set time of which God has spoken" (Gen 21:2), that is, by one year after the visit of the mysterious strangers. All this is understood by the AJT to mean that Isaac was born one year after the destruction of the cities of the plain.

In other words, according to the AJT, the destruction of the cities of the plain occurred 401 years before the exodus. The FCD and WAV camps, on the other hand, must separate these events by 430 plus 190 plus 1 (see end of sec. II-a), or 621 years. This may provide an important clue to help us choose between the various dates proposed for the exodus.

III. Enslavement and Liberation

(a) Maxima and Minima

When the family of Israel of some seventy-plus members arrived and settled in Egypt, they were initially welcomed by pharaoh and, of course, his second-in-command, the vizier Joseph, their kin, as described in Genesis (47:1-6, 11-12). They led a peaceful, even prosperous, existence and proceeded to (purposefully) multiply greatly (Gen 47:27). It was not until Joseph and all his brothers and all that generation died (Ex 1:6) and a new king arose over Egypt (Ex 1:8) that the enslavement began.

We do not know how long each of the brothers lived except for Joseph and Levi. Joseph lived 110 years (Gen 50:26) and Levi lived 137 years (Ex 6:16). Joseph appears before pharaoh and is appointed

¹⁵ Babylonian Talmud, tractate *Bava Metziab*, fol.

vizier of Egypt (his most likely title) at the age of thirty (Gen 41:46). After seven years of plenty (Gen 41:53) and two years of famine (Gen 45:6), at which point Joseph is thirty-nine, the family of Israel joins him in Egypt and the Israelite sojourn in Egypt begins. At this point Levi is forty-three years old, since he is four years older than Joseph. (Levi was born approximately three years after Jacob/Israel married the sisters Rachel and Leah within the span of one week (Gen 29:21–34), and Joseph was born near the end of the seventh year after that event (Gen 30:23–25). See also Gen 31:41.) So Levi lived ninety-four years, from age 43 to 137, before the enslavement began. If the enslavement began the very next day after Levi died, it endured at most 210 minus 94, or 116 years, according to the AJT. If the enslavement began significantly later, certainly a possible scenario, it lasted less than 116 years.

On the other hand, Moses is born when both the enslavement and the later decree to kill all newborn Israelite males (the oppression) are in full force (Ex 1:22 – 2:10). Since Moses is eighty years old at the exodus (Ex 7:7, Deut 34:7), the enslavement and oppression must have been in effect for at least eighty-plus years.

So we arrive at a time frame for the enslavement of between 80 and 116 years. The actual number is not likely to be close to either of these extremes. This is so, because the enslavement should have been in effect for some time for pharaoh to realize that his policy of enslavement is not effective in its stated goal of reducing the Israelite population, thus necessitating the decree (Ex 1:9–22). Nor did the death of Levi play any role in precipitating the enslavement. It was the emergence of a new king over Egypt that led to the initiation of the new policies. A reasonable estimate for the duration of the enslavement, one that is between 80 and 116 but not too close to either of these extremes, would therefore be *about one hundred years*. This figure cannot be far from the truth and is the number we are inexorably led to by the AJT's view of the sojourn in Egypt.

(b) Elimination of the Oppressor

One of the most salient aspects of the exodus, not as well known as the plagues and the crossing of the Sea of Reeds, is described by Moses forty years later, in Deut (11:4). After recounting the many extraordinary feats performed over the years for the Israelites, who

are gathered in front of him and whom he is addressing, Moses declares, “(And) what He (God) did to Egypt’s army, its horses and chariots, how He rolled back upon them the waters of the Sea of Reeds when they were pursuing you, and the Lord destroyed them to this day.” These events are described previously in detail as they occurred, in Exodus (14:9–29). But in recounting them forty years later (Deut 8:2), Moses adds a new intriguing element. The army of Egypt was “destroyed to this day,” **in addition to** the awesome events at the Sea of Reeds. (The NJPS translates here “**thus** destroying them once and for all.” This is incorrect and the implication that the army’s permanent destruction occurred at the Sea of Reeds event, implied by the word ‘thus,’ is entirely unwarranted.)

Now, to what is Moses referring? It cannot be the death of the Egyptian soldiers, horses and charioteers (whether at the Sea of Reeds or elsewhere), since it makes no sense to describe them as “dead to this day.” Dead is forever. That goes without saying. Since this is so, what does the phrase “and the Lord destroyed them to this day” add to the list of great feats?

The ancient Jewish commentators understand this phrase to mean that the Egyptian army as an entity was eliminated and not reconstituted for at least forty years.¹⁶ In this they are undoubtedly correct, for that is the plain meaning of those words. There was no Egyptian army for at least that number of years. And since forty years is more than enough time to recover from a military defeat, no matter how resoundingly an army is beaten in battle, we must conclude that the very rulers and government defended by that army—the institution that should have taken a keen interest in immediately rebuilding that army—was also destroyed. And that happened independently of the events at the Sea of Reeds.

As a matter of fact, the AJT interprets the phrase “to this day,” wherever it appears in the Torah, as referring to the day of any future reader of the text. That is, any future reader is informed that the statement he/she just read is applicable “to this day,” the day he/she reads those words. It is as if the phrase is placed in the

¹⁶ See Ibn Ezra, Nachmanides and others on Deut 11:4. No commentator voices disagreement with this analysis and interpretation.

mouth of the reader. The reader is saying it. Since the text is assumed to be timeless and everlasting, the phrase really means to say, “in perpetuity.” Such is the case, for example, with regard to Moses’ burial place. We are told (Deut 34:6) that “He buried him in the valley.... And no man knows his burial place to this day.” Meaning, no man will ever know his burial place. And such is indeed the case, to this day (even if you are reading this essay a thousand years after it was written).

The conclusion therefore is inescapable that the Torah, our only source for the events associated with the exodus, is informing us, based on the AJT of its textual interpretation, that the oppressor of the Israelites and its power (the institution and its defending army) were totally and utterly destroyed soon after the exodus, never to return.

(c) Forty Years Later

A few weeks after uttering the above words Moses dies, the Israelites cross the Jordan River into the Promised Land, and soon they are engaged in the battle for Jericho. The crossing of the Jordan is facilitated when its water becomes “piled up in a single heap” in the vicinity of (a place named) Adam (Josh 3:16). The city of Jericho with its mighty fortress is conquered when its massive defensive perimeter suddenly collapses. These events occur during the first month (known today as *Nissan*, from the Babylonian exile period, usually coincident with April), forty years to the month from the exodus (Josh 4:19). Jericho is subsequently burned to the ground with all that is in it, except for the silver, gold, bronze and iron implements found there, which the Israelites dedicate to their future temple. The conquest of the land was on its way and the rest is history.

(d) Summary

According to the AJT, the following statements are applicable to the Israelites’ sojourn in Egypt, the exodus and its immediate aftermath:

1. The sojourn lasted 210 years.

2. The last 100 years (approximately) of that sojourn were spent in a state of slavery.
3. At least 80 of those 100 years were in a state of oppression (as defined above).
4. The Cities of the Plain are destroyed 401 years before the exodus.
5. Jericho is destroyed and burned 40 years after the exodus.
6. Events following the exodus bring the oppressor and its power to a permanent end.

IV. The Evidence

(a) A Case of Missing Data

A popular mantra of Bible critics is “there is no evidence” for the exodus or even for an Israelite presence in Egypt. The usual response of Bible defenders consists of the following points: First, ongoing excavations in the vicinity of ancient Avaris (the Hyksos capital when these alien rulers were in control of the Egyptian Delta area, ca. 1660–1550) have in fact demonstrated a significant foreign, particularly Canaanite, presence in Egypt at the time.¹⁷ Since the Israelites hailed from Canaan, we ought to expect some difficulty in distinguishing them from their fellow Canaanites. It is therefore incorrect to claim “no evidence” for their presence in Egypt. Second, papyrus documents reflecting the presence and then disappearance of a large body of foreign slaves is not to be expected from the Delta area, where the Israelites sojourned, because hardly any documents at all have survived the moist conditions of the Delta from so long ago. Third, we ought not to expect any pharaoh to erect a stela or commission an inscription depicting what can only be viewed as a defeat for Egypt. Better to forget the event and erase it from the record. The Egyptian attitude was, if it is not inscribed, it (is as if it) did not happen.

¹⁷ J. Hoffmeier, *Israel in Egypt* (Oxford: Oxford University Press, 1997), 52–76; A. Rainey, *Egypt, Israel, Sinai* (Tel Aviv: University Press, 1978), 41–56

These are all fine arguments, but a nagging question remains. How come, with the many documents that have survived from the dry (southern) regions of Egypt, there are none that mention the sudden disappearance of many tens of thousands of slaves¹⁸ from the northern part of the country? Would this development not have severely impacted the entire Egyptian economy? Were there no measures to be considered, blame to be assigned or regrets to be offered?

Well, it turns out there is more to this story, as we shall soon see.

(b) Destruction at Jericho

Let us look first at a place where evidence is rather plentiful, at ancient Jericho. Extensive archaeological reports from the decade of the 1950s CE, based on extensive analyses of the pottery found at city IV (the strata identified as inhabited Jericho during the Middle Bronze Age (MBA), ca. 1900–1550), led to the conclusion that its occupation ended with the end of the MBA, ca. 1550 BCE, and that occupation did not resume at the site for some seven centuries thereafter.¹⁹ The still-visible toppled perimeter walls and the evident burn layer of the city's remains must therefore represent the final destruction of MBA Jericho, at about 1550, or so went the argument. The only issue left to determine was, who did it or what was responsible?

This conclusion could be reconciled neither with a ca. 1250 exodus date (the WAV) which necessitates that Jericho's destruction take place forty years later, ca. 1210, nor with a 1450 exodus date (the FCD) which implies that Jericho was destroyed ca. 1410, nor with a 1312 exodus date (the JCB) which requires a ca. 1272 destruction of Jericho. All of these scenarios bring Joshua to the scene at a

¹⁸ The figure of “about six hundred thousand” includes **men and women** adults (“strong ones on feet,” Ex 12:37, who can walk on their own and need not be carried by others, contra the NJPS translation), as I will demonstrate in a follow-up essay. Even if we assume that the Israelite women were not enslaved, that still leaves about 300,000 male slaves who vanished from the country one nice day.

¹⁹ A. Negev, ed., *Archaeological Encyclopedia of the Holy Land* (New York: Putnam, 1972), 163–166.

time when Jericho is unoccupied, having been destroyed centuries earlier. This did not go unnoticed by the Bible critics. They soon pounced on this evidence as proof that the biblical account is anachronistic at best, fictitious at worst, and certainly unreliable historically—there was no city for Joshua to conquer when he arrived at the scene forty years after the exodus.²⁰

Defenders of the FCD responded by critiquing the pottery data. The reason no post-MBA pottery was found (post 1550, known as the Late Bronze Age, LBA) at Jericho, they argued, was that Jericho was distant from the main trading roads (it was) and that the pottery examined did not include the poorer areas of the city (it may not have). Thus the city could have been inhabited deep into the LBA (say about 140 years, up to 1410), but its residents did not keep up with the latest in pottery styles and technology. These and other criticisms leveled at the archaeological findings based on the pottery data kept the debate alive, albeit with the Bible supporters on the defensive.²¹

Then came the C-14 radioactivity analysis performed in the 1990s CE on organic specimens obtained from the burn layer at Jericho's city IV. These studies consisted of high-precision techniques, comprehensively applied to a variety of short-lived and long-lived specimens gathered from the burn layer. Without getting into a lengthy discussion of the complexities inherent in this analysis—such as calibration curves and their “wiggles,” which are important to the study but have been treated elsewhere—it can safely be said that the results convincingly demonstrate a rather high probability (95%) that the short-lived specimens were burned within an eighty-year time span centered on 1562 BCE. This effectively excludes 1410 and 1210 as candidate-years for the destruction of Jericho's

²⁰ K. Kenyon, *Digging Up Jericho* (London: Ernest-Benn, 1957), 261-262.

²¹ B. Wood, Did the Israelites Conquer Jericho, A New Look at the Archaeological Evidence, *Biblical Archaeology Review*, March/April 1990: 44-58.

MBA city. These years are just too far out of the high probability range between 1522 and 1602 to be credible.²²

A counterargument raised by the WAV defenders is that the Jericho area is subject to erosion, whereby the soil on hills adjacent to the Jordan River (the vicinity of Jericho) slides into the river during the relatively rare occasions when it rains there. Over the course of centuries these effects accumulate to the point that an entire (abandoned) city can be eroded away. So, propose they, the destroyed MBA city was rebuilt soon after its destruction in ca. 1562 and replaced by a smaller city. This later city was surrounded by a defensive mud-brick wall (no stone as in the MBA wall) and it was this city that Joshua conquered and burned in ca. 1210 BCE. Then the remnants of this destroyed smaller city, with its pottery and dissolved mud bricks, were washed away by the rains, never to be found again.

In support of this imaginative hypothesis, its supporters point to the large sections of the older MBA city that are now missing. These sections were apparently eroded away and the parts that survived did so, argue they, only because a later LBA city was built on top of them, thereby protecting them for a few centuries. But it is also possible that there was no replacement city and the sections of the MBA city extant today were just not eroded away. This explains well the extreme meagerness of LBA paraphernalia found at the site, which is more indicative of the remains of a tiny band of squatters than a city respectable enough for Joshua to conquer.

(c) New Evidence

New information has very recently become available that sheds more light on the history of the Jericho area. Studies of seismites and varves in the Dead Sea area have yielded a rather complete and accurate record of past earthquakes in the region of magnitude six and higher, going back thousands of years.²³ The record thus ob-

²² H. Bruins and J. Plicht, Tell es-Sultan (Jericho): Radiocarbon Results of Short-lived Cereal and Multiyear Charcoal Samples, *Radiocarbon*, 37/2 (1995): 213–220.

²³ C. Migowski, et al, Recurrence Pattern of Holocene Earthquakes along the Dead Sea Transform, *Earth and Planetary Science Letters*, 222 (2004):

tained has been cross-checked against the record of known earthquakes of the last two millennia, and the data match up impressively well. The following are the earthquake years for the time frame of concern to us, in order of increasing distance into the past: 1050, 1365, 1560, 1800, 2000, 2050, 2100 and 2700, all years BCE.

Surely you noticed the year 1560 in the list! That year sits right on top of dead center of the carbon dating span for the destruction of Jericho! Earthquakes play a central role in the biblical narrative of Jericho's destruction. Both the collapse of the defensive wall around the city (Josh 7:20) and the blocking of the Jordan River at Adam about two weeks earlier (Josh 3:16) are most readily attributed to the action of a quaking ground. Earthquakes produce mudslides that block the water, as happened repeatedly at the very same spot, the last time as recently as 1927 CE.²⁴ Could the convergence of these two disparate sources of evidence, the carbon dating and earthquake record, be mere coincidence?

The WAV supporters, who postulate a city-busting earthquake at Jericho in ca. 1210, are entirely out of range of any of the quake years on the list. They may argue that a minor quake (below magnitude six that may not appear in the list) destroyed their proposed replacement city's walls ca. 1210 BCE. But why then would the significantly stronger earthquake of 1365, which *was* strong enough to leave its mark in the record, not have destroyed those walls, and a lesser quake in 1210, not strong enough to leave any telltale evidence behind, did manage to topple those walls? More important, with two independent but simultaneous events described in the Bible, the burning (by Joshua) and the toppling of the walls and blocking of the river (by earthquake), both confirmed by the evidence as having occurred at about the same time, ca. 1560, why would we forsake this attractive package in favor of an imaginary successor city that was once again struck simultaneously by both

301–314; R. Ken-Tor, et al, High Resolution Geological Record of Historic Earthquakes in the Dead Sea Basin, *Journal of Geophysical Research*, 106/B2 (2001): 2221–2234.

²⁴ R. Avni, *The 1927 Jericho Earthquake*, Ph.D. thesis, Ben-Gurion University of the Negev (Beer-Sheva, Israel, 1999); D. Amiran, et al, Earthquakes in Israel and Adjacent Areas, *Israel Exploration Journal* 44 (1994): 260–305.

these independent events, a rarity in and of itself, with neither event leaving any evidence behind?!

Both these questions can, of course, also be addressed to the 1312 exodus supporters (the JCB) who require a 1272 date for Jericho's destruction. This too is entirely out of range of any of the earthquake years enumerated above, and it is way past 1560 BCE.

The FCD camp fares somewhat better here. They must propose a ca. 1410 date for Jericho's destruction, significantly removed from the 1560 quake but close to the 1365 quake, although still a substantial forty-five years away. But 1560 has the distinct advantage of having the earthquake **and** the burning depicted in the Bible in agreement with two independent lines of inquiry, as having occurred about the same time.

To summarize: We have data from three independent modes of inquiry—the pottery of the residents, the carbon dating of the ash layer and the earthquake record—all converging to ca. 1560 for Jericho's MBA destruction. There is no such confluence of data for any other date and no evidence of a successor city for many centuries. So, in true scientific fashion (when beautiful theories come up against nasty facts) we should follow the data wherever they lead us. If there is to be any historicity to the biblical narrative, we must tentatively conclude that Joshua's encounter with Jericho occurred ca. 1560 and that the exodus must therefore have taken place ca. 1600 BCE.

(d) Sodom and Gomorrah

It has been recognized for quite some time that the best candidates for the five biblical Cities of the Plain, named Sodom, Gomorrah, Admah, Zeboiim and Zoar (Gen 19:22–24, Deut 29:22), are the five adjacent sites east and southeast of the Dead Sea, known today as Bab Edh-Dhra, Numeira, Safi, Feifa and Khanazir. The rather strong evidence for this identification, geographically and archaeologically, has been presented elsewhere.²⁵ The story of their destruc-

²⁵ W. Rast and R. Schaub, Preliminary Report of the 1979 Expedition to the Dead Sea Plain, *Bulletin of the American Schools of Oriental Research* 240 (1980): 21–61.

tion (described in Gen 19:24–29 and Deut 29:22) informs us that these cities were “overturned” with sulfur, salt and fire raining down upon them. No deaths are mentioned, but the ground was rendered inhospitable for human habitation. This certainly implies a violent earthquake that toppled structures but with sufficient advance warning (such as precursor tremors) to enable the residents to escape with their lives before the overturned cities were engulfed by fire, sulfur and salt. All of these aspects have been found at Bab Edh-Dhra and Numeira, both of which met their violent end at the same time, as narrated in the Torah. The other sites have not (yet) been sufficiently excavated due to their present occupation.

When were these cities so violently destroyed? The archaeological evidence (basically pottery) is vague enough to accommodate a long time span between ca. 2400 and 1900 BCE. Precision carbon dating of the extensive burn layer has to date not been forthcoming, but dating of organic specimens left behind by the residents, presumably before the destruction, has been performed. These have yielded dates from ca. 3000 down to 2100 BCE for Bab Edh-Dhra, indicating that it has been inhabited for a long time and that its destruction did not occur before ca. 2100 BCE.²⁶ Numeira was inhabited a much shorter period of time and was destroyed together with Bab Edh-Dhra, as indicated above, that is, after 2100 BCE.

(e) More New Evidence

Very recent studies of the earthquake record in the area (section IV-c) help narrow the time frame for the destruction of these cities to ca. 2000 to 2100 BCE, a period containing three major earthquakes in the list of quake years presented earlier (2000, 2050 and 2100). The other quake years on the list are either much too early (2700) or outside the range of high probability based on the carbon dating and archaeological evidence (1800). In addition, the still standing salt pillar at Mt. Sodom (on the opposite side of the Dead Sea), which has managed to survive all these years due to its stone cap (any other such pillars have presumably been dissolved over time

²⁶ A. Frumkin, Stable Isotopes of a Subfossil Tamarix Tree from the Dead Sea Region, *Quaternary Research*, University of Washington, 71 (2009): 319–328.

by the rare rainfall in the area), has recently been shown to have formed as a result of the effects of an earthquake on the geology of the area. That quake has been dated to ca. 2000 to 2050 BCE.²⁷ Salt pillars, you may recall, are associated in the Torah with the destruction of these cities (Gen 19:26), which is why the salt pillar still there today is popularly known as “Lot’s wife.” (But don’t read too much into this appellation.)

(f) Conclusion

So, the key requirements that must be met by any proposed date for the exodus according to the AJT can now readily be satisfied. An exodus that takes place ca. 1600 is both forty years before 1560, the dead center year for the destruction of Jericho, *and* four hundred years after 2000, proclaimed by the evidence as a distinct likelihood for the year of the destruction of (two of) the Cities of the Plain.

It ought to be kept in mind that these numbers are approximations; the evidence allows any of these events to have occurred a few years earlier or later. The important point, however, is that the evidence at both ends, four hundred years before and forty years after, our ca. 1600 date for the exodus, is consistent with the AJT. We cannot claim any more because the available evidence cannot be more precise. It certainly cannot be said that the evidence (considered so far) contradicts the biblical narrative as conveyed to us via the AJT, *if and only if* the exodus is assumed to have occurred ca. 1600 BCE.

V. The Setting

(a) Coincidences

Now that we have arrived at the ca. 1600 date for the exodus and seen how two of the six requirements listed earlier (section III-d), based on the AJT, have been met, we next turn to the event itself. What were the conditions under which the exodus occurred? What

²⁷ A. Frumkin, Formation and Dating of a Salt Pillar in Mt. Sedom Diapir, Israel, *Geological Society of America Bulletin*, 121/1-2 (January 2009): 286–293.

about the AJT's requirement of about one hundred years of slavery and the permanent elimination of the oppressor? How do these requirements stand up to this date?

Well, 1600 BCE, and only this date of all those proposed for the exodus, brings us to a remarkable coincidence. According to all historians, there was a period of time when Northern (lower) Egypt, including the Delta area where the Israelites were stationed, was ruled by foreigners known to the native Egyptians as Hyksos (foreign rulers). After an extended period of many centuries in the twelfth and thirteenth dynasties (1900–1650), during which it was Egyptian policy to allow and even invite Asiatics (the name Egyptians applied to the peoples to their east and north) to migrate and settle in Egypt, these foreigners became numerous enough to seize control from the native Egyptians. At first they ruled over just the Delta area, then they gradually expanded their dominion to cover a far greater portion of Egypt. Soon they considered their part of the country to be the real Egypt, they referred to their rulers as pharaohs, the native government now limited to the southern portion of the country became subservient to them, they adopted Egyptian gods and customs and contributed in many ways to the development of the country.²⁸

These Hyksos pharaohs ruled for about 110 years, until they were finally expelled, after many battles over the course of many years, by Pharaoh Ahmose I, ca. 1550, according to most Egyptologists. The victorious native Egyptian forces then pursued the foreigners and their army across the desert (Sinai peninsula), besieged them at Sharuhen (near present day Gaza City) for many years, and finally defeated them. The power of the Hyksos was at this point utterly eliminated; they disappear from history—never to be heard from again.

Notice the coincidence of the about one hundred years of Israelite enslavement, according to the AJT, and the about one hundred years of Hyksos rule. Notice also the coincidence of the permanent and complete destruction of Hyksos power with the AJT's requirement, based on the Torah (section III-b), that the oppressor of

²⁸ E. Meyers, ed., *The Oxford Encyclopedia of Archaeology in the Near East*, 5 volumes (Oxford: Oxford University Press, 1997), vol. 3.

the Israelites be permanently eliminated. These considerations and some others discussed below lead inexorably to the conclusion that it was the Hyksos, and not the native Egyptians, who oppressed and enslaved the Israelites.

(b) Chronology of Events

A reasonable scenario for the chain of events leading up to the exodus, one that incorporates the relevant historical and biblical data, may proceed somewhat as follows. Soon after seizing control, the Hyksos rulers, insecure about their staying power as usurpers in a foreign land and suspicious of the Israelites' loyalty—who had every reason to look kindly upon the native Egyptians, considering all that transpired between them in the narratives of Genesis (chapters 45 to 47)—turn against the Israelites (who were also foreigners in Egypt) and enslave them as a strategy to reduce their population. This is the deeper meaning of the Hyksos pharaoh's proclamation regarding the Israelites in Exodus 1: 9-10—more about that below (sec. VI-a). When it later becomes apparent that this policy was not successful in shrinking the Israelite population, the Hyksos pharaoh decrees that all newborn Israelite boys be killed (the 'oppression'). This continues for many decades.

Eventually, the Israelites, under the leadership of the daring and charismatic Moses, begin to loudly demand the opportunity to serve their own God, outside the country, in the desert. The Hyksos pharaoh denies them this privilege. Moses threatens him and his people, in the name of the God of Israel, with all manner of catastrophes for disobeying the will of Israel's God. The land under Hyksos control is then visited by a succession of plagues that bring disease, hunger, suffering and death upon the people. The Hyksos populace and ruling class become convinced, after a period of denial, that Moses and his God brought all this travail upon their heads. As rebellion spreads amid chaos and confusion, the power of the ruling class hovers on the brink of collapse.

Spooked by the nasty turn of events and by Moses' pronouncements, the Hyksos pharaoh finally relents. He grants the Israelites permission to leave the country to serve their God for a few days in the desert, the official Israelite demand as conveyed by Moses (Ex 5:1, 3, 12:31). But the Israelites have no intention of re-

turning. Units of the Hyksos army then pursue them and these are promptly destroyed in the Sea of Reeds. All this draws the attention of the native Egyptians and their pharaoh in the south. They seize the opportunity to launch attacks against their much-weakened Hyksos enemy. After a few years of battles, the Hyksos have no choice but to flee for their lives. They are pursued across the desert, and after a few more years of sieges and battles at Sharuhen the Hyksos power is eliminated and they are history, never to be heard from again.²⁹

Returning home triumphant, the native Egyptians proceed to cleanse their now unified country of any vestiges of the hated foreigners. The saga of Hyksos rule is deemed a blemish on their proud history and they fervently wish to erase every trace of it. And they do a superb job! There is pitifully little material evidence of Hyksos rule to be found, except for a tomb here and a grave there unearthed by archaeologists millennia later. But in doing so, the native Egyptians (unfortunately for our purposes) effectively destroy any remaining evidence of one of the key legacies of the Hyksos' rule—the enslavement of the Israelites.

Combine this now with the fact that, from the point of view of the native Egyptians in the south, the Israelite slaves served a foreign entity in the north and their escape was considered to be the internal affair of an alien power. To the native Egyptians it was all none of their business. And the Hyksos are gone, their remains in Egypt subjected to a campaign of erasure. No wonder then that the sojourn, enslavement, oppression and exodus all occur 'under the radar' of history—except for the Israelites' record in the Torah.

All this serves to explain why evidence of the sojourn and exodus is so hard to come by these days (section IV-a), thousands of years after the events.

²⁹ Careful reading of the original (Masoretic) Hebrew text of Deut 11:4 allows for the elimination of the Hyksos oppressor to occur later than, and separate from, the Sea of Reeds event. However, the two developments must be separated by less than forty years, since Moses discusses the elimination forty years after the exodus (Deut 8:2). This implies that the Hyksos elimination could have occurred ten, twenty or even thirty years after the exodus.

To precisely date each of the developments in the above-described sequence of events, or to name the pharaohs of the oppression and the exodus (they are not the same, as indicated by Ex 2:23) with any degree of confidence, is not possible with the present state of our knowledge. We have only estimates for the duration of the enslavement (between 80 and 116 years) and Hyksos power (about 110 years). And the dates for the exodus and the expulsion of the Hyksos can themselves be moved up or down a few decades without contradiction by the evidence. However, the overall framework constructed above is sound and the pieces of the puzzle fit quite snugly together.

(c) The Thera Eruption

An interesting tidbit of history deserves mention at this point. The ca. 1600 date for the exodus is too close in time and place to the great volcanic eruption on the island of Santorini (ancient Thera) in the Mediterranean to ignore. The latest physical evidence (dendrochronology and carbon dating, as opposed to archaeological evidence based on pottery) strongly suggests that the great eruption occurred ca. 1610, give or take about twenty years on either side.³⁰ Since Thera is only some 700 kilometers from Egypt's Delta, this eruption could provide a natural basis for such phenomena as the "hot hail" that fell upon Egypt shortly before the exodus (the seventh plague, Ex 9:22–32). Volcanic ash, always hard and brittle and often hot, from Santorini has indeed been identified in datable contexts by deep core drilling in various locations in Egypt.³¹ Likewise, the earthquake storms that usually accompany such enormously

³⁰ C. Ramsey, et al, Dating the Volcanic Eruption of Thera, *Radiocarbon* 46 (2004): 325–344.

This scientifically ascertained date is hotly disputed by some archaeologists. See M. Wiener, Times Change: The Current State of the Debate in Old World Chronology, *The Synchronization of Civilizations in the Eastern Mediterranean in the Second Millennium BC*, vol. 3, p. 40.

³¹ D. Stanley and H. Sheng, Volcanic Shards from Santorini (upper Minoan ash) in the Nile Delta, Egypt, *Nature* 320 (April 1986): 733–735; P. La Moreaux, Worldwide Environmental Impacts from the Eruption of Thera, *Environmental Geology*, 26/3 (Oct 1995): 172–181.

powerful volcanoes may have been responsible for some of the other disasters to strike northern Egypt at that time. Further research into this hypothesis is in order.

VI. New Insights

(a) A New King

Let us now savor some of the rewards of our handiwork. Various anomalous verses in the Torah can now be seen in a new light and their deeper, more meaningful message can now be gleaned and more fully appreciated.

At the introduction to the Israelites' enslavement, we find the following verse: "A new king arose over Egypt who did not know Joseph. And he said to his people, Look the Israelite people are much too numerous ..." (Ex 1:8). Considering the context in which this is presented, the implication clearly is that not knowing all the good that the Israelites had done for Egypt, and the great debt owed to the Israelites in return, enabled the new king to proceed with his plans (to enslave and oppress the Israelites) with a clear, untroubled conscience.

But this poses a problem. With the Egyptians' propensity for maintaining a keen eye on history and their due diligence in recording all significant events, how could a successor to the pharaoh of Joseph's acquaintance not know about Joseph? How could he not know about all that transpired between the Israelites and the Egyptians a mere few decades earlier?

This question has been addressed before, and various mutually exclusive solutions have been offered. Our rabbis dealt with the issue and disagreed among themselves as to its resolution.³² Some proposed that the verse means to say that the successor pharaoh did not "personally" know Joseph. Others took the position that the verse informs us that the new pharaoh acted "as if he did not know" Joseph. Instead of showing gratitude for the blessing and salvation

³² This implies that any tradition pertaining to the subject, if there ever was one, had been lost or forgotten. Consequently, the Talmudic sages were free, and felt obligated, to offer their own opinions and analyses.

the Israelites brought to his country, he made believe he knew nothing of all that and proceeded to oppress them.

However, notice the expression “a new king arose” instead of the more natural ‘another pharaoh arose.’ Knowing what we know now, we can see that the verse informs us that a ‘new regime’ arose over Egypt that ‘did not recognize’ and perhaps really “did not know” the Joseph story that occurred about one hundred years earlier. Certainly it can be said of the Hyksos rulers that they could not care less about the experience with Joseph. It meant nothing to them as it was not part of their collective experience. And they likely did not trouble themselves to become acquainted with the history of their new country, in which case they really did not know about Joseph.

This verse is then followed by v. 1:10 in which the new king worries out loud about the Israelites joining his people’s enemy in the event of war, whereupon they will “get up from the land,” meaning that the king and his people will be evicted from the country (the plain sense of this grammatically difficult passage being that the defeated side leaves). But why worry particularly about exile? If the new king will be defeated by a coalition of his enemy and the Israelites, all manner of catastrophes may be conjured up. Defeat those days could and frequently did lead to slavery, captivity, execution and poverty. What is so special about exile that it is singled out? And why would the Israelites side with the new king’s enemy and not with the new king himself, their caring host government, in the absence of his enslaving them? But, as pointed out earlier (section V-b), the Hyksos rulers were fearful and nervous about their staying power as usurpers in a foreign land, and they were suspicious of the kinship built up over the years between the Israelites and the native Egyptians who hosted them in a most friendly and accommodating manner for many decades. In this context, the entire first section of the first chapter of Exodus makes much better sense.

(b) The Mixed Multitude

As the exodus gets underway, we encounter the following enigmatic verse: “Moreover, a mixed multitude went up with them (out of Egypt) and very much livestock ...” (Ex 12:38). Who are these peo-

ple who joined the Israelites in large numbers out of Egypt? Their “multitudes” never appear explicitly in the Torah again—not in the census of the half-shekel conducted a few months later (Ex 38: 25-26) nor in the census one year after the exodus (Num 1: 20-47) nor in the census forty years later (Num 26: 5-51). All these censuses enumerate only descendants of Israel’s sons. What happened to the large number of all those ‘others’?

They could not have been native Egyptians. Egypt was always the place people migrated to, not from. And for good reason. The Nile River of Egypt was far more reliable as a source of life-sustaining water than the rains in much of the surrounding areas. And why would Egyptians be described as “mixed”? They are always referred to in the Torah simply as “Egyptians.” Why not say so here?

No doubt, the “mixed multitude” harkens back to the time when northern Egypt was teeming with foreigners, a development epitomized by the rule of the Hyksos. These folks likely consisted of a mixture of Canaanites, Amorites, Hittites, Moabites, Edomites, Ammonites and perhaps others from further east and north of Egypt. They came seeking a better life. It is reasonable to assume that Canaanites constituted the largest contingent in the mix, since Canaan was just across the desert and outnumbered some of the other tribal kingdoms. But the Canaanites were themselves an amalgam of peoples who migrated into the land referred to as Canaan.

These aliens in northern Egypt had had enough of the suffering and chaos in the land at the time of the exodus. And they felt menaced by the resentful native Egyptians who now appeared poised to strike at them and evict them—to make sure nothing like the Hyksos usurpation of their country would occur ever again. They accompanied the Israelites out of Egypt, probably crossed the Sea of Reeds with them, then returned to their original homelands. When the Israelites made that right turn southward, down the west coast of the Sinai peninsula, these folks bid them goodbye and proceeded across the desert (eastward and northward) to their various destinations.

(c) The Wrong Target

Forty years after the exodus, we encounter Moses addressing the Israelites shortly before his death. Among the many declarations he makes pertaining to their future conduct in the Promised Land, we find the following: “You shall not abhor (reject) an Egyptian for you were a stranger in his land. Children born to them may be admitted into the congregation of the Lord (Israel) in the third generation” (Deut 23: 8, 9).

Let us get this straight. The Israelites are to ignore one hundred years of enslavement and eighty-plus years of the killing of their newborn sons, because they were accepted as strangers before that? This is as logical as appealing to Jews forty years after the holocaust to ignore Germany’s role in those horrendous atrocities on the grounds that Jews were allowed to live there before the holocaust.

Perhaps, one may argue, this is an exhortation to forgive and forget all the evil and hurtful deeds, to let bygones be bygones, to ‘move on’ so to speak. But this cannot be. Only four verses earlier we are told, also by Moses: “No Ammonite or Moabite shall be admitted into the congregation of the Lord (marry an Israelite). None of their descendants, even in the tenth generation, shall be admitted into the congregation of the Lord. Because they did not meet you with food and water on your journey after you left Egypt, and because they hired Balaam son of Beor ... to curse you.... You shall **never** concern yourself with their welfare or benefit as long as you live” (Deut 23:4, 5, 7).

In other words, the Israelites are commanded not to intermarry with Ammonites and Moabites down the generations,³³ because it is in their character not to greet hungry, tired wanderers in the desert with food and water. But Israelites may intermarry with Egyptians and are commanded not to reject them, despite a record far worse over a span of much more time—one hundred years! Does this make sense?

In light of what has been proposed above, however, all makes perfect sense. Deut 23:8 refers to “an Egyptian,” that is, the native Egyptians, who are not associated with the oppression and en-

³³ Babylonian Talmud, tractate *Yivamot*, fol. 76b–78a.

slavement of the Israelites. These evil deeds were inflicted upon the Israelites by the Hyksos foreigners. The prescribed relationship between the Israelites and the Hyksos people is addressed in other places in the Torah in terms even more severe than that of the Ammonites and Moabites (e.g. Deut 7: 1-5). The native Egyptians, on the other hand, welcomed the Israelites into their country with open arms during a very stressful time in their own country (a severe famine) and even treated them royally (Gen 45: 17-20, 47: 5-6). And they never participated in the enslavement and oppression. So, do not abhor them!

(d) The Judges

The period after Joshua and the committee of elders who succeeded him (Jud 2:7), up to Israel's first king, Saul (I Sam 8:5 - 11:15), is known as the era of the judges. The course of events during this period, or at least parts of it, is described in the book of Judges. We are told that after the elders that succeeded Joshua and that entire generation had passed on, successive generations of Israelites arose who "had not experienced the deliverance of the Lord or the deeds that He had wrought for Israel" (Jud 2:10). These Israelites gradually forsake their God and His commandments, under the influence of their neighbors whom they have failed to displace. This initiates a cycle of events that is repeated multiple times throughout the book. The Israelites do what is offensive in the sight of God, they are then attacked by enemies and subjected to oppression, they eventually cry out to God for help, and God sends them a leader/judge who guides them out of their difficulties and to conduct acceptable to God. Then the judge dies, the Israelites slide back into God-forsaking conduct, and the cycle repeats itself, again and again.

Unfortunately, for our purposes, the book of Judges does not focus consistently and rigorously on the chronology of events. It does generally inform us as to how long each judge ruled, from as little as three years in one case to as long as eighty years in another case. But it does not clearly state how many years elapsed between judges. Nor does it inform us at one particular junction that the next judge to be described ruled after the previously described judge (Jud 6:1). This leaves open the possibility that some judgeships over-

lapped. If we simply add up all the judges' time spans, a total of over five hundred years emerges.

Now, we do have a pretty good idea as to when the era of the judges ended and the reign of Saul began. King Solomon's reign, it is generally agreed, began ca. 970 BCE. This is soundly based on multiple synchronizations between the more rigorous chronology presented in the books of Kings and the known histories of Egypt, Assyria and Babylonia.³⁴ Since Solomon's reign was preceded by the forty-year reign of King David (I King 2:11), David's reign began ca. 1010 BCE. This was preceded by the reign of King Saul, whose tenure can best be estimated, from the many events in which he was involved, as about thirty years.³⁵ So the era of the judges ends at about 1040 BCE.

Had the book of Judges been more elaborately chronological, we could have calculated our way back from Saul to Joshua to the exodus, and there would have been no need for this essay and countless others on the subject. But, alas, that is not the case. One verse in that book, however, does help us out. In Jud 11:26 we encounter Judge Jephthah's note to the king of the Ammonites, a message he sent in a failed attempt to prevent war between their nations. In this diplomatic communication, Jephthah refers to events that occurred between their peoples forty years after the exodus, a short time before Joshua crossed the Jordan River and conquered Jericho. Jephthah describes those events as having occurred "three hundred years ago." Since Jephthah is succeeded by four other judges, culminating in the judgeship of the well-known Samson, we can set a minimum for the time between the exodus and Saul, based on the following: Three hundred years from Joshua to Jephthah (could be 'rounded'), forty years from the exodus to Joshua (supposed to be precise) and about fifty years for the succeeding

³⁴ E. Thiele, *The Mysterious Numbers of the Hebrew Kings* (Grand Rapids: Kregel, 1983).

³⁵ I Samuel 13:1 is undecipherable with regard to how old Saul was when he became king. The concluding phrase, "and he reigned over Israel two years," is likely not a total of all his years as king but introductory to the events that follow (that they occurred soon after he completed two years as king). So the best we can do with regard to Saul's reign is estimate.

four judgeships (Samson himself ruling for at least twenty years). This yields a grand total of about 390 years.

Since Saul ascended to the kingship ca. 1040 and the exodus must have occurred at least 390 years earlier, the exodus ought to have taken place *before* 1430 BCE. This is a huge problem for the WAV and JCB supporters and a smaller problem for the FCD camp. Our 1600 date comes through with decades to spare.

The WAV supporters typically deal with this problem by attacking Jephthah's credibility, describing him with such epithets as "roughneck" and "outcast," one prone to boasts and strident declarations.³⁶ This is unacceptable, however lowly was his background. Jephthah may have used a rounded figure of three hundred years. But he was engaged in a serious exchange with a fellow ruler, regarding a matter of war and peace. It is extremely unlikely that he thought he could buttress his case by wildly substituting three hundred years for only about one hundred years, as necessitated by a 1250 date for the exodus (leaving only 170 years between Joshua ca. 1210 and Saul ca. 1040 BCE).

So, despite the ambiguities in the record of the judges, we can still glean enough information from the meager data to help us evaluate the competing dates for the exodus. The scenario that is thoroughly discredited by the record is the 1250 date (WAV). It leads to Joshua's crossing the Jordan River ca. 1210, only 170 years from Saul's ascension, ca. 1040 BCE. Allowing a minimum of two decades for Joshua's military and other activities, the rule of his elderly colleagues and the passing of that entire generation, and the era of the judges is then compressed into about 150 years (170 -20). This is a most untenable compression, as it forces every judge's reign to overlap that of others, an idea that is contradicted by the flow of the entire book. And it is contradicted by Jephthah's message.

³⁶ K. Kitchen, *On the Reliability of the Old Testament* (Grand Rapids: Eerdmans, 2003), 209.

(e) Counting from Adam

If you carefully follow the chronology of events in the Torah from Adam through the exodus and designate Adam's appearance as the beginning of year 'one,' you arrive at the year 2448 FA (From Adam) for the exodus. At the time of this writing, 2012 CE, the Jewish calendars on the walls of observant Jews around the world proclaim the year to be 5772 (January through mid-September). This is understood by many as representing 5772 FA, counting from Adam. This implies that the exodus occurred 5772 minus 2448, or 3324 years ago. This can then be converted to years BCE, arriving at 1312 as the year of the exodus. This forms the basis of the JCB date for that seminal event in the history of Israel.

Unfortunately, the biblical record is not sufficiently detailed in the post-exodus period for such a calculation to be persuasive. The multi-century era of the judges is a prime example of this, as noted above. And we have no other contemporary records from the Levant to compliment the biblical record. And, of course, 1312 does not fit the evidence described earlier based on the AJT. For example, there is no city of Jericho for Joshua to destroy ca. 1272, forty years after 1312 BCE.

If the AJT and the scientific, historical and archaeological evidence do indeed converge to a ca. 1600 exodus, as this essay demonstrates, then the Jewish calendar year of 2012 CE needs to be updated from 5772 FA to about 6060 FA. (This is, of course, independent of other possible adjustments, based upon considerations such as the duration of the Persian Era and the Second Temple, which are beyond the scope of this essay. Unfortunately, these proposed adjustments do not 'cancel out.')

VII. More Archaeology

There are hundreds of sites scattered across the Levant that have yielded information about their past, either superficially via surface surveys or as a result of meticulous, laborious excavations. Each site has a tale to tell, and the evidence typically comes with its certainties and ambiguities. It is neither practical nor possible in this essay to analyze all of this massive body of data. Instead, we will consider those sites that have drawn the attention of advocates for one camp

or another in the ongoing exodus debate, including those that have been used to impugn the historicity of the biblical narrative.

(a) Gibeon, Hebron, Hormah, Arad

We group these sites together because they all appear in the text as inhabited cities at the time of the exodus-conquest, yet the archaeological evidence indicates no occupation ca. 1200 BCE, at the end of the Late Bronze Age (LBA). Since the WAV paradigm is quite entrenched in the scholarly community, and the evidence at these sites contradicts the biblical story, Bible critics have latched on to these sites to augment their claim that the biblical stories are anachronistic at best, fraudulent or deceptive at worst, or just plain good old fairy tales.

We encounter Hebron in the book of Josh (14:12) as Caleb makes his plea for possessing it. “Assign to me this hill country,” declares Caleb, “...Anakites are there and great fortified cities...I will dispossess them as the Lord promised.” In the book of Judges (1:20), Caleb gets Hebron and, we are informed, “He drove the three (tribes of) Anakites out of there.” The main site identified as ancient Hebron is known as Jebel Rumeida. Based on the biblical verses just quoted and others, this site should have been inhabited at the time of the conquest, first by Anakites, then by the Calebites.

As the Israelites prepare to enter the Promised Land, they encounter the “king of Arad who dwelt in the Negev” (southern Canaan) who engages them in battle (Num 21:1-3). The Israelites proscribe (destroy?) them “and their cities” and rename the place Hormah (destruction). Three sites have variously been proposed for this location, Tell Arad, Tell Malhata and Tell Masos, all of them in southern Canaan (Israel). The name Hormah appears again in Judges (1:16-17) when the tribe of Judah is camped south of Arad, conquers the inhabitants of Zephath and destroys it and “so the town was renamed Hormah.”

While the evidence indicates that none of these sites were inhabited ca. 1200 (for the WAV) or ca. 1400 (for the FCD), the situation is radically different ca. 1550 BCE. The evidence is quite clear that Hebron was inhabited then, that it was surrounded by a defensive wall, and that it was destroyed at that time. The same is true of Tell

Malhata. At Tell Masos the area is inhabited and surrounded at the time, but no evidence of destruction has been found.³⁷

Gibeon is described in Joshua as “a large city, like one of the royal cities... and all its men were warriors” (10:2). Joshua signs a treaty with them, so no battle of Gibeon takes place. Yet, the archaeological evidence indicates no occupation at el-Jib, the site identified as Gibeon, either ca. 1200 or 1400 BCE. But the data do show habitation there ca. 1550, without a fortified enclosure. Instead of a destruction we have an abandonment there, at that time.³⁸ This is entirely consistent with the Joshua narrative, if and only if we place the exodus at ca. 1600 BCE.

To summarize: A 1600 exodus coupled with a 1560 conquest is in perfect harmony with the evidence at these sites. The alternative dates for the exodus and conquest are not

(b) Edom, Moab, Dibon, Heshbon

As the Israelites make their way across the Transjordan by circumventing the kingdoms of Edom (Num 20:14–21) and Moab (Deut 2:8-9), they are confronted by Sihon, king of the Amorites, who engages them in battle. The Amorites are defeated, and among the cities conquered are “Heshbon and all its dependencies” (suburbs) and Dibon (Num 21:25, 30). These city names appear again among those requested by the tribes of Reuben and Gad (Num 32:3).

We group these sites together because that entire region has been portrayed, based on old archaeological surface surveys conducted in the 1930s CE, as bereft of human occupation during the entire six-hundred-year period from ca. 1800 to ca. 1200 BCE.³⁹ In

³⁷ E. Stern, et al, eds., *The New Encyclopedia of Archaeological Excavations in the Holy Land* (Jerusalem: Israel Exploration Society; New York: Simon and Schuster, 1993), 1: 75–87, 3: 934–939, 986–989.

³⁸ J. Pritchard, *Gibeon: Where the Sun Stood Still* (Princeton: Princeton University Press, 1962), 156–158.

³⁹ N. Glueck, *The Other Side of the Jordan* (New Haven: American Schools of Oriental Research, 1940), 114, 125–147.

However, the chronology of Edom has recently been pushed repeatedly upward in time by many centuries, based on new evidence. See T. Levy, et al, High Precision Radiocarbon Dating and Historical Biblical Archae-

particular, Dibon, which has been associated with modern Dhiban, located just north of Wadi Mujib (the Arnon river of Numbers 21:24–26), reveals no occupation prior to 1200 BCE. Heshbon, which has been identified with Tell Hesban, has also yielded no remains from before 1200 BCE. So, the argument goes, at the time the Israelites are about to enter the Promised Land, whether that occurred ca. 1560 (our scenario) or 1410 (the FCD) or 1272 (the JCB), there is no Edom, no Moab, no Dibon and no Heshbon, of any significance. If the exodus-conquest story is to be historical at all, the argument continues, it must have occurred at about 1200 BCE.

Yet, Dibon is mentioned in a list of conquests from the reign of Pharaoh Thutmose III (1490–1436) and in a text of Pharaoh Ramesses II (1290–1224).⁴⁰ Both of these predate 1200 BCE. And more recent surveys and excavations have revealed more than sixty sites with MBA (1900–1550) and LBA (1550–1200) occupations in the Transjordan area. So the Transjordan area was hardly devoid of human beings during those seven hundred years.

In addition, the identifications of Dibon at Dhiban and Heshbon at Tell Hesban are based exclusively on the similarity of their names. In ancient times, when settlements were of necessity confined to areas close to sources of water, any interruption in the availability of that life-sustaining resource would compel the residents to “site shift.” That is, they would abandon the site and relocate or rebuild their settlement at a nearby site with water. In doing so they would often carry the name of their previous town with them and apply it to the new settlement. This raises the possibility that names in use today reflect ancient names of settlements at different locations that were site-shifted.

Old biblical Heshbon may originally have been either at Tell el-Jelul or at Tell el-Umeiri, both near Tell Hesban, and when these sites were abandoned in ca. 1200 the name Heshbon moved with

ology in Southern Jordan, *Proceedings of the National Academy of Sciences* (PNAS) 105/43 (October 2008); J. Sauer, Transjordan in the Bronze and Iron Ages: A Critique of Glueck’s Synthesis, *Bulletin of the American Schools of Oriental Research* 263 (August, 1986): 7–9.

⁴⁰ K. Kitchen, *On the Reliability of the Old Testament* (Grand Rapids: Eerdmans, 2003), 195.

the settlers to Tell Hesban, where the residents built their new settlement. This would explain the absence of evidence of human occupation prior to 1200 at Tell Hesban. El-Umeiri has in fact recently been excavated and has revealed an MBA and LBA fortified city.⁴¹ Intensive surface surveys of the site's hinterlands have revealed dozens of small villages from the same periods, exactly what we would expect based on the Torah's reference to "Heshbon and all its dependencies" (quoted above). A similar process of site-shifting may have occurred with ancient (biblical) Dibon, which we know from Egyptian texts must have existed before the earliest date provided by the archaeological evidence at Dhiban.

The net result is that the data extracted from these sites fail to provide comfort for the WAV supporters, despite their claims.

(c) Fortifications and Destructions

As the MBA drew to a close and the LBA dawned, at about 1550, the overall scene across Canaan changed drastically. The archaeological evidence shows that the MBA landscape consisted of many large, strongly fortified cities. As the spies reported to Moses, "The people who inhabit the country are powerful, and the cities are fortified and very large" (Num 13:28). Moses later rephrases their report as follows: "We saw there (in Canaan) a people stronger and taller than we, large cities with walls sky-high" (Deut 1:28). When Joshua enters the land, forty years later, he finds much the same scene, as indicated by Josh 10:20 and 14:12 and the important roles played by the fortifications around various cities such as Jericho (Josh 6) and Ai (Josh 8).

Close the curtain on this scene, then reopen it onto the LBA. Some forty of the great fortified cities have been either destroyed or abandoned, replaced by smaller villages without protective walls. This scene is not quite congruent with that depicted in the Torah for the period of the exodus and conquest.

If one is unwilling to accept our ca. 1600 date for the exodus, followed by a ca. 1560 date for the conquest, or if one does not ac-

⁴¹ Project Umayri, Madaba Plains Project, *Andrews University Excavation Reports*, 1984 to present; < www.hesban.org/umayri > .

cept the historicity of the entire biblical narrative pertaining to the exodus-conquest, the following question begs to be addressed: How and why were all these great, fortified cities destroyed at the MBA/LBA transition period, if not by the hand of the Israelites?

Some historians have pointed their accusatory fingers at the Egyptians.⁴² Supposedly, as the Egyptians pursued the Hyksos into Canaan with the aim of eliminating the threat from Canaan once and for all, they engaged in an orgy of destruction of their nemesis' homeland, before returning home. There is, however, nothing in Egyptian history to support this scenario and there is no mention of any such destruction (except for defeating the Hyksos at Sharuhen after a long siege) in the primary Egyptian records of the Hyksos expulsion, where we would expect to find a record of such activity.⁴³

It is noteworthy in this regard that those who insistently demand documentation for the exodus, and are unwilling to accept the exodus story in the absence of such documentation, are quite willing to accept this utterly undocumented rampage of destruction by the Egyptians across the length and breadth of the land of Canaan. This despite the high plausibility that the Egyptians were incapable of such military prowess at this point in history. They barely managed, after a prolonged and difficult struggle, to expel the Hyksos from their own country. Then it took many years for them to finally defeat the Hyksos at Sharuhen, after a long siege. Then Pharaoh Ahmose I had to rush back to Egypt to take care of urgent difficulties besetting his country, like dealing with the usurper in Nubia and rebels in Upper Egypt. All this does not make it sound like they were in a position to overcome a host of fortified cities, each of which would likely have called for a challenging, time-consuming siege.

Scholars who question the occurrence of the exodus need to address this glaring defect in their argument. If the absence of docu-

⁴² Various Editors, *The Cambridge Ancient History*, CAH3, Vol. II, pt. 1 (Cambridge: Cambridge University Press), 526.

⁴³ Such as at the tomb of Ahmose son of Abana. For text see <www.osirisnet.net/tombes/eL_kab/ahmes/e_ahmes.htm>.

mentation is reason enough for the negation of the exodus, despite the ample supply of sound reasons for this absence (sec. IV-a, V-b), then why is the absence of documentation not sufficient reason to negate the Egyptian orgy of destruction when no good reasons for this absence have been forthcoming? After all, someone must be responsible for these destructions. There are no other candidates.

On the other hand, fourteen of these destroyed cities are explicitly named in the book of Joshua as among those conquered by the Israelites, and some of the others appear in the list of thirty-one defeated kings (Josh 12). Some of the others may have been attacked by fellow Canaanite city-states when they sought to make common cause with the Israelites, as happened with Gibeon (Josh 10: 1–4) and as indicated in the Amarna Letters (Egyptian diplomatic communications of the fourteenth century). In other words, all or most of the destructions at the end of the MBA may be related to the Israelites' activities upon entering Canaan.

The Bible also presents a list of cities that, despite the defeat of their ruler/king, were not occupied by the Israelites (Jud 1: 27–36, Josh 12: 9–24). Among them are Beth-Shean, Taanakh and Megiddo. Interestingly, the archaeological evidence at these sites shows that they passed from the MBA to the LBA without an interruption in habitation, of the sort that befell the other cities. Indeed, the evidence generally indicates that destroyed or interrupted cities are named as conquered or dispossessed in the Bible, and cities of continuous occupation (across the MBA/LBA divide) appear in the Bible as places that were not overrun by the Israelites.

This good fit of the conquest narrative in the books of Joshua and Judges with the MBA/LBA transition at ca. 1550 has not gone unnoticed. Indeed, it has animated some archaeologists to propose extending the MBA downward, all the way to ca. 1420, in order to bring together their favored FCD of the exodus and the MBA/LBA divide.⁴⁴ This has, as was to be expected, raised hackles among their colleagues.⁴⁵ But rather than move the MBA to the exodus, they

⁴⁴ J. Bimson and D. Livingston, Redating the Exodus, *Biblical Archaeology Review* 13/05 (Sept/Oct, 1987).

⁴⁵ B. Halpern, Radical Exodus Redating Fatally Flawed, *Biblical Archaeology Review* 13/06 (Nov/Dec, 1987).

should have moved the exodus to the MBA—as we have proposed in this essay and as is supported by all the evidence presented here, based on the AJT.

(d) The Invisible Israelites

An important argument made by the WAV supporters is based on the absence in the archaeological record of Canaan of any indication of a large influx of new people before 1200 BCE. This is coupled with the evidently substantial increase in the number of hill-country settlements in central Canaan/Israel after 1200 BCE (the end of the LBA and beginning of the Iron Age, IA). If the Israelites arrived in great numbers before 1200, ask the WAV supporters, where is the distinct Israelite pottery and the increase in settlements before 1200 BCE? More specifically, if they arrived ca. 1560, as this essay proposes, where were they hiding for 360 years? Is not the significant increase in settlements in the central hill-country after 1200 indicative of the arrival of the Israelites at that time?

These questions have been asked and addressed elsewhere.⁴⁶ We will only briefly review some key points in light of our thesis that it was the Hyksos who were the oppressors.

The Israelites (family of Israel/Jacob) traveled to Egypt as residents of Canaan at a time of extensive migration into that country, as attested in the Torah (Gen 41:57) and Egyptian history for the period (twelfth-thirteenth dynasties).⁴⁷ They remained there for 210 years, in a predominantly Canaanite (Hyksos) environment. Thus, when they left Egypt, they left as cultural Canaanites (whatever their religious disposition at the time). When they returned to Canaan they were still cultural Canaanites, once again surrounded by Canaanites, their newfound religious group identity as Israelites notwithstanding. In addition, they migrated to Egypt as pastoral

⁴⁶ W. Dever, Cultural Continuity, Ethnicity in the Archaeological Record and the Question of Israelite Origins, *Eretz Israel* 24 (1993): 22–33; A. Mazar, The Iron Age I, *The Archaeology of Ancient Israel* (New Haven: Yale University Press, 1992), 295; V. Fritz, Conquest or Settlement? The Early Iron Age in Palestine, *Biblical Archaeologist* 50 (1987): 97.

⁴⁷ K. Kitchen, *On the Reliability of the Old Testament* (Grand Rapids: Eerdmans, 2003), 343–344, with notes.

semi-nomads (Gen 46:32, 34),⁴⁸ spent forty years in the desert as a semi-nomadic, tented people, then returned to Canaan where a significant portion of the population were themselves semi-nomadic pastoralists, as evidenced by the many cave burials far away from the cities. (The balance of the population was urbanized, many in the great, fortified cities discussed above.)

We ought therefore to expect some difficulty in distinguishing between the Israelites and the local population in the archaeological record. Coming out of the Canaanite environment in northern Egypt, which interacted extensively with their fellow Canaanites back home, the Israelites' pottery would likely have been up-to-date Canaanite in style. Since they probably had more important things to do in the desert than create new pottery styles, they arrived in the Promised Land with pottery quite like that of the local populace. With all the pressing business to attend to now, from fighting wars to figuring out their land allotments to dealing with the resentful locals to finding new ways to meet their new needs to repelling attacks and raids by outsiders, they had no time to engage in pottery innovation for the benefit of future archaeologists. The local Canaanite pottery suited them just fine.

Whatever increase in population their arrival produced was to a significant extent negated by a decrease in the local urban population, as evidenced by the many destroyed and abandoned large, fortified cities (sec. VII-c). These inhabitants probably fled or were victims of the many battles that took place, some of which are described in the books of Joshua and Judges. The Israelites likely produced a net increase in the local semi-nomadic, tented population. But such populations are notoriously difficult for archaeologists to detect or measure—just as the existence of ancient Edom and Moab is barely noticeable in the archaeological record of this period, de-

⁴⁸ Indeed, Gen 46:34 makes it abundantly clear that the Israelites were settled in Goshen (land of Ramesses, in the Delta) precisely in order to be near their fellow pastoralist Canaanites, where they would be comfortable with their neighbors (and they with them). Had they settled elsewhere, such as in Southern Egypt, they would have been surrounded by native Egyptians who viewed their pastoral/nomadic occupation, the text declares, as “abhorrent.”

spite their definite attestation in Egyptian texts (and, of course, the Torah). Mobile people who live on the edge of the human comfort zone, always ready to pack their bags and move on in search of greener pastures, do not build stone structures on top of previous structures for archaeologists to discover much later.⁴⁹

The increase in central highland settlements after ca. 1200 is not necessarily due to new arrivals from outside the country. It could just as well be attributed to shifting internal population patterns caused by evolving technological, economic and political conditions.⁵⁰ This would explain the pronounced congruence between the pottery and cultural remains of these 1200 highland settlements and the pottery and cultural remains of the just-completed LBA Canaanites in the surrounding areas—a phenomenon noted by many archaeologists. The increased availability of iron tools (iron was more plentiful than bronze) at the time (the beginning of the IA) may have made it more practical to consider clearing large tracts of wooded land for new settlements and using the timber to build homes. The business of shepherding may have run afoul of the laws of supply and demand, thereby encouraging new modes of earning a livelihood. Fear of the marauding Philistines, who appear on the scene for the first time at about 1200, may have animated folks to move away from the coast (where the Philistines were dominant) and resettle further inland. And the general breakdown of LBA city-states at the time may have animated the Israelites (and others) to give up their semi-nomadic ways and settle down into a more sedentary existence.

That the Israelites lived in mobile tents, as opposed to more permanent houses, even after all of Joshua's big battles, is supported by numerous textual references to their domiciles as *Obel* (Hebrew for tent) instead of *Bayit* (house). See Josh 22: 4, 6, 7, 8. That a significant portion of them (enough to draw attention in the text) settled down with the local population and became thoroughly integrated into Canaanite society, is evident from numerous statements

⁴⁹ For an elaboration of additional reasons this is so, see A. Frendo, The Capabilities and Limitations of Ancient Near Eastern Nomadic Archaeology, *Orientalia* 65 (1996): 1–23.

⁵⁰ See note 46.

in Judges (1: 29–35, 3: 5-6). The foundation for the points made above is thus incorporated in the biblical narrative.

(e) Jericho, Ai, Hazor

These three cities are the only cities explicitly described in the HB as having been conquered, destroyed and **burned to the ground** by Joshua (Josh 6:24 for Jericho, 8:28 for Ai, 11:11 for Hazor). So we may feel entitled to find evidence at each of these sites of a destruction layer coupled with a burn layer (charcoal, ash) in the correct time frame—if only we could identify the sites.

Jericho has already been discussed above (section IV- b, c). Its location is considered certain and it displays both a destruction and a burn layer, dated to ca. 1560, and this date also matches the earthquake record, as noted earlier.

Hazor has also been identified with certainty at Tell el-Qedah in northern Israel. It is a huge tell, covering many acres. Despite decades of excavations, only a small portion of the site has been exposed down to oldest times. It displays an extensive destruction/burn layer dated to ca. 1200, but evidence of earlier conflagrations, including one in the 1500s, has also been found.⁵¹ Future excavations will likely shed more light on the history of this site. The big question at this site is: Who or what is responsible for each destruction and burn layer? Unlike Jericho, which remained abandoned for many centuries after the ca. 1560 destruction, the upper city part of Hazor was rebuilt after every destruction, sometimes by new inhabitants, right through the second century BCE.

If we associate an earlier burn layer, such as that of the 1500s, with Joshua's activity in the area, as our thesis requires, then the later burn layer dated ca. 1200 may be due to the activity of Deborah and Barak, as described in the book of Judges (4: 1–24). The biblical narrative has both Joshua and Deborah defeating Hazor, although no destruction or burning is specified in the case of Deborah. Recall (sec. VI – d) that our thesis allots about five hundred years to the era of the judges, to which Deborah belongs. So Deborah could

⁵¹ A. Negev, ed., *Archaeological Encyclopedia of the Holy Land* (NY: Putnam, 1972), 139.

have ruled some 300-plus years after Joshua and there is plenty of time left for the judges that came after her. There are, however, other candidates for the ca. 1200 destruction of Hazor on the horizon, such as the Philistines, who wreaked much havoc in the area on their way down to Egypt, where they engaged Ramesses III in battle at about 1180 BCE.

Considering the unusually elaborate biblical description of the geography and topography of the area around Ai (Gen 12:8, Josh 7:2, 8:3–17), you would think it would be easy to identify. But that has not turned out to be the case. For quite some time it was the established scholarly wisdom that Ai is to be located at Khirbet et-Tell (the ‘ruin’) and that nearby Bethel (west of Ai, as required by the texts) was at Beitin. Both are situated a few miles north of Jerusalem. There was no evidence for these identifications other than the simplistic similarity between their ancient and modern names. (Ai is assumed to mean ‘ruin’ and two of the three consonants in Bethel and Beitin are identical.)

Since et-Tell eventually proved to have no archaeological remains from either the LBA or the MBA (1900–1200), Ai became fodder for the Bible critics to buttress their claim that the biblical narratives are either anachronistic, fictional or fraudulent.⁵²

Realizing that these identifications do not have much to rest upon, despite their popularity, some archaeologists undertook a more thorough survey of the area and carefully reconsidered the textual description of Ai’s surroundings. It soon became abundantly clear that the biblical geography and topography fit much better with nearby Khirbet Nisya as Ai and el-Bireh as Bethel (west of Nisya, as required).⁵³

The question then became, what does the archaeology of these sites tell us about their history? Bireh has never been excavated and, due to its present-day occupation, is not likely to yield its deep secrets any time soon. But surface surveys conducted at the highest point in the city have produced pottery identified with the Early Bronze Age (fits mention of Bethel in Gen 12:8 at the time of

⁵² Z. Zevit, The Problem of Ai, *Biblical Archaeology Review* 11/2 (1985): 58–69.

⁵³ D. Livingston, Location of Bethel and Ai Reconsidered, *Westminster Theological Journal* 33 (1970): 20–24.

Abraham), the latter half of the MBA (fits the Joshua story), the Persian period (fits the biblical narrative of the books of Ezra and Nehemiah), and other periods.

What about Khirbet Nisya as Ai? Surface surveys initially found nothing from before the IA (ca. 1200). When Nisya was finally excavated and surveyed more extensively, in the 1980s CE, it was discovered that a settlement did exist there in the latter half of the MBA and that the settlement ceased to exist, for a few centuries, at the end of the MBA, ca. 1550 BCE. This is precisely what we expect from the biblical narrative. Nisya was also occupied during the later Persian period, thereby satisfying the Ezra/Nehemiah requirements. Missing from Nisya's history is the earlier half of the MBA and the latter half of the EBA, which would fit the mention of Ai in Abraham's time (Gen 12:8), ca. 2000 BCE. Careful reading of Gen 12:8 does not, however, require that Ai be occupied at that time, merely that it be a place identified as such. Earlier Ai, inhabited during the early part of the EBA, may have been abandoned or destroyed before Abraham's time, and the name Ai remained attached to the site as it continued to display the ruins of the former settlement.⁵⁴

But Khirbet Nisya has so far not produced any structural remains, nor evidence of a fortification wall, nor remains of a burn layer—all required by the biblical narrative (Josh 8). This may be due to the challenging nature of the site. Extensive and repeated human activity has exposed the bedrock at various points (blame the Romans for this), in the process destroying much of the evidence we are looking for.⁵⁵

But the story of Ai is by no means over. An even better candidate has recently emerged for this elusive site. It is Khirbet el-Maqatir, located somewhat further east of el-Bireh than Nisya.⁵⁶ Ex-

⁵⁴ D. Livingston, Is Khirbet Nisya the Ai of the Bible?, *Bible and Spade* 12/1 (1999): 13–20.

⁵⁵ D. Livingston, Locating Biblical Ai Correctly, <www.ancientdays.net/ai15.htm>.

⁵⁶ B. Wood, Khirbet el-Maqatir, 1995–1998, *Israel Exploration Journal* (Jerusalem: Israel Exploration Society, 2000), Vol. 50, 123–130, 249–254; Asso-

cavation of this site is still ongoing and much work remains to be done. Already it has revealed pottery of various periods not present at et-Tell, in addition to buildings, fortification walls and evidence of burn events. Time will tell more. Stay tuned!

VIII. Concluding Remarks

Reconstructing ancient history is in many ways like solving a complicated detective mystery. We seek answers to such questions as what happened, who or what is responsible, how did it happen and when did it happen? We search for clues here and there, some of which appear to be decisive, others more ambiguous and yet others mutually contradictory. A competent detective seeks to separate the wheat from the chaff, so to speak, and identify the clues that are informative, while not being swayed by unanswered questions that always seem to linger at the margins of any event.

Considering all the evidence presented here and the weight that the AJT rightfully ought to be granted, it behooves the scholarly community and all who are interested in the historicity of the biblical narratives, to carefully consider the reasoning and evidence presented in this essay and the conclusions derived from them—that the exodus occurred ca. 1600, that the oppressors were the Hyksos rulers, that the conquest began ca. 1560 and that an historic affinity existed between the native Egyptians and the Israelites for quite some time after the exodus.

Our only source for the exodus story is the Torah. This ancient text comes to us courtesy of an ancient people whose traditions pertaining to, and understanding of, that story—the story they recorded as contemporaries of the described events—is extant and accessible today. That understanding, and only that understanding, which we referred to as the AJT, fits all the unambiguous clues provided by the fields of history, science and archaeology, clues that converge from multiple and disparate directions onto the conclusions cited above. All other scenarios proposed for the exodus do not fit all

ciates for Biblical Research Excavation Report, <www.biblearchaeology.org/post/2009/07/17>.

these clues, and some are contradicted by those clues, as amply demonstrated in this essay.

The folks whose agenda it is to discredit the historicity of the Torah will now need to get the story straight, all over again. This essay is as good a place for them to start as any.

Some outstanding issues have, however, not been addressed in this essay (which has grown too long as it is) and so remain to be dealt with in a future article. Among them are the following:

- (1) Could a population of seventy-plus (Jacob's family upon arrival in Egypt) grow to over six hundred thousand (the Israelite population at the exodus) in a mere 210 years?
- (2) Why is no mention made in the book of Judges of Egyptian intervention in the Levant in the 1400s, considering that the Israelites were already there according to our chronology?
- (3) I Kings 6:1 informs us that 480 years elapsed from the exodus to King Solomon's construction of the temple, an event fixed historically at ca. 970 BCE. How is that to be understood in terms of our chronology?
- (4) Why does the name Ramesses, identical to the names of pharaohs who reigned between 1292 and 1069 (the Ramesside dynasty), appear in Ex 1:11 as the name of one of the store cities built by the enslaved Israelites, if the exodus occurred three hundred years earlier?
- (5) How do we explain the mentioning to Joshua of the five Philistine cities in the land of Israel (Josh 13:1-7) when the Philistines (the 'sea peoples' to the Egyptians) arrived in the area ca. 1180, about four hundred years after Joshua entered the land of Israel—according to our chronology?

All of these complications have been raised by proponents of the alternative chronologies and all have satisfactory solutions. But their discussion must be relegated to a future essay, God willing. ☞