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Carbon dating and Egyptian chronology

There is a chapter on dating methods in the *Cambridge Encyclopaedia of Archaeology* that is very relevant to the problem of Egyptian chronology:

‘When the radiocarbon method was first tested, good agreement was found between radiocarbon dates and the historical dates for samples of known age (for example, from Ancient Egyptian contexts). As measurements became more precise, however, it gradually became apparent that there were systematic discrepancies between the dates that were being obtained and those that could be expected from historical evidence. These differences were most marked in the period before about the mid-first millennium BC, in which radiocarbon dates appeared too recent, by up to several hundred years, by comparison with historical dates. Dates for the earliest comparative material available, reeds used as bonding between mud-brick courses of tombs of the Egyptian Dynasty I, about 3100 BC, appeared to be as much as 600 years, or about 12%, too young.’¹

That the earliest comparative material is 600 years too young and that the differences were most marked in the period before about the mid-first millennium BC is most significant. This is the period of time that Dr Immanuel Velikovsky and Dr Donovan Courville claimed have been erroneously added to Egyptian chronology:

‘The magnitude of the task confronting any one who would attempt to propose a credible altered chronology involving a condensation of this magnitude was becoming increasingly apparent. The discrepancy in terms of biblical chronology is of the magnitude of

more than 600 years at the time of the Conquest (of Jericho by Joshua).’²

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2. Courville, D., *The Exodus Problem and Its Ramification* (2 Vols), Challenge Books, Loma Linda, California, vol. 1, p. xviii, 1971.

Biblical chronology

I am thirteen and am in seventh grade. Several days ago my dad showed me an article in *TJ* 15(1) by David Down called *Searching for Moses*.¹ I had read several of Immanuel Velikovsky’s books on a reconstruction of Egyptian history, and Down’s article reflected some of the conclusions I had been coming to. I do disagree with him on his equation of Senusert III with the Pharaoh of Exodus 1:8–10. Before going further, I will clarify this point: I believe 430 years to be the most probable length of the sojourn in Egypt.

As for Senusert III (given in the article as Sesostris III), his reign does not seem to reflect the situation in Exodus 1:10. At this time Egyptian power was supreme and uncontested. Approximately 250 years prior to the reign of Neferhotep I was the reign of Khety III, who ruled from Heracleopolis. Khety III’s reign was fraught with war and civil unrest interspersed with uneasy truces. His main adversaries were the kings of Thebes: Intef II, Intef III, and Mentuhotep II. Khety III felt himself pressured between Thebes and the Eastern Delta, and finally solved the problem by sending a military expedition into the Eastern Delta. The Eastern Delta is Goshen. With the situation

reflected in Exodus 1:9, a large-scale organized resistance to the Pharaoh’s command is not surprising. In fact a military campaign into Goshen would be expected. Shortly after the death of Khety III, Mentuhotep II conquered Egypt. After his death, his son, Mentuhotep III built a row of forts around the Eastern Delta. According to Nicolas-Christophe Grimal in *A History of Ancient Egypt*, this was to ‘keep the Asiatics out’. I don’t know his reasons for saying this, but if one looks at the geography this makes little sense. Why build forts *around* Goshen to keep the Asiatics *out*. Could it have been to keep the Asiatics (namely Israelites) *in*? It would appear that the situation in Exodus 1:12 was already making itself felt in the reign of Mentuhotep III, although he apparently did not enact the drastic measures of the pharaoh a hundred years latter (Exodus 1:15–22).

Down was correct when he stated that we have a big job ahead of us to reconstruct ancient history to fit a biblical time scale. If the Bible is the infallible word of God, we should be able to figure out biblical chronology straight from the Bible, and then figure out in what ways we have to change our understanding of Assyrian, Egyptian, Babylonian, Greek, etc. to fit it into the Bible. This certainly means that the efforts of Thiele and those who try to place the Exodus in the reign of Merneptah or Rameses II are greatly misguided. I will not go into great detail on this issue here, but I will throw out this one set of interesting facts. A papyrus made in the time of the Ptolemys that refers to a seven year famine in the reign of Djoser. If this is the famine of Joseph, this requires squeezing 700 years of conventional timeline down into less than 200. I devised a tentative timeline that does exactly that. According to this timeline Joseph died in the reign of Khufu. In the Papyrus Westcar, as well as other documents, there is reference to a magician named Djedi in the reign of Khufu. According to these sources Djedi was 110 years old. Joseph lived to be 110 years old. It is also clear from the Bible that Joseph practiced witchcraft (Genesis 44:5), so

he could well have been referred to as a magician.

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Sesostris III

David Down replies:

I congratulate Samuel Hanna at such a young age to have such a keen interest in biblical chronology. He has a good foundation by accepting that the Bible is the infallible Word of God and using that as our basis for understanding ancient chronology. As Samuel says, we need to determine biblical chronology straight from the Bible, and then determine where we need to change our current understanding of the chronologies of ancient Assyria, Egypt, Babylon, Greece and the like to harmonise with the biblical standard. In practice, however, there are a number of choices that need to be made and the outcomes of those, while reasonably small in absolute terms, do lead to differences.

The fundamental issue with Samuel's letter is the 430 years, which he assumes is the probable length of the sojourn of the children of Israel in Egypt. The record of the 430 years, of course, is specifically quoted in Exodus 12:40–41, which chapter describes the events on the day that the Israelites left Egypt. It says:

⁴⁰Now the sojourn of the children of Israel who lived in Egypt was four hundred and thirty years.
⁴¹And it came to pass at the end of the four hundred and thirty years—on that very same day—it

came to pass that all the armies of the LORD went out from the land of Egypt' (NKJV).

It can be seen that Genesis 12:40 above can be interpreted two ways—either 430 years that the Israelites were in Egypt, or 430 years for their whole sojourn which started from the time Abraham came to Canaan. In the NKJV above it is left open and depends on where the commas go. It could be 'the sojourn of the children of Israel, who lived in Egypt, was four hundred and thirty years.' Indeed, the KJV places the commas at those places. Furthermore, the Samaritan Pentateuch and Septuagint speak not of 'lived in Egypt' but 'lived in Egypt and Canaan'.

Galatians 3 makes it clear that the 430 years is from when the promise was given to Abraham until the law was given at Sinai. We read in Gal. 3:17 (NKJV):

'And this I say, that the law which was four hundred and thirty years later, cannot annul the covenant that was confirmed before by God in Christ, that it should make the promise of no effect.'

The law was introduced 'in the third month after the children of Israel had gone out of the land of Egypt' (Ex. 19:1, NKJV). And the covenant referred to in Gal 3:17 was to Abraham when he 'believed God, and it was accounted to him for righteousness.' (Gal 3:6, NKJV). This event is described in Genesis 15, with 15:6 being quoted in Galatians 3:6. Thus it is clear that the 430 years was not the length of time in Egypt but the time from when the covenant was given to Abraham until the Israelites left Egypt.

By linking the wrong events to the 430 years means that the other details of Samuel's chronology are not correct. Thus there is no point in discussing the other points he raises. I would encourage Samuel in his pursuit of biblical chronology with the advice to always check and cross check different chronological schemes with all the relevant biblical passages and a number of different English translations.

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Dwarf galaxies

I read the recent article 'Cosmologists can't agree and are still in doubt', by Dr Hartnett in which the problem that CDM theory predicts hundreds of dwarf galaxies that are not observed was discussed.¹

However, two recent articles in *Sky & Telescope* magazine claim that this problem may have been solved.^{2,3} Gravitational-lens observations of seven galaxies indicate that their dark matter haloes are not smooth, but contain lumps about the mass of a typical dwarf galaxy. It is thus believed that the dwarf galaxies are not missing, just invisible, since they contain only dark matter. So it is claimed that the particles mentioned in Hartnett's paper have actually been observed, just not optically. I would appreciate Dr Hartnett's thoughts on whether this solves the problem, or is there more to the story than that?

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