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On the Consistency of the Wandering Year as Backbone of Egyptian Chronology

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3. The Period in Which the Year Wandered with Regularity beyond Doubt

3.0 To determine the overall plausibility of the Sothic hypothesis, it will be useful to attempt first to establish the limits of the period in which the Egyptian year wandered with absolute regularity without the slightest doubt. Remarkably, these limits are inferred, not from Egyptian sources, but from Aramaic and Greek manuscripts. In order to place the quest for the earliest certain date into perspective, it may be useful to address two related questions in 3.1–2 in order to show current limitations of Egyptian chronology. A first question is as follows.

3.1 What Is the Limit of Absolute Dating if the Sothic Hypothesis Is Correct?

Dating an event absolutely means determining how many times the earth revolved around its axis since that event. Since it has been determined that Taharqa's Year 1 fell in the Egyptian year 690/89 B.C.E. or julian 12 February 690–11 February 689,[39] the limit of absolute dating in Egyptian chronology is that portion of the Egyptian year 690/89 that coincides with Taharqa's Year 1,[40] which lasts from his accession to the throne on an unknown date in 690 or 689 till the last day of the year (11 February 689).[41]

[39] The year of Taharqa's accession and the dates of the reigns of the Saite Pharaohs (660–527/5 B.C.E.) have been known within a range of one or two years for a long time. For a summation of the evidence, see Kienitz 1953: 154–59 and Gardiner 1945: 17–20.

But the exact years have been determined on the basis of only two pieces of evidence, as interpreted by Parker (1957 and 1960). The items are both at the Louvre in Paris. One is a lunar date in the abnormal hieratic papyrus no. 7848 (see n. 38) and the other a set of dates in Apis stela IM 3733 from the Serapeum in Memphis.

[40] Because of the Egyptian custom of predating regnal years, the 365 day year 690/89 encompasses both the last year of Taharqa's predecessor Shabataka and Taharqa's first, each year being shorter than 365 days, unless Taharqa succeeded Shabataka on New Year's Day (12 February 690).

[41] This is a refinement of my observation on the limit of absolute dating in *JEA* 79 (1993): 269. Cf. also Leclant 1985: 167 n. 3.

This means that any event in Year 1 of Taharqa can be dated absolutely down to the day. Because Taharqa's accession day is not known, the beginning and length of this earliest stretch of time in which absolute dating is possible also remains unknown.[42] A second question arises from this.

3.2 What Is the Earliest Absolutely Dated Event in Egyptian History if the Sothic Hypothesis Is Correct?

No dated events from Taharqa's Year 1 are attested in the sources. There are documents from Year 2, but the month and day dates of the reported events are not specified.[43] For the earliest absolutely dated event, one must proceed to his Year 3 (11 February 688–10 February 687 B.C.E.). This concerns the sale of a slave, a *rmṯ ʿ mḥty* "man of the north,"[44] reported in papyrus Louvre E3228d, written in abnormal hieratic.[45] The month and day date is I *prt* 10, that is, *June 11, 688 B.C.E. (julian).*[46] The sale of a slave on June 11, 688 is, then, for the time being, not the beginning of absolute dating in Egypt, but of absolutely dated Egyptian history. This is a much lower date than 19 July 4241 B.C.E., proposed by Eduard Meyer (1904: 45) as earliest dated event in Egyptian history, namely the institution of the calendar.[47]

Note.—The Interpretation of Louvre IM 3733.

The date June 11, 688 B.C.E. hinges on two pieces of evidence cited in n. 39. There is a small window of doubt regarding Louvre IM 3733, a Serapeum stela pertaining to the Apis who died in Year 20 of Psammetichus I. But the only other possible solution would merely push back the earliest absolutely dated event by 365 days to 10 June 689 B.C.E. (not 11 June because julian 689 or 688 is a leap year).

Doubt is possible because the information provided by IM 3733 is incomplete. On the one hand, both the life span of 3733, described as *jr n rnpt* 21 "amounting to 21 years,"[48] and the date of birth, Year 26 of Taharqa, are given *without indication of month or day.*[49] On the other hand, the date of installation is given as Month 8 Day 9 *without mention of the year.*

"Rounding off" (Parker 1960: 268) of some sort seems to have occurred in the case of the "21 years." There are two possibilities: rounding off upward or downward. Traditional chronology assumes, with Parker (1960), rounding upward, according to the following line of argument.

The date of birth, Taharqa's Year 26, is followed immediately in the text by the date of installation, Month 8 Day 9. This would seem to imply that the installation also occurred in Taharqa's Year 26. Moreover, since the hull as a rule lived several months before being installed, the present Apis must have been born in the beginning of Year 26.

Since it is known that the bull died at the very end of Year 20 of Psammetichus I, namely in Month 12 Day 20, a date of birth in the very beginning of Year 26 of Taharqa is best explained by assuming a lifespan of nearly 21 years ronnded off upward to a full 21. From the beginning of the 365 day wandering year encompassing Taharqa's last and Psammetichus' first regnal years (5 February 664), the bull would then have lived nearly 20 years. According to this first hypothesis, it is assumed that the bull was born in the beginning

[42] If it would appear, as new sources emerge, that Taharqa came to the throne only in 689, that is, later than Month 10 Day 23 (31 December 690 B.C.E.), then absolute dating would begin only in 689.

[43] For a list of monuments dating to the reign of Taharqa, see Leclant 1985: 168–72 n. 11 and Spalinger 1978: 44. Year 2 is also mentioned in a document dated to Year 7, Louvre E3228c, edited by Malinine (1951).

[44] On this term, see, for example Parker (1966: 113–14), who, referring among others to the present text, thinks it likely that it denoted Egyptians of the Delta.

[45] Schmidt (1958: 128) also refers to this as the earliest precise date in Taharqa's reign.

[46] For the text, see Malinine 1953: 43–49.

[47] Cf. Neugebauer 1938.

[48] *jr n rnpt* 21 can hardly mean "made in Year 21," first because *jr n* "amounting to" is a common expression (Gardiner 1957: 341, §422, 3; 199 bottom, §266, 2 end), and second, because the same brief inscription twice uses the preposition *m* "in" with *rnpt* to express "in the year" and not *n*.

[49] For the text, see now Malinine, Posener, and Vercoutter 1968: 146 no. 192. A graffito of uncertain reading following *jr n rnpt* 21 at the end of the inscription was once thought to indicate month and day (Schmidt 1958; Parker 1960). But an old photograph discovered later revealed that the graffito is modern (Malinine, Posener, and Vercoutter 1968: 146).

of the wandering year before that. Since the year of birth is Taharqa's 26th according to the text, Year 26 is Taharqa's last full 365 day year of rule and his last regnal year is his 27th. Thus, this stela makes it possible to establish how long Taharqa reigned and when his reign began.

An alternative theory involves roundiug off downward. The bull would have lived a little over 21 years, having been born shortly before Month 12 Day 20 of Year 26 of Taharqa. If the rule that installation follows birth by several months was observed, then the bull was installed in Year 27. From what has been said above, it can be inferred that the bull was born in the year before Taharqa's last full year of rule. His last full year would be his 27th and his last regnal year his 28th. Taharqa would then have died in his Year 28 and the beginning of his reign would have been a year earlier in the wandering year 691/90 B.C.E. But one serious objection is that, as already noted by Parker, the change of regnal year from birth to installation would curiously remain without mention in the text!

In conclusion, to the extent that IM 3733 rather suggests that birth and installation occurred in the same year, Year 27 is to be preferred as Taharqa's last and the absolute date mentioned above stands. Those who maintain otherwise will need to seek the earliest absolutely dated event in the beginning of Psammetichus I's reign.

3.3 What Is the Earliest Absolutely Dated Event without Relying on the Sothic Hypothesis?

So far we have assumed the Sothic hypothesis to be correct. But if the wandering calendar could have been randomly adjusted at any time, the quest for the earliest absolutely dated event has to begin afresh. Egyptian evènts are dated absolutely if they can be related to dates already absolute. Such relations are established in the well-known Aramaic double dates.

A number of the Aramaic papyri found in Egypt have Babylonian-Egyptian double dates. The Egyptian and Neo-Babylonian calendars differ completely in structure. But to find that pairs of dates, of which each member is independently converted into julian dates, as a rule match is the most striking confirmation ever to emerge of the correctness of our insight into the two calendars, at least back to the fifth century. The earliest double date, corresponding to julian 2 November 473 B.C.E., is found in a text known as the Memphis Shipyard Journal or Journal of the Memphis Arsenal, found in a papyrus from Saqqara (Porten 1990: 29). Several other dates from 472 and 471 B.C.E. can be cited in support. There is therefore not the least doubt that, from about 473 onwards, the Sothic hypothesis is not really a hypothesis but simply the truth.

Before that time, there is much that could be said about dating in the Saite period (690–527/5) that would make the Sothic hypothesis extremely plausible for that period as well, yet not absolutely certain.[50]

[50] Since the Egyptian month and day date of the astronomical date recently proposed by Smith (1991) for the year 610 B.C.E. is unknown, a minor calendar adjustment after 610 would not significantly affect Smith's proposal, and the date is therefore not absolute evidence for the consistency of the wandering year back to that time. What follows is a brief discussion of this date.

A literary narrative in the fragmentary Demotic papyrus P. Berlin 13,588 datable to the first century B.C.E. (for the text, see Erichsen 1956) mentions a celestial phenomenon, previously interpreted as a solar eclipse (Hornung 1966, referring to a proposal by Otto Neugebauer), and a certain king Psammetichus. Because the text is fragmentary, relations between persons, places, and objects are obscure, but Smith argues coherently that the text associates a lunar eclipse occurring in the evening of 22 March 610 B.C.E. with the death abroad of Psammetichus I. One way of challenging a good proposal constructively is to suggest an alternative not lightly falsifiable. For example, Psammetichus III, who died shortly after Cambyses' conquest of Egypt in 527/5 B.C.E., is not considered because the lunar eclipse of 5 September 525, visible in the evening in Babylon (Kudlek and Miller 1971: 149), could not have been observed at Daphnae in Egypt (Smith 1991: 107). But the text does not state that the observation was made at Daphnae, only that the occurrence of the eclipse was announced there. If the king was Psammetichus III, then, the protagonist of the narrative, a young scribe, copied mortuary texts for a deposed king in exile who would otherwise have been buried without them. An argument against this, though, is that Herodotus (III, 15) seems to imply that Psammetichus III died in Egypt. Then again, lunar observation flourished in Babylonia whereas it was much less significant in Egypt. Therefore, when lunar eclipses are mentioned in Demotic texts, Babylonian influence in the wake of the Persian conquest may be suspected (Parker 1959: 28–30, 53–54); reports in Demotic texts of lunar eclipses are more easily reconciled with the Persian period than with the Saite period. For example,