



ANCIENT EGYPTIAN CHRONOLOGY FOR AEGEANISTS

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ABSTRACT

This paper intends to give a current reassessment of the chronology of Ancient Egypt before 525 BC, correcting the hypercriticism offered against that chronology in a recent publication, and seeking to define the practical limits available.

KEYWORDS: Dating, Dynasties of Egypt, 2000-525 BC

INTRODUCTION

Quite recently, Dr Sturt Manning produced a very substantial volume (Manning 1999) on Aegean archaeological chronology and its Levant relationships, built around the issue of the dating and impact of the 2nd-millennium eruption of the Thera volcano on such matters. For many decades, Aegean chronology has looked to the historical chronology of ancient Egypt for anchor-dates in terms of years BC; but in the light of his beliefs about Thera and the internal chronological sequence and time-spans of certain epochs in Middle and Late Bronze Aegean archaeology, Dr Manning would seem to wish to adjust Egyptian chronology, by raising the date for the start of the New Kingdom in particular by 25 years - nearer to,

say, 1575 BC than to the egyptologically commonly accepted date around 1550 or 1540 BC. Unfortunately, his procedures for making such an upward adjustment are not beyond criticism, and themselves stand in need of clear correction, to avoid needless delusions on this topic. As a matter of sound method, we shall begin with his earliest agreed date, namely 525 BC, in which year Cambyses of Persia annexed Egypt, bringing to an end the 26th Dynasty; and then proceed back through time.

EARLY 1ST MILLENNIUM BC

The claim is made that the arrival of Cambyses in Egypt in 525 BC is the earliest fixed date in Egyptian history (Manning 1999, 373), rather than 664 BC, beginning of

the 26th Dynasty, as is generally accepted. There has never been any dispute over the beginning of the 26th Dynasty, except as to whether it began (accession of Psamtek I) in 664 or 663 BC, this turning on whether Amasis II reigned 43 or 44 full years. As there is good reason to accept 44 years, not 43 (see Parker 1957; Hornung 1965), 664 BC should be retained. Before Psamtek I, Taharqa of the 25th Dynasty ruled for a clear 26 years, dying in his 27th (cf. Parker 1960); between the death of Taharqa and kingship of Psamtek I, Taharqa's successor Tanutamun promptly invaded Egypt from Nubia, to expel the Assyrians and slew Psamtek I's father Necho I in the process, all in 664. Thus, the whole of Taharqa's 26 full years preceded 664 BC, and take us back for his accession to 690 BC - again, a secure date, contra Manning's mere 525 BC with Cambyses.

Before that date, between the death of Shabako (first Nubian king to rule Egypt) and the accession of Taharqa in 690, we have a temporary "weak link", the reign of Shebitku or Shabataka, for whom we have - at present - only a Year 3, guaranteeing only 2 years of full reign at first sight. So short a reign is known to be impossible (see in detail, Kitchen 1996, xxxix-xlii; Depuydt 1993 is a disastrous guide to 7th-century chronology!) Mere number-crunching is not sufficient to establish a chronology; the full historical set of events must be taken into account. And we now have entirely fresh data on the early activity of Shebitku, not later than 706 BC. First, events. So soon as Shebitku had established himself up north in Egypt, in Memphis, as pharaoh, he summoned his younger brother prince Taharqa to come north, *bringing an army with him*. Nobody, but nobody would ask or attempt to bring several thousand men (an army, not a mere brigade!) 2,000 miles from the depths of Kush all the way to Memphis just for fun. The sole route available was the Nile, mainly by boat; there were no Hercules transport-planes in those days, to effect a rapid and painless transportation! Such a drastic

move meant that battle, serious war, was intended. Before 690 BC, the only serious such theatre of war was in the Levant, threatened by the armed might of Assyria, ever since the Battle of Qarqar in 853 BC, and especially from Tiglath-pileser III onwards from 745 BC, and by Sargon II also, down to 705. Soon after the latter's death, Sennacherib had to quell revolt in Palestine, specifically in 701 BC - and Egypto-Nubian forces were involved. And then *never again*, until the Assyrians attacked Egypt within the reign of Taharqa himself (in the 670s). Thus, 702 is the key date for the accession, plotting and militarisation by Shebitku, culminating in the conflict of 701. Alone of the four Nubian rulers of Egypt, it was Shebitku who flaunted a blatantly imperialistic titulature, all part of the act. Thus, from 702 to 690 BC, we are obliged to assign a 12-year reign to Shebitku. Which fits well with the 12 years of the Eusebian version of Manetho for those who find any comfort in that fact (see Kitchen 1996, xxxix-xlii, following on 552-558, and 154-161). And what of Shebitku in 706 BC? The Tang-i-Var text of Sargon II in 706 BC calls this king "*Shapataka, shar mat Meluhha*", or 'Ruler ("king") of Nubia'. If taken literally (so, Kahn 2001), then Shebitku ruled from 706 BC at least, down to 690. This seems unlikely, and is opposed by three considerations: (i) Assyrian scribes commonly called *any* local Egyptian ruler *sharru*, "king", regardless of their true rank (blatant in Assurbanipal's texts); (ii) 'Shapataka' is located here in *Nubia*, not Egypt. It is, therefore, altogether simpler to regard him as the Nubian viceroy of Shabako (who ruled as real king in Egypt), not as pharaoh in 706 BC (cf. Kitchen 2000, 50-51); (iii) the Nubian regime only ruled in Egypt from 715 BC, not earlier, leaving no room for the 14 years of Shabako there within only 715-706 BC; see just below.

Thus, it is imperative to set Shebitku as king in Egypt during 702-960 BC; no later dating will fit all the facts. Nor can he well be earlier as pharaoh. On first-hand data,

Shabako had 15 full years as king, 14 of them (from Year 2) in Egypt. Thus, he reigned from 716 BC (Nubia only) and from 715 BC (in Egypt) down to 702. He cannot well have reigned much earlier, for in 716 BC, Sargon II found a different pharaoh, Shilkanni, in the East Delta - the Osorkon IV of our hieroglyphic sources. So, in 716, Shabako was not then pharaoh in Egypt. So, we are dealing with very close dating back to 716 BC, if we treat our sources aright. Osorkon IV was the So of 2 Kings 17:4 in 725 BC, and also the contemporary of Piye ("Piankhy") in 728 BC. The latter reigned to at least his Year 30, having invaded Egypt 10 years earlier in his Year 20 (stela, Year 21), thus 726 or before, when he found Tefnakht in Sais as Chief of the Ma, but not yet king. After that irruption, Tefnakht became king, reigning into an 8th year, then his successor Bakenranef into a 6th year, till slain by Shabako in 715 BC - a bare minimum of (7+5) 12 full years, going back to 727 BC, more likely 728. There is no evidence to assume that Piye arrived in Memphis or Heliopolis just a few minutes after Osorkon IV's accession, so the latter is likely to have reigned from 730 or 729 BC at the least. Thus, we may not be dealing at this point with absolutely precise chronology in 730 or 728, but we are still very close.

Before Osorkon IV, we indubitably have the entire 22nd Dynasty, back to its formidable founder Shoshenq I. Over this man, Manning (1999, 378) blunders horribly. The equation Shoshe(n)q with amissible *n* corresponds *perfectly* to Hebrew Shishaq (even better with the marginal reading, Shushaq; cf. Assyrian Shushinqu); it is not simply acceptable, it really is the *only* possibility. The Sesse of James and Rohl has absolutely nothing in common with it; no *q*, which is indispensable, and wrong sibilant - *s* and *sh* are *not* interchangeable within Egyptian and alphabetic West Semitic. Like English Tony for Antony, Sesse is simply a pet abbreviation for Ramesses II and III in their inscriptions exclusively, and relates to nobody

else. These kings, as Manning (1999, Appendix 2) is bound to admit, reigned over 300 and 200 years respectively before the Shoshenqs who could never be Sesse; attempts to wriggle out of this by invoking cuneiform usage are totally invalid, and known to be so. James issued no "valid criticism", only nonsense.

There is not one scintilla of evidence that Shoshenq II ever campaigned *anywhere*. Before kingship, he was solely High Priest of Amun in distant Thebes, and Governor in Upper Egypt (the southland), with no authority or employ anywhere else. As king, he was a short-lived co-regent of Osorkon I, and did not outlive him, as Takeloth I succeeded to the throne. Contrast the case of Shoshenq I, the only Shoshenq ever known to have warred abroad. At Karnak, to celebrate a victory in Palestine, he commissioned one of the greatest triumphal reliefs ever carved, with unique details. It includes a topographical list wholly different in orthography from all previous lists, and with 90% new place-names so far as preserved (the other 10% are those that no conqueror could sidestep, like Megiddo); and so on. It is a real record, not a copy of anyone else's. Alongside this, we have (i) trace of another such large scene and list at El-Hiba, now all but totally destroyed, but of superb workmanship; (ii) a stela from Karnak blaming hostilities on "Asiatics" molesting his troops on Egypt's Sinai borders (as an excuse for a war); (iii) above all, an upper corner-fragment of a very large stela of his originally set up at Megiddo itself, carved of local limestone. So, of the reality and scope of *his* campaign, there can be no doubt. Contrary to Manning (and the incompetents he chooses to cite), the Egyptian forces invaded not just Israel, but also Judah and the Negev, and even penetrated briefly across the Jordan (itself named). As for Jerusalem, just how many more times must one point out (i) the name may be irretrievably lost from the badly-damaged Row IV of place-names, and (ii) as it surrendered, and was not occupied, it may not

have needed to be mentioned in any case.

In terms of chronology, the matter is perfectly clear for those who will abide by the facts. Thiele's work on the Hebrew royal chronology *cannot* be cavalierly dismissed. Unlike the common run of Old Testament scholars, he took the trouble to compare the data in King systematically with *real* Near-Eastern regnal usage as known to us at first-hand; the short period 853-841 BC from Ahab to Jehu within Shalmaneser III's reign is particularly instructive in exhibiting the true state of affairs (accession-year dating in Judah, the opposite in Israel), which then made it possible to secure 931/930 BC for the division of the Hebrew kingdom at Solomon's death, an important point. In subsequent years since Thiele, nothing of comparable quality and rigour has been produced (but plenty of nonsense). However, it is very important to notice that, working from different (if inferior) bases, G. Galil (1996) came to precisely the same result as did Thiele, in reaching 930 BC for the death of Solomon and division of the Hebrew monarchy. That date is a good one, like it or not. Which, in turn put the 5th year of Rehoboam and the Shishak campaign in 926/925 BC, so far as Hebrew chronology (solidly backed up by Assyrian) is concerned.

Now we go back to the 22nd Dynasty from Shoshenq I (21 years) through Osorkon I (at 32/33, better 35 years), Takeloth I (14/15 years), Osorkon II (24 years), Takeloth II (25 years), Shoshenq III+IV (39+13 = 52 years), Pimay (6 years), and Shoshenq V (37 years into a Year 38); see Kitchen 2000, 40-41 and Table I. This gives us a total of an irreducible 211 years before Osorkon IV in 728 BC (better, 730 BC), going back to a basic low at *939 or *941 BC for the accession of Shoshenq I. But as there is reason to allow Osorkon I 35 years, and probably Takeloth I 15 years, there are probably (3+1=) 4 years to be added, giving us 945 BC, on a 730 date for Osorkon IV (943 from 728). Thus, the 21 years of Shoshenq I cannot go below *939-918 or

*941-920 (irreducible), or better at 945-924 BC (943-922, on a slightly too-low 728 date for Osorkon IV). On this basis, Shoshenq I and Shishaq (926/925 BC) are incontrovertible contemporaries, and their identity has to be accepted, once and for all. Bluntly, there is no viable alternative. That the campaign did occur very late in Shoshenq's reign can also be shown very clearly (see Kitchen in Handy 1997, 119-120, plus 124-125); the Karnak Forecourt, Bubastite Gate and adjoining triumphal scene and list are all one project, actually commissioned in Year 21 (Silsila stela), and (apart from the scene) all left unfinished at the king's death a year later in Year 22. So, 926/925 as a synchronism has to stand when all the data are examined competently - and fairly.

Beyond 945 BC, only one dynasty separates us from the New Kingdom - the 21st. Here, we have a clear set of 7 kings, for whose reigns both the first-hand datelines and Manetho are in very close agreement virtually throughout. An error of 9 for 19 years in Manetho and a probable brief 2-year co-regency of Psusennes I and Amenemope account for two of the only three differences. The reign of Psusennes II may be any of 13 or 14 or 15 years; overlapping him with Shoshenq I does not work. Thus 6 clear reigns at (respectively) 26, 4, 46 (plus 2 yrs co-regent, thus not to be counted), 9, 6, 19, total some 110 years. Psusennes II at 13-15 years then gives a final total of 123, 124 or 125 years, so we go back to 945 + those figures to either 1068, 1069 or 1070 BC for the death of Ramesses XI (and the New Kingdom) and accession of Smendes I and the 21st Dynasty.

This result must be treated more seriously than Manning does; only by special pleading could it be reduced by even a decade (to *1060), and there is no reason of any kind whatsoever, to raise it beyond 1070 BC on our existing evidence. The years 1070-1068 BC cannot yet claim the same absolute status as 525 or 664 or 690 BC, but they are not far behind! At maximum (and it is higher dates,

after all, that Manning desires!), we have to end the New Kingdom at a base-line of 1070 BC in practice. In no way can an arbitrary 25 years be inserted after 1070 BC. This fact is worth the details gone into above.

THE NEW KINGDOM

The 20th Dynasty had 10 kings; as of now, their years can be baldly summarized thus (R = Ramesses): Setnakht, 2; R III, 31; R IV, 6; R V, 4 (all, correct); R VI and VII, each 7 minimum, perhaps 8; R VIII 1 (+ x?); R IX 18 min., possibly 19; R X, 3 agreed, but probably 7 (because of a Year 8); R XI, 28. This totals minimally (R VIII = 1; R X = 3) some 107 years, which would go back to *1070+107 = 1177 BC. But a proper reign for R X (on a datum often misunderstood) at 7 years would take this up to *1181 BC. If R VI and VII actually had 8 full years, and R VIII 3 years (on a Book of Sothis possibility), then we would be up to *1185 BC. Much more would seem unlikely, because the density of documentation at Deir El-Medina for this Dynasty indicates a very close succession.

In the case of the 19th Dynasty, the reign-lengths are all closely fixed except one. Ramesses I was just over a year; Ramesses II, 66 years and a fraction (ostrakon plus Manetho in precise agreement), Merenptah 10 years, Amenmesses 3 or 4 years, Sethos II 6 years, Siptah 6 years, and Tewosret his 6 years prolonged to 8 years (there is no case for giving her 8 separate years, given the close density of the Deir el-Medina data from Ramesses II onwards). The one uncertain reign is Sethos I – 10/11 years, or 14/15 years? Hence a factor of 4 years uncertainty. Secondly, some would locate 3 years of Amenmesses within the 6 of Sethos II, but this is very dubious, and so I discount it here. On this basis, the reigns of Ramesses II down to the death of Tewosret in our suggested *1181 or *1185 BC would begin (at 94 or 93 years) in *1275/*1274 BC or *1279/*1278 BC. (If we disallowed the tiny supplements given to

the 20th Dynasty (taking it back only to *1177 BC irreducibly), then Ramesses II would begin at barest c. *1271 or *1270 BC, barely 8 years different, using the 1070 baseline for the New Kingdom.) The important thing to realize is that, while one might smuggle in 11 years piecemeal, by having our 8 years plus 3 more (R XI?), there is absolutely **no** way of smuggling in a 25-year increase in years from Ramesses II downwards. And that is that.

What about Sethos I, his father and the 18th Dynasty? The 15/10 year minima would set Sethos I maximally at 1279+15 = *1294 BC, and minimally at 1270+10 = *1280 BC. Then Ramesses I would rule at c. *1295-1294 BC or *1281-1280 BC correspondingly, and the 18th Dynasty end in *1295 (max) to *1281 (min) - a maximum divergence of 14 years. So, by accepting the higher date, Dr. Manning would gain more than his 11-year minimum gain! But still, no way, a 25 year one.

The basic figures of the 18th Dynasty that remain closely correct are Ahmose I, 25 years; Amenophis I, 21; Tuthmosis III, 54; Amenophis II, 26 (but 2, co-regent to be omitted = 24); Tuthmosis IV, 10 (no solid grounds whatever for more!); Amenophis III, 38; Amenophis IV (Akhenaten), 16 (not 17; omitting any co-regency); Smenkhkare, 2 (1, co-regency?), Tutankhamun, 9; Ay, 4; and Haremhab with good reason, 28 (references, Kitchen 2000, 43). Total to accession of Tuthmosis III, 184 years, + *1295 (max) or *1281 (min), then *1479 or *1475 BC. The reigns of Tuthmosis I and II are annoyingly unclear. The former has Years 8 and 9 (fairly close to Manetho's 12 or 13 years, but T II only a Year 1 so far, by contrast with Manethonic Khebron (= <Aa>khepren<re>) at 13 years, hence often amended to *3 years. Maximally using 12 + 13 for T I and II), this would begin Ahmose I and the New Kingdom at *1479 + 71 = *1550 BC (if 12 + 3, *1540). Minimally using 9 + 1 for T I and II, that double event (from *1475 +

56) = *1531 BC. So, thanks to the problems of just three kings (Tuthmosis I and II; Sethos I), the New Kingdom ought to begin close to 1550 or 1530 BC as outside limits. Despite all the arguments by Manning, there is no warrant whatsoever for inserting 25 years *anywhere* into this sequence. Regarding Tuthmosis IV, the arguments about *shebiu-necklaces* are pointless, as the jubilee role of such is an assumption, not a fact, and could be shown in hopeful anticipation, just like certain kinds of jubilee-wishes, which were hopes, not actual celebrations (see Kitchen 1978, 72-74). The arguments for a Year 23 of Tuthmosis IV in Nubia are also false; the prenomen on the relevant monument has only room for Men-kheper-re, not Men-kheperu-re (with its three vertical end-strokes).

As for Near-Eastern links for Egypt, the Assyrian royal dates are well fixed back to 911 BC. Before that date, there has (until recently) been no more than a 10-year variation over a king (Ninurta-apil-ekur) given either 3 or 13 years in variant king-lists, but usually held to be 13 years. Latterly an attempt was made to reduce the 46 years of Assur-dan I by a decade (to 36 years), but this is speculation without proof. So, if we go back to Assur-uballit I, thus set at 1365-1330 BC, he wrote to both Tutankhamun (EA 15), and also Akhenaten (EA 16). At *1295 (max) or *1281 (min) for the end of the 18th Dynasty (above), on figures given, Tutankhamun would be in *1336-1327 or *1322-1313 BC, and Akhenaten (before 1 year of Smenkhkare) at *1353-1337 or *1339-1323 BC. Either would work well with Akhenaten - but only the maximum date goes with Tutankhamun! Then, as already pointed out elsewhere (Kitchen 2000, 43), Burnaburiash II of Babylon, within his reign at c.1359-1333 BC, corresponded with Amenophis III (EA 6), Akhenaten (EA 7-8) and also Tutankhamun (EA 9). Thus, Amenophis III cannot die before 1358, nor Akhenaten and Smenkhkare after 1335/4 and 1334/3 BC, to permit the

minimal link with Tutankhamun (must accede by 1334/33 BC). This rules out completely (for Akhenaten and Tutankhamun) the minimal dates, but goes well with the maximal ones. This ought to be welcome to Dr Manning, so far as it goes.

Finally, Manning invokes Henige (1981) against Bierbrier on generation-counts. But it is Henige who is in error (for Egypt) on his supposed 30-year generation intervals. Henige based himself worldwide on all history (737 dynasties!), most of which is totally irrelevant for Egypt in the early first millennium BC and before. From our period, there are enough clear examples of totally father-to-son genealogies (each within fixed time-spans) to show clearly an average of about 25 years (not 30!), varying from 23/24 to 27/28 years. So, here we may quickly prove the point. (1) 11th Dynasty, 6/7 generations, =143 years divided by 6/7 = 24/20 years. (2) 12th Dynasty, 7 such generations, c. 1973-1795 BC = 178 by 7 = 25+ years. (3) 22nd Dynasty, 10 generations, c. 945-715 = 230y by 10g = 23 years. (4) 23rd Dynasty, c. 818-715 = 103y by 5g = 20+ years. (5) Memphite high priests, 22nd Dynasty (Kitchen 1996, 194), c. 865-745 = 120y by 5g = 24 years. (6) Nesoramun family (*ibid.*, 202), c. 980-760 = 220y by 9g = 24+ years. (7) Djed-Thutefankh family (*ibid.*, 217/220), c. 940-760 = 180y by 7 g = 25+ years. (8) Roma-roy family (Bierbrier 1975, 2), Merenptah to Osorkon I, c. 1210-900 = 310 by 10/11g = 31/28 years. (9) Pashedu family (*ibid.*, 24), Sethos I to Siptah, 100 years by 4/5 generations = 25/20 years. (10) Sennudjem family (*ibid.*, 30), Sethos I –Ramesses XI, c. 225y by 10g = 22+ years. (11) Qaha family (*ibid.*, 36), Haremhab to R XI, c. 1320-1070, 250y by 10g = 25 years. Outside Egypt, cf. (12) IIIrd Dynasty of Ur, 2112-2004 BC = 108y by 5g = 21+ years. (13) Ist Dynasty of Babylon, c. 1900-1600 BC, c. 300 years by 11g = 27+ years. (14) Hebrew Monarchy, David to Josiah, c. 1010-610 BC = 400y by 17g = 25+

years. And so on; forget Henige, so far as the pre-classical Ancient Near East is concerned!

MIDDLE KINGDOM AND BEFORE

It is possible to limit reasonably the interval (Dynasties 13-17) between the end of the 12th Dynasty and the start of the 18th, on an important factor overlooked by Manning. That is the time-span needed to accommodate all those kings *known* to have reigned *consecutively* in Thebes (whatever their precise order, and regardless of who was 16th or 17th Dynasty, an irrelevance chronologically). That span cannot well be less than about 240 years, and is probably nearer 250 years or so (see Kitchen 2000, 45). If so, then the 12th Dynasty would end c. $*1550+240/250 = c. *1790/1800$ BC maximally, or else $*1530+240/250 = c. *1770/1780$ BC, minimally. The length of that Dynasty is disputed because of doubts over the reigns of Sesostri II and III, (which complicates use of the Sothic date of 1866 BC or whatever; the lunar dates are all now to be discarded – see Wells 2002). But its beginning is somewhere between $*1980$ and $*1960$ BC, on the end-figures just given. There is no point in continuing thus inquest further back through time (so far as Thera is concerned), as any kind of precise dating is impossible at present before the 11th Dynasty' 143 years (beginning on our now rough maxima and minima at c. $*2123$ or $*2003$ BC respectively).

We finally return to the Hyksos period. The generally accepted datum is 6 rulers at 10[8] years in the Turin Canon. Their rule ended when the 18th Dynasty expelled their regime from the East Delta into Canaan. This date is not certain; the Year 11 in Papyrus Mathematical Rhind could be either of the local last Hyksos king, or else of a victorious Ahmose. In the latter case, the 15th Dynasty's 108 years would be (max.) 1540 back to 1648 BC. Or (min) $1520 + 108 = *1628$ BC. The dating offered of Years 18-22 of Ahmose for this event is virtually certainly too late (cf.

Kitchen 2000, 46). That Ahmose's conquest was in his 1st year seems unlikely; it would set highest max and min dates of $*1550+108 = *1658$ BC and $*1530+108 = *1638$ BC. The true date is more likely to be sometime up to Year 10, on practical political and military grounds.

AND THERA?

If the volcano erupted in 1628 BC (and not at one of several dates from 1528 to 1180 offered by various people, I am told), then it would have most likely coincided with the Hyksos 15th Dynasty, or just possibly with the late 13th, plus E Delta 14th, Dynasties. Its link with the 18th Dynasty would be zero (the storm-stela of Ahmose I "has nothing to do with the case", as others have noted). So why all the unnecessary fuss to try and insert 25 more years into the 18th Dynasty, and the unnecessary foul-mouthing of the proper state of Egyptian chronology between 1550 and 525 BC, especially (and wrongly) during c. 1070-525 BC? We do not need it. "Science" cannot solve the intricate problems of detailed Egyptian successions, and the cross-links with the neighbouring Near East; texts alone can do that. As for Aegean archaeological levels, those I will leave to Aegeanists, reminding them only that pots do not give absolute dates, unless prior historically-dated contexts do it for them. And time-spans of pottery-style use are matters of (gu)es(s)time, not of dating to the year.

IN SUMMARY

Egyptian chronology is exact from 664, probably 690 BC; it is very close to exact from 945/1070 BC. Before that, it is within a decade back to c. 1480 BC, and within some 20 years back to 1550/1530 BC, for the start of the 18th Dynasty. On the fairly close data available, one cannot arbitrarily insert an additional chunk of 25 years anywhere after c. 1480 BC or within 1550/30 – 1480 BC. The working minimum for the Second Intermediate Period (including the Hyksos at its end) is some

240/250 years; the 12th Dynasty on this basis plus a Sothic date is quite close to 1973-1798 BC (within 1980/60 to 1800/1790 BC); and the 11th covers the 143 years before that. The links (and many individual figures) back to the First Intermediate Period, Old Kingdom and Archaic Period and back to its founder Menes are much less precise at present, but his opening to the 1st Dynasty is wisest placed at roughly 3000 BC (\pm c. 100 years). For the

moment. There is not much help for Egypt; the best help from the sciences will eventually come from dendrochronology, in combination with judicious use of the written record. In some periods, the darker times of Egypt's long history may well resemble the "rags and tatters" that Gardiner complained of, but not so the chronology from 1550/1520 BC and after.

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