EGYPT AND THE HELLENIC ECONOMY

Culture as a Non-Tariff Trade Barrier in the Atheno-Egyptian Grain Trade, 665-204BC

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Abstract

Without sufficient food for her population, and in the absence of the empire which had sustained her before the Peloponnesian War, fourth-century BC Athens relied on regular supplies of foreign grain. While the trade in grain has been subjected to sustained scholarly interest, few academics have considered why Athens chose one grain source above another. Most agree that at least a third of Athens' grain requirements were satisfied from the Euxine, which was vulnerable to infrequent crop failure and sits at the end of a precarious and navigationally challenging shipping route exposed to danger from the Spartans, Byzantians and pirates. Conversely, there is insufficient evidence that Egypt, a voluminous grain source closer (by ancient sailing practices) than the Black Sea, contributed much to Athens' food supplies before the Battle of Chaironeia (338BC). This thesis contributes one solution to this conundrum: that cultural differences constituted such a significant transaction cost to Atheno-Egyptian trade that it outweighed the dangers of the Euxine route. Applying approaches derived from New Institutional Economics to the Atheno-Egyptian case-study, this thesis pre-empts the Finleyan shibboleth that ancient trade cannot be considered economically rational by demonstrating the real economic costs of linguistic, religious, ethnic, philosophical, governmental, diplomatic and legal differences. Through charting a gradual convergence in these areas between the seventh and third centuries BC, a new perspective is offered on Egypt's transition into a Hellenic economy which undermines the long established 'Classical'-'Hellenistic' and 'Western'-'Oriental' dichotomies which still pervade literature on the ancient economy.

Acknowledgements

'No man is an island entire of itself'; John Donne's aphorism is especially true for DPhil Theses, which, despite the single name on the cover, are a deeply collaborative process. My primary collaborator, to whom I owe the deepest gratitude, was Dr Alfonso Moreno, my supervisor. He stuck with this project even when its claims seemed far-fetched and others were less supportive. If this thesis demonstrates even a fraction of the respect he has for the evidence, or of the skill of his argument, then I shall be pleased beyond words. I am also extremely thankful for the assistance of Prof Jonathan Prag, my college supervisor, who injected much-needed enthusiasm at an early stage. For initiating and nurturing my interest in the ancient economy, I must also thank Prof Polly Low and Prof Stephen Todd, whose fingerprints are in evidence in the present thesis.

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Of course, my final thanks must go to my family: my mother, grandmother, late grandfather, and brothers. They provided financial and emotional support from beginning to end, and it is to them that this work is dedicated.

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Note on Transliteration

The transliteration of Greek names into English is, as ever, inconsistent. As a rule, transliterations aim to retain Greek spelling, but where names are significantly more familiar from their Latinizations, these are allowed to stand. Thus, the reader will find 'Thucydides' rather than 'Thoukudides', but 'Herodotos' for 'Herodotus'. Besides proper nouns, Greek words are generally untransliterated. Exceptions include words whose meaning has been reconstructed by modern scholarship, and thus may not precisely reflect ancient usage, and concepts with wider modern currency. For Egyptians, native names are given, since not all prominent Egyptians have Hellenized names, and historians are otherwise inconsistent (e.g., using Psammetichos II in place of Herodotos' 'Psammis', or the Biblical 'Nekau' for his 'Nekos'). For the reader's convenience, a concordance of Egyptian names and those appearing in Classical and Biblical sources is provided below. Egyptian words other than proper nouns are transliterated according to the system proposed by Gardiner (1957).

A Concordance of Greek and Egyptian Royal Names

		Transliteration	Greek Name(s) and Testimonia
TWENTY-SIXTH (SAÏTE) DYNASTY, 672-525BC			
672-664BC	Necho I	*nkɜw*	Νεκῶς (Hdt. 2.152.1), Νεχαῶ (*FrGrHist.* 609 F2.141)
664-610BC	Psamtik I	*psmtk*	Ψαμμήτιχος (Hdt. 2.151.2; Diod. 1.66.8; *FrGrHist.* 609 F2.141)
610-595BC	Necho II	*nkɜw*	Νεκῶς (Hdt. 2.158.1), Νεχαὼ (2 Chronicles 35:20), Νεχαῶ (*FrGrHist.* 609 F2.141)
595-589BC	Psamtik II	*psmtk*	Ψάμμις (Hdt. 2.159.3), Ψαμματίχος (M&L 7), Ψάμμουθις (*FrGrHist.* 609 F2.141)
589-570BC	Wahibre	*wɜḥ-ib-rᶜ*	Ἁπρίης (Hdt. 2.161.1; Diod. 1.68.1), Οὐαφρις (*FrGrHist.* 609 F2.141)
570-526BC	Ahmose II	*iᶜḥ-ms*(*.w*)	Ἄμασις (Hdt. 2.172; Diod. 1.68.3), Ἄμωσις (*FrGrHist.* 609 F2.141)
526-525BC	Psamtik III	*psmtk*	Ψαμμήνιτος (Hdt. 3.14.1), Ψαμμεχερίτης (*FrGrHist.* 609 F2.141)
TWENTY SEVENTH DYNASTY (FIRST PERSIAN PERIOD), 525-404BC			
TWENTY-EIGHTH DYNASTY, 404-398BC			
404-398BC	Amenirdsu (II)	*imn-ir-di-s*(*w*)	Ψαμμήτιχος (Diod. 14.35.4), Ἀμύρτεος Σαίτης (*FrGrHist.* 609 F2.142)
TWENTY-NINTH (MENDESIAN) DYNASTY, 398-380BC			
399-393BC	Nefaarud I	*nɜy.f-*ᶜ*ɜw-rwḏ*	Νεφερίτης (*FrGrHist.* 609 F2.142)
392-379BC	Hakor	*hgr*	Ἄχωρις (*FrGrHist.* 609 F2.142), Ἀκώριος (*FrGrHist* 115 F103.1)
379BC	Nefaarud II	*Name unknown from Egyptian Sources*	Νεφορίτης (*FrGrHist.* 609 F2.142)
THIRTIETH (SEBENNYTIAN) DYNASTY, 379-342BC			
379-361BC	Nakhtnebef	*nḫt-nb.f*	Νεκτανέβης (*FrGrHist.* 609 F2.144), Νεκτενίβιος (*FrGrHist.* 115 F103.10)
361-359BC	Djedhor	*ḏd-ḥr*	Ταχὼς (IG II² 119; Diod. 15.92.1, Plut. *Ages.* 36.3, Athen. *Deip.* 616d-e), Τεὼς (*FrGrHist.* 609 F2.144)
359-342BC	Nakhthorhebyt	*nḫt-ḥr-ḥbyt*	Νεκτανεβὼς (Diod. 15.92.3), Νεκτανεβὸς (*FrGrHist.* 609 F2.144)

Metrology

Weights and measures are converted into metric units for ease of comparison, based on the following equivalences:

COMMON MEASURES OF DRY VOLUME

ATTIC			EGYPTIAN		
Unit	**SI Measure[1]**	**SI Weight[2]**	**Unit**	**SI Measure[3]**	**SI Weight**
kotyle	0.27 L	Wheat: 0.16kg Barley: 0.14kg	*hnw*	0.48 L	Wheat: 0.30kg Barley: 0.25kg
choinix	1.09 L	Wheat: 0.68kg Barley: 0.57kg	*ḥḳ3t*	4.80 L	Wheat: 3.01kg Barley: 2.51kg
hekteus	8.75 L	Wheat: 5.49kg Barley: 4.58kg	*ḥḳ3ty*	9.60 L	Wheat: 6.03kg Barley: 5.02kg
medimnos	52.51 L	Wheat: 32.96kg Barley: 27.47kg	*ḫ3r*	76.80 L	Wheat: 48.21kg Barley: 40.18kg

COMMON MEASURES OF AREA

ATTIC		EGYPTIAN (PTOLEMAIC)	
Unit	**SI Measure[4]**	**Unit**	**SI Measure[5]**
hemiektos	72.95m^2	*rmn*	13.78m^2
hektos	145.90m^2	*mḥ-t3*	27.57m^2
aroura	218.85m^2	*st̲3t* (*aroura*)	2,756.25m^2
plethron	875.38m^2	*ḫ3*	27,600.00m^2

[1] Moreno (2007a:325).
[2] Derived from R&O 26, which suggests that ancient grains were approximately 30% lighter than modern varieties (Moreno, 2007a:325).
[3] Clagett (1999:14).
[4] After Moreno (2007a:326).
[5] Clagett (1999:12); on the Ptolemaic *aroura*, see Bagnall (2009b:186).

COMMON MEASURES OF LENGTH

ATTIC		EGYPTIAN	
Unit	**SI Measure[6]**	**Unit**	**SI Measure[7]**
daktulos	0.02m	*ḏbꜣ*	0.02m
palaiste	0.07m	*šsp*	0.07m
pechus	0.46m	*mḥ nswt* (“*royal cubit*”)	0.52m
stadion	184.90m	*ḫt*	52.20m
schoinos	7,397.00m	*ỉsw.t* (*schoinos*)	10,500.00m

WEIGHT STANDARDS

ATTIC		EGYPTIAN	
Unit	**SI Weight[8]**	**Unit**	**SI Weight[9]**
tetartemorion	0.18g	*šʿty*	7.58g
obol	0.72g	*qdt*	9.10g
drachma	4.31g	*dbn*	91.00g
mna	431.00g		
talent	26.16kg		

[6] After Smith (1851).
[7] Gardiner (1957:199).
[8] After Moreno (2007a:325).
[9] After Clagett (1999:201 n.92).

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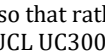
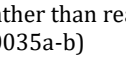
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Abbreviations

AEL	Lichtheim, M. (1976) *Ancient Egyptian Literature: a Book of Readings.* Vol. II: *The New Kingdom*. Berkeley, CA.
APF	Davies, J. K. (1971) *Athenian Propertied Families, 600-300BC.* Oxford.
***ARAB* I**	Luckenbill, D. D. (1926) *Ancient Records of Assyria and Babylonia*. Vol. I: *Historical Records of Assyria, from the Earliest Times to Sargon*. Chicago, IL.
***ARAB* II**	Luckenbill, D. D. (1927) *Ancient Records of Assyria and Babylonia.* Vol. II: *Historical Records of Assyria from Sargon to the End*. Chicago, IL.
***ARE* II**	Breasted, J. H. (1906a) *Ancient Records of Egypt: Historical Documents from the Earliest Times to the Persian Conquest*. Vol. II: *The Eighteenth Dynasty*. Chicago, IL.
***ARE* III**	Breasted, J. H. (1906b) *Ancient Records of Egypt: Historical Documents from the Earliest Times to the Persian Conquest*. Vol. III: *The Nineteenth Dynasty*. Chicago, IL.
***ARE* IV**	Breasted, J. H. (1906c) *Ancient Records of Egypt: Historical Documents from the Earliest Times to the Persian Conquest*. Vol. IV: *The Twentieth to the Twenty-Sixth Dynasties*. Chicago, IL.
ArP.	Cowley, A. (1967) *Aramaic Papyri of the Fifth Century BC*. Osnabrück
ATL	Meritt, B. D., Wade-Gery. H. T. and McGregor, M. F. (1950) *The Athenian Tribute Lists*. Princeton, NJ.
Bergk.	Bergk, T. (1848) *Poetae Lyricae Graeci.* Leipzig.
BGCH	Noe, S. P. (1937) *A Bibliography of Greek Coin Hoards.* New York, NY.
BMInscr.	Hicks, E. L. and Newton, C. T. (1874) *The Collection of Ancient Greek Inscriptions in the British Museum*. Vol. I: *Attika*. Oxford.
***CH* 1**	Price, M. J. (1975) *Coin Hoards.* Vol. I. London.
***CH* 9**	Meadows, A. and Wartenberg, U. (2002) *Coin Hoards.* Vol. IX: *Greek Hoards.* London.
CIG	Böckh, A. (1825-60) *Corpus Inscriptionum Graecarum.* 3 vols. Berlin.
CIRB	Struve, V. V. (1965) *Корпус Боспорских Надписей* [*Corpus Inscriptionum Regni Bosporani*]. St Petersburg.
CT	de Buck, A. (1935-61) *The Egyptian Coffin Texts.* 7 vols. Chicago, IL.
DÉLG	Chantraine, P. (1999) *Dictionnaire étymologique de la langue grecque : histoire des mots*. 2nd ed. Paris.
DLE	Lesko, L. H. and Lesko, B. S. (2002) *A Dictionary of Late Egyptian.* 2nd ed. Providence, RI.
Driver	Driver, G. R. (1957) *Aramaic Documents of the Fifth Century BC.* Oxford.
DSf	Darius, Susa Foundation Tablet

EA	Moran, W. L. (1992) *The Amarna Letters.* Baltimore, MD.
Edfou	Chassinat, É. (1892-1933) *Le Temple d'Edfou.* 8 vols. Cairo.
EDG	Beekes, B. S. P. (2010) *Etymological Dictionary of Greek.* Leiden.
FrGrHist.	Worthington, I. (2019) *Brill's New Jacoby*. Leiden. [Online] available at: https://referenceworks.brillonline.com/browse/brill-s-new-jacoby
I.Lindos	Blinkenberg, C. S. (1941) *Lindos : fouilles de l'acropole, 1902-1914.* Vol. II: *Inscriptions*. Berlin.
I.Olbia	Knipovich, T. N. and Levi, Y. I. (1968) *Надписи Ольвии* [*Inscriptiones Olbiae*]. St Petersburg.
***IG* I³**	Lewis, D. M., Jeffery, L. H., Erxleben, E. and Hallof, K. (1981-94) *Inscriptiones Graecae*. Vol. I: *Inscriptiones Atticae Euclidis anno anteriores*. 3rd ed. Berlin.
***IG* II²**	Kirchner, J. and Sironen, E. (1913-2008) *Inscriptiones Graecae.* Vol. II: *Inscriptiones Atticae Euclidis anno posteriores.* 2nd ed. 5 parts. Berlin.
***IG* II³**	Lambert, S. D., Bardani, V. N. and Tracy S. V. (2012) *Inscriptiones Graecae.* Vol. II: *Inscriptiones Atticae Euclidis anno posteriores.* 3 parts. Berlin.
***IG* V.1**	Kolbe, W. (1913) *Inscriptiones Graecae.* Vol. V, part 1: *Inscriptiones Laconiae et Messeniae.* Berlin.
***IG* V.2**	Hiller von Gaetringen, F. (1913) *Inscriptiones Graecae.* Vol. V, part 2: *Inscriptiones Arcadiae.* Berlin.
***IG* X.2**	Kern, O. (1908) *Inscriptiones Graecae.* Vol. X: *Inscriptiones Thessaliae.* Berlin.
***IG* XI.4**	Roussel, P. (1914) *Inscriptiones Graecae.* Vol. XI: *Inscriptiones Deli.* Part 4. Berlin.
***IG* XII.2**	Paton, A. R. (1899) *Inscriptiones Graecae.* Vol. XII: *Inscriptiones insularum maris Aegaei praeter Delum.* Part 2: *Inscriptiones Lesbi, Nesi, Tenedi.* Berlin.
***IG* XII.3**	Hiller von Gaertringen, F. (1898) *Inscriptiones Graecae*. Vol. XII: *Inscriptiones insularum mares Aegaei praeter Delum*. Part 3: *Inscriptiones Symes, Teutlussae, Teli, Nisyri, Astypalaeae, Anaphes, Therae et Therasiae Pholegandri Meli Cimoli*. Berlin.
***IG* XII.5**	Hiller von Gaertringen, F. (1903-1909) *Inscriptiones Graecae.* Vol. XII, part 5: *Inscriptiones Cycladum.* 2 vols. Berlin.
***IG* XII.7**	Delamarre, J. (1908) *Inscriptiones Graecae.* Vol. XII, part 7: *Inscriptiones Amorgi et insularum vicinarum.* Berlin.
IGCH	Thompson, M., Mørkholm, O. and Kraay, C. M. (1973) *An Inventory of Greek Coin Hoards*. New York, NY.
IGLouvre	Froehner, W. (1865) *Musée Impérial du Louvre : les inscriptions grecques.* Paris.
IK.Kyme	Engelmann, H. (1976) *Die Inschriften von Kyme.* Bonn.
Inscr.Cypr.	Michaelidou-Nicolaou, I. (1963) *Inscriptiones Cypriae Alphabeticae,* Vol. II. Nicosia.

***IosPE* I²**	Latyschev, V. (1916) *Inscriptiones Antiquae orae Septentrionalis Ponti Euxini Graecae et Latinae*. Vol. I: *Inscriptiones Tyrae, Olbiae, Chersonesi Tauricae aliorum locorum a Danubio usque ad Regnum Bosporanum*. 2nd ed. Hildesheim.
***IosPE* II**	Latyschev, V. (1890) *Inscriptiones Antiquae orae Septentrionalis Ponti Euxini Graecae et Latinae*. Volume II: *Inscriptiones Regni Bosporani Graecae et Latinae*. Hildesheim.
K.-A.	Kassel, R. and Austin, C. (1984-2001) *Poetae comici Graeci*. 8 vols. Berlin.
L.-P.	Lobel, E. and Page, D. (1955) *Poetarum Lesbiorum Fragmenta*. Oxford.
LGPN	Parker, R., Yon, J.-B. and Depauw, M. (2018) *The Lexicon of Greek Personal Names*. Oxford. [Online] available at: https://www.lgpn.ox.ac.uk/online/index.html
LSJ	Liddell, H. G. and Scott, R. (1996) *A Greek-English Lexicon*. 9th ed. Rev. by Jones, H. S. Oxford.
M&L	Meiggs, R. and Lewis, D. M. (1969) *A Selection of Greek Historical Inscriptions to the End of the Fifth Century BC*. Oxford.
OED	Simpson, J. and Weiner, E. (1989) *The Oxford English Dictionary*. 2nd ed. Oxford.
OGIS	Dittenberger, W. (1903-5) *Orientis Graeci inscriptiones selectae.* Leipzig.
OJEC	*The Official Journal of the European Community*
ORBIS	Scheidel, W. and Meeks, E. (2019) *ORBIS: the Stanford Geospatial Network Model of the Roman World*. Stanford, CA. [online] available at: http://orbis.stanford.edu/#
P&L	Perdrizet, P. and Lefebvre, G. (1919) *Les Inscriptions grecs du Memnonion d'Abydos.* Nancy.
P&Y	Porten, B. and Yardeni, A. (1986) *A Textbook of Aramaic Documents from Ancient Egypt*. Winona Lake, IN.
PIE	Proto-Indo-European
Posener	Posener, G. (1936) *La première domination perse en Égypte : recueil d'inscriptions hiéroglyphiques.* Cairo.
R&O	Rhodes, P. J. and Osborne, R. O. (2003) *Greek Historical Inscriptions, 404-323BC.* Oxford.
RC	Welles, C. B. (1934) *Royal Correspondence in the Hellenistic Period: a Study in Greek Epigraphy*. New Haven, CT.
S&F	Saprykin, S. Y. and Fedoseyev, N. F. (2011) "Особенности проксенической аеярельности Боспора," *Аристей: вестник классической филологии и античной истории*, 4: 89-114.
***SAA* 16**	Luukko, M. and van Buylaere, G. (2002) *State Archives of Assyria*. Vol. XVI: *The Political Correspondence of Ershaddon*. Helsinki.

***SB* III**	Preisigke, F. (1974) *Sammelbuch griechischer Urkunden aus Ägypten.* Berlin.
SEG	*Supplementum Epigraphicum Graecum*
SIRIS	Vidman, L. (1969) *Sylloge inscriptionum religionis Isiacae et Sarapiacae.* Berlin.
S.-K. I and II	Shelov-Kovedyayev, F. V. (1985) "Новые Боспорские декреты," *Вестник древней истории*, 172: 57-72.
S.-K. III	Shelov-Kovedyayev, F. V. (1988) "Декрет из раскопок 1985 г. в Пантикапее," *Вестник древней историиns*,187: 81-83.
Snell	Snell, B. and Maehler, H. (1959) *Bacchylides: Carmina cum fragmentis.* Berlin.
Strong	Strong, J. (1890) *The Exhaustive Concordance of the Bible*. New York, NY.
***Syll.*³**	Dittenberger, W. (1915-24) *Sylloge inscriptionum graecarum.* 3rd ed. 4 vols. Leipzig.
Tod	Tod, M. N. (1946-48) *Greek Historical Inscriptions*. 2 vols. Oxford.
Trapp	Trapp, M. (2003) *Greek and Latin Letters: an Anthology with Translation*. Cambridge.
TT	Theban Tombs Mapping Project Number
US Const.	United States Congress (2007) *The Constitution of the United States of America, as Amended.* Washington, DC.
UNGA	Resolutions of the United Nations General Assembly
V,T&S-K	Vinogradov, J. G., Tolstikov, F. V. and Shelov-Kovedyayev, F. V. (2002) "Новые декреты Левко- на I, Перисада и Эвмела из Пантикапея," *Вестник древней историиns*, 243: 58-75
Wb.	Erman, A. and Grapow, H. (1926-61) *Wörterbuch der ägyptischen Sprache*. 6 vols. Berlin.
WChr.	Mitteis, L. and Wilcken, U. (1912) *Grundzüge und Chrestomathie der Papyrusurkunde.* 2 vols. Leipzig.
West	West, M. L. (1974) *Studies in Greek Elegy and Iambus.* Berlin.
Wittgenstein *TLP*	Wittgenstein, L. J. J. (1922) *Tractatus Logico-Philosophicus*. Eng. trans. by Russell, B. A. W. of *Logisch-Philosophische Abhandlung*. London.
Yaylenko	Yaylenko, V. P. (2001) "Вторая фанагорийская проксения," *Древности Боспора*, 4: 474–486.
YBC	Yale Babylonian Collection, New Haven CT.

CHAPTER 1
Introduction

A wealth of ancient source material attests to the consistent intensity of Athenian interest in Egypt throughout the Archaic and Classical Periods: late traditions record an alliance between Athens and Pharaoh Psamtik I (Diod. 1.67.8); his probable descendant, another Psamtik, apparently presented Athens with a diplomatic gift[1] of grain, *c.*445/4BC (Philoch. *FrGrHist.* 328 F119; Plut. *Per.* 37);[2] between 459BC and 452BC, a massive Athenian force supported the Delta Kinglet Irethor against the Persians (Hdt. 3.12, 15, 7.7; Thuc. 1.104; Plat. *Menex.* 241e-2a; Diod. 11.71.3-6, 74.2-4, 74.5-75.4, 77.1-5);[3] a further Atheno-Egyptian alliance is attested in 388BC (Ar. *Plut.* 178);[4] envoys were dispatched to Athens under Djedhor (*IG* II^2 119); while several prominent Athenians – Solon, Chabrias, and Plato – had known or purported ties to Egypt (§3.4).

It has long, and not unreasonably, been presumed that this active Atheno-Egyptian diplomatic relationship was mirrored by equally intense bilateral trade, built around voluminous Egyptian grain exports.[5] A fruitful trading relationship is indeed attested at various times throughout Athenian history by a number of references to Egyptian goods and traders. Yet, we do not see anything like the volume or quality of direct evidence for a bulk trade in Egyptian grain as we do for Euxine (*IG* I^3 62; *IG* I^3 61.34ff; Xen. *Hell.* 1.1.35-6, 2.29, 2.2.21; Lys. 22.14; [Dem.] 50.4-6, 17-19; Tod II 163; *IG* II^2 212; Dem. 18.87) or Sicilian ([Dem.] 32; *IG* II^3 432) before Athens' defeat at Chaironeia.[6] Besides Psamtik's largesse of 445/4BC (a non-trading interaction), the only explicit attestations of Egyptian grain in

[1] On the 'official gift' (*inw*) in Egypt, *cf.* Bleiberg (1996) and Chapter 4.
[2] *cf.* Gernet (1909:16-17), Garnsey (1988:125-6), Moreno (2007a:236).
[3] Bigwood (1976:1-25), Ruzicka (2012:16, 29-32, 240 n.8, 241 n.12), Hornblower (2011:29, 31, 69).
[4] Ruzicka (2012:75).
[5] Milne (1939:177); Michell (1940:235, 263); Sutherland (1943); Meiggs (1972:93-5); Austin and Vidal-Naquet (1977:115).
[6] *cf.* Moreno (2007a:337-43).

Athens are of Hellenistic date (Lykourg. 1.18-19; *IG* II^3 430; *IG* II^2 283; [Dem.] 56; *cf.* R&O 91).[7]

The Athenians, then, failed to realize Egypt's potential as a breadbasket until late in her history; the Romans were the first foreign power to fully exploit Nilotic grain (§1.3). Given that Athens' grain deficit probably totalled 800,000 *medimnoi* (26,368 tonnes of wheat, or 21,976 tonnes of barley: *cf.* Dem. 20.31, §1.1) annually, we must question the economic rationality of the decisions this vast import trade implies. Our argument begins with some scene-setting. Starting from the least controversial premises of this thesis, we briefly recapitulate the evidence for the Athenian grain deficit (§1.1) and assess for ourselves the enormous surpluses produced in Egypt (§§1.2-3). Having established the seemingly natural economic partnership between grain-poor Athens and grain-rich Egypt, we shall examine the sources Athens instead chose, comparing their viability and productivity with that of Egypt (§1.4). Only then can our hypothesis be proposed in full (§§1.5-6): that the lack of an Atheno-Egyptian trade in cereals before Alexander largely resulted from the high transaction costs imposed by cultural differences.

1.1 | Athens' Need for Grain

Dendro-climatological studies of Mediterranean Cypress (*Cupressus sempervirens*) fragments from the column-drums of the Parthenon[8] reinforce prevalent ancient observations of the harshness of Attika's soil, and her climate's poor suitability for agriculture (Thuc. 1.2.5; Plat. *Krit.* 111b5; Arist. *Mete.* 360b; Plut. *Sol.* 22; Strab. 9.1.8).[9]

[7] On presumed Egyptian grain exports pre-332BC, *cf.* Rathbone (1983:51), Garnsey (1988:162), Moreno (2007a:340-1), Buraselis (2013:97), Colburn (2014:362).
[8] Mariolopoulos (1962:246); Papadopoulos *et al.* (2009:584). *cf.* Sallares (1991:390-1).
[9] Moreno (2007a:11-12).

Taken alongside a small cultivable area[10] and unprecedentedly large urban population,[11] these conditions explain a preoccupation with food supplies recognized in antiquity (e.g., [Arist.] *Ath.Pol.* 43.4), and emphasized in modern scholarship.[12] While establishing the exact deficit is impossible, due to several ultimately unquantifiable variables, it is apparent that, from the mid-fifth century BC, Athenian grain consumption (probably contributing 75% of the average diet[13]) drastically outstripped Attic productive capacity. The well-rehearsed arguments for the Attic deficit need only brief recapitulation here. Estimates of land under grain in Attika have varied from 10% (240km^2)[14] to 40% (960km^2) of her total territory,[15] while those of productive output range from 9,600 to 43,000 tonnes.[16] When combined with the various population and consumption estimates, the grain deficit has been seen as falling somewhere between nothing in most years,[17] to some 44,000 tonnes *per annum*.[18] The higher estimate derives from the most recent monograph-length examination of the issue,[19] and a little might be added within the scope of this thesis.

First, our understanding of Attika's productive landscape has advanced: a recent geo-archaeological survey compared soil-quality data, geological maps, and the European Union's CORINE land-cover assessments, identifying 875km^2 of arable under a 7%

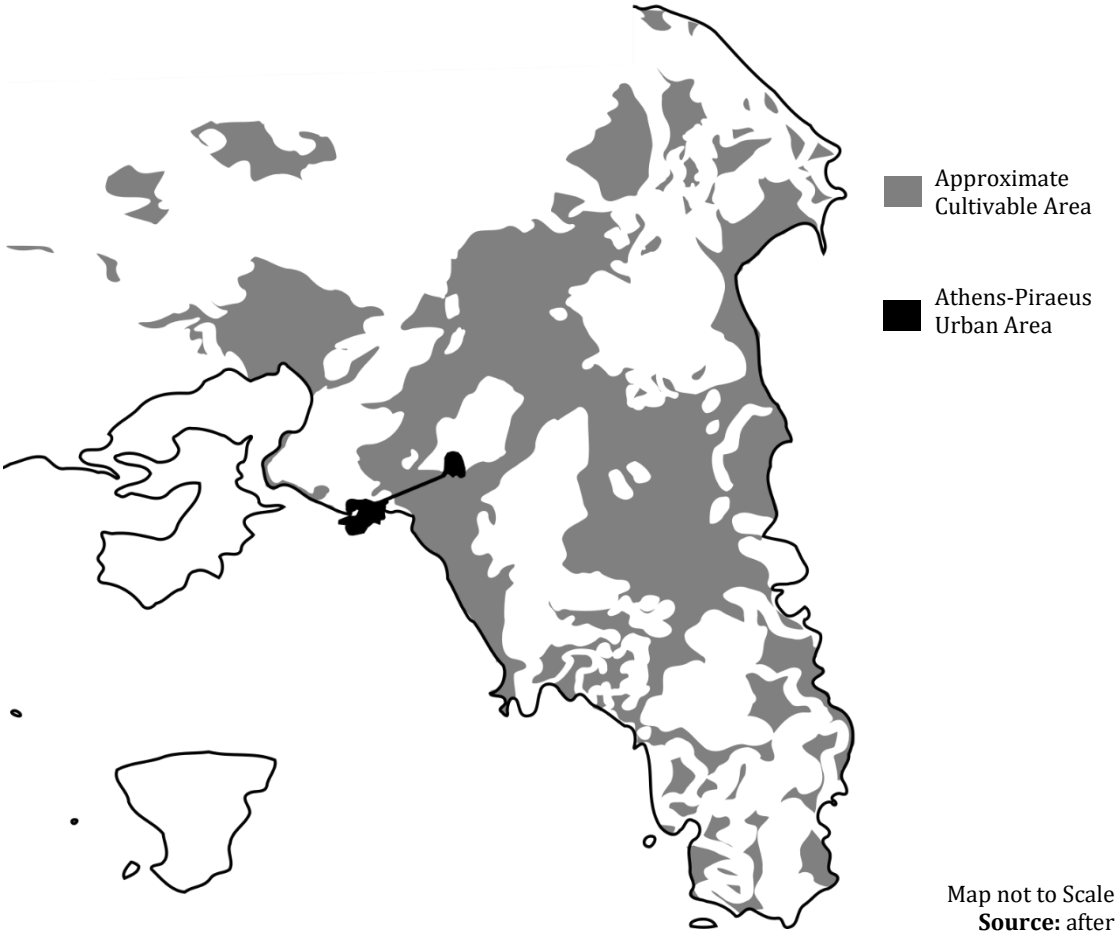
[10] Estimates range from 480km^2 (Jardé, 1925:52-3) to 960km^2 (Osborne, 1987:46; *cf.* Garnsey, 1988:99-101), the latter derived from modern censuses (Garnsey, 1988:92 n.11; Sallares, 1991:79, 310, 386; Moreno, 2007a:13).
[11] Fifth-century estimates range from 250,000 (Garnsey, 1988:90) to 350,000 (1986:7-13); for the fourth, a figure between 100,000 and 120,000 is commonly accepted (Garnsey, 1988:136; Sallares, 1991:60; Hansen, 1991:93). The unknowable number of metics and slaves render such estimates largely speculative.
[12] e.g., Harding (1995:107-8), Garnsey (1988), Meiggs (1972:93-5), Bissa (2009), Moreno (2007a), Whitby (1998:113), Hansen (1991:125).
[13] Foxhall and Forbes (1982:72), Garnsey (1988:91 n.6), Gallant (1991:104); higher socio-economic status reduces dependence on cereals (Foxhall, 2007:87).
[14] Jardé (1925:142-3). *cf.* Garnsey (1988:91) and Moreno (2007a:10, Table 1).
[15] Osborne (1987:46). Garnsey (1988:91-2). Osborne (1995:32) suggests that *c.*20% of Attika was under grain, and accepts biennial fallow; *cf.* Moreno (2007a:5, 7).
[16] As per Moreno (2007a:10, Table 1).
[17] As per Osborne (1987, esp. 46), Garnsey (1988, esp. 104).
[18] Moreno (2007a:32-3).
[19] Moreno (2007a).

gradient.[20] At 35% of Attika's total territory, this sits among the higher estimates,[21] and excludes terracing which may have considerably expanded cultivation.[22] But this survey highlights an important nuance: despite larger fertile plains in the north and some coastal areas,[23] Attika's farmland was disjointed, hemmed in by mountains and rocky outcrops (Map 1.1).[24] Some demes, including Phyle,[25] lacked agricultural land altogether. This distribution indicates a high proportion of marginal land inappropriate for grain production,[26] and presupposes patterns of smallholding unconducive to large surpluses.[27] Given the likely prevalence of biennial fallow (*cf.* Hes. *Op.* 464; Hom. *Il.* 10.351-3, 13.702-4, 18.541-2; Xen. *Oik.* 16.10-15),[28] up to half of this total was unfarmed in any given year.

Another marginal refinement accounts for 'post-harvest loss'. Inefficiencies in the post-harvest handling and storage of grain significantly reduced the output of pre-industrial states. Even today, in developing countries, this loss can range from 15-50%.[29] In cereal-farming, these losses derive from mishandling, pests, spoilage, and inefficiencies in processing; modern sub-Saharan Africa sees an average post-harvest loss of 20.5%.[30]

[20] Fachard (2013, 2016:207).
[21] e.g., Garnsey (1988:81-2), Moreno (2007a:13).
[22] While aerial photography reveals traces of extensive terracing, up to 30km^2 (Moreno, 2007a:56), it is inconceivable that most smallholders could expend the labour required for such projects (*cf.* Jameson, 2002:65). Archaeological and ethnographic comparanda indicate that terraces usually shored up existing farmland, rather than extending the cultivable area (van Andel and Runnels, 1987:147; *cf.* Moreno, 2007a:56), with high labour-costs making it more viable for cash-crops than staples (van Andel and Runnels, 1987:147-9). Regardless, it is impossible to accurately assess the impact of terracing in Attika (Fachard, 2016:207).
[23] Importantly, these plains also contained settlements and, in the case of Eleusis, a large area of sacred land which it was taboo to cultivate (Papazarkadas, 2011:11-12, 251; *cf.* Thuc. 1.139.1, *I.Eleusis* 144).
[24] Bissa (2009:154). *cf.* Osborne (1985a:38), who proposes (*ibid.*:62-3) that this landscape may have been advantageous to farmers.
[25] Fachard (2016:209).
[26] *cf.* Whitby (1998:100-1, 103).
[27] Jameson (1977:131), Gallant (1991:82-6), Sallares (1991:101), Feen (1996:453).
[28] Michell (1940:53-4), Osborne (1987:41), Isager and Skydsgaard (1995:161), Moreno (2007a:23-4). Garnsey's (1988:93-4) argument that manuring and crop-rotation substituted for fallow seems impractical (*cf.* Moreno, 2007a:15-24). Nonetheless, since fallow negotiates a 'trade-off between long- and short-term productivity' (Moreno, 2007a:14), it relies on a landowner's concern for the future productivity of his soil. Hence, fallow was stipulated in leases, since it was disadvantageous to short-term tenants.
[29] FAO (2011:6, fig.3).
[30] Mezgebe *et al.* (2016:46, Table 1).

Map 1.1 | The Approximate Cultivable Area of Attika



Map not to Scale
Source: after Fachard (2013).

Similarly, the inefficiency of ancient mills reduced the calorific value of grains.[31] Demosthenes' assertion of 800,000 *medimnoi*-worth of annual imports must, then, represent a normal year,[32] indicating that most of Athens' population (perhaps two-thirds) was sustained from foreign grain.

1.2 | Egyptian Productive Capacity

Egypt's vast agrarian wealth was well-known in Antiquity. Homer considered her incalculably rich (*Il.* 9.346, 381-5; *Od.* 3.253), with Egyptian Thebes the wealthiest city yet

[31] Foxhall and Forbes (1982:46-7). Nevertheless, microscopic study of Egyptian bread-samples demonstrates surprising efficiency (Samuel, 1996:488).
[32] Moreno (2007a:32-3 with n.185), Bissa (2009:177).

known (*Od.* 4.125). This impression was persistent (e.g., Pind. *Pyth.* 4.56;[33] Hdt. 3.91.2-3; *cf.* Ap. Rhod. *Arg.* 267-71; Theok 17.95-114). In Aeschylus, the Nile was the 'feeder of many' (πολυθρέμμων: *Pers.* 33), and for Herodotos, Egypt was the 'gift of the river' (δῶρον τοῦ ποταμοῦ: 2.5.1).[34] Isokrates extolled the many benefits that the Nile bestowed on the Egyptians (10.13), confirming Herodotos' emphasis on the ease with which Egyptians produced surpluses (2.14.2). Following Alexander's conquest, however, Egypt's agricultural output increased markedly. We must, therefore, chronologically chart the scale of Egypt's surpluses to determine the ease with which she could meet the needs of her grain-poor neighbours.

1.2.1 | *Egypt's Hydro-Agricultural Regime*

The Egyptians knew their land as *km.t* ('the Black Land', Greek Χημία: [Plut.] *de Iside*. 364c),[35] referring to the thick, dark-coloured silt deposited upon the Nile's banks by the annual inundation (*cf.* Hdt. 2.12.2). This alluvial soil is swept by the current from the fertile Ethiopian highlands[36] (as Herodotos concluded: 2.12.2) following the monsoon rains, impregnated with organic matter: while the average organic carbon and nitrogen contents of the Nile's alluvial soil is low (0.9% carbon and 0.06% nitrogen in Sudan,[37] 1.0% carbon and 0.1% nitrogen in the Delta[38]), there are localised pools of up to 2.2% carbon and 0.17% nitrogen[39] comparable with the soils of central and northern Europe, and the most fertile soils of mainland Greece.[40] The levels of other nutrients, especially

[33] Pindar here conflates Egypt and Cyrenaica as the single domain of Zeus-Ammon 'by the Nile' (Νείλοιο): Morrison (2010:773).
[34] The phrase probably predates Herodotos, having been coined by Hekataios (Arr. *Anab.* 5.6.5); *cf.* Gwyn-Griffiths (1966).
[35] Gardiner (1957:611), LSJ *s.v.* Χημία.
[36] Hassan (2007:101).
[37] Buursnik (1971:185).
[38] Elbasiouny *et al.* (2014:73 table 1).
[39] *ibid.*
[40] Zdruli *et al.* (2004:10-12).

phosphorus, potassium and metallic elements, are comparatively high;[41] resultantly, Egypt's soils are among the Mediterranean's most productive. While we lack quantitative evidence for the fertility of Egyptian soils in antiquity, the number of ancient anecdotes attesting to Egypt's immense agricultural productivity (Hom. *Od.* 4.229-233, 14.258-268, Bacch. Fr. 20B 14-16 [*apud.* Ath. *Diep.* 2.39e-f], Theok. 17.77-80; Plin. *HN.* 18.10)[42] reinforce this view.

But Egypt's remarkable agrarian wealth was not constant:[43] a low Nile – caused by a deficit of monsoon rains – meant famine, while excessively high floods destroyed embankments and irrigation systems, and risked damaging homes and granaries. The inability to predict the outcome of the floods promoted paranoia among Egypt's leaders, reflected in ancient 'advice texts' (e.g., *P.Millingen* M 2.11; *P.St-Petersburg* 1116A 87). A bad flood called into question Pharaoh's moral fortitude and physical (or sexual) potency, expressed through his ability to balance the competing forces of 'order' (*m3ʿt*) and 'chaos' (*izf.t*).[44] Thus, it was for both sacred and practical reasons that the Egyptians fastidiously recorded the depth of the floodwaters, and the scattered extant data provides an invaluable indication of Egypt's productivity. Measurements were taken at the Nilometers associated with riverside temples along the Nile's course. While we know of Nilometers both at Memphis (Diod. 1.36.11; Heliod. *Aethiop.* 9.22.3) and in the Delta,[45] the primary extant examples are in Upper Egypt, at Karnak, Edfu and Elephantine.[46] These three sites preserve several inscriptions memorializing the Nile's maximum depth during the inundation. Representing the dateable tenth- to seventh-century BC records from Karnak

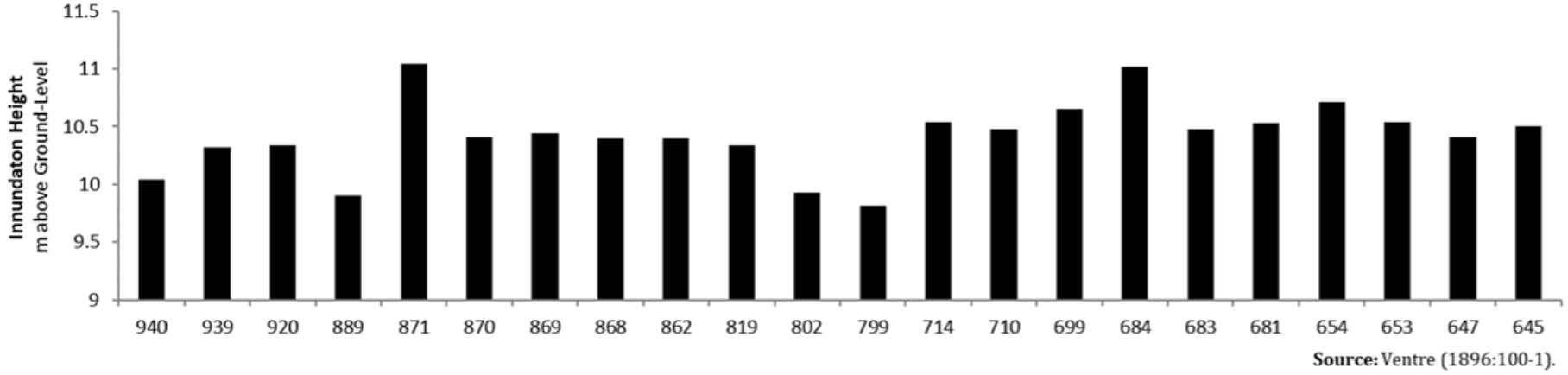
[41] Kishk (1990:204, 206-7 table 3), FAO (2005:3).
[42] On Greek responses to Egyptian wealth, *cf.* Lloyd (2010a).
[43] *cf.* Eyre (2010:291), and especially Hassan (2007).
[44] Ferguson (2016:46-7); on the similarities between the *m3ʿt-izf.t* duality and that of *km.t* (the floodplain) and *dsr.t* (the desert), *cf.* te Velde (1977:111-13).
[45] Lutz (1923:49).
[46] The most significant are surveyed in Borchard (1906). On their construction and use, *cf.* Bonneau (1986).

graphically (Chart 1.1) gives an impression of low variability in the Nile's height over extended periods, and, where consecutive years survive (940-39BC, 870-68BC, 684-3BC, 654-3BC), low interannual variation. In fact, of the records surviving from Karnak (including those without a conclusive date), the entire range is only 1.83m.[47] This impression is reinforced by later data: flood-levels taken between AD600 and AD1800 suggest that significant variation occurred on a multi-decadal, rather than interannual, scale.[48]

To interpret this data, we must establish the minimum flood-depth required to sustain agriculture. Inscriptions from a shrine of Senusret I (1971BC–1928BC) suggest that a flood of 21.5 *mḥ nswt* (11.30m) at Elephantine, 12.5 *mḥ nswt* (6.60m) at Memphis, and 6.5 *mḥ nswt* (3.40m) in the Delta, represented a 'good' Nile,[49] undermining Herodotos' assertion that a rise of 8 πήχεις (3.44m) nine centuries before his visit (Hdt. 2.13.1) was sufficient.[50] He goes on, however, to record that, in his day, the inundation failed if it rose short of 15 or 16 πήχεις (6.85-7.31m). These figures find agreement in Pliny (*HN* 5.10), who reports that 14 cubits avoided famine, 15 cubits ensured security, and 16 cubits brought about rejoicing.[51] Both authors probably refer to the area around Memphis, given the importance of the Nilometer there (Diod. 1.36.11), and the similarity to the figures recorded at Cairo in the nineteenth century AD (Chart 1.2). Over time, however, the height of the Nile flood increased, as sedimentation raised the riverbanks. Thus, between AD930 and AD1300, a flood of 16 cubits was insufficient, resulting in price rises and famine.[52]

[47] *cf.* Ventre (1896:100-1).
[48] Hassan (2007:103 Table 1); *cf.* de Putter *et al.* (1998:3193 fig. 1).
[49] Kees (1961:50), Bell (1975:226), Bonneau (1986:68).
[50] It is possible that Herodotos conflated the reign of Moeris – a pharaoh who seems to amalgamate various Middle Kingdom kings – with a period of the even more distant past: Bell (1970) demonstrates that the alluvial plane rose throughout Egyptian history, with the earliest records attesting floods of 1.00 and 4.00m.
[51] Pliny's figures held wider currency; the 'Vatican Nile' (Mus. Vat. 2300), a large marble depicting Neilos reclining, is surrounded by sixteen *pecheis* (cubit-high children) emphasizing the plenty the inundation bestowed on Egypt's Roman conquerors (*cf.* Plin. *HN.* 36.56; Swetnam-Burland, 2009:449-50, 453).
[52] Hassan (2007:104).

Chart 1.1 | Dateable Maximum Nilometer Readings at Karnak, *c.* 940BC – *c.* 640BC



Source: Ventre (1896:100-1).

Chart 1.2 | Maximum Nilometer Readings at Rhoda Island (Cairo), AD1850 – AD1870



Source: Lyons (1905: 398, Table 12).

1.2.2 | *Quantifying the 'Black Land'*

The amount of land actually cultivated in Egypt is a contentious problem, but one that has suffered from a dearth of scholarly attention. Customarily, studies of Egyptian agriculture simply repeat the estimate from the AD1882 census that approximately 25,000km^2 of land was cultivated, out of a theoretical total of 30,000km^2.[53] This has been substantiated by a Ptolemaic inscription from Edfu, which assesses Egypt's agricultural land at nine million *arourae* (*c.*24,800km^2: *Edfou* VI.199-201) out of a total of 18,000,000 (*c.*49,600km^2).[54] The credibility of this figure is debated; while this assessment is unlikely to be entirely fanciful,[55] uncritical acceptance on the grounds of similarity to the AD1882 data[56] is not desirable either. The context of the inscription, a '*nome* list', makes it unclear whether it lists all of Egypt's farmland, including private landholdings, presumably derived from tax receipts,[57] or lists only temple or royal land. Additionally, the figure of nine million *arourae* invites suspicion not simply because it is a conveniently round number.[58] The number nine holds special significance at Edfu, and in Egyptian religion generally. Enneads, groups of nine gods, appear frequently throughout the temple's decorative scheme,[59] while the Egyptian word for 'million' (*ḥḥ*) could be used to refer to an incalculably large number[60] (similarly, *cf.* the Greek μῡρῐάς[61]), and provided the etymological root of the name of Heh, the god of infinity and eternity.[62] Thus nine million

[53] *cf.* Butzer (1976:82), Rathbone (1990:107).
[54] Butzer (1976:92), Bowman (2009:181).
[55] As per Scheidel (2001:220).
[56] See e.g., Butzer (1976:82, 92), Manning (2003a:49 n. 129).
[57] *ibid.*
[58] The inscription is peppered with round numbers that are exact multiples of one another: e.g.,18,000,000 *arourae* for the whole country (*cf.* Priskin, 2014:27).
[59] While gods were grouped in numbers other than nine (including at Edfu: Gaber, 2009:104; *cf.* te Velde, 1971:82-3), the Egyptian word for such groups, *psḏt* (e.g., *Edfou* IV.13.13; *cf.* Alliot, 1949:46 and Gaber, 2009:31), still refers to a grouping of nine (Gardiner, 1957:566).
[60] Gardiner (1957:582).
[61] *cf.* LSJ *s.v.* μῡρῐάς.
[62] Barta (1992:10).

arourae likely represents a traditional figure emphasizing the boundlessness of Pharaoh's Kingdom.

Importantly, this figure refers to a singular moment in time, and one which is rather late in our period (c.221BC-c.204BC). It, therefore, comes after a period of significant change in Egypt's productive landscape; large areas of marshland, particularly in the Fayyum and Delta, were cleared in the Ptolemaic period, at an unprecedented rate (*cf*. *P.Petr.* III 43 [c.245BC]). Additionally, Egypt's agricultural landscape was inherently dynamic; in the absence of perennial irrigation, the height of the Nile flood determined the viability of landholdings for an entire agricultural cycle, occasionally rendering marginal land fertile, and sometimes reducing the productivity of otherwise prime farmland. It is impossible to precisely determine the scale of the diachronic change in the quantity of arable land in our period, but two important factors merit consideration: the contrasting effects of urbanization and artificial expansion of Egypt's cultivable area.

URBAN EXPANSION

Even today, the Nile valley is the only part of Egypt which is habitable, with 99% of her population crammed into 4.5% of her total land area.[63] As a result, patterns of settlement have an important impact on the amount of arable available in Egypt; the amount of agricultural land in Egypt actually declined between AD1821 and AD2001, despite increasing desert irrigation, thanks to urbanization in the Nile Valley and Delta.[64] Our period similarly saw increased urban development. The foundation of Naukratis in the Delta, the movement of the capital to Saïs and the growth of cities including Memphis and

[63] Ibrahim and Ibrahim (2003:30).
[64] *ibid*. In the coastal Nile Delta, 15% of farmland (965km^2) disappeared between 1990 and 2014 (Ali and el-Magd, 2016:4).

Thebes, which might have reached 50,000 people early in the Ptolemaic period,[65] all increased the urban area at the expense of arable land. This process accelerated under Alexander and the Ptolemies: towns and cities on the Greek model were founded throughout Egypt, especially Alexandria, home to half a million during its zenith, and Ptolemais, whose population eclipsed that of Memphis by the first century BC (Strab. 17.1.42). While the scale of Greek immigration has probably been consistently overestimated in the modern scholarship,[66] the newfound taste for urban life on the Hellenic model fundamentally changed even native cities and their hinterlands.[67]

EXTENDING THE CULTIVABLE LAND

Yet, this urban development ran alongside schemes to increase Egypt's cultivable area. Archaeology in the Fayyum demonstrates the success of Ptolemaic land-reclamation and marsh-drainage schemes; from the reign of Ptolemy I Soter, barrages at the inflow of Lake Moeris starved it of water, reducing its size and leaving in its place rich sediment. This almost trebled the agrarian area from *c.*450km^2 to *c.*1,200km^2 (Map 1.2).[68] But the Fayyum is unique in Egypt both for the ease with which land could be reclaimed, and for its suitedness to perennial irrigation. Elsewhere, the success of Ptolemaic land-reclamation schemes is less easily ascertained. The amount of cultivable land in the Nile Delta certainly increased early in the Ptolemaic Period, largely due to marsh draining. Marshes were synonymous with the Delta in both the Greek and Egyptian imagination: for Egyptians, the toponym for the north Delta was *t3 mḥt*, literally 'the marshes',[69] while Thucydides referred to Amenirdsu (I) – a native of the Delta – as the 'King in the Marshes' (τοῦ ἐν τοῖς ἕλεσι

[65] Manning (2003a:36-7).
[66] Rathbone (1990:112-13), Fischer-Bovet (2007:2), §1.2.4.
[67] Davoli (2010).
[68] Rathbone (1990:111).
[69] Wallis-Budge (1920:1050). Similarly, the demonym 'Marshman' (*iḏḥy*) was used for Delta-dwellers, including by Thucydides (οἱ ἕλειοι: 1.110.2).

Map 1.2 | The Varying Extent of Lake Moeris (Birket Qarun), the Fayyum Oasis



Source: after Hassan *et al.* (2006: 39).

The Modern Birket Qarun (-45m elevation)

Lake Moeris, *c.*246BC (-5m elevation)

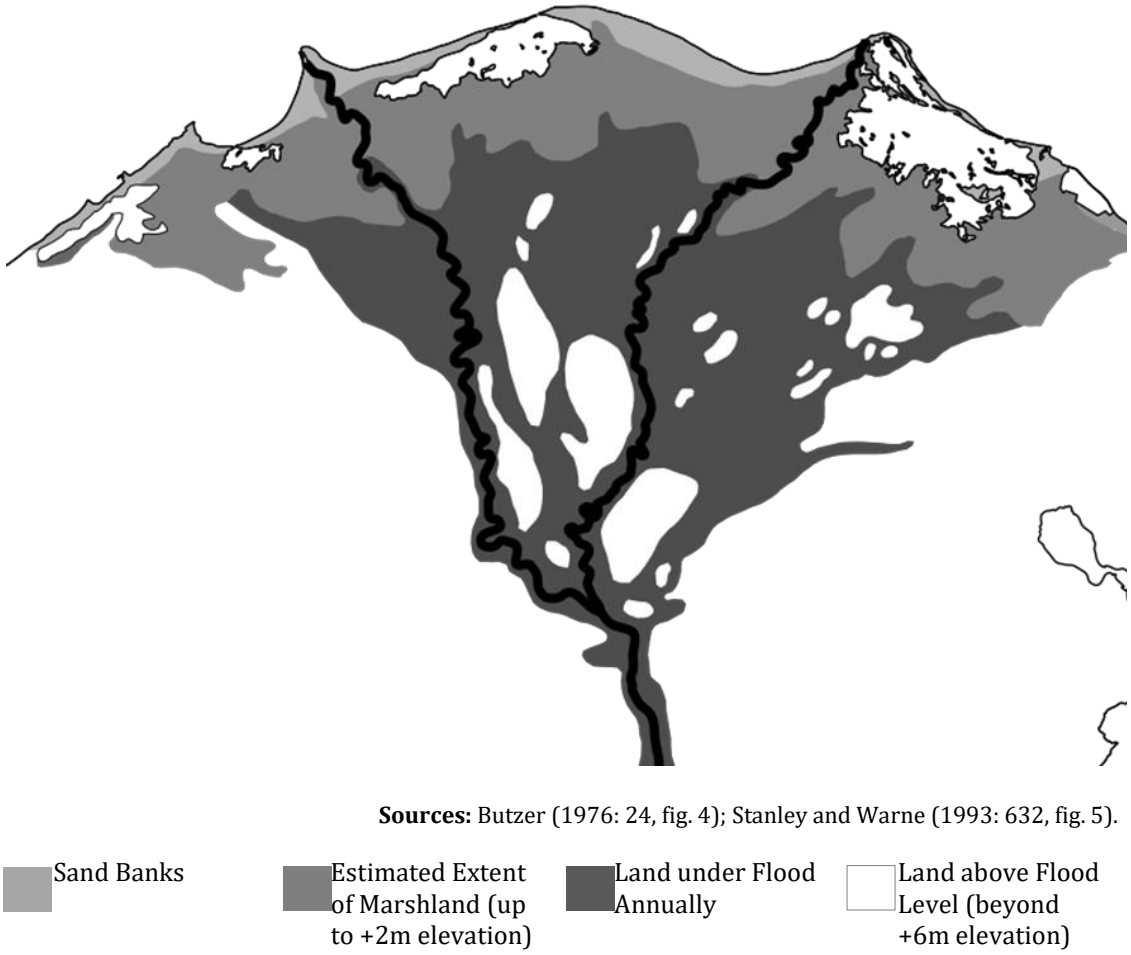
Lake Moeris *c.*500BC (+10m elevation)

βασιλέως; Thuc. 1.110.2). Similarly, Herodotos consistently calls the Delta 'the Marshlands' (τὰ ἕλεα; Hdt. 2.92.1, 137.2, 140.1, 152.4). Archaeology reinforces that marshes were the Delta's predominant topographic feature: the distribution of pre-Ptolemaic sites, and the evidence of bore-hole samples, suggest that marshland covered approximately the northern third of the Delta (around 4,800km^2;[70] Map 1.3), down to the 2m contour,[71] but receded between 550BC to AD450.

The greatest impact on Delta agriculture was made not by reclaiming marshlands, but by extending perennial irrigation to those areas too high for floodwaters to ordinarily

[70] According to the estimated size of the ancient Delta provided by Butzer (1976:83), and accepted by Bowman (2009:180-1) and Monson (2012:33).
[71] Butzer (1976:22).

Map 1.3 | The Extent of Cultivable and Uncultivable Land in the Nile Delta, *c.*500BC



Sources: Butzer (1976: 24, fig. 4); Stanley and Warne (1993: 632, fig. 5).

reach (indicated in white on Map 1.3), using artificial water-raising devices, including the *saqiya* (waterwheel)[72] and Archimedean Screw (Diod. 1.34.2). Estimating the extent of land irrigated by such means is difficult, but fossilized remnants of these processes may be found in the salinated wastelands which occupied approximately 4,856km^2 of the Delta during the irrigation survey of AD 1886.[73] The primary cause of salination in Egypt is unmaintained artificial irrigation, which allows the river-water to stagnate, leaching salt from the soil before evaporating, leaving a salt-crust which cannot be flushed by fresh water. These wastelands are probably the remains of basins irrigated in antiquity but abandoned following the Arab conquest, a supposition supported both by borehole data[74]

[72] Butzer (1976:82, 91).
[73] Willcocks (1913:450).
[74] e.g., Pennington *et al.* (2017)

and local traditions recorded in the nineteenth century AD.[75] Adding this to marshland, up to 40% of the early-modern Delta (6,944km^2) may have been uncultivated at Ptolemy I Soter's ascension, leaving approximately 10,416km^2 of arable land (compared to the 12,545km^2 cultivated in AD 1886).[76] Ptolemaic irrigation likely added a majority of the 4,856km^2 of wasteland to the total. Presuming some marsh reclamation, we might conservatively suggest that 3,000km^2 of cultivable land was added to the Delta across the Ptolemaic period, leaving a rough figure of 13,468km^2.

The Proportion of Land Under Grain

Our information about land-use in Egypt is late and patchy. Most is specific to the unique agricultural conditions of the Fayyum,[77] derived from the rents on royal land. From these, we learn that in the Arsinoite Nome in 235BC, 90% of land was given over to three kinds of grain (durum [74%], emmer [2%], and barley [14%]),[78] with similar proportions on royal land in the Hermopolite Nome in the second century (74% durum, 8% emmer and 10% barley),[79] with the remainder in both cases given over to vetch, lentils, grazing and cash crops. Our only global assessment of Egyptian land-use is offered by the idealized image presented in the Edfu Temple text, which lists 'all the fields with barley and wheat for sustenance: 9,000,000 [*arourae*]' (*ȝḫ(.t) st̲ȝ.t šȝ nb n <it> bd.t n <ꜥnḫ> 9,000,000*: *Edfou* VI.199-201), half of the total reported farmland. Given the problems with this text (§1.2.2), a number close to the figures from the Fayyum, perhaps 80%, seems reasonable.[80]

[75] Willcocks (1913:453-4).
[76] *ibid*: 408 table 187A.
[77] In the Fayyum, less than 50% of land was privately owned, compared to *c.*80% in the Nile Valley during the Roman Period (Monson, 2007:18). The preponderance of *kleruchies* may have been a revenue-raising measure (Rowlandson, 1985:329-30).
[78] Monson (2012:23, fig. 3).
[79] *ibid.* fig. 4.
[80] As per Bowman (2009:188-9).

The limiting factors identified in our analysis of the Attic grain deficit – biennial fallow, lack of contiguous land, marginality of land – were largely absent in the Egyptian case due to perennial irrigation and the restorative powers of the flood. It is only in the artificially drained areas populated by *kleruchs* that fallow at least may have featured.[81] Variable floods might drastically change the picture, however, if we assume that floodwaters reached 9.00m elevation in the Nile Valley and 6.50m elevation in Lower Egypt in an average year, then we may accept the AD1886 figure of 9,109km^2 of cultivated land and 493km^2 of marginal land[82] as broadly correct[83] for the Nile Valley. This gives us a conservative pre-Ptolemaic total of 19.975km^2 including the Fayyum and Delta, and an equally conservative Hellenistic total of 23,777km^2, an increase of 19%.[84] Assuming that 20% of this land was occupied by non-cereal agriculture, we have totals of 15,980km^2 before Alexander and 19,021km^2 after Ptolemy II under grain.

1.2.3 | *Crop Yields*

The Nile's nutrient-rich alluvial soil (§1.2.1) ensured that crop yields were consistently high throughout antiquity. This is despite landholding practices in Egypt, as in Athens, being unconducive to the long-term productivity of the land, at least at the start of our period. The papyrus archive from Hermonthis, dated 664BC-497BC, reveals that the tenancy agreements of sharecroppers on temple land were fluid, with land remaining for as little as three years in one family (*P.Torino* 246, 244, 247 and 248, all dealing with the same plot).[85] In practice, however, this regime hardly impacted yields since the flood replenished the soil annually; long-term strategies for productivity prevalent elsewhere,

[81] Murray (2000:516). Accidental fallow is also attested.
[82] Willcocks (1913:408 table 187A).
[83] On the continuity of conditions in the Nile Valley, *cf.* Butzer (1976:80).
[84] This increase is larger than proposed by Butzer (1976:82) of 10-15%, but deals with smaller totals overall.
[85] For translation and commentary, *cf.* Griffith (1909).

such as fallow and crop-rotation, were only required on marginal land if at all (§1.2.2). We have comparatively good evidence for Egyptian grain yields, thanks to the common assumption in tax-assessments that 1 *ḫ3r* (48.20kg) of seed should produce 10 *ḫ3r* (482.04kg) of wheat.[86] Roman records from Oxyrhynchus attest that yields of 1:10 (1,000 kg/ha) were still assumed five centuries later.[87] While this yield might seem high,[88] it is of the same order of magnitude as the 1:8 and 1:10 yields recorded by Cicero as exceptionally good (but feasible) yields for rain-fed Sicily (*Verr.* 2.3.112).[89]

1.2.4 | *Population*

Until relatively recently, discussions of Ancient Egyptian population have accepted almost uncritically the only two extant figures from our ancient sources:[90] 7,500,000 excluding Alexandria in Josephus (*BJ.* 2.385), and either 7,000,000 or 3,000,000 in Diodorus (1.31.6-9). The larger figure has been accepted since Josephus quotes taxation (εἰσφορά) records, to which he, as a visitor to Alexandria in Vespasian's entourage, is posited to have had special access (Jos. *Vit.* 415).[91] Josephus is presumed to refer to the Poll Tax (λαογραφία),[92] which were probably linked to census-taking,[93] perhaps funding the census.[94] Yet, it is unclear whether the collection and recording of the Poll Tax was conducive to accurate data collection,[95] while the many exemptions (e.g., of priests)[96] and

[86] Eyre (2010:293); *cf.* Eyre (1994:130).
[87] Rathbone (1991:242-3), Kehoe (2010:311); *cf.* Rowlandson (1996:251).
[88] Bowman (1986:18) is more optimistic, describing it as 'on the low side'.
[89] Moreno (2007a:26).
[90] e.g., Wałek-Czernecki (1937), Jones (1964:1040), Finley (1973:31); Lo Cascio (1999) argues for their veracity.
[91] Rathbone (1990:105) disputes this. Bowman (1986:17) argues that, since he calculates Egypt's carrying capacity at 8,000,000 persons, Josephus' figure is plausible.
[92] Note that an alternative manuscript tradition (*Cod.Par.Graec.* 1425 [MS P]) gives συνεισφορά ('contributions', *cf.* LSJ *sv.* συνεισφορά), whose meaning is closer to the Ptolemaic usage of σύνταξις for the Poll Tax (Wallace, 1938:123; Evans, 1957:260). On these terms, *cf.* Kraus (2004:39-40).
[93] The term also refers to a census or enrolment (LSJ *sv.* λᾱογρᾰφία).
[94] Evans (1957:259-260).
[95] *cf.* Russell (1966:70).
[96] Evans (1957:263-5).

the low reporting rates in pre-modern censuses undermine the plausibility of higher totals. Instead, Josephus probably took a traditional figure for Egyptian population, inserting it into Herod Agrippa II's speech dissuading the Jews from revolution to exaggerate the impression of Roman manpower in the region (*cf.* Diod. 33.28b).

That figures in the region of seven million represent a conventional estimate of Egypt's population is shown by the frequency of their repetition. Diodorus' seven million for the past population of Egypt perhaps derives from an older tradition, given his claim that it originates in the 'sacred records' (ἐν ταῖς ἱεραῖς ἀναγραφαῖς: 1.31.7). Additionally, this number – and Diodorus' accompanying suggestion that there were 33,000 villages in Egypt – are paralleled in Porphyry (*Quaest. Hom. Il.* 9.383 [= *FrGrHist.* 264 F19a]) and Stephanus (*sv.* Διόσπολις [= *FrGrHist.* 264 F19b]).[97] Taken alongside his significantly lower figure for his day, Diodorus' estimates may represent a local Egyptian tradition which maximized the prosperity and population of pre-Persian Egypt, and exaggerated her decline under foreign rule (*cf.* Hdt. 2.177.1).[98]

In the absence of reliable ancient figures, we must find alternative methods for calculating Egypt's population across our period. Three methods prevail in the scholarship: calculating population based on Egypt's carrying capacity;[99] factoring up the sizes of local populations for which we have better evidence;[100] and deriving estimates from later Mediaeval and Arabic populations.[101] The former method is logically problematic for us: estimates based on carrying capacity give a maximum conceivable population, presuming equilibrium between food production and consumption in Egypt. The evidence for large-

[97] Rathbone (1990:104-5).
[98] *ibid*: 106.
[99] As per Butzer (1976:92); Bowman achieves his maximum conceivable population of 8,000,000 persons (1.5 million families) through this method (1986:17-18).
[100] Rathbone (1990); Clarysse and Thompson (2006); using primarily urban population, *cf.* Russell (1958).
[101] Scheidel (2001).

scale surpluses identified below indicates that this was not the case, with production significantly outstripping consumption.

Thus, we are left with the latter two methods. It is, naturally, problematic to presume a relationship between parts of a population and the whole without an accurate average for population density, especially for Egypt, where we know significantly more about atypical populations in the Fayyum (and, to an extent, Delta) than we do about the Nile Valley. Nevertheless, this method predominates in modern scholarship, and, guided by Mediaeval and nineteenth-century AD populations, provides us with our best maxima and minima for Egypt's ancient population. This is not to say that later estimates are unproblematic: the Arab suggestion that, on conquering Egypt (by AD642), they found fourteen or fifteen million inhabitants[102] must be exaggeration. Clearly from its Roman (or perhaps Byzantine) apogee, Egypt's population declined.[103] By AD1798, Napoleon's savants estimated a population of 2,488,950,[104] derived from multiplying local data by the number of towns, and then adding Cairo's population (problematically presuming the same population-density as Paris).[105] The first modern Egyptian census, in AD1846, recorded 4,476,440 people during a period of increasing population.[106] It seems likely that, early in the nineteenth century AD, a figure between these two – somewhere close to Diodorus' 3,000,000 estimate – is close to the truth.

With these figures as a guide, we may now tackle some of the estimates modern scholars have derived from sample population densities for the better-recorded nomes of Lower Egypt. However, we must first highlight the atypicality of these regions. Little may be said about the Delta; it is presumed from the evidence of settlement distribution that

[102] Azmi (1937:268), McCarthy (1976:1); *cf.* Jomard (1829:168-80).
[103] Butzer (1976:92), McCarthy (1976:1), Russell (1966:72).
[104] Jomard (1829:109-11).
[105] Azmi (1934:43), Russell (1966:70).
[106] McCarthy (1976:17).

Table 1.1 | Estimates of Egyptian Population

	Cultivable Land	Est. Population Density (persons/km²)			Total Pop. Estimate
		Nile Valley	Fayyum	Delta	
		PHARAONIC PERIOD			
Bowman (1986)	25,000km²	*Average of 120 persons/km²*			3,000,000
Butzer (1976)	22,400km²	180	180	90	2,900,000
		PTOLEMAIC PERIOD			
Butzer (1976)	27,300km²	240	240	135	4,900,000
Clarysse (2003)	25,000km²	*Average of 112 persons/km²*			2,800,000
Clarysse and Thompson (2006)	25,000km²	*Average of 60 persons/km²*			1,500,000
		ROMAN PERIOD			
Bagnall and Frier (1994)	25,000km²	*Average of 120 – 200 persons/km²*			3,000,000 – 5,000,000
Bowman (1986)	25,000km²	*Average of 300 persons/km²*			7,500,000
Krüger (1990)	25,000km²	*Average of 252 – 272 persons/km²*			6,300,000 – 6,800,000
Lo Cascio (1999)	25,000km²	*Rural average of 120 – 200 persons/km² + Urban Pop. of at least 3,000,000*			6,000,000 – 8,000,000
Rathbone (1990)	25,000km²	*Average of 120 persons/km²*			3,000,000
Russell (1966)	24,600km²	*Average of 183 persons/km²*			4,500,000
Scheidel (2007)	30,000km²	*Average of 167 – 200 persons/km²*			5,000,000 – 6,000,000

the Delta was more sparsely populated than the Nile valley, but that it nevertheless increased throughout the Ptolemaic Period[107] to a density in the Roman Period of around 100 persons/km².[108] The situation in the Fayyum is clearer. As demonstrated above (§1.2.2), the oasis underwent rapid and large-scale development during the Graeco-Roman

[107] *cf.* Butzer (1976:95-6) with Rathbone (1990:109); see also, above, §1.2.2.
[108] Rathbone (1990:109)

Period, thanks to the distribution of *kleruchies* to a predominantly Greek population. This settlement pattern, unique in Egypt, resulted in a relatively even spread of population. For those villages boasting relatively good documentary evidence, in the Arsinoite Nome, we find densities of *c.*92 persons/km^2 in our period (for Kerkeosiris, *c.*118BC), to 120 persons/km^2 (for Philadelphia, around the mid-first century AD) or 124 persons/km^2 (for Theadelphia, mid-second century AD) under the Romans.[109] The important question is whether, as has been argued,[110] this density can be considered close to the average for Egypt as a whole.

Certainly, the population density of Egypt varied widely, particularly in the Nile Valley, where conditions are considerably more heterogeneous than in the Delta or Fayyum. The little documentary evidence surviving from Upper Egypt indicates populations sometimes matching, or even exceeding, the densities recorded for the Fayyum. Comparing the sizes of landholdings in Hermonthis (modern Armant, 12 miles south of Luxor) during the seventh century BC (*P.Torino* 244, 246, 247, 248; *P.Louvre* E7858, E3231A) and in the Fayyum towns of Kahun and Gurob in the mid-third century BC (*P.Petrie* III 98), reveals similarly-sized plots, in the range of 8 to 40 *arourae*. But Hermonthis was a fairly large town with a significant hinterland at its disposal. Elsewhere, where the floodplain was more restricted (e.g., around Heliopolis or Edfu), populations were presumably denser still. Nevertheless, without better data, presuming a similar density for the Valley and the Fayyum appears the safest route. Tabulated above (Table 1.1) are the range of ancient population estimates derived from presumed population densities. Butzer's estimate for the late-Pharaonic period, reached by working back from Josephus' 7,000,000, implies densities far greater than the papyrological data permits; I, therefore, incline towards Rathbone's 120 persons/km^2, a figure much lower than for

[109] *ibid*:108-9; *cf.* Clarysse and Thompson (2006).
[110] Rathbone (1990:109).

other highly urbanized and densely populated regions in antiquity (e.g.,140 persons/km^2 for Attika at the outbreak of the Peloponnesian War[111]), but higher than more sparsely populated territories (e.g.,*c.*47 persons/km2 in Italy around 25BC[112]) due to the concentration of Egypt's population along the Nile. However, even this should be revised down since Rathbone relies on Roman data. We shall tentatively propose an average population density of 100-130 persons/km^2 for the Hellenistic, and 80-110 persons/km2 for the Saïte/Persian Period (implying growth of 0.20% *per annum*).[113] This method remains problematic, masking the impact of variables including migration, which led to a statistically significant influx of Greeks and Macedonians in Alexander's wake. Given our totals for cultivable land given above, the following population estimates can be reached:

Table 1.2 | Revised Population Estimates

	Cultivable Land	**Est. Population Density (persons/km^2)**			**Total Pop. Estimate**
		Nile Valley	**Fayyum**	**Delta**	
		LATE PHARAONIC PERIOD			
Low	19,975km^2	*Average of 90 persons/km^2*			1,797,750
High	19,975km^2	*Average of 110 persons/km^2*			2,192,250
		EARLY PTOLEMAIC PERIOD			
Low	23,777km^2	*Average of 100 persons/km^2*			2,377,700
High	23,777km^2	*Average of 120 persons/km^2*			2,853,240

[111] Using Moreno's (2007a:11, 31) figure of 337,000 people inhabiting 2,400km^2. This dropped, perhaps to 80 persons/km^2, in the fourth century BC (Scheidel, 2007:46, Map 3.1; Moreno's [2007a:11, 30] figures of 205,000 people in 2,400km^2 gives a density of 85 persons/km^2).
[112] Lo Cascio (1999:170).
[113] A relatively modest rate in line with other pre-industrial growth figures: Scheidel (2003:122).

1.2.5 | *Consumption*

Reliable estimates suggest that 65%-75% of ancient calorific requirements were met by grains,[114] with a slightly higher or lower proportion depending on affluence and status.[115] Ancient populations were generally younger,[116] and considerably more active, than in modern advanced economies. For most people, carbohydrates often substituted for proteins;[117] resultantly, subsistence calorific intake was considerably higher than for moderns, closer to what nutritionists assign for 'very active' individuals.[118] We may therefore estimate 15,495kcal/day subsistence intake for a model ancient family (Table 1.3), a figure around 237kg of wheat annually.

Table 1.3 | Calorific Intake of Model Ancient Family

	Weight	**Age Range**	**Activity**	**Subsistence calorific intake**[119]
Adult female	52kg	60-69	'very active'	1,974kcal/day
Adult male	62kg	20-39	'very active'	3,337kcal/day
Adult female	52kg	20-39	'very active'	2,434kcal/day
Female child		10-12		2,350kcal/day
Child		7-9		2,190kcal/day
			TOTAL	15,495kcal/day

Source: Foxhall and Forbes (1982:49, n.6).

Due to the circumstances of preservation in the Nile Valley, and the Egyptian habit of artificially preserving the dead, various chemical analyses of human remains have

[114] Horden and Purcell (2000:201) and Gallant (1991:104) suggest 65%-75%. Garnsey (1988:81 n.6, 104), Davies (2007:342) and Moreno (2007a:31) recommend 70%-75%.
[115] Whitby (1998:111).
[116] Scheidel (2007:38).
[117] Moreno (2007a:31).
[118] FAO/WHO (1973:31-4).
[119] FAO/WHO (1973:31-4).

provided important insights into Egyptian diet, revealing the almost exclusively local origin of foodstuffs,[120] and a low intake of meat products.[121] Proportions of $\delta^{13}C$ from the hair of Egyptian mummies are similar to those of modern ovo-lacto-vegetarians (and around half that of modern omnivorous Europeans),[122] with protein instead derived from fish[123] and the nutritious emmer-wheat beer which was Egypt's national drink. These analyses suggest a slightly higher proportion of high-protein foods in the Egyptian diet than the Greek, lowering potential grain consumption to around 61%.[124] Mummified remains, however, disproportionately come from higher-status individuals, living well-above subsistence, with the evidence of grain-wages from Deir el-Medina indicating that the disparity could be substantial. Considering this atypicality, we shall accept a figure of 237kg for Egypt as well. This figure originates with the standard Greek ration of 1 *choinix* (0.68kg of wheat) daily, which at 2,305kcal accounts for 70% of the diet of a 'very active' 62kg man.[125] There are too many variables to know whether this figure held for Egypt. However, analysis of the Zenon archive[126] suggests that 1-2 *choinikes* per day was also a standard ration– the higher figure accounting for 58% of the calorific requirements of a 2-parent, 1-child family. 237kg/person, therefore, is an acceptable per-capita annual estimate.

1.2.6 | *Conclusions*

Adding in all of the variables calculated above allows us to propose optimistic and pessimistic assessments of Egypt's surplus:

[120] Touzeau *et al.* (2014:119).
[121] Thompson *et al.* (2005:461).
[122] Touzeau (2014:121). For modern comparanda *cf.* Petzke *et al.* (2005).
[123] Indicated by levels of $\delta^{15}N$ elevated compared to modern omnivorous Europeans. The impact of aridity on this isotope, however, hinder our assessment of fish consumption in Egypt: Touzeau *et al.* (2014:121-2).
[124] *ibid*:122.
[125] Foxhall and Forbes (1982:49 n.6).
[126] von Reden (2007:138).

Table 1.4 | Estimates of the Ancient Egyptian Grain Surplus

	Estimated Land Under Grain	**Grain Production (1,000kg/ha)**	**Population** (A: Low, B: High)	**Consumption (237kg/person/year)** (A: Low, B: High)	**Estimated Surplus** (A: Optimistic, B: Pessimistic)
			SAÏTE PERIOD		
A:	15,980km^2	1,598,000 tonnes	1,598,000	378,726 tonnes	**1,219,274 tonnes**
B:			2,192,250	519,563 tonnes	**1,078,436 tonnes**
			PTOLEMAIC PERIOD		
A:	19,021km^2	1,902,100 tonnes	2,377,700	563,515 tonnes	**1,388,885 tonnes**
B:			3,091,010	732,569 tonnes	**1,104,531 tonnes**

These estimates remain too high; taking into account post-harvest loss, at an estimated rate of about 20% (§1.1), the total reduces to **975,419 tonnes** (optimistic) and **862,749 tonnes** (pessimistic) for the Saïte Period, with **1,111,108 tonnes** (optimistic) and **883,625 tonnes** (pessimistic) for the Ptolemaic. Even these are above what we might expect: we know that even relatively small fluctuations in the inundation caused shortages, though serious food crises mostly occurred after successive years of low inundations depleted the stored surplus.[127] In fact, these numbers are all optimistic. While a large number of Egyptians would have lived on as little as 237kg *per annum*, many others lived well above subsistence. Our figures for land under grain presume the universal suitability of the Nile's banks for that purpose,[128] and also that Egypt – uniquely among ancient or modern states – made full and efficient use of its factor endowments.

These figures similarly ignore that large surpluses are notoriously difficult to extract from a smallholder scenario.[129] A sensible farmer will only produce as much grain

[127] *cf.* Allen (2002:170-1). Repeated low floods are commonly adduced as a cause of Dynastic collapse in Egypt: Kemp (2006:181), Stanley *et al.* (2003:398-9), Hassan (2007).
[128] Some parts of the floodplain were, in fact, less accessible to the floodwaters, and a low Nile might leave entire regions above the flood level.
[129] Barrett (2008:300); *cf.* Allen (2002:170).

as he might reasonably expect to sell, since he must invest man-hours in each unit of surplus, and incur further costs of storage and spoilage. Thus, while some surplus is necessary to weather the bad years,[130] this will often be small. Egypt was nonetheless well-placed to produce surpluses, given the productive advantages of the Nile's alluvial soil, Pharaoh's ability to artificially stimulate demand through in-kind taxation, and the importance of grain as a medium of exchange. The maximal figures presented above, then, merely indicate an order of magnitude: most years, Egypt's grain surplus totalled hundreds of thousands of tonnes, increased by 14% between the Saïte and Ptolemaic Periods, and that Egypt had, even before Alexander, a substantial exportable surplus.

1.3 | Ancient Assessments of Egyptian Grain Wealth

This impression of voluminous Egyptian harvests is confirmed by our ancient sources. After our period, Augustus extracted some 20,000,000 *modii* (108,200 tonnes of wheat or 91,200 tonnes of barley) of grain annually from Egypt ([Aur. Vict.] *Ep.Caes.* 1.6), enough to feed Rome for four months (Jos. *dBJ.* 2.386-7). These figures may be exaggerated: the *Epitome*'s numbers account for two-thirds of Rome's grain intake (assuming a million residents),[131] and we must recognize the rhetorical thrust of Josephus' passage.[132] Beyond massive exports to Rome herself, Egypt was simultaneously able to provide ample grain to her nearer neighbours. During the famine that crippled Judea *c.*25BC, Herod the Great turned to Egypt, apparently importing 10,000 *medimnoi* (3,296 tonnes of wheat or 2,747 tonnes of barley) for domestic consumption, and 80,000 *medimnoi* (26,152 tonnes of wheat or 21,976 tonnes of barley) to distribute among Levantine cities (Jos. *AJ.* 15.313-15).[133]

[130] Rosivach (2000:34).
[131] Garnsey (1988:231).
[132] Carlyle (2016:13).
[133] Garnsey (1988:231, 256-7). The imports resulted from sweetheart deals with the Prefect of Aegyptus.

This tradition of Egypt's rulers giving grain to allies in need was long-held.[134] The Ptolemies especially engaged in large-scale munificence towards Greek states. Ptolemy I donated 300,000 *artabae* of grain and legumes to the Rhodians around 306BC (Diod. 20.96.1). If, for argument's sake, two-thirds of the donation was grain, this would amount to 5,047 tonnes of wheat or 4,250 tonnes of barley. His grandson, Ptolemy III Euergetes, also aided the Rhodians following the earthquake of 227/6BC (Polyb. 5.89.1-5; §5.2.4). In addition to silver, ship timber, bronze coinage, and workers to repair the Colossus, he donated a total of 1,020,000 *medimnoi* of grain (34,015 tonnes of wheat or 28,349 tonnes of barley) for private consumption and the public games. Meanwhile, a decree honouring Kallias of Sphettos (*IG* II^3 911.50-5) records 20,000 *medimnoi* of wheat (i.e., 659 tonnes) sent by Ptolemy II Philadelphos to Athens around 282BC.

Perhaps our best evidence for large-scale and regular Egyptian grain exports is also our latest. The thirteenth *Edict* of Justinian, recording correspondence between the Emperor and his Egyptian Prefect, concerns 'the wheat shipment of good fortune, of 8,000,000 measures' (σιτοπομπίας είς όκτοκοσίας μυριάδας εύτυχοῦς; Just. *Ed.* 13.8). The units referred to are unspecified; some recent arguments propose that Justinian meant *modii*.[135] It is worth considering, however, that the grain would have been collected in *artabae*, and indeed this measure is specified elsewhere in the *Edict*, so it seems sensible to follow the majority of scholars who have historically accepted it.[136] In this case, the entire *canon urbis* of Constantinople – 179,440 tonnes of wheat or 151,120 tonnes of barley – originated from Egypt.[137] Taken together, these sources indicate that Egypt had enough grain to maintain itself – including Alexandria, the Ancient Mediterranean's second-largest

[134] It continued well into the present Era, with a 60,000 *modii* contribution to Tralles in Asia Minor in AD129: *I.Eph.* 274 [= *Syll.*^{3} 839]); *cf.* Garnsey, (1988:256).
[135] Mayerson (2007). His argument is the inverse of that presented here, suggesting imports were counted in *modii* at destination (*cf.* Theod. *Nov.* 8; Mayerson, 2007:169).
[136] e.g., Rouillard (1928:124-6), Johnson and West (1949:236), Bowman (1986:46), Garnsey (1988:231).
[137] Sirks (1991:230).

city – and another city of up to a million inhabitants (Rome or Constantinople), while still maintaining a thriving export trade, feeding a large military apparatus, and providing relief for disaster-struck neighbours. Yet, the reader will notice, all of the figures presented here, except Ptolemy I's grain gift of 306BC, postdate the Ptolemaic reforms in land tenure, administration, and production (though it is thought that Egyptian grain production fell across the Roman Period[138]). We must ask, however, what earlier evidence reveals about the scale of Egypt's surplus in the Pharaonic Period.

1.3.1 | *The Temple Administration and Public Granaries*

The *Great Harris Papyrus* (*P.Harris* 1 [= *P.BM* EA9999]) is a record of the temple donations made across Pharaoh Ramses III's reign (*c.*1186BC-*c.*1155BC), as an encomium composed under his son.[139] It records grain donations of 5,279,552 *ḫ3r*,[140] and separately 460,900 *ḫ3r* annually.[141] While these figures may overlap,[142] together they total 31,000 tonnes of wheat or 26,100 tonnes of barley. Importantly, this evidence indicates that Pharaoh could summon up an *additional* 1,000 tonnes per year for disposal in the temples on top of pre-established distribution. Additionally, Ramses assigned an additional 113,433 people to the temples. With an average annual wage of 66 *ḫ3r* (3 tonnes) of wheat per worker for the tomb-builders at Deir el-Medina,[143] this represents an additional wage-bill of *c.*351,642 tonnes.[144] Ramses' largesse came on top of the annual donations long-established for the temples. Both the mortuary temples of Ramses II and III, far smaller than, e.g., the Temple of Amun at Karnak, enjoyed donations of 620 tonnes of wheat or 522

[138] Bowman (1986:18-19).
[139] Bryce (1998:370).
[140] Grandet (1994:332), Warburton (2000:72 n.20).
[141] Grandet (1994:325), Warburton (2000:72 n.20).
[142] Warburton (2000:72 n.20).
[143] Janssen (1975), Kemp (2006:257). This was, admittedly, a highly paid and privileged group.
[144] *cf.* Warburton (2000:75).

tonnes of barley annually.[145] To facilitate these vast donations, an infrastructure of granaries was necessary. The granary at the Ramesseum, Ramses II's mortuary temple, had a capacity of 16,522m^3, sufficient to store 226,328 *ḫ3r* of grain (10,244 tonnes of wheat or 8,625 tonnes of barley).[146] Using the wage-figures from Deir el-Medina, this might pay for 3,400 workers and their dependents (i.e., 17,000-20,000 people). Large civic granaries existed too: in Edfu, a granary complex of the Second Intermediate Period (*c.*1650BC-*c.*1550BC),[147] a time of disunity and reduced output,[148] comprised 18 silos with a minimum capacity of 409 tonnes of wheat or 340 tonnes of barley.[149]

1.3.2 | *Sixth-Century Grain Tribute to Persia*

Assessments of the veracity of Herodotos' list of Persian tribute revenues under Darius (3.89.2-94.2) have ranged from outright rejection,[150] through qualified acceptance,[151] to the view that Herodotos directly quoted Persian sources.[152] The latter position is undermined by the Hellenocentricity evident in the arrangement of the satrapies in the list;[153] it is probable, therefore, that Herodotos' source was the list compiled by Hekataios (*cf.* Hdt. 5.36.2).[154] Herodotos lists the tribute in Babylonian talents of silver (30.13kg,[155] or 1.15 Attic talents), and gives a total of 9,880 Euboic talents (7,600 Babylonian talents, or 228,988kg; Hdt. 3.95.1). Beyond these payments in silver, Herodotos identifies an amount of in-kind tribute paid within the satrapies: three hundred and sixty

[145] Haring (1997:389).
[146] Kemp (2006:257).
[147] Moeller (2010:83). The site was abandoned shortly after, and superseded by the temple granaries.
[148] On the period generally, *cf.* Ilin-Tomich (2016).
[149] These calculations are based on the diameters listed in Moeller (2010:90 Tab. 2), presuming the same proportions as reconstructed in Moeller (2010:90 fig. 5).
[150] Jursa (2011:444).
[151] Tuplin (2011:57).
[152] Briant (2002:392).
[153] Klinkott (2005:106), Kleber (2015).
[154] Tuplin (2011:45).
[155] Segré (1944:73).

white horses from Cilicia plus maintenance for a garrison (3.90.3), five hundred eunuchs from Babylonia and Assyria (3.92.1), uncoined gold from India (3.94.2), and some 20,000 measures of grain from Egypt supplying the garrison in the historic capital, Memphis (3.91.2).

In explaining this discrepancy, it has been suggested that payment-in-kind was purely for tribute disposed of within the satrapy of origin, and that silver specie was paid into the central Achaemenid administration.[156] Herodotos' concluding anecdote – that silver tribute was melted into vases, to be smashed when the Great King needed cash (3.96.2) – confirms that this impression reflects his intention.[157] However, we should question whether Herodotos was correct. In-kind taxation, usually *corveé* and military service, was the norm throughout the Empire:[158] Herodotos himself acknowledges that this was the case before Darius' systematic reforms (3.89.3). While exchange in silver is known, even from the temple administration in the Babylonian heartland, in-kind rents and taxes still predominated (e.g., YBC 4164.5-8).[159] It is possible, then, that Herodotos' figures either represent a conversion of goods into conventional silver value higher up the Achaemenid administration, or that he (or, more probably, his source) resorts to silver to provide a unified value to a potentially bewildering away of goods collected by the Persians from their satrapies. This tribute would doubtless have included silver coin, mostly from the Ionian cities (including Herodotos' hometown, Halikarnassos), but probably included grain from Egypt, not just to feed Persian troops in Memphis, but also exported to the Persian heartland.

[156] Klinkott (2005:272-4), Bedford (2007:322-3), Jursa (2011:431), Kleber (2015).
[157] Kleber (2015).
[158] *ibid.*
[159] Jursa (2011:434).

In this connection, our attention turns to the biggest infrastructure project of Darius' reign: the so-called 'Canal of the Pharaohs', which linked the Nile with the Red Sea (and thus Persia) through the Wadi Tumilat. This project, prefigured by Necho II's failed canal, was on an enormous scale: the limited remains of Darius' canal indicate a width of approximately 80m bounded by 30m-wide banks of packed earth,[160] while the better-preserved Romano-Arabic canal along a similar route was 170km long representing the excavation of 25,000,000m^3 of earth.[161] Darius' motivations in conceiving this project are unknown. Certainly, Necho's proposed canal was military in nature, since its failure was followed by the establishment of the Red Sea fleet, presumably to defend Egypt's eastern seaboard from Persian aggression.[162] Darius, too, probably had some military objectives in mind when resurrecting Necho's project, but the Great King himself provides us with another motivation: tribute.

Darius had four stelae (three surviving) placed at prominent positions along the canal's path. In them, he recounts, in both cuneiform[163] and hieroglyphic scripts, his order to construct the canal. But while the shorter cuneiform inscription does not indicate motivation, the Egyptian script is more detailed. Reading together the three extant stelae (Posener 8 [= Cairo JE48855], 9 and 10)[164] reveals that the first journey along the canal

[160] Redmount (1995:132). Herodotos claims it was dug two triremes wide (2.158.1). The evidence of the ship-sheds at Zea (Gabrielsen, 2014:44), confirmed by Vitruvius (*de Arch.* 1.2.4) indicates that triremes peaked at 6.50m in width (the beam of the reconstructed trireme *Olympias* is 5.50m: Morrison *et al*. 2000:194 fig. 54); even including oars (4.20m either side: Morrison *et al.* 2000:215) and space to avoid clashing, it is clear that Herodotos' dimensions are gross underestimates.

[161] Cooper (2009:204). The length of Darius' canal is indicated by Herodotos, who records a sailing-time of four days (2.158.1). In open water, it has been calculated that ships could achieve up to 6 knots, and travel perhaps 100 nautical miles (185km) per day. Herodotos merely estimates the distance at over 1,000 *stades* (183km).

[162] Tuplin (1991:241-2), Ruzicka (2012:24-5). The canal was guarded by Arab mercenaries stationed at Tell el-Mashkuta (Hdt. 2.158

[163] The cuneiform inscription is repeated thrice, in Babylonian, Elamite and Old Persian (Tuplin, 1991: 238).

[164] The three stelae are poorly preserved, with some text damaged post-discovery and reconstructed from photography taken during excavation: Posener (1936:51).

consisted of twenty-four (or thirty-two?)[165] ships, manned both by Egyptian client princes and Persian 'inspectors' (*sḫḏ.w*),[166] carrying with them tribute (*inwt*).[167] The number of ships, taken alongside the cost and manpower implications of the canal,[168] implies that whatever formed this tribute was shipped in a bulk far greater than the *c.*21,091kg of silver indicated by Herodotos. The investment in the canal, and the fact that it was apparently abandoned after Egypt regained independence (and not re-dug during the second Persian Period, when coined money had penetrated Egypt: §4.3.3),[169] suggests tribute paid (at least partly) in grain.[170]

If Herodotos was correct about the value of the tribute, but not its mode of payment, then we can roughly estimate the amount: his 700 Babylonian talents, at a contemporary price of between 6 and 9 drachmas per *medimnos* of wheat,[171] would result in between 54,498 and 81,748 *medimnoi* (1,796,277kg – 2,694,414kg),[172] It remains possible that not all of the tribute paid in-kind to Persia was in grain, and Herodotos includes Kyrene and parts of Libya in the satrapal tribute assessment (3.91.2-3). As a guide, we might take the twenty-four or thirty-two shipments mentioned in Darius' stelae. The relatively small Kyrenia shipwreck had a capacity of up to 25 tonnes; if similarly-sized vessels are envisaged, we might estimate 600,000kg to 800,000kg of grain (up to 45% of the value of Herodotos' assessment). Given the canal's dimensions, however, even larger

[165] Posener (1936:63-81), Tuplin (1991:245).
[166] These officials may be identified with the Persian 'Eyes of the King' (**spasaka*); *cf.* Balcer (1977:258).
[167] Tuplin (1991:255), Lloyd (2007:101-4), Cooper (2009:206), Colburn (2014:246). Severin's (1951) interpretation, that the stelae record the transport of gifts to the goddess Neith to resolve a famine in Egypt, has been discounted as baseless (Tuplin, 1991:245). If nothing else, the cuneiform inscription confirms the direction of travel from Egypt to Persia: Ruzicka (2012:25).
[168] Cooper (2009:204) estimates some 71,000,000 man-hours. While Herodotos' assertion of 120,000 deaths during Necho's attempted construction (2.158.5) is almost certainly exaggerated, Muhammed Ali's 80km Mahmudiyyah canal project started in AD1819 cost 20,000 lives (Cooper, 2009:204).
[169] Tuplin (1991:238).
[170] Note also that the canal was seasonal, open only during the inundation, i.e., following the harvest in April (Redmount, 1995:134; Cooper, 2009:206).
[171] *IG* II^2 1672 lists 6 drachmas for wheat at line 287 and 5 drachmas at line 278. *cf.* Moreno (2003:100).
[172] Given a weight of 4.30g of silver per drachma, 700 Babylonian talents would equal approximately 490,488 drachmas.

ships (perhaps large towed Nile barges,[173] whose cargo would be transferred to seagoing ships later) are likely.

1.3.3 | *The Pre-Hellenistic Trade in Egyptian Grain*

While most Egyptian grain was swallowed up by the temple administration, tribute to foreign powers, and in gifts from Pharaoh (such as that of the otherwise unknown Delta dynast Psamtik: Philoch. *FrGrHist,* 328 F119; Plut. *Per.* 37), a limited but important body of evidence indicates a bulk trade in grain from Egypt to both the Levant and parts of the Aegean.

THE LEVANT

Egypt's cultural, political and trading links with the Levant far predate those with the Aegean, representing the cornerstone of her foreign and economic policy throughout the New Kingdom (*c.*1550BC – *c.*1069BC). The Saïte accession signalled a resumption of this interest (§5.2.2),[174] taking advantage of waning Assyrian control in the region.[175] But the economic relationship which paralleled these politico-military developments was not merely extractive. The biblical book of Isaiah[176] informs us that 'by the waters of the Great Sea [i.e., Mediterranean] the seed of Shihor, the harvest of the river, is her [Tyre's[177]]

[173] e.g., the *baris*, described by Herodotos (2.96.1-5). An example from Herakleion-Thonis (Ship 17) had a capacity of 112 tonnes (Belov, 2015:206-7), making 24 such vessels sufficient to carry grain to the value of our whole estimate.
[174] Often considered part of a wider renaissance of traditional Egyptian concerns on the part of the Saïtes: Kuhrt (1996:641).
[175] Revere (1957:58).
[176] The book of Isaiah is purported to be the work of the eighth-century prophet Isaiah ben Amos (Isaiah 1:1. 2:1, 6:1, 7:1, 13:1, 14:28, 36:1; Sweeney, 1998:75). It is now thought that the book was mostly the work of later authors, with the section that concerns us, First Isaiah (1-39) the product of the Babylonian Exile (*c.*597BC-*c.*538BC; Sweeney, 1998:76-7). Isaiah 23:3 can therefore be taken to reflect conditions during the Saïte Period.
[177] It is possible that references to Tyre were a late interpolation into a passage concerned with Sidon: Lee (2018).

revenue; and she is the Mart of the Nations' (וּבְמַיִם רַבִּים זֶרַע שִׁחֹר, קְצִיר יְאוֹר תְּבוּאָתָהּ; וַתְּהִי סְחַר גּוֹיִם: Isaiah 23:3). The interpretation of this passage rests largely on the identification of the river called 'Shihor' (שִׁיחֹר). Biblical references obfuscate the river's identity; one refers to it as 'east of Egypt' (עַל־פְּנֵי מִצְרָיִם: Joshua 13:3), while another places it on the border of Egypt and Israel (1 *Chronicles* 13:5). These, however, do not preclude us from identifying the Shihor as the Nile:[178] Herodotos reminds us that there was some debate in ancient times about whether Αἴγυπτος correctly referred to Pharaoh's entire territory, or just to the Delta (2.15.1-2).[179] In the latter case, 'Shihor' may mean the easternmost (Pelusiac) branch of the Nile, forming the eastern border of Deltaic Egypt. This interpretation is not only strengthened by the remaining biblical reference to 'Shihor', in which it is compared to the similarly great confluence of the Euphrates (Jer. 2:18),[180] but also by the two possible etymologies of the word itself. The first is from the Old Hebrew *schachar* (שָׁחַר), meaning 'dark',[181] which draws comparison both with the Egyptian name for their own land (*km.t*, the Black Land; §1.2.1), and to a possible common etymology of the Greek Νεῖλος and the Sanskrit नील ('nīla', the name of *Indigofera tinctorial* from which indigo dye is extracted, and a general adjective describing darkness).[182] The second refers to an Egyptian toponym *št-ḥr,* 'the Waters of Horus', which is usually connected either with pools in the Eastern Delta or to the Pelusiac branch of the Nile itself.[183]

[178] The Bible more usually refers to the Nile by the general term Ye'or (יְאֹר), simply meaning 'river' or 'watercourse': Genesis 41:1, 2, 3, 18; Exodus 1:22, 2:3, 5, 4:9, 7:15, 17, 18, 21, 24, 28, 8:5, 8:7, 17:5; Amos 8:8, 9:5; Isaiah 19:7, 8, 23:10; Jer. 46:7, 8; Ezek. 29:3, 9; Zach. 10:11. *cf.* Strong № H2975. Compare the Egyptian *itrw*, also meaning 'river' in general, and the Nile specifically (Quirke, 2014:13).
[179] *cf.* Gwyn-Griffiths (1966:57).
[180] Na'aman (1980:96).
[181] Strong № H7883.
[182] Baumgartner (1975). Hillel (2006:88) also proposes an alternative etymology from the Semitic root *nahal,* 'river' or 'vale'. Quirke (2014:13) suggests a derivation from the Egyptian *n3 itrw*, 'the rivers', used to describe the branches of the Delta.
[183] Gardiner (1924:93), Na'aman (1980:96).

Clearly, then, the 'seed of Shihor' (זֶרַע שִׁחוֹר) refers to the produce of the Nile, specifically the Delta. That the revenues of a city the size of Tyre might be built on it implies a significant bulk trade, almost certainly in grain. This trade was supported by a sizeable Tyrian population in Egypt's historic capital Memphis, housed in a district called the 'Camp of the Tyrians' (Τυρίων στρατόπεδον; Hdt. 2.112.2) around the Temple of Ptah (a major centre for banking and assay-place: §4.1.4). The scale and importance of the trade with Egypt is again confirmed in the Book of Isaiah, when it is prophesied that Egypt's impending destruction would be met with equal consternation in Tyre (Isaiah 23:5),[184] and by the existence of Tyre's 'Egyptian Harbour' which was certainly called such by the time Alexander besieged the city (Strab. 16.2.23; Arr. *Anab.* 2.20.10). The southerly of Tyre's two harbours,[185] it may simply have been called 'Egyptian' since that is the direction of the prevailing wind. This explanation is unsatisfactory, however, when we consider that the northern harbour was named 'Sidonian'; rather than some region to the far north which was the destination reached following the prevailing wind (perhaps Syria, Cyprus or Karia), it was named instead for a specific location merely 36km away. We might conclude, therefore, that Tyre named her harbours after the origins and destinations of the traffic flowing through each harbour, or perhaps from the ethnicities of the merchants residing around them.

The Aegean

The Tyrians probably re-exported at least some of this grain, earning their city her epithet 'Mart of the Nations' (סְחַר גּוֹיִם). Some of this grain perhaps found its way into the

[184] Alternatively, this passage may be taken to mean that the destruction of Egypt would predicate the destruction of Tyre (Balogh, 2011:122), presumably due to the damage it would cause the Tyrian economy. This passage is possibly later than the surrounding text (Lee, 2018:127-8).
[185] The description of Tyre as double-harboured is certainly very old; Iron Age images depict her as such (Lehmann-Harleben, 1923), and in the biblical Book of Ezekiel (27:3), which dates from the period of the Babylonian Exile. *cf.* Marriner *et al.* (2008:1295).

Aegean, though grain is not among the exports to Ionia recorded in the Ahiqar Palimpsest (P&Y C3.7),[186] nor was a bulk trade in grain one of the likely causes of the founding of Naukratis (§5.3.1). The oldest literary reference to the import of Egyptian grain on Egyptian ships comes from Bakchylides' *enkomion* to Alexander I of Macedon. Expressing Alexander's wealth in Homeric terms, Bakchylides enthuses that 'wheat-bearing ships bring great wealth from Egypt over a dazzling sea' (πυροφ[όροι δὲ κατ' αἰγλάεντ]α πό[ντον νᾶες ἄγο]υσιν ἀπ' Αἰγύπτου μέγιστον πλοῦτον; Bakch. F20B Snell). The arrival of Egyptian wealth immediately associates Alexander with Menelaos and Odysseus, unsurprisingly given his repeated assertions of Greekness (this poem must immediately postdate his joint-victory in the Olympic *stadion*-race of 504BC; Hdt. 5.22.2)[187] and the parallel invited by the Iliadic overtones of his name. The passage itself does not unambiguously refer to Egypto-Macedonian trade in grain. Agrarian wealth is an identifiable *topos* of sympotic poetry, and the association of Alexander and Egypt may indirectly reference his kingdom's vassalage to Persia. Nonetheless, the epithet 'wheat-bearing' (πῡροφόρος) afforded the Egyptian ships reflects a general association between grain and the merchantmen of that country.

These trade ships seem also to have visited Sparta with some degree of regularity (§6.2). The Athenian capture of Kythera, in the summer of 424BC, caused great consternation for the Spartans, who garrisoned it and 'paid it great attention, since it was a landing for merchantmen from Egypt and Libya' (πολλὴν ἐπιμέλειαν ἐποιοῦντο. ἦν γὰρ αὐτοῖς τῶν τε ἀπ' Αἰγύπτου καὶ Λιβύης ὁλκάδων προσβολή: Thuc. 4.53.2-3). Grain is never explicitly mentioned as cargo for these ships, nor for the ships rescued by the Athenians in 412/11BC (Thuc. 8.35.2),[188] but later sources reveal Spartan interest in grain (Diod. 14.79.4

[186] The predominant export mentioned here is Natron.
[187] Fearne (2007:27-8).
[188] Thucydides fails to mention the intended destination of these ships; the fact that they were rescued by Athenians is no indication that they were Piraeus-bound.

reports a 500,000 *medimnoi* [16,400 tonnes of wheat, or 13,735 tonnes of barley] gift from Nefaarud I, *c.*396BC), and given the strategic importance Sparta placed on Kythera, a bulk trade in a staple commodity appears possible.[189]

1.4 | Climate, Risk and Athens' Alternative Breadbaskets

However accurate these brief sketches of the Athenian and Egyptian agricultural economies, the basic impression they leave is surely correct. Egypt had around ten times the population of Athens, but nearly twenty times the cultivable land, each square metre of which was three times more productive than its Attic equivalent. As demonstrated below (§1.5), much modern economic theory predicts that this made Athenians and Egyptians natural trading partners. Our evidence, however, indicates that especially the Black Sea, but also Sicily, were Athens' primary sources of grain. Yet, their suitability as grain sources can also be challenged, through examination of their climatic and navigational vulnerabilities.

1.4.1 | *Climate: the Euxine and Sicily*

Among the ancients, the region around the Dnieper was considered similarly productive as the Nile (Hdt. 4.53.1; Strab. 7.3.17), but this comparison ignores a fundamental difference between the two. While the Nile's banks were watered by inundations and irrigation (§1.2.1), the Dnieper's fertility derived from rainfall. The same holds for the fertile plains of Sicily, and both of these regions were poorly suited to artificial irrigation.[190] Rain-fed agriculture is inherently risky; charting 25 years of observed rainfall in Attika reveals that it regularly (1/3 years: Chart 1.3)[191] falls under the

[189] *cf.* Moreno (2007a:341).
[190] Gallant (1991:57).
[191] *cf.* also Bresson (2016a:65 Table 2.4).

lower limit for dry agriculture (300mm *p.a.*),[192] never achieving the ideal level of >500mm. While the Euxine and Sicily were considerably wetter,[193] both experienced localized sub-300mm spells, while both regions regularly average sub-500mm annual rainfall (Charts 1.4 and 1.5). These observations indicate that a simultaneous hydraulic deficit would occur in Attika, the Euxine and Sicily about once every century: Demosthenes' 'universal' grain-shortage (20.33) is probably an example of this.[194] Additionally, the northern Euxine could suffer severe frosts and unexpectedly heavy rainfall.[195]

1.4.2 | *Navigation and Risk: the Euxine and Sicily*

The ancient maritime world can be considered as a series of discrete points connected by routes (e.g., Hom. *Il.* 1.312, *Od.* 3.187-205, 4.573-86; Thuc. 2.97.1-2) derived from collective ancestral experience, and separated by time.[196] Actual distances were secondary to time-distances, and often calculated from them (e.g., Hdt. 4.85.2-86.2; Strab. *Geog.* 2.5.24).[197] The overestimations revealed by these calculations[198] demonstrate that ancient travel was costly and time-consuming. The size of the Black Sea was consistently overestimated in ancient sources, with the Mediterranean and Euxine constituting separate words of similar size (*cf.* Strab. 1.2.10),[199] reflective of the navigational challenges it posed. Between these worlds lay the near-impenetrable Turkish Straits[200] – the Hellespont, Bosporos and Sea of Marmara. Even today, these Straits are among the world's most dangerous sea-lanes. Despite modern safety measures, designated shipping lanes,

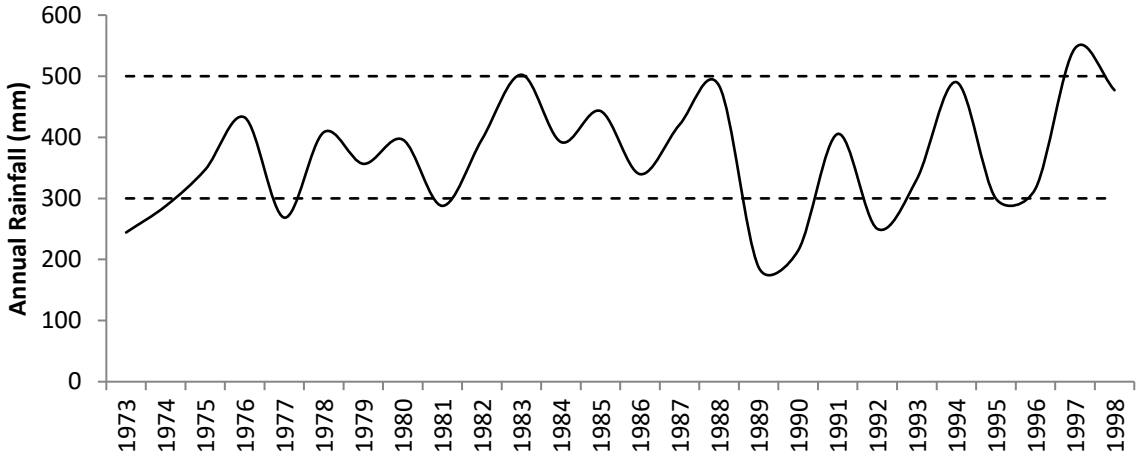
[192] Davies (2007:342).
[193] High interannual variability characterizes these regions; modern-day Crimean farmers even receive insurance pay-outs when April-June rainfall dips below 80% of the average (Skees *et al.*, 2007:xiv).
[194] *cf.* Garnsey (1988:147).
[195] *cf.* Skees *et al.* (2007:xiv).
[196] Davis (2001:51), Arnaud (2014:44-5).
[197] West (2003:151-2), Arnaud (2014:39).
[198] West (2003:151-2), Bresson (2016a:89).
[199] West (2003:157).
[200] *cf.* Casson (1991:170), Horden and Purcell (2000:393).

and fog lights along the course, they average nine maritime incidents annually.[201] The Bosporos gets as narrow as 740m,[202] with course alterations as sharp as 80°;[203] the Hellespont hosts hidden sandbanks and rocky cliffs.[204] The Straits are famed for the ferocity of their currents (*cf.* Ap.Rhod. *Arg.* 2.549-52;[205] Polyb. 4.43.3-10),[206] which, thanks to the contrasting densities of low-salinity meltwater from the northern Euxine and the highly-saline Mediterranean waters, was matched by sub-surface counter-currents.[207] While this sometimes assisted northbound travel along the Asiatic side,[208] this risked tearing apart ancient trade-ships with their deep draught and high waterline.[209] These risks were matched by the infamously dangerous Cape of Malea (Strab. 8.6.20; *cf.* Hom. *Od.* 3.286-90, 4.514-17, 9.80-1, 19.186-7; Hdt. 4.179),[210] which must be rounded by Sicily-bound Greek ships.

While the Mediterranean route to Egypt was open year-round (*cf.* Dem. 56.30, P&Y C3.7), the routes through the Turkish Straits and towards Sicily were only navigable at certain times of year. Favourable conditions were particularly restrictive in the Straits; nineteenth-century observations indicate that winds permitted travel into the Euxine only on 51 days between April and September.[211] While one might traverse the Bosporos in eight hours,[212] a fortnight might pass before conditions permitted passage.[213] Similarly,

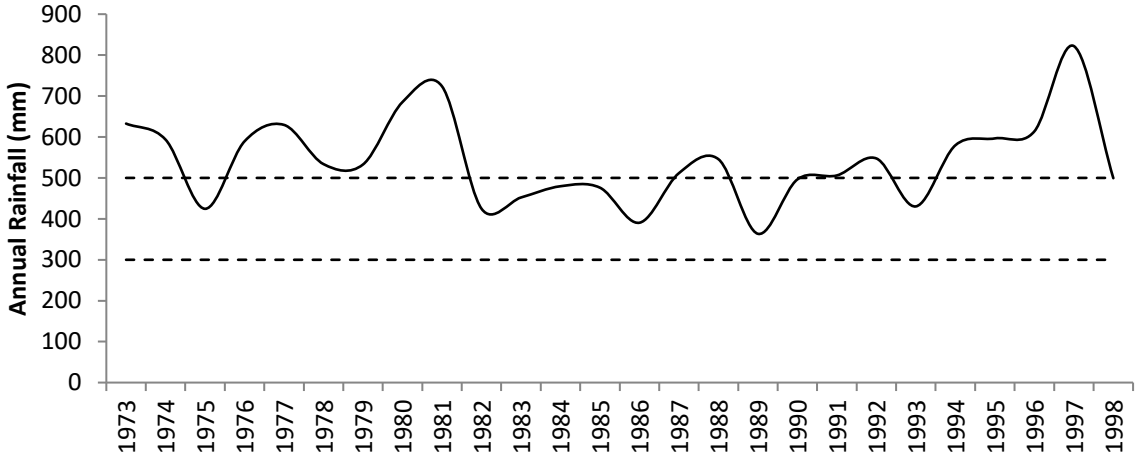
[201] Akten (2004:345).
[202] USN (1920:103).
[203] Akten (2003:345, 348).
[204] UKHO (2003:70-1).
[205] *cf.* Thalmann (2001:28).
[206] The currents can rise to 7kn in the Bosporos: Morton (2001:42). Akten (2004:348), USN (1920:107).
[207] West (2003:152-3), Morton 2001:42-3), UKHO (2003:70-1).
[208] Ullyott and Ilgaz (1946:44-5, 47).
[209] *cf.* UKHO (2003:66).
[210] Davis (2001:119).
[211] Labaree (1957:32), USN (1920:16).
[212] Labaree (1957:33).
[213] *cf.* Morton (2001:211), Labaree (1957:33).

Chart 1.3 | Rainfall in Athens and Attika (1973-1998)



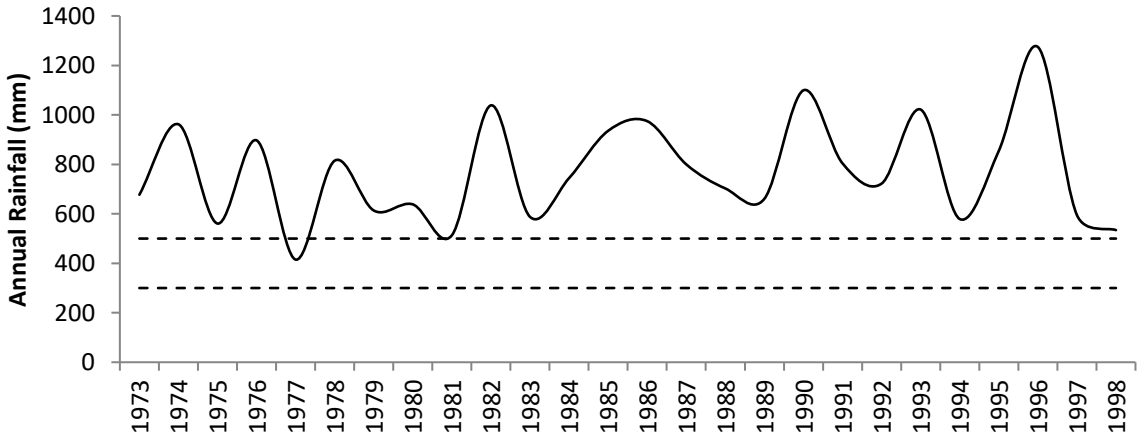
Source: NOAA (2016)/NOA (2016)

Chart 1.4 | Rainfall in the NW Black Sea (1973-1998)



Source: NOAA (2016)

Chart 1.5 | Rainfall on Sicily (1973-1998)



Source: NOAA (2016)

sailing was impossible during the fog which occurred early in the sailing season (*cf.* Ap.Rhod. *Arg.* 1.1114),[214] and at night.[215]

1.5 | Problematizing Ancient Trade

Economists will recognize that the contrasting agricultural fortunes of Athens and Egypt conform closely to the premises of the Heckscher-Ohlin model,[216] the most straightforward Neo-Classical model of trade. The classic exemplar of this model imagines two countries similar to Athens and Egypt: one densely populated, predominantly industrial economy; and another sparsely populated, predominantly agricultural economy.[217] Since the larger country should produce agricultural surpluses more efficiently and cheaply, these will be exported to the smaller country, where land-poverty and population density make agriculture unprofitable. This population density encourages industrial manufacture, and so the smaller country exports its production specialities at a low price to its larger neighbour. In this way, 'trade equilibrium' is reached, with both countries' needs satisfied at minimal cost to either.[218]

We must here make two important observations: first, despite the resemblances identified above, Heckscher-Ohlin, and other modern economic theories, can no longer be unproblematically applied to the ancient economy without first dealing with Finley's Primitivist-Substantivist model; and, more seriously, the predictions of Heckscher-Ohlin are not borne out by the historical evidence, which indicates that a bulk Atheno-Egyptian grain trade did not predate the Hellenistic Period. Our case is not alone: economists now

[214] On the frequency of fog, *cf.* Russell (2017:27-8).
[215] *cf.* USN (1920:17), UKHO (2003:66), Akten (2004:345, 350), West (2003:152-4).
[216] Ohlin (1967), Leamer (1995:1-2), Rogowski (2006:815).
[217] Modern examples include the Americas and Europe (Flam and Flanders, 1991:56-60), Australia and Japan (Rogowski, 2006:815 n.3).
[218] So-called 'factor-price equilibrium'.

recognize that Heckscher-Ohlin, and its derivatives, perform poorly when applied to empirical case-studies, despite their undeniable logic.[219] It fails, for example, to account for differences in technological development between regions, assuming instead that countries utilize all the productive factors at their disposal (ignoring unemployment, undeveloped land, etc.). Such problems are ubiquitous among Classical, Neo-Classical, Ricardian and Austrian-School economic models:[220] the assumptions of perfect competition, complete factor endowment, unfailing rationality and homogeneous capital are not borne out by practical experience. Instead, mainstream economics is increasingly devoted to examining 'transaction costs', the practical constraints on economic action.

Culture, our central focus, is not an immediately obvious transaction cost. In fact, no single definition of culture is widely accepted,[221] with one review listing 164 separate definitions.[222] What emerges is that culture is a social construction,[223] shared among and distinctive to a specific group,[224] and learned across generations.[225] Cultures thereby self-perpetuate, and influence modes and interpretations of behaviour.[226] There is similarly no agreement on what should be included under this notoriously 'fuzzy' heading.[227] Certainly, culture is manifested in symbols – art, artefacts, literature, myth – and these will comprise important categories of evidence for this thesis. But for our purposes, the cultural differences that matter are those of shared knowledge, beliefs, morality, law and customs. Such differences circumscribe participants' ability to communicate, and condition their

[219] Particularly with reference to the mid-twentieth-century United States – a capital-abundant country which exported largely labour-intensive goods (Leontief, 1953). For Heckscher-Ohlin's applicability to historical scenarios, see O'Rourke and Williamson (1999).
[220] Thaler (1980:39-41); though, it should be noted that economic models are created in full knowledge that they are imperfect: Neary (2001:548).
[221] Apte (1994:2001), Baldwin *et al.* (2006:4-5).
[222] Kroeber and Kluckhohn (1952).
[223] Matsumoto (1996:18), Avruch (1998:5-6).
[224] Hofstede (1991:10), Ferraro (1998:16).
[225] Mead (1953:22), Ferraro (1998:19), Matsumoto (1996:16).
[226] Hofstede (1991:8).
[227] The wording of Spencer-Oatey (2008:3).

expected outcomes. Cultural Economic Distance (CED), the cumulative effect of these institutions and tropes, is presented here not only as a novel solution to the particular problem of Egypt's lack of involvement in supplying Athens, but also to demonstrate the potential of theoretically sophisticated models, co-opted from post-1985 economics, in explaining ancient economic decision-making while providing an alternative to Finleyan Primitivism-Substantivism.

The use of economic models, however innocuous, by historians is methodologically problematic; models often depend on *a priori* assumptions rather than empirical observation – an anathema to the Positivistic *mentalité* that pervades historical scholarship[228] – resulting in reductionist generalizations of complex circumstances. Yet, all analytical history is an exercise in modelling, regardless of whether ancient historians explicitly state the parameters of their models.[229] Historians cannot reveal '*wie es eigentlich gewesen*',[230] since their reconstructions of the past cannot be untangled from the assumptions of their present.[231] Instead, history produces representations ranging in conviction from 'what *might* have been' to 'what *must* have been'.[232] While glib, this has important ramifications for the practice of history: where possible, models must be wittingly employed, and their weaknesses considered, lest the core assumptions of an historical enquiry impose themselves undetected.[233]

Our CED model, too, makes presuppositions which must be empirically scrutinized. Most problematically, it assumes a rational profit motive ('utility function'). Finley's great innovation was the assertion that profit was eschewed by ancients in favour of status-

[228] Finley (1985b:5, 104), Morley (1999:5). On Positivism, and other Empiricist historiographies, *cf.* Breisach (1994:272-6, 327-9).
[229] Finley (1985b:4-5), Marwick (1989:145).
[230] The formulation of Ranke (1824:v-vi); *cf.* Finley (1985b:47-9).
[231] Finley (1985b:4), Marwick (1989:143).
[232] *cf.* Morley (1999:81-2).
[233] Marwick (1989:143, 150), Morley (1999:5, 81).

based exchange relationships.[234] Finley's conclusions are indeed supported by the predominantly elite writings that afford his most effective evidence,[235] status-consciousness is not incompatible with the profit motive. Simply put, the profit motive claims that economic actors always seek to maximize benefits over costs.[236] *Ceteris paribus*, economic actors should place a greater value on the output of the interaction than on the input.[237] But, since value is a socio-cultural, or even personal, construct (§4.1),[238] status-conscious exchanges can be considered economically, provided that participants assess social value higher than material value.[239]

Transactions costs are not necessarily material either, encompassing a range of obstacles to successful exchange: since human beings have finite physical capacity, a finite lifespan, finite mental energies, and live in environments with finite factor endowments, it is clear that energy inputs, time costs, effort, and material resources can all be 'spent' in transactions.[240] If value is socio-culturally constructed, so are costs. The negative value placed on, for example, shame or danger, may outweigh the material advantages of a transaction.[241] In short, the value of an item or service can be defined as the maximum cost that an individual will tolerate to obtain it;[242] if the cost demanded (the 'market value') is below that maximum, the buyer has achieved profit (or, 'consumer surplus'). But accepting

[234] Finley (1973), esp. 50; *cf.* Bissa (2009:4), Engen (2010:7, 10).
[235] Morris (2002:13); Finley himself recognises this evidence-base as problematic (1973:37-8, 51-3), *contra* Austin and Vidal-Naquet (1977:15, 17). *cf.* Finley (1985b:7).
[236] *cf.* Emerson (1976).
[237] Kahneman and Tversky (1984:347).
[238] *cf.* Danner (1982:179), Kahneman and Tversky (1984:341-2, 343). On differences in the assessment of subjective value, *cf.* Kahneman and Tversky (1984:349).
[239] Similarly, human responses to risk place more value on certainty than on the expectation of material gain (Kahneman and Tversky, 1984).
[240] Danner (1982:178).
[241] Humans demonstrably conceive value not in overall terms (an £8.00 bet with £100.00 starting capital has the outcomes £108.00 or £92.00), but in terms of the value outcomes of the transaction (that same bet results in +£8.00 or -£8.00 regardless of starting capital), emphasizing the subjectivity of value-perception in economic decision-making (Kahneman and Tversky, 1984:342, 344).
[242] Thaler (1980:44), Kahneman and Tversky (1984:348).

the profit motive in Athenian economic decision-making requires us to accept that the Greeks thought about value and cost as moderns do.

The duality between value and costs (especially time and toil) of production appears recurrently in Greek literature (Hes. *Op.* 302-15; Xen. *Oik.* 1.5.4), while Xenophon – whose thinking is admittedly unique among extant sources – demonstrates that ancient farmers conceived of a labourer's productivity in terms of the costs of his upkeep (Xen. *Por.* 4.5). Other sources directly reference price fluctuations based on relative scarcity (Xen. *Oik.* 20.27-8, *Ages.* 1.18, *Por.* 4.7-10 [esp. 4.6]; Arist. *Pol.* 1259a5-36, 1308a36-8, 1333b13-14; Plut. *Demetr.* 33.3),[243] or mention price instability in circumstances where scarcity is the implied cause (Ar. *Eq.* 344-5, 647-50, 894-5, *Ach.* 758-9, *Pax.* 1201-39; Dem. 42.20, 31; Theophr. *Char.*4.12).[244] Admittedly, most of these examples are 'common-sense' observations of economic phenomena as experienced by individuals,[245] the fact that the term οἰκονομία ('household management') was extended to apply metaphorically to the management of a state and its resources (Din. 1.97; Polyb. 4.26.6)[246] implies that Greek thought related these first-hand observations to wider economic forces; not yet a predictive or performative 'science' of economics, but certainly a descriptive approach.

Social psychologists and behavioural economists have experimentally demonstrated the existence of psychological heuristics which determine human responses to risk and gain.[247] These short-cuts in thinking, which limit the mental processing-power required for decision-making, evidence a 'bounded rationality'[248] in which the drive to

[243] *cf.* Finley (1970:13), Engen (2010:93), Harris and Lewis (2016:2). This is puzzlingly ignored by Polanyi (1957a:87).
[244] Möller (2007:372-3), Harris and Lewis (2016:1-2).
[245] Permitted in the Substantivist model: Finley (1970:3, 4), Austin and Vidal-Naquet (1977:10).
[246] Finley (1970:15 n.51; 1985b:20), Austin and Vidal-Naquet (1977:8-9), Lewis (2009:388); though *cf.* Arist. *Pol.* 1252a7-16, who disagrees that the state economy is merely the household writ large (Migeotte, 2009:36).
[247] Including Kahneman and Tversky (1974).
[248] Simson (1979).

profit from exchanges is tempered by intuitive instincts, like risk aversion.[249] Incidentally, one of the most powerful heuristics is immediately relevant to our analysis: the 'familiarity heuristic', or the bias towards recognizable economic actors or exchange scenarios (*cf.* §4.1.6). The object of a significant number of recent studies,[250] it has been demonstrated to significantly influence both investor[251] and consumer behaviour.[252] While these heuristics do not necessarily enable humans to maximize profit or utility effectively or objectively,[253] they do demonstrate unconscious adherence to the profit motive so great that it overrides our capacity for rational cognition. These heuristics may have appeared early in our evolution: experiments teaching arbitrary value to tufted capuchins (*Cebus apella*) have exposed similar behaviour[254] – including the adjustment of 'spending' (in response to simulated price shocks and increased wealth) to maximize value output.[255] The profit motive is therefore unlikely to be culturally or temporally dependent, and therefore as central to ancient economic decision-making as for modern. By accepting the applicability of the profit motive, we may consider Athens' grain imports in terms of competition among grain producers – though, with the caveat that we consider socio-culturally constructed value alongside market value.

The other presuppositions of our CED model are less problematic. CED assumes that economic actors conceive of themselves as members of exclusive cultural entities, and that the existence of such entities impedes the ability of economic actors to relate to one another. The latter suggestion is self-evident: cultural differences increase the likelihood of

[249] Thaler (1980:40), Kahneman (2003).
[250] Including de Bondt and Thaler (1994), Oberlehner (2004), and Linciano (2010).
[251] Baker and Nofsinger (2002).
[252] Park and Lessig (1981).
[253] For example, Kahneman and Tversky (1984:344, *cf.* 346) have demonstrated that changes in categories of value (0%-5%, or 'nothing' to 'something', and 95%-100%, or 'something' to 'everything') are more potent than mathematical changes of the same magnitude (e.g.,30%-35%).
[254] Chen *et al.* (2006); though, it is important to note that capuchins are only distantly related to humans (Chen *et al.*, 2006:524 n.10; *cf.* Schneider *et al.*, 2001).
[255] Chen *et al.* (2006), esp. 519. Such responses are also detected in children (Harbaugh *et al.*, 2001) and other animals (Kagel *et al.*, 1975).

conflict,[256] decrease social cohesiveness,[257] and interrupt communication.[258] It seems logical, then, to expect culture to exhibit a similarly strong effect in the fourth-century Athenian grain trade. But to incorporate these observations into our analysis, we must recapitulate the role of culture both in Athens and Egypt, determining the levels of exclusivity they exhibit.

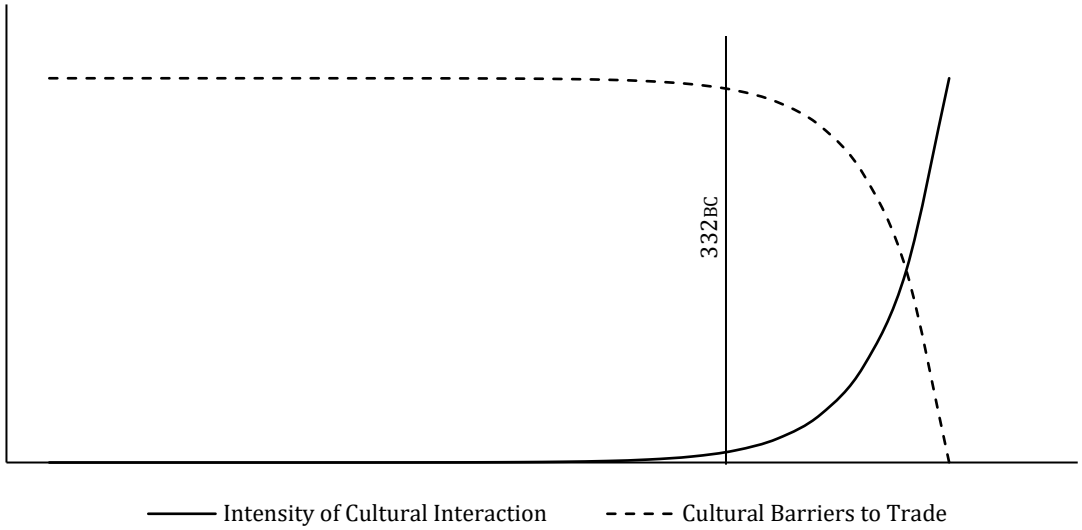
1.6 | Cultural Economic Distance and the Atheno-Egyptian Grain Trade

Herodotos' famously explicit manifesto of Greekness (8.144.2) minimizes the divides which existed between individual *poleis*, supra-*polis* groups and peripheral ethnicities. Historic animosity between Ionians and Dorians,[259] ethnically-exclusive institutions (e.g., the Panionion: Hdt. 1.141.4), and specific interstate rivalries, were temporarily overlooked when confronted by a barbarian foe. This Greek-Barbarian dichotomy took root in historiography,[260] theatre (e.g., Aiskh. *Pers.* 183-200),[261] and artistic representations.[262] Yet, although confrontation with the 'Other' crystallized Hellenic identity, it must be recognized that this is only one of many Greek cultures, serving a specific ideological agenda. Modern definitions of culture recognize its distinguishing function,[263] but also accept that cultures are multifocal and permeable,[264] with overlapping membership: an individual Athenian, for example, might subscribe to elite culture, seafaring culture, mercantile culture, gender cultures, sexual cultures, ancestral or tribal cultures, religious, political or gang cultures, and so on – all with distinctive patterns of behaviour and models of living. These tropes might even be shared between cultures,

[256] Montalvo and Reynal-Querol (2005:797-801), Esteban *et al.* (2012, esp. 1335-7).
[257] Alesina and La Ferrara (2000).
[258] Blommaert (1991); *cf.* Skinner (2012:56).
[259] Alty (1982:11).
[260] Cartledge (2002:75-6).
[261] *cf.* Hall (1989).
[262] Lissarrague (2002).
[263] Hofstede (1984:51).
[264] With specific reference to antiquity, *cf.* Hall (1997:2) and Skinner (2012:19).

facilitating inter-cultural communication, and presenting opportunities for individuals to migrate between cultures.

Chart 1.6 | Proposed Model of Graeco-Egyptian Cross-Cultural Contact



In Egypt, too, we find a highly exclusive ethnoculture; Herodotos famously emphasizes Egypt's over-resistance to foreign cultures (Hdt. 2.79.1, 4.76.1); a stereotype reflected in the (later discredited) myth of Busiris, the Egyptian king who cannibalized foreigners who strayed into his Kingdom (Hdt. 2.45; Isok. 11.40; §5.1.2)[265] Similar myths existed regarding the Skythians (Ephoros *FrGrHist.* 70 F42 [*apud* Strab, 7.3.9]; Eur. *IT.* 30-40; Strab. 4.5.4; §6.1), highlighting further the problem explored by this thesis; how was it that, despite the irredeemable 'Otherness' and shared introversion of the Skythians and Egyptians, the Athenians could trade extensively with the northern Black Sea in the Classical Period, but failed to do so with Egypt until much later? To answer this, we will emphasize that cultures are not monolithic and unchangeable, and even those as apparently resistant as the Egyptian and Athenian were variously subject to change in response to external influences and the objectives of political and social leaders.

[265] *cf.* Vienna AS.IV.3576; Hicks (1962:103).

This thesis is nothing so grand as a defence of multiculturalism or globalization, though the corollary of its argument is that cross-cultural understanding, if not homogenization, is a positive predictor of successful transactions. The intensity and quality of Atheno-Egyptian cross-cultural interaction could be conveniently plotted on the graph as a curve (Chart 1.6), the inverse of the barriers Graeco-Egyptian cultural differences posed to bulk trade. A low gradient up to the fifth century BC expresses low-level or low-quality cross-cultural interactions, exemplified by the cult of Zeus-Ammon, who, as the Greek syncretisation of a Libyan adaptation of an Egyptian god, demonstrates arm's-length cultural engagement with Egypt (§3.3.3). Following Alexander's conquest of Egypt, cultural interaction increases exponentially. Importantly, vital aspects of this increased interaction (e.g., the introduction of coined money: §4.2) preceded Alexander. With a different curve, we might question whether Alexander would have achieved the legitimacy among native Egyptians that secured his Ptolemaic successors.

The following chapters divide Cultural Economic Distance into discrete 'dimensions'. Chapter Three examines the dense networks of individuals, crisscrossing the Mediterranean, which bridged cultural gaps and reduced informational asymmetries. These networks were sustained both by formal institutions – the multi-state mercantile sanctuaries (e.g., Hieron,[266] the shrine to Achilles Pontarkhos,[267] the Naukratite Hellenion[268]) which nurtured trading relationships and provided refuge from man-made and natural risks (§3.3.1), Egyptian cults exported throughout the Greek world (§3.3.3), and by the initiative of prominent Egypt-interested Athenians (§3.4.3). Chapter Four demonstrates how the size and composition of communities in Greece and Egypt promoted divergent moral values (§4.1), resulting in the invention of coined money, forever changing notions of economic value (§§4.2-4). Finally, we will tackle non-tariff state interventions in

[266] Moreno (2008, esp. 663-4).
[267] *cf.* Horden and Purcell (2000:442).
[268] Hdt. 2.178.2; §5.3.1.

Graeco-Egyptian trade, both at the macro-scale – monarchic and democratic authority (§5.1), securing trade-routes (§5.2), administered 'Ports-of-Trade' (§5.3) – and micro-scale – contract enforcement (§5.4), and mercantile access to justice (§5.5). But first, we consider what ancient thinkers considered the defining dimension of culture. Language remains the most significant dimensions of CED,[269] constituting a more substantial trade-obstacle than tariffs or unfavourable exchange rates.[270] Modern studies reveal that co-lingualism increases trade-flows by an average of 40%,[271] and that the effect is significant even when shared-language prevalence is as low as 22%.[272] The gradual and tentative mitigation of this 'Language Effect' reveals the first steps towards Graeco-Egyptian cultural convergence, as far back as the seventh century BC.

[269] Second only to a past 'colony-coloniser' relationship (Ghemawat, 2001:138, table 1), though, language-export is a facet of colonial control.
[270] Anderson and van Wincoop (2004:691).
[271] Egger and Lassmann (2011:2).
[272] Fidrmuc and Fidrmuc (2009:3).

CHAPTER 2
The 'Language Effect' in Atheno-Egyptian Trade

The division of the world into 'Hellenes' and 'barbarians' had currency from Homeric times (Hom. *Il.* 2.867), but found its fullest expression in fifth-century BC Athens, where the Persian threat crystallized the commonalities of the fragmented Greek world. The word βάρβαρος, with its derisive emphasis on the unintelligibility of non-Greek languages, suggests a world where polyglots were exceptional.[1] Linguistic self-definition was not unique to Greeks: Egyptians also defined foreignness in linguistic terms. Their word for foreigner, *$i^{c}3$, similarly singles out non-Egyptians for their incomprehensible tongues;[2] this surprised Herodotos (2.158.5), perhaps given that – from a Greek perspective – non-Greeks labelling others (Greeks included) as barbarians reinforced Egypt's topsy-turvy exoticism (*cf.* Hdt. 2.35.1-40.4).

The association between language and identity established the prevalent attitude of both Greek and Egyptian sources that it was incumbent on foreigners to learn their languages. Thus Wenamun, protagonist of a famous Late Egyptian (*c.*1000BC) tale, asks in the court of the Queen of Alašiya (modern Cyprus?[3]) 'is there not one among you who speaks the language of Egypt?' ((*i*)*n mn wˁn.im=tn iw=f sḏm md.t km.t*: *P.Moscow* 120 W478-9).[4] Despite first-millennium Egypt's waning influence, he remains able to find a local translator. Meanwhile, even exceedingly well-travelled Greeks made little attempt to learn foreign languages: Herodotos (e.g., 2.125.6) and Xenophon (*Anab*. 4.5.34, 5.4.5, 7.3.34) both relied on translators, despite extended periods abroad. Egyptian particularly baffled

[1] Bravo (2009:21-2).
[2] Derived from the verb "to babble", it was used in the titles of Egyptian diplomatic translators: Gardiner (1915:125), Bell (1976:63).
[3] Goren *et al.* (2003).
[4] Trans. di Biase-Dyson (2013:436).

Greeks. Herodotos, in his catalogue of ways in which Egyptians 'seem to have reversed the usual practices of mankind' (τὰ πολλὰ πάντα ἔμπαλιν τοῖσι ἄλλοισι ἀνθρώποισι ἐστήσαντο ἤθεά τε καὶ νόμους: Hdt. 2.35.2), lists the practice of writing right-to-left and the existence of 'sacred' and 'common' scripts (2.36.4). His ignorance of pictographic scripts may have led him to confuse Hittite inscriptions for Sesostris' victory stelae (2.106.1-5).[5] Herodotos' dependence on second-hand information led him to 'lie through ignorance' (ὑπ' ἀγνοίας ἐψευσμένον: Manetho *FrGrHist*. 609 T7a) regarding Egyptian matters.[6] In fact, despite the number of Greeks said to have travelled to Egypt,[7] we hear of only two who learned to speak Egyptian: Pythagoras (DL 8.2), and Eudoxos of Knidos (DL 8.87), who may have translated an Egyptian text, a 'Dialogue of the Dogs' (Κυνῶν διαλόγους: DL 8.89) in its entirety.[8] This apparent xenoglossophobia was reinforced by a series of language-based prejudices. Athenian sources imply that Greeks who learned a foreign language while staying in that country had 'gone native' (*cf.* Thuc. 1.137.4-138.1; Plut. *Them.* 29.3),[9] or that xenoglots diluted the 'Greekness' of the city-state ([Xen.] *Ath.Pol.* 2.8). Athens was particularly sensitive to this. Her late fifth-century rejection of Ionic ethnicity in favour of autochthony (§5.1.1)[10] meant dealing with Pelasgian ancestry, since they were supposedly the original inhabitants of the Greek mainland. Herodotos' assertion that the Athenians had always spoken Greek (1.58.1), rather than having been Pelasgians who learned Greek, reveals language as a signifier of racial purity in the Greek world.[11] These prejudices must have occasionally been overlooked, or international interactions

[5] West (1992:117-20), Harrison (1998:4).
[6] Priestley (2014:215)
[7] Beyond the prominent Athenians listed below (§3.4.1), we might mention the Spartans Lykourgos (Plut. *Lyk.* 4.5) and Agesilaus (Xen. *Ages.* 2.27; Plut. *Mor.* 212d-e), the Rhodian Mentor (Diod. 16.42.1-2), and the philosophers Thales (DL 1.24) and Pythagoras (DL 8.2-3). *cf.* Hdt. 3.139.1.
[8] Griffiths (1965).
[9] Harrison (1998:6-7), Bravo (2009:20-1); the only Persian-speaking Greek in Herodotos, Histiaios, epitomizes failed Greekness: sneaky, manipulative and part-Medizing, using Persian to bargain for his own life (Hdt.6.29.2).
[10] Rosivach (1987:294).
[11] *cf.* Bravo (2009:11)

would have been impossible. And there are indications that both Athenians and Egyptians recognized the economic and political advantages of foreign languages.

Xenophon, an admittedly unique voice among our Athenian sources, recognized that language barriers hindered cross-cultural co-operation. When discussing the 'unwritten laws' (ἀγράφοι νόμοι) followed by all men, he proved they could not be man-made, by emphasizing that language-barriers prohibit collaboration (Xen. *Mem.* 4.4.19).[12] In Egypt, the usefulness of polyglots to the state boosted their social status, while multilingualism was seen as a mark of an intellectual (*sš, sḫ*).[13] Thus, Greek-Egyptian bilingualism did indeed exist, both in Athens and Egypt, despite the hostility borne by both societies towards foreign-speakers. But, as demonstrated below (§2.1), while the existence of Greek-Egyptian bilinguals in both states went some way to reducing Atheno-Egyptian CED, the prevalence and prominence of such individuals, and the ease with which traders could access translators, will have significantly impacted the quantity and intensity of the bilateral trading relationship.

2.1 | The 'Language Effect' in Bilateral Trade

The 'Language Effect' is among the most robustly tested predictions of modern economics; a recent meta-analysis identified 81 articles on the subject between 1970 and 2011.[14] While all studies identify that a shared language increases bilateral trade intensity,[15] there has been significant variation in estimates of its effect:[16] language barriers roughly equate to a 7% tariff on imports,[17] while common languages can yield

[12] *ibid*:19; *cf.* the Biblical Tower of Babel (Gen. 11:1-9), the story of which dates to the 7th century BC (*cf.* Campbell and O'Brien, 1993:10-12; Baden, 2009:311).
[13] Karenga (2004:80)
[14] Egger and Lassmann (2012:221).
[15] Fidrmuc and Fidrmuc (2009:2).
[16] Egger and Lassmann (2012:221).
[17] Anderson and van Wincoop (2004:693).

trade increases of up to 65%,[18] with an average increase of 44% across all studies.[19] The reason for the significant consequences of language barriers are clear. When traders operate in an environment dominated by a foreign language, they must invest either in translation services, or learn the language themselves, costing time and money. Without first-hand understanding, negotiations are cumbersome and open to misinterpretation. Monolingual traders cannot consult foreign laws first-hand, and risk, through faulty translation, flouting such customs, jeopardizing the whole transaction. Less measurable, but still important, is the effect of language barriers on the interpersonal relations between trading partners; without a common language, it is much harder to build the kind of networks which drive much modern trade, and whose importance was exaggerated in the ancient world (§3.1).

'Language barrier' lacks a precise definition. Most studies of the 'Language Effect' in modern trade use a binary measure of co-lingualism: whether or not a language has official status in either country.[20] Yet, official status is a poor indicator of actual prevalence (consider, for example, how few francophone Canadians live outside of Quebec,[21] or the widespread unofficial use of Chinese in South East Asia[22]), and fails to reflect the use of third languages, *linguae francae,* and minority languages. A more accurate picture of the 'Language Effect' therefore accounts for communicative probabilities (i.e., the probability of two random individuals speaking the same language),[23] language similarity,[24] and language competence. Studies recognizing these variables demonstrate the power of co-lingualism to facilitate trade. Take the core 15 countries of the European Union. 22% of their inhabitants self-identify as proficient or very proficient speakers of English;

[18] Frankel *et al.* (1995:73).
[19] Egger and Lassman (2012:221).
[20] Melitz (2008:668), Fidrmuc and Fidrmuc (2009:3).
[21] Arcand (2013:10, Table 1).
[22] Fidrmuc and Fidrmuc (2009:3).
[23] *cf.* Boisso and Ferrantino (1997), Wagner *et al.* (2002), Melitz (2008), Fidrmuc and Fidrmuc (2009).
[24] *cf.* §2.2, with Chiswick and Miller (1998) and Hutchinson (2002, 2005).

calculations have indicated that this increased intra-bloc trade by 30%.[25] The effect is even identifiable within countries. The 43% of Québécois and 33% of New Brunswickers who are English-French bilingual act as a gateway to Francophone trade in Canada: these two provinces account for a small share of Canada's overall international trade, but their trade with francophone countries is four times that of less bilingual provinces.[26] The 'Language Effect', then, has been repeatedly demonstrated to impose a significant barrier to bilateral trade-flows, up to 40%. It is harder to determine what this means for Atheno-Egyptian trade.

The Athenian grain trade centred on nominally Hellenophone trading partners: Sicily and the Black Sea. But while this outcome is predicted by the 'Language Effect', our understanding of the scale of the barrier imposed by the Graeco-Egyptian language barrier is hindered by a lack of data. We have no surveys of language proficiency from the ancient world, nor even adequate figures for the numbers of Egyptians in Athens, or *vice versa*. But this bleak quantitative picture does not preclude a qualitative assessment. Three main approaches enable this qualitative sketch of the Atheno-Egyptian language barrier. Naturally, we must estimate the size and composition of the Athenian and Egyptian expatriate communities in one another's states, and identify which languages these people spoke day-to-day. Additionally, we must establish whether any Egyptians in their home country acquired Greek and *vice versa* (§§2.3-4). The potential role of *linguae francae* must also be established. But we begin with an assessment of the languages themselves. Language similarity is an important, if under-recognized, component of the 'Language Effect', only recently subjected to sustained inquiry.

[25] Fidrmuc and Fidrmuc (2009).
[26] Arcand (2013:21, Table 8).

2.2 | Greek-Egyptian Comparative and Historical Linguistics

Similar languages obviously go some way to assisting communication between potential trade partners; a Flemish-speaker could claim some competency in Dutch, just as Portuguese and Spanish speakers can understand much of one another's languages without specific training. Language similarity aids language acquisition, reducing the time required to achieve competency.[27] The greater the mutual intelligibility between languages, the easier language barriers are overcome; but there is no simple measure of such similarity.[28] Many linguists determine language similarity through 'genetic relatedness' (i.e., positions on their respective language trees). This provides an incomplete picture exemplified by 'mongrel' languages such as English – genetically Germanic, but having absorbed borrowings from languages as diverse as French and Hindi, that it bears only limited resemblance to its closest relatives. Other attempts at assessing the distance between languages, therefore, have adopted an experiential approach, determining the difficulty speakers of one language have in learning others by examining the rapidity and comprehensiveness of language acquisition,[29]

Experiments reveal that (American) English speakers find Japanese and Korean the most difficult to learn, while Afrikaans, Swedish and Norwegian were easiest.[30] These results correspond to the number of language features which differ from English: phonology, morphology, syntax, lexicology, writing system, and stylistics.[31] An English speaker, used to a left-to-right arrangement of twenty-six letters, with few diacritical marks in daily usage, will naturally experience difficulty memorizing the 10,000 readings of 5,000 Japanese characters required for full reading competency, or even the 1,800

[27] Crystal (1987:271).
[28] Chiswick and Miller (2004:2).
[29] Grimes and Grimes (1993); *cf.* Chiswick and Miller (2004:7).
[30] Hart-Gonzalez and Lindemann (1993).
[31] NSA (1981:7-9).

required to read a standard newspaper.[32] The use of ideograms, determinatives and other non-alphabetic signs make languages even harder for speakers of alphabetic languages. Conversely, shared vocabulary or syntax decreases the hurdles language-learners must overcome. Less obvious, however, are the impact of phonology and stylistics on language learning.

Phonology naturally impacts how speakers of a second language sound; the learning of one's native tongue occurs during a period of rapid musculoskeletal development,[33] and resultantly, some speakers may become physically incapable of producing sounds required by foreign languages, as Europeans find when articulating the (especially aspirated) lateral and post-alveolar clicks of languages like Xhosa.[34] But the impact of phonology runs deeper than hindering the replication of phonemes. It has been demonstrated that phonological dissimilarity disrupts the short-term memory processes inherent in language learning; in short, unexpected sound patterns make it harder to retain information and associate meaning with words.[35] Similarly, stylistics, the presence of different registers or taboos regarding speech to specific groups, defined by age, status, religion and so on, or the use of sociolects and dialects, can reduce the effectiveness of communication in an unfamiliar society.[36]

Before continuing, we must observe the caveat that languages are more heterogeneous than reductive labels like 'Greek' and 'Egyptian' imply. Not only are languages divided into dialects, acrolects, basilects etc., but also so-called 'Speech

[32] *ibid*: 8.
[33] Green *et al.* (2000:239).
[34] Ladefoged and Maddieson (1996:78, 256-7).
[35] Papagno *et al.* (1991).
[36] While these differences can be simple vocabulary (e.g., French *tu* and *vous*), they can also involve entirely different grammatical or written systems: NSA (1981:9).

Communities', groups defined by common language use.[37] While Speech Communities can be ethnic or dialect groups, they might also comprise other groups with common interests or who require specialist language to communicate concepts specific to them. Speech Communities even operate across linguistic systems.[38] These specialized languages are often radically different in pronunciation, syntax or vocabulary, so that Speech Communities may become less intelligible to the rest of society. Our investigation deals specifically with the Atheno-Egyptian mercantile community, and so, while a complete linguistic study of Greek and Egyptian would be a fruitful and valuable scholarly project, that enormous task is left to someone else: our brief survey will focus on language as experienced by this community. We will be concerned more with pragmatics than semantics, limited lexical fields than broad vocabularies, and our sources more mundane than literary.[39]

2.2.1 | *Greek and Egyptian: a Historical Introduction*

Greek and Egyptian belong to separate language families (Indo-European and Afro-Asiatic) between which any genetic relationship, if one existed, is extremely distant. The extinction of Proto-Nostratic, their hypothetical most recent common ancestor,[40] perhaps occurred between 15,000BC and 12,000BC. Regardless of the problematic ideological foundations of Nostraticism,[41] most linguists would agree that such a distant genetic link would be largely irrelevant – especially given the loose relationship between languages

[37] Bloomfield (1926:153-4), Silverstein (1996:285). The usefulness of Speech Communities as an analytical unit is not unchallenged, however: *cf.* Corder (1973:53), Hudson (1996: 28-9).
[38] Romaine (1994:22), M. Morgan (2004:6).
[39] On the use of graffiti, papyri and epigraphy in the understanding of ancient languages and their relationships, *cf.* Millar (1983:83-97).
[40] Inclusion of language families in Nostratic is not uniform, and there are a number of arguments for not including Afro-Asiatic (Appleyard, 1999:311-13); the alternative Eurasiatic macro-family similarly discounts Afro-Asiatic (Pagel *et al.*, 2013:8471).
[41] Ironically, its difficult ideological genesis is well-summarized by its most vociferous proponent, Martin Bernal (1991:40-2).

even within the Afro-Asiatic family.[42] Lacking a recent common ancestor, then, Greek and Egyptian were fundamentally dissimilar. Nowhere is this more apparent than in their writing systems. The Greek script is alphabetic: in its classical form, 24 graphemes represent 15 consonantal and 7 vowel sounds, plus long variations of five vowels, and three biliteral consonants (representing two phonemes: ζ [=/d͡z/], ξ [=/ks/] and ψ [=/ps/]; see §2.2.3). This system was very stable, with only minor changes (the dropping of *digamma* [ϝ], *koppa* [ϙ] and *san* [ϻ]) early in its history. Egyptian, on the other hand, underwent various historic phases distinguished by the use of different scripts. Hieroglyphs were used throughout Egyptian history in sacral and monumental contexts, but were impractical for daily use; they were superseded for secular writing by hieratic, a cursive script contemporary with, or even predating, hieroglyphs.

Both systems are orthographically complex. There were over 10,000 Hieroglyphic signs, which fulfilled various functions. 24 uniliteral signs represented consonantal phonemes, while others were bi- or triliteral. Still more were ideograms, representing entire words through pictorial representation, though often distinguished by repetitions of one or more of their consonantal phonemes. In the absence of written vowels, determinative signs defined the semantic field of the following words, avoiding confusion. It is unclear how many symbols were required for reading competence in hieroglyphic Egyptian, but we may be guided by the list of 837 common signs compiled by Gardiner (1957); at *c.*8% of the total, this is significantly more than the 4.5% of Japanese characters (*jōyō kanji* [常用漢字], literally 'commonly-used letters') required of Japanese school-leavers,[43] and includes variations probably not learned separately. Hieroglyphs could be arranged in rows or columns, and read from left-to-right or (more commonly) right-to-left;

[42] Appleyard (1999:290-1).
[43] *cf. Japan Times* (2008). The percentage figure is based on the 47,000 signs featured in the *Kāngxī Zìdiǎn* dictionary; more recent Japanese dictionaries place the total number of signs at anywhere between 50,000 and 87,000 (Chiu and Hsu, 2006:3-4).

their monumental function demanded flexible orthography, to meet extra-textual (often aesthetic) concerns.[44] Hieratic enjoyed a similar profusion of graphemes, fulfilling the same roles as hieroglyphic signs, though employing ligatures for many characters, and with diacritical additions distinguishing similar signs. Hieratic also introduced rudimentary grammar, with the start of a sentence or paragraph commonly written in red ink. Unlike hieroglyphs, however, the orthography was standardized: hieratic was always written horizontally, right-to-left. By our period, the hieratic script predominating in Egypt's administration became increasingly cursive, the so-called 'Abnormal Hieratic'.

With the accession of the Saïte Dynasty, *c.*664BC, Hieratic was increasingly replaced in legal and administrative contexts by Demotic (§5.4.1), a development of the hieratic script originating in the Delta.[45] By the reign of Ahmose II (*c.*570-*c.*526BC) hieratic had been phased out completely, excluding religious contexts,[46] a distinction recognized by Herodotos (2.36.4). Demotic script was a much-simplified version of the Egyptian script; it employed many fewer characters than Hieratic, and, while never strictly alphabetic, the prominence of logograms (especially determinatives and ideograms) was diminished.[47] This development occurred at a time when Egypt refocussed her priorities away from Africa towards the Eastern Mediterranean (§5.2); Egypt, particularly the Delta, had long been exposed to the alphabetic Phoenician (itself related to Hieratic) and Aramaic scripts, and now added sustained interaction with the Greek world to her list of foreign contacts. Exposure to alphabetic scripts probably influenced the development of Demotic.

The rapid adoption of Demotic was only partly a natural evolution in the Egyptian language; it was also a conscious imposition by the Saïte regime. Scholars have usually

[44] *cf.* Loprieno (1995:16).
[45] Kuhrt (1996:636).
[46] Allen (2000:7).
[47] Loprieno (1995:23).

presumed political motivations: the Saïtes were a Delta family, whose restive Upper Egyptian subjects used Abnormal Hieratic, a script associated with the High Priesthood at Thebes, whose holders had virtually assumed the kingship of Upper Egypt, and were a locus for anti-Saïte sentiment. Along with replacing the incumbent High Priests (and the increasingly influential God's Wife of Amun) with Saïte loyalists (*ARE* 944; *P.Brooklyn*. 47.218),[48] the imposition of Demotic served to suppress rebellious sentiment, and promote unity. Yet, whether or not it was intended by the new regime, the adoption of Demotic made the Egyptian administration and legal system more accessible to outsiders, by reducing the linguistic distance between Egypt and her contemporaries in the Eastern Mediterranean.

If Coptic, the latest form of Egyptian, can be taken as a guide, there were perhaps six major Egyptian dialects.[49] Like dialect forms of Greek, these are broadly similar, with largely orthographic differences; the primary dialectical division follows a north-south axis,[50] as alluded to in a Late Egyptian satirical text, where an incompetent scribe's incoherent narratives are likened to conversation between northerners and southerners (*P.Anastasi* I 40.3-4).[51] But unlike Greek, Egyptian had a standard form, used by the administration across the unitary Egyptian state, and understood by a majority of Egyptians as their national acrolect.

2.2.2 | *Grammar*

Space precludes full comparison of Greek and Egyptian grammar, which would distract from our focus on language as experienced in the vernacular; our concern is the

[48] Sullivan (1981:8); Kuhrt (1996:638).
[49] Allen (2013:4, 11).
[50] Satzinger (2017:41).
[51] Allen (2013:4). This idiom was long-established (*P.Berlin* 3022.224-5); *cf.* Satzinger (2017:44).

primary differences between the two, and the diachronic changes each experienced. We shall summarize these distinctions under three broad headings: nominal and verbal morphology, and syntax.

NOMINAL MORPHOLOGY

The nominal system of Classical Attic was highly inflected, morphologically expressing gender (masculine, feminine, neuter), number (singular, plural, and, rarely, dual) and case (nominative, accusative, genitive, dative, vocative),[52] following three declensions. Egyptian nominals, conversely, became increasingly analytical. In Old Egyptian, all nouns were morphologically marked for gender (masculine, feminine) and number (singular, plural, dual); any morphological representation of case had vanished by the advent of Old Egyptian.[53] Other morphology disappeared during pharaonic history. The feminine ending *-t* was dropped early, following which, both gender and number are signified by reconstructed vowel sounds **u* for masculine and plural, and **a* for feminine and dual.[54] Gradually, the dual was lost, initially surviving for natural pairs, and eventually fossilizing lexically in these words, which were treated as singular.[55] Thus, by the time of Late and Demotic Egyptian, the six morphemes of Old Egyptian had been reduced to four.

Another important innovation of Demotic Egyptian was the adoption of a definite article, absent from the language's previous incarnations.[56] While in Old and Middle Egyptian the definition of a word (i.e., generic, defined, undefined) was indicated by context, and the convention that undefined nouns did not distinguish gender,[57] in Demotic

[52] Weiss (2010:105).
[53] Allen (2013:60-1).
[54] *ibid.*
[55] *ibid*:62.
[56] Loprieno (1995:6-7), Allen (2000:48)
[57] Allen (2013:63).

gender became lexicalized, and both gender and number were expressed *via* the definite article.[58] Thus:

Table 2.1 | The Article in Old Egyptian and Demotic

Old Egyptian	Demotic
s 'man' (masc. sing.) 'the/a man'	*p3 s* 'the' (masc. sing. def. art.) 'man' 'the man'
pssšt 'share/portion' (fem. sing.) 'the/a share/portion'	*t3 pš* 'the' (fem. sing. def. art.) 'share/portion' 'the share/portion'

Source: Kramer (2012:88), Allen (2013:63).

Reliance on the article to signify gender is familiar to Greek-speakers, whose singular dative and plural first-declension masculine and feminine nouns are otherwise indistinguishable, alongside the masculine and neuter genitive and dative in the second and third declension.

VERBAL MORPHOLOGY

Greek employs complex verbal morphologies to express three persons (first, second, third), three numbers (singular, plural, dual), three voices (active, middle, passive), four moods (indicative, subjunctive, optative, imperative[59]), and seven tenses (present, imperfect, future, aorist, perfect, pluperfect and future perfect). Egyptian verbal morphology was less stable, developing from Egyptian I (synthetic) into Egyptian II (analytic).[60] Resultantly, Egyptian verbal morphology is little-studied and remains

[58] Loprieno (1995:60), Allen (2013:63).
[59] The Greek imperative stands apart morphologically, so is sometimes not considered a mood: Weiss (2010:111).
[60] Allen (2013:104).

contentious.[61] In Egyptian I (Old and Middle Egyptian), morphologies express seven persons in the singular (first, masculine and feminine seconds, pronominal and nominal masculine and feminine thirds), three in the dual, and four in the plural (first, second, nominal and pronominal thirds);[62] additionally, Egyptian I marks stative verbs,[63] two tenses (past, non-past) with five aspects (perfect, perfective, aorist, imperfective, prospective), three moods (imperative, subjunctive, prospective) and three voices (active [unmarked], middle and passive).[64] The analytic Egyptian II system, predominant in our period, reduced the number of morphological forms to seven.[65] The absent morphemes were replaced with periphrastic forms, as in English, based on the verb *iri* 'to do'. Thus, Old Egyptian *sḏm.n=f,* 'he heard', becomes Late Egyptian *ir=f sdm*, literally 'he did the hearing'.[66]

SYNTAX

The Egyptian move from a synthetic to an analytic verbal system predicates a change from the traditional Verb-Subject-Object syntax of Egyptian I, towards a Subject-Verb-Object syntax in the Late Period.[67] Such a simple description of verbal syntax eludes students of Greek; since it is so heavily inflected, word-order itself lacks inherent meaning, with few constraints beyond mere convention. Resultantly, Greek word-order owes more to desired emphasis, genre, dialect and aesthetics than grammatical rules. The only exceptions are the so-called pre- and postpositives. The former, consisting of the article, relative pronouns, prepositions, conjunctions, the negative and some particles, must come

[61] Loprieno (1995:72-3).
[62] *ibid:*74.
[63] *Cf.* Allen (2013:109).
[64] Loprieno (1995:77-90).
[65] Allen (2013:141).
[66] Loprieno (1995:90-1)
[67] *ibid*:91.

first in its syntactic unit (i.e., sentence, clause, verbal or nominal phrase). The latter, made up of enclitics, must occupy second position.[68]

Besides these exceptions, we may identify loose conventions for Greek word-order. Declarative main clauses tend to follow the basic structure:[69]

(TOPIC →) FOCUS → PREDICATE → REST

Grammatically, the Topic can be the Subject, Verb, Object, or even the Predicate; the subject is usually omitted, since it is indicated by verbal morphology (usually the Focus in the above formulation). However, the Focus and Predicate may also be identical.[70] While numerous permutations of this structure were current, we can nonetheless assert that, since Topic and Focus often overlap with Subject and Verb, the Subject-Verb-Object structure of Demotic Egyptian was not unusual in Greek. Despite this, the predominant structure of Classical Greek was Subject-Object-Verb.

2.2.3 | *Phonology*

The little we know of both Greek and Egyptian phonology must be reconstructed from their descendant languages, and how words were transliterated or translated by other languages.[71] Attic Greek is agreed to have had fifteen consonantal phonemes,[72] five short and seven long vowels (of which only two have specific characters), and various diphthongs; Late Egyptian had either 22 or 23 consonantal phonemes, though the absence of vowels in pre-Coptic scripts leaves the number, frequency and distribution of vowel sounds open to speculation. Coptic vowels appear superficially similar to Greek, using the

[68] van Emde Boas and Huitnik (2010:148).
[69] Dik (1995).
[70] van Emde Boas and Huitnik (2010:149), with example sentences 39 and 40.
[71] On Greek phonemes, *cf.* Probert (2010:85-6). For Egyptian, *cf.* Allen (2013) and Loprieno (1995).
[72] Probert (2010:90).

same letters (ϒ [=υ] was reserved for loan-words and diphthongs),[73] though the actual values of Coptic vowels are debated: whereas η and ω in Greek represent the long, open vowels /ɛː/ and /ɔː/, contrasting the short closed /e/ and /o/ of ε and ο, Coptic ⲏ/ⲉ and ⲱ/ⲟ perhaps distinguished length, rather than the qualities of the sound, producing /eː/ (like the Greek ει) and /oː/ (like ου) respectively.[74]

Egyptian's extra consonantal phonemes required the reinstatement of defunct Greek letters (*koppa* [ϙ] became *tshēma* [ϭ]and *fay* [ⲫ]), ligatures (*stigma* [ϛ] became *so* [ⲥ̄]), and the addition of five which had never existed in Greek (*shay* [ϣ], *khay* [ϧ], *hōri* [ϩ], *janja* [ϫ] and *ti* [ⲧ]), when the Greek alphabet was applied to Coptic. But new characters were not developed for all additional phonemes. Coptic ⲃ could represent /β/ at the end of words or before consonants, and /w/ elsewhere,[75] similarly to the migration of β from /b/ in Ancient to /v/ in Modern Greek initiated in the Hellenistic Period.[76] While Egyptian did have a phoneme /b/, this became ⲙ in Coptic (Demotic *m.bꜣḥ* ['before'] becomes Coptic ⲙⲙⲁϩ).[77] Similarly, ⲁ represents both the short vowel /a/ in Greek loan words and the glottal stop / ʔ/ common in Semitic languages. Attic Greek employed two phonemes absent from Egyptian: the /ŋ/ in words like ἄγγελος, and the /ɾ̥/ of ῥήτωρ.[78]

Below, the consonantal phonemes of Coptic are tabulated, with those shared with Greek highlighted in grey:

[73] Greenberg (1990:428).
[74] On this debate, *cf.* Greenberg (1990).
[75] Maher-Ishak (1975:37)
[76] Gignac (1970:188).
[77] Maher-Ishak (1975:41).
[78] *cf.* Probert (2010:87 Table 7.1). /ŋ/ only occurs before γ, κ, χ and potentially μ: Probert (2010:89).

Table 2.2 | Coptic Consonantal Phonemes, and their Relationship to Attic Greek

		LABIAL		ALVEOLAR		POST-ALVEOLAR	VELAR		GLOTTAL
		Plain.	Den.	Plain.	Den.		Plain.	Den.	
	NASAL	/m/ ⲙ		/n/ ⲛ					
STOP	Voiceless Aspirated	/ p^h/ ⲫ		/ t^h/ ⲑ			/ k^h/ ⲭ		
STOP	Voiceless Unaspirated	/p/ ⲡ		/t/ ⲧ	/t'/ ⲇ		/k/ ⲕ	/k^j/ ϭ	/ʔ/ ⲁ
STOP	Voiced			/d/ ⲇ			/g/ ⲅ		
AFFRICATE	Voiceless					/t͡ʃ/ ϭ or ⲭ			
AFFRICATE	Voiced					/d͡ʒ/ ⲝ			
FRICATIVE	Voiceless		/f/ ⲫ	/s/ ⲥ		/ʃ/ ⲯ			/h/ ϩ
FRICATIVE	Voiced	/β/ ⲃ		/z/ ⲍ					
	APPROXIMANT	/w/ ⲃ		/l/ ⲗ				/j/ ⲓ	
	TRILL			/r/ ⲣ					

Coptic Source: Loprieno (1995:40-2), Allen (2010:22).
Greek Source: Probert (2010:87, Table 7.1)

At least in their consonantal aspect, the evidence of Coptic implies dissimilar phonologies in Attic and Egyptian. Since Coptic developed after the intense Greek-Egyptian language contact experienced during the Ptolemaic Period, and employed a script designed to reconcile Greek and Egyptian phonology, this dissimilarity was greater still when Athenian traders first encountered Egyptian-speakers. Yet, the trend towards simplification in Egyptian's later phase (§§2.1.1-2) is seen also in Demotic phonology. Thus may be traced in the phonemes /t/ and /d/: in Demotic, the two became allophones, with

/d/ only resurrected in Coptic for Greek loan-words.[79] The indistinction between the two persisted in vernacular Coptic, where the Greek vocative singular δέσποτα becomes Coptic ⲧⲉⲥⲡⲟⲧⲁ.[80] Egyptians struggled with /d/, as seen in renderings of King Darius' name, whose initial phoneme was rendered *nd* or *inti* in Egyptian,[81] and by abundant mistakes in Greek texts from Ptolemaic Egypt (particularly common are τημοσίων for δημοσίων, and τραχμάς for δραχμάς).[82] Other phonemes also coalesced in Demotic: /q/ with /k/, while /t^h/ was increasingly rendered with /t/. Other phonemes, Old Egyptian /θ/ and Middle Egyptian /ɬ/, disappeared entirely.[83] Phonologically, then, Egyptian administrative Demotic, would have been more easily intelligible to Greek speakers than Middle Egyptian literary texts, and Late Egyptian Hieroglyphic and Hieratic religious texts.

The most distinctive Greek phonological feature was its tonality, preserved through the Alexandrian introduction of pitch accents initially on Homeric works and, from the ninth century AD, as standard.[84] But tonality far predated such accents (*cf.* Plat. *Krat.* 399b; Arist. *Soph. El.* 177b35-178a3).[85] Accents served not only as didactic aids, but could also distinguish meaning (e.g., τίς/τις, τίνος/τινός, ἄλλα/ἀλλά) or case (e.g., ποιεῖ/ποίει),[86] and, given that texts were written in *scriptio continua* without grammatical marks, even separating words within a sentence (*cf.* the unaccentuated sequence απονου, which could read ἀπ᾽ὄνου ['from a donkey'] or ἀπο νοῦ ['from (your) senses']).[87] It was in this role that accentuation was first used;[88] the location and timing of its introduction may have been motivated by a large number of foreign learners of Greek present in Hellenistic Alexandria.

[79] Maher-Ishak (1975:298), Allen (2010:48-9).
[80] *cf.* Georgiacas (1959:266), with examples.
[81] Allen (2010:51).
[82] Torallas-Tovar (2010a:261).
[83] Allen (2010:51).
[84] Clarysse (1997:177).
[85] Probert (2006:16-17).
[86] *cf.* the Mandarin poem 'Mr Shi Eating Lions' (施氏食獅史; *shī-shì shí shī shǐ*), constructed from tonal variations of the syllable /ʂʅ/: Hengxing (2018).
[87] Gunkel (2014:7). The example is an Aristophanic pun (*Nub.* 1273).
[88] *cf.* Gunkel (2014:8).

Since pitch accents were not adopted into Coptic, we may conclude that Egyptian was not tonal, similarly to related Semitic languages. Most Egyptian texts are, however, written in a kind of metre, with formalized patterns of two or three stresses; these must have originated in the spoken language, and are maintained throughout Egyptian history.[89]

2.2.4 | *Greek-Egyptian Language Contact: Cognates, Borrowings and Loan Translations*

The antiquity of Graeco-Egyptian interactions presupposes extended language contact. The Athenians certainly realised that some parts of their language were borrowed. The Old Oligarch complains:

> φωνὴν πᾶσαν ἀκούοντες ἐξελέξαντο τοῦτο μὲν ἐκ τῆς, τοῦτο δὲ ἐκ τῆς: καὶ οἱ μὲν Ἕλληνες ἰδίᾳ μᾶλλον καὶ φωνῇ καὶ διαίτῃ καὶ σχήματι χρῶνται, Ἀθηναῖοι δὲ κεκραμένῃ ἐξ ἁπάντων τῶν Ἑλλήνων καὶ βαρβάρων.
>
> Hearing every kind of language, they have taken something from each; the Greeks individually rather use their own language, way of life, and type of dress, but the Athenians use a mixture from all the Greeks and non-Greeks.
>
> [Xen.] *Ath. Pol.* 2.8

Yet, long-term Atheno-Egyptian contact resulted in remarkably few borrowings.[90] Despite various attempts to identify Egyptian roots for hundreds of Greek words,[91] hardly any secure Egyptian loan-words, cognates and etymologies can be found in Greek, especially before the Hellenistic Period. Most are nouns describing objects peculiar to Egypt:[92]

[89] Baines (1983:579).
[90] Torallas-Tovar (2010a:265).
[91] Most notably by Bernal (2006).
[92] Jasanoff and Nussbaum (1996:188).

animals such as the ibis (Greek ἴβις, Egyptian *hb*), geographical features like oases (Greek ὅασις, Egyptian *wḥ3t*), and major Egyptian exports such as natron[93] (Greek λίτρον or νίτρον, Egyptian *nṯry*), comprise the earliest assimilated into Greek.[94]

Among the uncertain Egyptian etymologies proposed for Greek words, the most relevant for our study are those relating to cereals and commerce. Most of these are highly problematic. Bernal's etymology of ἀθήρ ('awn'; the pointed bristles of wheat-ears, or, Bernal proposes, the ear itself)[95] is circuitous: from the Egyptian *nṯr* ('divine'), Bernal suggests the secondary definition 'renewal', and, by adding a vowel (possible given that 'gods' in Bohairic Coptic is ⲉⲛⲧⲏⲣ), transmuting /tj/ into /t^{h}/, and dropping the final *r*, resulting in the Greek ἄνθος ('blossom'), and by restating the /r/, but dropping the /n/, becoming ἀθήρ.[96] Bernal's reliance on vague phonetic resemblances and leaps of meaning has attracted considerable criticism.[97] Bernal's other evidence, that the Greek ἀθάρη ('wheat broth') is mentioned by Pliny as an Egyptian word, is false; Pliny informs us that a medicine made from *olyra* ('wheat' or 'rye') is 'called *athera* by the Egyptians' (*quod aegyptii atheram vocant*: *HN.* 22.57). By Pliny's time, Greek was Egypt's prestige language, and even if ἀθάρη was part of the Egyptian vernacular, it is as likely to have been loaned from Greek as the other way around. Similarly, Bernal's association of the Greek κρῑθή ('barley') with the Late Egyptian *šrit* (also 'barley') relies by his own admission on a controversial phonetic leap.[98] While the conversion of the Egyptian *ḳ* and *ḫ* into κ is well-attested, from the transliteration of Egyptian proper nouns,[99] there are no certain examples converting *š* to κ. But we should caution that our knowledge of both Greek and Egyptian is limited to the, mostly official or literary, written word, preserved due to the

[93] Natron is the only export mentioned by name on the Ahiqar Palimpsest (P&Y C3.7).
[94] McGready (1968:249).
[95] Bernal (2006:247); *cf.* LSJ *s.v.* ἀθήρ, which it defines solely as 'awn' or, in the plural, 'chaff'.
[96] Bernal (2006:247).
[97] c*f.* Jasanoff and Nussbaum (1996:200).
[98] Bernal (2006:199).
[99] e.g., κόμμι from the Egyptian *ḳmyt*, κῦφι from *ḳ3pt* and χάμψα from *ḫms*: McGready (1968:249-52).

permanency of their media or their attractiveness to generations of copyists. We will never have an accurate estimate of how many Greek words slipped into the Egyptian vernacular, or *vice versa*, especially in places like Naukratis (§5.3.1). Probably traders learned isolated words of one another's languages to facilitate basic communication, or even developed a mercantile pidgin.[100]

2.3 | Who Spoke Greek in Egypt?

There had been expatriate Greek communities in Egypt for most of their shared history. Herodotos identifies two distinct communities: the trading and sacral community at Naukratis (2.175.1-4; §5.3.1), and the foreign legions at Stratopeda (Tell Defenneh; 2.154.1) who later inhabited the Hellenic quarter in Memphis (2.154.3; §4.3.1). Unless we are to suppose that these Greek communities were totally isolated, their longevity presupposes intense cultural and linguistic contact, and hints at relatively widespread Greek-Egyptian bilingualism in Egypt.

2.3.1 | *The Greek Military Community in Egypt and its Descendants*

By the time of Wahibre, there may have been as many as 30,000 Greeks and Karians serving in Egyptian armies (Hdt. 2.163.1; Diod. 1.68.4). These troops retained at least some of their native language and customs. A famous graffito at Abu Simbel (M&L 7) records the names of Greeks employed by Psamtik II (during his Nubian expedition: Hdt. 2.161.1). The inscription reveals that Greek troops served together in 'foreign legions', and were not incorporated into the Egyptian army proper. Thus, the Egyptian Padismatawy (transliterated as Ποτασιμτό) is mentioned in the inscription as having 'commanded the foreign-speakers' (ἀλογλόσος δ' ἦχε: M&L 7.4); this title recurs on Padismatawy's

[100] Torallas-Tovar (2014:255).

sarcophagus, where he is called 'General of the Greeks' (*mr ḥ3w-nbwt*).[101] This same title is attested for another Egyptian of Psamtik II's reign, the admiral Hor (Manchester 3570).[102] Individuals like Hor and Padismatawy, then, were bridges between Egyptian command structures, and the Greeks serving under them. They, or their immediate subordinates, must have spoken sufficient Greek to communicate effectively with the troops they commanded. While we cannot determine whether either man was bilingual, Hor's statue inscription indicates that he was an emissary to Greece, perhaps recruiting troops. Hor built a career on his knowledge of Greek customs and, perhaps, language, which brought him considerable status. But while there were likely Hellenophones strategically distributed through the Egyptian hierarchy, we must also consider whether any locally-stationed Greeks learned Egyptian. A fundamental clue lies in the nature of their service in Egypt.

Despite the long-standing presumption that mercenaries in Egypt were paid in silver,[103] we shall later demonstrate that in-kind payment was more likely (§4.3.1). Silver was not a standard form of remuneration in seventh-century Egypt, and the sheer number of troops renders temporary contracts impractical; perhaps 7,500 replacements would be needed annually to maintain a force of 30,000, entailing an improbable 150 yearly shipments.[104] Logic dictates, then, that most foreign troops in Egypt were permanent residents. Given that land was the customary payment for military service in Egypt,[105] it seems sensible to follow Herodotos' statement (not contradicted by Diodorus) that this was how Psamtik I paid his troops (2.154.1). This position is bolstered by the attempted defection of Greek and Jewish mercenaries to Nubia (told on the statue of Nesuhor, *ARE* 994). Like Egypt, Nubia was a non-monetary redistributive economy, even further

[101] Hauben (2001:66), Fischer-Bovet (2014:29-30).
[102] Agut-Labordère (2013:990).
[103] Trundle (2004:157).
[104] Wallinga (1991:185,187).
[105] Warburton (2000:76).

removed from the monetized Mediterranean. Whatever in-kind recompense Nubia's Pharaoh promised was sufficient to tempt these troops. One mercenary, Pedon, certainly received a grant of land (he claims, 'a city') and gold bracelets, recorded on an Egyptian statue dedicated in his home-*polis* of Priene (ϙῶι βασιλεὺς ἔδωϙ' ὠιγύπτιος Ψαμμήτιχος ἀριστήϊια ψίλιόν τε χρύσεογ καὶ πόλιν ἀρετῆς ἕνεκα: *SEG* 37.994.3-9 [Pamukkale 3162]).[106] The Greek cemeteries which have begun to emerge at Tell Defenneh[107] and the western Delta,[108] and the hybrid Graeco-Egyptian burials at Memphis (*cf.* Brooklyn 37.1354E),[109] provide further incidental proof.

Since they would not soon return home or seek employment elsewhere, a settled Greek population in Egypt would have had considerably greater exposure to the language and incentive to acquire it themselves (§2.3.2). Settlement in Egypt is also the most probable explanation for the absence of ethnics among some Greeks listed at Abu Simbel (M&L 7),[110] as well as for the archaeology of various mercenary sites. Tell Defenneh, for example, boasts plentiful Greek pottery[111] deposited over decades, with a concentration around the reign of Ahmose II, before the Persian occupation ended the Greek presence there.[112] Tell Defenneh is particularly associated with the production of *situlae*, apparently made on-site in imitation of Egyptian bronze vessels, often with imitation Egyptian decoration (e.g., BM 88.2-88.3).[113] One graffitist at Abydos, Timarchos, even adopts 'Daphnaian' for his ethnic (P&L 614). So, too, the troops at a large Egyptian fort in the Sinai, perhaps the biblical 'Migdol', practised Greek-style cremation,[114] indicating long-term investment in the site.

[106] Moyer (2011a:57).
[107] Braun (1982:44).
[108] Snodgrass (1983:144).
[109] Kurtz and Boardman (1971:324), Colburn (2018a:85, fig.30).
[110] Dillon (1997:128).
[111] Some 400 fragments: Weber (2007:302).
[112] Boardman (1999:133-4).
[113] *ibid.*
[114] Oren (1984a).

2.3.2 | *The Greek Civilian and Mercantile Communities in Egypt*

Herodotos tells us that the *emporion* at Naukratis was 'given' to the Greeks by Ahmose II (2.175.1); archaeology reveals that Greek settlement at Naukratis probably predated Ahmose's reign by about a century (§5.3.1). The city was the archetypal Port-of-Trade, a centre for administered exchange on the margins of a controlled territory (§5.2),[115] providing a neutral interface between opposing cultures, protecting the host state from foreign interference, and the traders from potentially hostile natives.[116] Herodotos provides important evidence for how Egyptian administrators communicated with the Greek traders under their watch: Ahmose II had certain Egyptian children brought up learning Greek, seeding an apparently hereditary class of 'translators' (ἑρμηνέες: Hdt. 2.154.2). One interpreter, Deinias, son of Pythias, is mentioned in a proxeny decree from Lindos (*Syll.*[3] 110). His name, like his father's, is thoroughly Greek,[117] and his heritage is therefore uncertain: his fragmentary ethnic can be restored either as Αἰγ[ύπτιον] or Αἰγ[ινάταν].[118]

Certainly, there was no shortage of Hellenophones in Egypt. The site of Naukratis is large (approximately 600,000m^2; Plan 5.1),[119] suggesting a population of perhaps 13,000 at its Ptolemaic apogee.[120] Epigraphy indicates that this population spoke mostly Greek. To this population can be added several Greek-speakers elsewhere in Egypt. The capital, Memphis, hosted many Greeks, not least within the Royal Palace: Ahmose II even married a Greek, the Kyrenean princess Ladike (Hdt. 2.181.1; *cf.* §2.4.2). The Hellenomemphitai (Aristagoras *FrGrHist* 608 F9a [*apud*. Steph. Byz. *s.v.* Ἑλληνικὸν καὶ Καρικόν]; *cf.* Hdt.

[115] *cf.* Hall (2007:246).
[116] Polanyi (1963:30, 38), Möller, (2000:20).
[117] Deinias appears in *LGPN* 144 times, Pytheas 113.
[118] *cf.* Malkin (2011:86-7, with n.103), Demetriou (2012:126-7).
[119] Villing and Thomas (2015:12).
[120] Thomas (2015a:251). This is much larger than the previous estimate of Wilson (2011:186, Table 1), who estimated a population of 5,920, presuming a 30-hectare site with a density of 185 people/ha.

2.154.3, Strab. 17.1.32,), along with Karians (Aristagoras *FrGrHist* 608 F9b [*apud.* Steph. Byz. *s.v.* Καρικόν]; *cf.* Polyaen. 7.3), left considerable evidence for their presence in the form of grave stelae (e.g., BM EA67235, Brussels E2483, Fitzwilliam E.1.1971), pottery and dedications; though, Hellenomemphitai are harder to trace than their Karian counterparts, excepting scattered pottery remains.[121] At least one graffitist at Abydos, the apparently Ionian[122] Chariandros, self-identifies as Memphite (Χαρίανδρος ὁ Στράτιωνος Μεμφίτης: P&L 536). This may not suggest that Chariandros considered himself a naturalized Memphite: mutable ancient notions of identity meant there was nothing contradictory about being simultaneously Ionian and Memphite, though it remains significant that Chariandros chose this ethnic for this particular context.[123] Many Hellenomemphites maintained their Greek identity. In the necropoleis at Saqqara and Abousir, some were interred in Ionian-style coffins,[124] one of which contained a papyrus copy of Timotheos' *Persae* (*P.Berlin* 9865); evidence both of Greek literacy, and, due to the short interval between the play's composition and the papyrus' internment, an active interest in the current literary milieu of 'Old Greece'.[125] The play itself deals with themes especially pertinent to Greeks in fourth-century Egypt: Greek-barbarian tension, culminating in the Persian defeat at Salamis.

Some Greeks did become naturalized Memphites. The 'King's Seal-Bearer' (*ḥtmty bity*) Wahibre-Emachet, despite his Egyptian name and sarcophagus (Leiden AM 4-a), had parents with the eminently Greek names Alexikles (*ꜣrksk*[*ꜣ*]*s*) and Zenodota (*sntty*).[126] The size and quality of his sarcophagus, and his burial at Giza, emphasizes his prominence in

[121] e.g., Philadelphia 29-71-189, 29-71-190; *cf.* Boardman (1999:135).
[122] Though neither name finds parallels in *LGPN*, the use of the definite article preceding the patronymic is characteristically Ionian.
[123] On multifocal identity in the Ancient Mediterranean, *cf.* Malkin (2011:18-19, with fig. 1.6).
[124] Watzinger (1905), Wilcken (1917:149-203).
[125] van Minnen (1997:247-8); Torallas-Tovar (2010a:255).
[126] Villing (2018:175).



Fig. 2.1 | Si-Amun, depicted with light skin, Greek beard and hairstyle, Siwa Oasis, 3rd century BC



Fig. 2.2 | Si-Amun's son, darker-skinned but wearing a *chlamys*, Siwa Oasis, 3rd century BC

the Saïte-Persian administration.[127] Other Hellenomemphites shared Egyptian names and cults. One bilingual inscription from Memphis names Malanthios (*br.sȝ* in Egyptian),[128] dedicator of a statue-base to Amun (New York 21.2.65). While the two roughly-incised inscriptions imply bilingual understanding, they are not verbatim translations; instead, each appeals to a distinct dedicatory practice. While the Egyptian inscription addresses Amun in the third person ('may Amun give life to Barusa': *imn di ʿnḫ br.sȝ*), the Greek focusses on the act of dedication ('[Mel]anthios dedicated me, a statuette for Theban Zeus': [Μελ]άνθιος μὲ ἀνέθηκε τῷ Ζηνὶ Θηβαίῳ ἄκαλμα).[129]

But we should not imagine Hellenic expatriates at Memphis and Naukratis were isolated in pre-Hellenistic Egypt; Greeks are attested throughout Egypt. At a city called Oasis in the 'Isles of the Blessed' (μακάρων νῆσος.: Hdt. 3.26.1) Herodotos identifies a community of Samians. They have left no archaeological trace, but the timing fits: at el-

[127] Prominent Saïte-Persian officials favoured heavy-featured anthropoid basalt or greywacke sarcophagi: e.g., the treasury official Ptahetep (Oxford 1947.295), and general Kheperra (Boston 30.834b).
[128] The reconstruction of Masson (1977:53-4); based on the phonetic approximation of Egyptian /b/ for Greek /m/, and Egyptian /r/ for Greek /l/, this seems probable.
[129] Translations adapted from Masson (1977:54).

Kharga, the likeliest candidate for Oasis,[130] the Temple of Amun was founded under Psamtik II,[131] suggesting that Herodotos' 'Samians' were yet another settled Greek-Karian military force.[132] To el-Kharga may be added the Siwa Oasis, home to the much-fêted oracle of Zeus-Ammon (§3.3.3). Here we find the later tomb of Si-Amun, whose Egyptian name and burial belie the Greekness of his appearance (fig. 2.1) and that of his son (fig. 2.2), as well as reports of Egyptian priests with limited competence in Greek: thus, the episode of Alexander's visit to Siwa, during which the prophet's mistaken greeting 'O, son of Zeus' (ὦ παιδίος) in place of 'O, my son' (ὦ παιδίον) accidentally confirmed Alexander's divine right (Plut. *Alex.* 27.5). This apocryphal tale is hardly concrete evidence of Hellenophones at Siwa, but as a regular destination for Greek travellers (Paus. 3.18.3),[133] and first port-of-call for land-traffic between Kyrene and Egypt, this was exactly the kind of place where bilinguals might settle.

2.3.3 | *The Prevalence of Greek and Availability of Translation in Egypt before Alexander*

The civil and military Greek communities in Egypt largely used their own language, evidenced by inscribed dedications at both Greek and Egyptian temples, as well as their graffiti and pottery inscriptions. Involvement in religion, tourism and commerce ensured that Greek-speakers crisscrossed Egypt regularly, settling throughout the country. While pots do not always mean people, inscribed pot-sherds, graffiti and dedications imply increasing numbers of Greek-speakers from the seventh to the fourth centuries. Greek visitors to Egypt had little trouble finding translators; their absence would have made Herodotos' Egyptian excursion impossible. But, while the second book of Herodotos is replete with instances where translation is implied (conversation with priests [e.g., 2.3.1,

[130] Asheri (2007:426); *cf.* Boardman (1999:159).
[131] Cruz-Uribe (1999:488).
[132] Boardman (1999:159); *cf.* Asheri (2007:426).
[133] Malkin (1994:159).

Table 2.3 | Evidence for pre-Hellenistic Greek Presence at Sites visited by Herodotos

	Ref.	GREEK POTTERY		Graffiti	Other Dedications	GREEK BURIALS	
		Inscribed	Un-inscribed			Greek-Style	Egyptian-Style
Pelusium	3.12.1						
Bubastis	2.137.5		✓				
Buto (West)	2.155-6		✓				
Buto (East)	2.75		✓				
Saïs	2.28.1, 2.131.3, 2.170.2	✓	✓				
Papremis	3.12.4						
Heliopolis	2.3.1		✓				
Memphis (& necropoleis)	2.2.5, 2.3.1, 2.99	✓	✓		✓	✓	✓
Moeris	2.51		✓				
Chemmis	2.91		✓				
Thebes	2.3.1, 2.55, 2.143		✓	✓	✓		
Elephantine	2.29.1		✓				

Pottery Source: Weber (2008:295).

28.1-5], and 'natives' [2.150.1]), or explicit (2.125.6), to deduce anything about the availability of Greek-Egyptian translation, we first have to confront an ultimately intractable problem: did a single translator, perhaps from Naukratis, accompany Herodotos on his travels, or did the historian use local interpreters? While we are unlikely to ever be able to answer this question, we might note that Herodotos' itinerary is limited

almost exclusively to locations where, archaeologically, there is strong evidence of pre-Ptolemaic Graeco-Egyptian contact (Table 2.3). It may simply be the case that these places held interest for his audience, but the availability of translators – or at least individuals amenable Greeks – may have guided Herodotos' travels.

2.4 | Egyptian-Speakers in Greece and, Especially, Athens

Alongside Exekias, perhaps the most prolific painter working in the Athenian Black-Figure style worked with a potter named 'Amasis'; the so-called Amasis Painter. The potter signed twelve or thirteen vases, all but one associated with the same painter.[134] His name is, of course, a Greek rendering of the Egyptian 'Ahmose'. His ethnicity, however, has been questioned: there is nothing in the design of his pots or their decoration, to imply foreign origins.[135] He was perhaps named for the philhellene Pharaoh,[136] though he was probably born too early to have coincided with Ahmose II's notoriety in Athens,[137] otherwise 'Amasis' might be a nickname recognizing some 'Egyptian' quality that he possessed or familial relationship with Egypt.[138] Even if he was Egyptian, and this seems the simplest explanation, his intimate knowledge of Athenian pottery shapes strongly implies an apprenticeship from a young age.[139] He could thus have hailed from Naukratis or another Greek settlement in Egypt,[140] or perhaps have been a second-generation Egyptian immigrant to Athens. What is certain is that Amasis signed in Greek. This to be expected: his pottery targeted a Greek market, and a foreign signature would have done

[134] von Bothmer and Boegehold (1985:33-5).
[135] Besides adopting the Egyptian *alabastron* form early (Agora P12628; Vanderpool, 1939:251, *cf.* Boardman, 1999:152), Amasis' work is, if anything, Ionian in style: Boardman (1956:2; 1987:144-5); *cf.* von Bothmer and Boegehold (1985:38).
[136] As per Karouzou (1956:27, 42).
[137] Boardman (1958:1), von Bothmer (1985:38).
[138] A potential satirical depiction of him by his rival Exekias (Philadelphia MS3442) bears African features: von Bothmer and Boegehold (1985:31).
[139] von Bothmer and Boegehold (1985:33-5).
[140] Boardman (1956:2).

little for brand-recognition among his customers (§4.1.6). But, if he were Egyptian, we must ask whether he, and his compatriots, maintained his native language in Athens. But our pre-Hellenistic evidence for Egyptians abroad is scarcer than for Ionians in Egypt; instead of explicit answers in the narrative history of the period, we must rely on archaeological and sub-literary evidence.

2.4.1 | *Egyptian Texts, Greek Contexts*

The Greek re-acquaintance with Egypt during the Archaic Period left a lasting impression.[141] During the subsequent period of 'Egyptomania', quintessentially Egyptian goods – scarabs, faience, bronzes, perfumes and other exotica – were in sufficiently high demand that Naukratites[142] and Phoenicians[143] produced imitation *Aegyptiaca* on an industrial scale. Over five thousand such works survive from the Greek world,[144] approximately a quarter of which bear hieroglyphic or pseudo-hieroglyphic inscriptions.[145] These inscriptions demonstrate varying degrees of competency in the Egyptian language, whether they originated in Egypt or elsewhere. For our analysis, I have divided these inscriptions into five types:

Type I: Grammatically correct Egyptian sentences of two or more words, including god-epithet compounds.

Type II: Single correctly-rendered Egyptian words, private or divine names, or the name of a contemporary pharaoh with formulaic titles,

[141] e.g., Austin (1970), Boardman (1999:141-53), Moyer (2011a).
[142] *cf.* Petrie (1886:14, 19, 36-7), Leonard (1997:10). Naukratis' Scarab Factory was a significant enterprise; Petrie unearthed 687 scarab and amulet moulds at the site (1886:37). Its output, made of a blue paste rather than faience (*ibid.*), would have undercut the genuine Egyptian article. Between them, small amulets and amulet moulds comprise 5% of the total assemblage from Naukratis (Boschloos, 2017:162).
[143] (Hall, 1913:viii-ix). The Phoenicians specialized in archaizing scarabs: a second-century BC deposit at Carthage yielded hundreds of scarab-seals inscribed for the Fifteenth-Dynasty Pharaoh Maaibra, and another 2,000 bearing the throne name of Thutmose III (Boschloos, 2017:149).
[144] Skon-Jedele (1994:v-vi).
[145] This figure, based on 1,281 inscriptions of the 5,138 identified by Skon-Jedele (1994), includes only those which are legible. The true proportion is certainly much greater.

cryptogrammatic divine names, where Egyptian prototypes are known.[146]

Type III: Egyptian words, names or phrases, with misspellings, mistaken signs, or incorrect orthography. This category includes some 'errors' which may be ligatures due to the limitations of space or materials, but which cannot be proven to be so.

Type IV: Archaizing Egyptian names, e.g., of long-deceased pharaohs, copied from ancient monuments but found in later contexts.

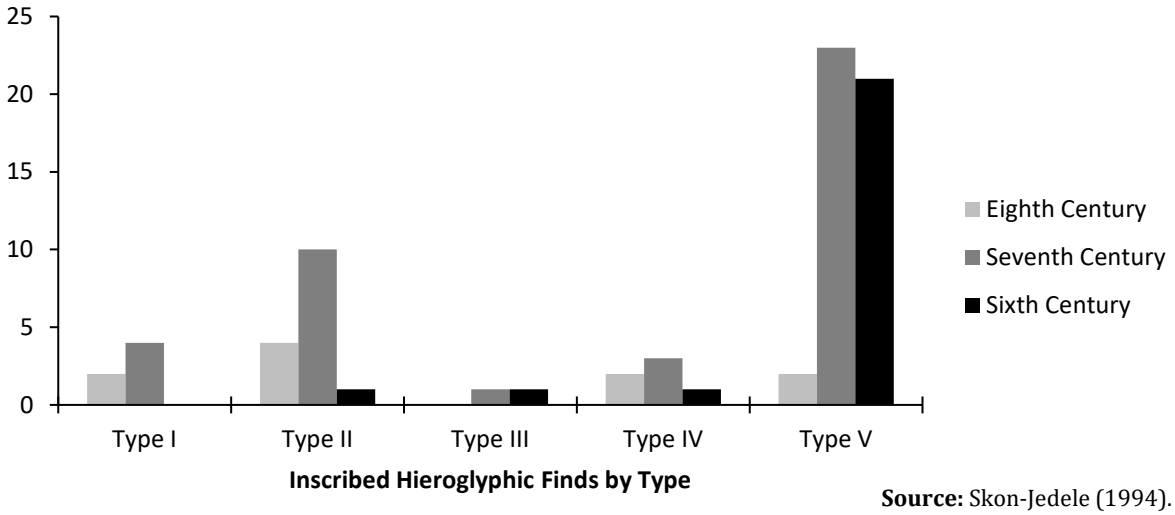
Type V: Aesthetic arrangements of hieroglyphs devoid of actual meaning, or arrangements of non-Egyptian symbols in imitation of hieroglyphs. Some may be arrangements of hieroglyphs with amuletic or 'heraldic' significance, and so genuine Egyptian works.

While such categorization is reductive – several inscriptions fit into multiple categories –it enables rudimentary statistical analysis. A graph of extant hieroglyphic inscriptions from Athens and Attika (Chart 2.1), arranged according to these types, demonstrates a preponderance of imitation or meaningless inscriptions from the seventh and sixth centuries BC, probably due to the Attic preference for scarabs and small faience *objets*, and an elite market for whom hieroglyphs served primarily to add provenance or to enhance their mystical appeal.

This pattern is largely replicated across the Greek world (Chart 2.2); Type V inscriptions account for 61% of Attic finds and *c.*50% elsewhere. The main differences lie in the relative proportions of genuine or mostly accurate inscriptions. The Aegean Islands, Crete and Rhodes have particularly high proportions of grammatically correct hieroglyphic inscriptions (14%, compared to 8% in Attika and the Peloponnese), while regions outside Attika all yield considerably more of archaizing and misspelt types. There are various reasons for this apparent disparity. Rhodes, the Aegean Islands and Crete yield a larger number of bronzes and statues, which are more likely to have been imported directly from

[146] As listed by Drioton (1940, 1957).

Chart 2.1 | Chronological Distribution of Inscribed Hieroglyphic Finds in Athens and Attika, Eighth to Sixth Centuries BC



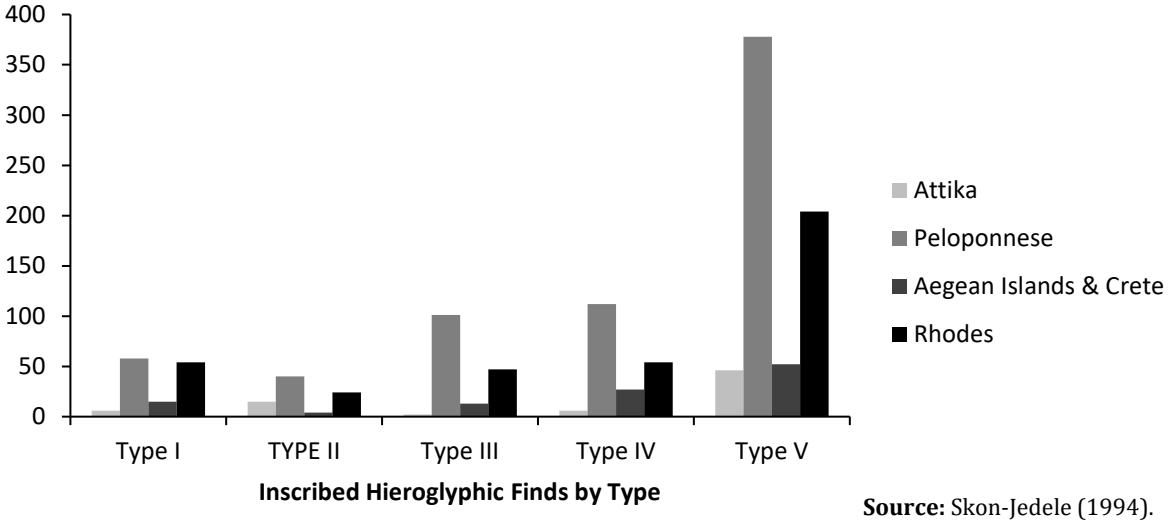
Source: Skon-Jedele (1994).

Egypt, and with more room for complex inscriptions. More importantly, the Peloponnese and Islands had greater direct contact with Egypt during the Archaic Period, with resultantly higher demand, and a more discerning eye, for genuine Egyptian goods. For Samos, Aigina and Rhodes, which yield the highest concentrations, a founding stake in Naukratis (§5.3.1) meant greater access to Egyptian goods and Naukratite imitations, providing prototypes for their own local production.

This does not, however, mean that no Greek elites cared about the meanings of inscribed *Aegyptiaca*. The most puzzling category, Type IV, is most easily explained if their meaning was understood. Type IV finds are mostly scarabs, often Graeco-Phoenician imitations,[147] bearing the names of long-deceased Pharaohs. Elsewhere in the Eastern Mediterranean, there are, for example, large numbers of seventh- and sixth-century BC, scarabs which read *mn-k3-rˁ*,[148] probably a corruption of the Fourth-Dynasty king Menkaure (builder of the third Giza pyramid, and subject of popular legend: *cf.* Hdt. 2.129-

[147] On the relationship between the Phoenicians and Greeks in the production of scarabs and other *Aegyptiaca*, *cf.* Fletcher (2004).
[148] Gorton (1996:80, 82-3, 85); *cf.* James (2015:362-3).

Chart 2.2 | Distribution of Inscribed Hieroglyphic Finds by Greek Region, Eighth to Fifth Centuries BC



Source: Skon-Jedele (1994).

33), despite the 1,900 interceding years.[149] Equally, a handful of similarly-dated scarabs from Athens are inscribed for Thutmose III (reigned *c.*1497BC-*c.*1485BC) and Amenhotep III (reigned *c.*1390BC-*c.*1352BC).[150] While it is possible that scarab-makers simply chose attractive arrangements of hieroglyphs known from other sources, this does not account for the limited number of names chosen or why they were preferred to contemporary Pharaohs. It is more probable, then, that scarab connoisseurs preferred Pharaohs of particular fame or antiquity,[151] encouraging producers to add value to their scarabs by associating these specific names with them.

Many[152] other archaizing scarabs from Greek sites, notably Perachora and Rhodes, demonstrate familiarity with the phonetic values of hieroglyphs. The so-called Hallmark A

[149] Fantalkin (2001:133). The suggestion that the name refers to an otherwise unattested contemporary Delta prince (Gorton, 1996:80) seems unlikely (James, 2015:362 n.45).
[150] e.g., Skon-Jedele (1994) cat. nos. 0025-6, 0182-92. On the improbability of Pendlebury's (1930:80) theory that Thutmose III's throne name, Menkheperre, refers to a Theban High Priest of that name, see Wainwright (1932a:126) and Skon-Jedele (1994:86-7).
[151] Thutmose III was a renowned warrior-king, while Amenhotep III was famed for his lavish court.
[152] Hallmark A and B scarabs represent some 60% of the Perachora-Rhodes (originally 'Perachora-Lindos', after Hölbl [1979:212], but renamed here following Skon-Jedele [1994:303-4]) types (Skon-Jedele, 1994:305).

and B groups were manufactured in the Aegean, perhaps on Rhodes itself,[153] These groups are derived from Egyptian prototypes,[154] bearing inscriptions known from genuine Egyptian examples – Hallmark A with the throne name of Amenhotep III, Nebmare, and Hallmark B with the traditional offering formula 'all fine and good things' (*ḫt nbt nfrt*)– but with minor variations unknown from standard Egyptian:

Table 2.4 | Comparison between Standard Egyptian Texts and Perachora-Rhodes Variants

Standard Egyptian	**Hallmark A**
	
Standard Egyptian	**Hallmark B**
	

Source: Skon-Jedele (1994:307).

These variations, specifically Hallmark A, demonstrate a rudimentary grasp of hieroglyphs. While the initial sun-disk has lost its internal boss, this is not unprecedented in genuine Egyptian renderings and does not alter the phonetic value. But the replacement of the seated goddess Maat from the standard Egyptian renditions with the simpler *mꜣʿt*–feather exploits the phonetic equivalence between the two signs.

Further evidence of limited Egyptian literacy, or pseudo-literacy,[155] comes from Samos, Perachora, Argos, Rhodes and on Crete, where Egyptian votive objects are found in

[153] Skon-Jedele (1994:305), Boschloos (2017:161).
[154] Hölbl (1979:212-13) rejects transmission via Phoenicia or the Levant.
[155] Pseudo-literacy refers to the ability to recognize and appropriately associate meaning with groups of symbols or individual words without actual reading competency. On the recognition of words by their shape, *cf.* Bouwhuis and Bouma (1979).

large numbers.[156] Particularly significant are the bronzes found at the Samian Heraion and Perachora, among them, mirrors containing hieroglyphic dedications to the goddess Mut,[157] long associated with Hera.[158] While Egyptians did dedicate at Greek religious sites – Necho II (2.159.2-3) and Ahmose II (2.182.1-3; 3.47.2-3) made numerous donations as part of the Saïte philhellenic policy (§5.2.4)[159] – these objects are usually considered exotic imports, acquired and dedicated by Greeks or Levantine intermediaries.[160] Yet, the appropriateness of the Mut dedications for their context strongly implies knowledge of the content of the hieroglyphic inscriptions, as well as their Egyptian religious context.

Among the most important hieroglyphic texts are those produced by Greeks in Greece. Most notable is the 'Apries Amphora' (Basel HC 1175 and UCL UC30035a-b), a seventh-century BC vase from Egyptian Thebes, but confirmed *via* isotopic analysis to have been produced in Ionia.[161] Along the amphora's neck are the Throne and Birth Names of Wahibre, repeated twice. But while the hieroglyphs are broadly accurate (Wahibre's Throne Name is poorly rendered), they are wrongly oriented: rather than having been transposed from a vertical to a horizontal arrangement, the entire hieroglyphic group was flipped 90° clockwise to fit the composition (fig. 2.3). This strongly discounts that the painter understood what he was writing; especially since, on stylistic grounds at least, the vase postdates Wahibre's death.[162]

Similarly, an *aryballos* shaped like a helmeted head, of a common East Greek type

[156] Samos: Kilian-Dirlmeier (1985); Guralnick (1997:130-1). Perachora: Payne (1940, esp. 142). Argos: Strøm (1992:40-1). Rhodes: Walters (1899:11 n.147), Trolle (1978:146 n.43). On *Aegyptiaca* in Greece generally, *cf.* Pendlebury (1930) and Skon-Jedele (1994). Skon-Jedele's catalogue (*ibid*) reveals that almost half of the *Aegyptiaca* from Greece originates from these four sites.
[157] Jantzen (1972:34).
[158] te Velde (1982:136-7).
[159] On dedications by foreign kings at Greek sanctuaries, *cf.* Kaplan (2006).
[160] Hall (2002:95).
[161] Bailey (2006:155), Villing (2013:91).
[162] Bailey (2006:157).



Fig. 2.3 | The so-called 'Apries Amphora', with an inscription miscopied from a vertical arrangement, so that rather than reading , it reads  6th Century BC (Basel HC 1175 and UCL UC30035a-b)

(e.g., Met.Mus. 41.162.74; Baltimore 48.2126), and likely manufactured in Corinth,[163] also bears a cartouche of Wahibre (Louvre MNB1143; fig. 2.4). The hieroglyphs are poorly incised, there is no attempt to distinguish the first and last characters. The same lack of detail is evident on a trio of faience *aryballoi* of a composite Graeco-Egyptian shape,[164] manufactured on Rhodes (Vienna IV.1626, Louvre NIII.2402 and Oxford 1944.35),[165] where the central hieroglyph is rendered as a simple cross. But while it may appear that the vessels' decorators were ill-practiced in drawing hieroglyphs, we might expect greater accuracy if they were copying an actual Egyptian prototype;[166] instead, the artist may have worked second-hand from Greek copies, or abbreviated the symbols, knowing that his Greek customers were unlikely to notice. Why these objects should have hieroglyphs at all remains unclear. In the instance of the Apries Amphora, its findspot in Egyptian Thebes suggests that it was commissioned specifically for dedication to (Zeus-)Ammon in his

[163] Boardman (1999:127-8)
[164] *ibid*:127.
[165] Mitchell (2005:71 and fig. 3.2). While it is possible that they are of Naukratite production (*cf.* Vlassopoulos, 2013:99), Rhodes is more likely.
[166] This is the model of transmission for hieroglyphs onto Greek vases accepted by Bailey (2006:157).

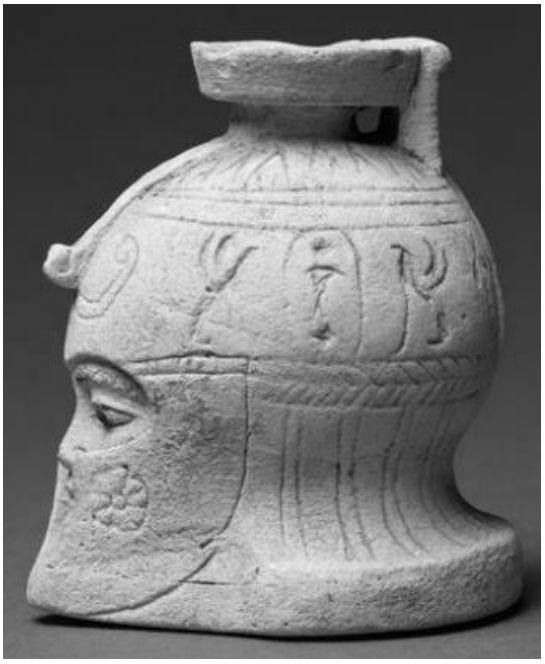


Fig. 2.4 | A Corinthian *aryballos* bearing Wahibre's cartouche, *c.*575-50BC (Louvre MNB1143)



Fig. 2.5 | Cartouche of Wahibre, correctly rendered on a fragmentary column, *c.*589-70BC (BM EA964)

primary cult-centre. As for the *aryballoi*, their function may provide a clue: they were used to store perfumes and scented oils for use in bathing, often in athletic contexts,[167] or by women.[168] Given Egypt's primacy in the perfume trade (§2.4.2), it could be that specifically Egyptian decoration of *aryballoi* attested to the quality of the product stored inside.

Individual words, names and short sentences are common among *Aegyptiaca* inscribed by Greek hands, only one complex sentence has been connected, however loosely, with a Greek author. The text is a dedication, purportedly reading 'Made for Mut, Mistress of the Gods, who gives life, prosperity and health to *tdrḫt*, daughter of [*i*]ʿ*ḥ*-*ḫns*(*w*).'[169] The latter is the name of the dedicant's mother, the theophoric name 'Moon of

[167] Aryballoi are often shown in athletic settings in vase-painting (e.g., Malibu 86.AE.298, Basel BS485; *cf.* Miller 2004:14-15). On athletics as characteristic of Greek self-image, *cf.* van Nijf (2001:307-310), Scanlon (2002).
[168] The use of *aryballoi* by women is evidenced on numerous vases: Louvre F203 (Amazons), Vienna 2166, Dresden 321 (Athletes?).
[169] This is the reading provided by Pendlebury (1930:142-3), though he provides no transliteration, and the present state of the mirror precludes fresh interpretation (Skon-Jedele, 1994:437).

Khonsu'.[170] But the dedicant herself has an unusual name; given the equivalence of the syllables with the Greek Θ-Δ-P-X-H, where H replaces the Egyptian feminine ending *t*, it has been reconstructed as Theodoriche. But, regardless of the nationality of the dedicant, the use of the matronymic was peculiarly Egyptian,[171] and the association of the goddess Mut with Hera, in whose sanctuary this mirror was found, demonstrates a wholesale adoption of Egyptian dedicatory practice, and understanding of Egyptian custom.

2.4.2 | *Egyptians in Athens, and the wider Greek World*

The foreign population of Athens was large,[172] and largely Greek.[173] The Old Oligarch complained that, because citizens and resident foreigners were virtually indistinguishable, it was impossible to treat foreigners with appropriate disdain, lest one mistreated an innocent Athenian ([Xen.] *Ath.Pol.* 1.10). Nevertheless, non-Greek foreigners also resided in Athens. The most numerous were slaves taken from the Black Sea region and Asia Minor, with smaller groups of Near Eastern slaves and barbarian metics. How many were Egyptian is harder to estimate; they are not mentioned among the Lydians, Phrygians, Syrians and 'other barbarians' (ἄλλοι παντοδαποὶ βάρβαροι) Xenophon listed as the principal groups of metics (*Por.* 2.3). But, while the evidence for Egyptians in Athens

[170] Despite the strong association between Khonsu and Herakles (*cf.* Hdt. 2.42.3, 5; *cf.* Long, 1987:147), the name references the moon (*iʿh*), emphasizing Khonsu's lunar aspect: if the mother were Greek, her name would likely refer to Selene or Phoebe.
[171] *cf.* Gordon (1993:133); matronymics were rare, but not unheard of, in Greece: *cf.* Pomeroy (1984:90).
[172] The size of Athens' foreign population is debated. The only ancient indication comes from Demetrios of Phaleron's census (Ktesikles *FrGrHist.* 245 F1), problematically listing 10,000 metics, and 400,000 slaves. Much depends on Demetrios' intentions: following Hansen's (1991:93) suggestion that it assessed military manpower, the figure should indicate 10,000 male metics aged 18-59, extrapolating to a total population of *c.*40,000; if Demetrios recorded metics eligible for the *metoikion* (Sallares, 1991:52), then his figure would include some unmarried women and the elderly, lowering the estimate. Accepting the figure uncritically (*per* Sallares, 1991:60) provides no alternative motivation for the census. As for slaves, Demetrios' 400,000 is unfeasible, and a figure in the tens of thousands more likely: see Sallares (1991:55-7) and Hansen (1991:93).
[173] Whitehead (1977:110), Miller (1997:84); *cf.* Isager and Hansen (1975:217-19).

is scanty, the glimpses we have indicate that they comprised a relatively significant group, who slowly grew in prominence.

The Archaic Period represented the apogee of Graeco-Egyptian contact before Alexander. As shown above (§2.4.1), Egyptian imports were commonly donated in Archaic Greek sanctuaries and were closely bound up with elite self-presentation in life and death across the pre-Classical Aegean. The presence of actual Egyptians in Archaic *poleis* is harder to establish: most *Aegyptiaca* probably arrived through Phoenician intermediaries, or from Naukratis. Short-term Egyptian visitors to Greece were certainly common, given the number of diplomatic gifts made to various Greek states and sanctuaries,[174] and the evidence, as from Admiral Hor's statue (§2.3.1), of diplomatic expeditions.[175] These *xenoi*, unless they were involved in the Greek community at home, probably communicated through interpreters.[176] Egyptian settlers in Greece, who doubtless learned the language, are harder to trace.

Cyprus (§5.2.3) and Kyrene are perhaps the likeliest recipients of Egyptian migrants, due to proximity and extensive Egyptian interest. Ahmose II's occupation of Cyprus (Hdt. 2.182.3) was possibly accompanied by Egyptian migrants; a fragmentary relief showing the Egyptian double-crown (Nicosia CS2378) may come from a gubernatorial residence,[177] while another sculpture (Princeton R9913; fig. 2.6) might depict the Nubian wife of an administrator (§5.2.3).

[174] Necho II: armour in Milesia (Hdt. 2.159.3), and a wooden shrine (Skon-Jedele, 1994:2357-8; §5.2.4). Ahmose II: a corslet, paintings and statues at Kyrene, Lindos and Samos (Hdt. 2.182.1; *cf.* Francis and Vickers 1984:119-20), a corslet at Sparta (Hdt. 3.47.1), and 1,000 talents of alum at Delphi (Hdt. 2.180.2).
[175] See also, later, *IG* II^2 119.
[176] It was perhaps for this kind of diplomatic service, rather than mercantile, that Damoxenos and Deinias (*Syll.*^{3} 110) earned proxeny from Lindos.
[177] Reyes (1994:83).

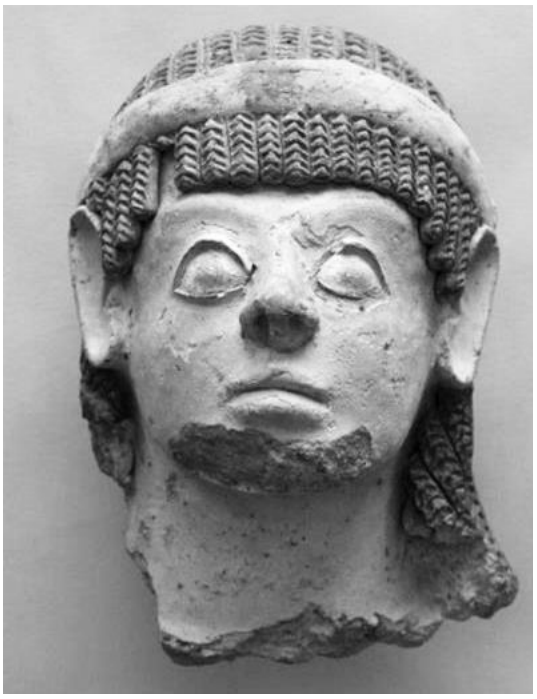


Fig. 2.6 | Cypro-Archaic sculpture of a woman with Nubian features 6th century BC (Princeton R9913)



Fig. 2.7 | East-Greek bronze in hybridized Graeco-Egyptian style, 6th century BC (Baltimore 54.970)

The close Egypto-Kyrenean relationship, cinched by the marriage of Ahmose II and Ladike (Hdt. 2.181.2), was also probably accompanied by migration. Elsewhere, we must look to Asia Minor and the Greek islands for Archaic evidence of Egyptian presence (§5.2.4). More Egyptian bronzes have been found in Samos than anywhere else in Greece,[178] some 132 in the Heraion alone,[179] part of the richest assemblage of *Aegyptiaca* in the Aegean.[180] Of particular interest is a small bronze of a woman (Baltimore 54.970, fig. 2.7): while her dress and stance are Egyptian, her 'Archaic smile' and the rendering of her eyes and hair are characteristically Greek.[181] The subject is unknown: she may simply imitate Egyptian statues known to the artist, though she lacks the attributes of a goddess. More probably, she represents a private individual. If so, she may have been an Egyptian resident on Samos, or a Greek depicted in Egyptian dress. Similarly, Egyptian-style

[178] Austin (1970:9).
[179] Snodgrass (1980:140).
[180] Skon-Jedele (1994:1402-3).
[181] Benson (2001:7-8).

inhumations on Samos and in Klazomenai[182] represent a hybridization of elite culture with Egyptian, revealing the kind of sustained, long-term contact engendered by migration.

Xenophon records a tradition that Aiolian Larissa, Kyllene and unspecified other Ionian cities were settled by Egyptian troops in the employ of Cyrus the Great (*Kyr.* 7.1.45; *cf. Hell.* 3.1.7). Archaeology is inconclusive on its veracity: while architectural fragments from Larissa display various Egyptian and Near Eastern motifs presented in the Greek style (lion-footed chairs, Egyptian-style wings: Stockholm 1685) this is perhaps expected from a city under Persian domination, and closely linked to Egyptian-friendly states like Klazomenai. For Archaic Athens, the evidence is even weaker; little *Aegyptiaca* comes from Athenian contexts,[183] mostly comprising East Greek and Naukratite imitations.[184] Those genuinely Egyptian finds are usually of seventh- or early sixth-century date and were dedicated at the seafaring shrine at Sounion[185] or Eleusis.[186] The pattern of dedications, proportion of imitations, and date of the finds, suggest donations from grateful seafarers returning from Egypt,[187] or elite dedications of exotic imports,[188] rather than from Egyptians themselves. The only other potential evidence for a resident Egyptian from before the end of the Persian Wars is the name of the potter Amasis.

Yet, it is in the Classical Period, precisely the time when Egyptian finds from Athens and Attika dry up,[189] that our evidence for Egyptian metics in Athens improves.[190] Thus we

[182] Hürmüzlü (2004:197-8).
[183] Though the variety of finds may indicate that they are a small portion of an originally much larger assemblage: Skon-Jedele (1994:166-7).
[184] *ibid*: 6-7; *cf.* §2.4.1.
[185] By far the largest assemblage, at 75 individual faience items (*ibid*: 135-6).
[186] *ibid*: 108.
[187] Pendlebury (1930:82); Schoder (1974:198).
[188] Skon-Jedele (1994:166-7).
[189] The only Egyptian find from a Classical context is a faience pot-sherd, itself of uncertain date (*ibid*: 71-2).
[190] Bäbler (1998:69-70) lists a number of Egyptians claimed to be resident in Athens; however, a number of those she references, such as Dinias (a noted perfume dealer: Strattis fr. 34 K-A) and the astrologer Petosiris (Ar. fr. 267 K-A), cannot be proven to have lived there, despite being well-known to Athenians.

hear of the unscrupulous fish-merchant Hermaios (Archippos fr. 23 K-A; Chapter 4), and Paapis, whose cups were allegedly stolen by Hyperbolos before his ostracism (Leukon fr. 1 K-A), both resident in Athens during the last quarter of the fifth century. Psammis, a metic farmer recognized for his contribution to the revolution against the Thirty *c.*401/0BC (R&O 4 [= *IG* II^2 10]), shares the name Herodotos used for Psamtik II. Our next named Egyptian features in a speech of Isaios, one Melas (Isai. 5.7-8, 40), a friend of the Greek Dikaiogenes 'since childhood' (ᾧ ἐκ μειρακίου φίλος ἦν: 5.40), proving that he was born, or at least spent his youth, in Athens, and was probably a second-generation immigrant.[191] His name, Melas (lit. 'black' or 'dark'), probably references his skin tone; his birth-name may have been Egyptian. He, like Hermaios, is duplicitous, attempting to lure his Greek friend into subverting Athenian social norms.[192] In another speech (by Hypereides, *c.*330-24BC), a plaintiff seeks redress for mis-sold slaves. The defendant is an Egyptian *parfumier* (Hyp. 3.3) whose name, Athenogenes ('born of Athena'), may translate the Egyptian Saneith ('son of Neith', syncretised to Athena; §3.3.2). He, too, was probably a second- or third-generation immigrant: the likeliest reconstruction of a fragmentary section of the speech (3.34) implies that Athenogenes inherited his perfumery from his father and brother. Hypereides also indicates that Athenogenes was of military age at the time of the Battle of Chaironeia, at which he refused to fight, that around that time he had multiple daughters of marriageable age (i.e., at least 12 or 13), and was old enough to stand as a magistrate in Troizen. Athenogenes must therefore have been at least thirty in 338BC, and, given the relatively high age restrictions on some Greek magistracies,[193] perhaps much older. His family must have arrived in Athens before the 360s BC, perhaps during Egypt's final, brief, independence from Persia.

[191] The speech dates from *c.*389BC (*cf.* Whitehead, 2000:267), so his family are likely to have arrived in Athens towards the end of the fifth century.
[192] In his case, circumventing the normal rules of inheritance.
[193] e.g., the *strategoi* at Kyrene, whose minimum age was 50 (Chamoux, 1953:176-207; Robinson, 1997:105).

Eight more Egyptians are known from funerary inscriptions found in the Agora. The earliest, a clothier or wool-weaver[194] also named Hermaios (*IG* II² 7967), died between 425 and 400 BC.[195] The remaining inscriptions date from the 350s BC, and include among their number individuals described as Naukratites (*IG* II² 9987), as well as ethnic Egyptians (*IG* II² 7968, 10596 and 10597). Women are well-represented, with two inscriptions (*IG* II² 7968 and 10596). These eight inscriptions form a fairly sizeable part of the 146 known for foreigners from Athens; the second-largest group of Near Easterns after the Persians.[196] That these funerary inscriptions are not bilingual, like those for Phoenician merchants (§2.5), implies nothing about the ability of these Egyptians to speak their native language. Egyptians were notoriously attached to their homeland and particularly distrustful of foreigners. Being buried abroad was a common taboo in Egyptian literature, including the popular *Tale of Sinuhe*, whose protagonist asks 'what matters more than being buried in the land where I was born?' (*ptr wrt r iʿbt ḫ3t=y m t3 ms.kw im=f*: *P.Berlin* 3022.159-60; *cf.* 195-200). Egyptians with means preferred to be buried in native soil; those mentioned on Attic grave inscriptions must have been attached to their new home, and unusually receptive to Athenian culture.

Apparently, then, Egyptian metics formed a significant group at Athens. At Piraeus, 333/2BC, we hear that groups of Egyptians had previously been permitted to erect temples to Isis (*IG* II³ 1 337.38-45)[197] and, somewhat earlier, Zeus-Ammon (*IG* II² 338.15, 410.19, 1496 A IV.96);[198] the Egyptians may have formed a cult association sizeable and vocal

[194] Labarre (1997:801-2).
[195] *cf.* Meritt (1934:87).
[196] Lewis (2011:104).
[197] Garland (1987:126-8).
[198] Evidence for the date of Zeus-Ammon's arrival at Athens is limited, but several Roman statues of Zeus-Ammon (e.g., Boston 59.715, Kassel Sk. 113, Met.Mus. 2012:22) are copies whose originals are placed stylistically in the Athens of the fifth century BC (Vermeule, 1988:111; *cf.* Picón, 2012:12-13), suggesting early recognition of this god. Garland (1987:134) dates the cult's foundation to the first half of the fourth century.

enough to agitate for this recognition (§3.3.3).[199] The Egyptian language was apparently not used in connection with these cults, either in ritual activity, or dedicatory practice. But the existence of groups of Egyptians significant enough (or sufficiently successful in their advocacy) to be granted sacred spaces by the *polis* implies fully-fledged expatriate communities with a keenly-felt identity. Under these conditions, it is not only native Egyptian religion which endured in a Greek environment; modern exemplars demonstrate that cohesive immigrant communities preserve their languages among themselves well into their third or fourth generation.[200]

We may add to the metic community various slaves and others of Egyptian extraction. Evidence for slaves from Egypt and the Near East is limited, with both ancient evidence and modern research focused on slaves from the Black Sea and Thrace.[201] Yet it is clear that Near Eastern slaves were commonplace in Athens; 70% of the slaves listed on the Attic Stelai originated from the east or northeast.[202] But while there is no unproblematic evidence for Egyptians as slaves in Athens – they do not appear in the lists of slaves confiscated from the *Hermokopidai* (*IG* I^3 421-30),[203] and no known slave bore an Egyptian name – the Egyptians were esteemed for two professions often (but not exclusively) performed by slaves: courtesanship and medicine.

An Attic red-figured *kylix* of *c.*520-10BC (Yale 1913.163) shows a *hetaira* wearing a broad beaded collar typical of Egyptian dress.[204] Exotic accoutrements are expected in this context; the contrast between Greek and Other was a central theme of the *symposion*, a safe outlet for otherwise respectable men to subvert the expectations and standards of the

[199] Parker (1996:337-8), Leiwo (1997:115).
[200] *cf.* Rumbaut and Massey (2013).
[201] *cf.* Lewis (2011:91-2).
[202] Miller (1997:81).
[203] *cf.* Pritchett (1953); Isager and Hansen (1975); Ehrenberg (1961:171-2) and Miller (1997:82-3).
[204] Cole (2013:127-8).

polis. Whether the artist intended us to think that this *hetaira* was herself Egyptian is debatable, though. Egypt (or, at least, Naukratis) certainly had a reputation for *hetairai*, including the famed Rhodopis (although she was an ethnic Thracian: Hdt. 2.135.1-3) and Archidike (2.153.2). The latter's Greek name does not preclude Egyptian ethnicity, given that many *hetairai* were originally slaves (including Rhodopis), named by their (Greek) masters. Certainly, a late mention of her emphasizes her availability both to Greeks and Egyptians, provided they could afford her services. The number of Egyptian *hetairai* is impossible to determine, but some interpretations of fifth-century tragedy suggest a thriving trade. In Aischylos' *Suppliants*, the Danaids – the fifty daughters of Danaos, twin brother of Aigyptos – arrive in Argos from Egypt, requesting suppliant status to avoid forced marriages (392-3).[205] Outside of Danaos' household, they became vulnerable to strange men, and at risk of conducting themselves improperly (1006-9);[206] a position akin to that of *hetairai*,[207] who controlled their own affairs but were nonetheless beholden to those men whose affections they earned. The play has excited much discussion: it was likely composed shortly after the Battle of Sepeia, when Argive manpower was decimated (Hdt. 7.148.2, 6.83.1). The Argive widows were required to remarry (Plut. *Mor*. 245c-f),[208] and Aischylos may be defending a similar Athenian law, requiring women to marry a relative of their deceased husband to keep his inheritance within the family.[209] The 'Egyptianness' of the Danaids has attracted less attention, however.[210] Aischylos certainly emphasized this feature, in his descriptions of their 'Nile-burned cheeks' (Νειλοθερῆ παρειὰν: 71) and Danaos' exposition of the physiognomic differences between Egyptians and Greeks (496-7; *cf*. 155, 719-20). Equally, these Egyptian women exhibit the independent agency which so concerned Herodotos (2.35.2). Of course, Aischylos wrote at

[205] Or, rather, to escape the power of their *kurios* (Bakewell, 2013:66).
[206] Silver (2018:101).
[207] A term which does not necessarily imply a sexual dimension: Davidson (2004:170); Silver (2018:99).
[208] Diamantopoulos (1957:222).
[209] Ridgeway (1910:18-9), Thomson (1973:285-95); their position is forcefully challenged by Garvie (1969:217-20) and Murray (1958:8-10).
[210] With the notable exception of Mitchell (2006a).

a time of crystallizing Greek identity, when various civic and ritual institutions emerged to contextualize 'Otherness' for an Athenian audience.[211] Aischylos' Danaids, therefore, bring to mind the irredeemable 'Otherness' of sympotic *hetairai*, and suggest that Egyptian courtesans were familiar to his audience. Certainly, *hetairai* were sometimes transient ([Dem.] 59), and we know of single Egyptian females in Athens (e.g., *IG* II^2 7968 and 10596) of uncertain status.[212] It is perhaps no coincidence that the villain Athenogenes chose a courtesan, Antigone, as his accomplice (Hyp. 3.5).

Perhaps the earliest individual associated with medical prowess was Polydamna, Helen's Egyptian attendant, famed for the 'well-chosen drugs' (φάρμακα μητιόεντα: Hom. *Od.* 4.227-8) brought from her homeland, where every man was a 'healer skilled above all other peoples' (ἰητρὸς δὲ ἕκαστος ἐπιστάμενος περὶ πάντων ἀνθρώπων: 4.231-2). By the Archaic Period, this expertise was exported to Oriental potentates, such as Darius (Hdt. 3.129), and likely also to Greece. Yet, Herodotos' anecdote of Darius' Egyptian doctors reverses their long-held reputation:[213] after Egyptian treatments proved ineffective, Darius summoned the Greek Demokedes, who superseded the Egyptian medics in the Great King's court. This episode fits with Herodotos' implicit expression of historical progress,[214] charting the moment where Greek wisdom superseded Egyptian. Yet, Egyptian doctors were commonplace enough in Athens that a fictional letter of Anacharsis, composed in the third century BC,[215] but with a dramatic date in the sixth, listed Egyptian doctors among examples of Athenian acceptance of barbarians ([Anach.] *Ep.* 1.8). Athens, then, probably had a significant unfree Egyptian population as well many Egyptian metics, who

[211] Vidal-Naquet (1997:115); Mitchell (2006a:220).
[212] The first of these women may have worked in textiles, since her inscription was found in the textile quarter (Ginestí-Rosell, 2013:322).
[213] Jouanna (2012:13-14).
[214] Stambler (1982:212).
[215] Malherbe (1977:6-7).

particularly specialized in the purveyance of luxury goods (e.g., perfume and fish), living both in the Piraeus and *asty*, and providing a corps of ready-made translators.

2.5 | *Linguae francae* in Graeco-Egyptian trade

Egyptian was only one of the Barbarian languages encountered by the Greeks. Far more day-to-day contact came on the direct periphery of the Greek world: Etruscans and Sikels in *Magna Graeca*, Skythians around the Euxine, Phoenicians on Sicily and Cyprus, and Lycians, Karians, and Phrygians to the east. But as the sixth century became the fifth, the Persians became the most important external voice with which Greek states needed to communicate. And, from the reign of Darius onwards, that voice replied in Imperial Aramaic.[216] Aramaic was a practical *lingua franca* for the linguistically diverse Persian Empire (*cf.* Esther 1:22):[217] it had been the trading and diplomatic language of the Eastern Mediterranean,[218] so already enjoyed wide currency among the Achaemenids' new subjects, including Egyptians (§5.1.4). An enormous corpus of Aramaic epistolic, literary and legal documents attest to widespread Aramaic literacy within Persian-era Egypt, especially among the Jews at Elephantine and the satrapal administration at Memphis. There, the satrap's business was conducted bilingually by a corps of native secretaries and translators. Pharandates, when approving administrative appointments for the Elephantine temple of Khnum (*P.Berlin* 15339), composed his response in Aramaic before the scribe Peftuaneith translated it phrase-by-phrase into awkward, stilted Demotic; the Demotic-language reply (*P.Berlin* 15340) was probably translated into Aramaic on

[216] Cameron (1973:52), Delaunay (1974). On the Achaemenid standardization of Aramaic dialects, *cf.* Gzela (2015:157-8). This did not diminish the linguistic diversity of the Persian Empire, and much satrapal business was conducted bilingually: Kuhrt (1995:699), Briant (2000:507).
[217] Generally, on linguistic diversity in the Persian Empire, *cf.* Cameron (1973:47).
[218] Folmer (1996:4), Gzela (2015: ch. 3, 158).

arrival.[219] Similarly, Arsames administered his Egyptian estates in Aramaic,[220] implying that bilingual supervisors translated his decisions for his native workers. Greeks also used Aramaic in foreign correspondence: Artaxerxes' letter to the Spartans, was written in 'Assyrian letters' (Ἀσσύρια γράμματα: Thuc. 4.50.2), which must surely mean Aramaic.[221] Despite the availability of Greek translators in the Achaemenid court, Artaxerxes sent his letter knowing that it could be translated in Sparta; when it was intercepted by the Athenians, they had no trouble discerning its contents. The availability of Greek-Aramaic translators is to be expected: a bilingually inscribed silver stater from Issos (BM 1985,1114.3)[222] demonstrates an amount of official bilingualism among Persia's Ionian subjects.

An important attestation to Aramaic in trade is the 'Ahiqar Palimpsest' (P&Y C3.7), the famous Egyptian port record from *c.*475BC.[223] Restored from an erased text,[224] the document records the collection of tariffs at a port on Egypt's Mediterranean coast,[225] likely Herakleion-Thonis (§5.3.2). 34 of the ships are 'Ionian' (*ywny*). It is unclear precisely what is meant by this; *ywny* can refer to Greeks in general, or specifically to those East Greeks under Persian domination. The latter seems preferable, given that officials presumably sought to differentiate between Persian-controlled and other Greeks.[226] But

[219] Briant (2000:474-5, 508).
[220] The Arsames correspondence, a corpus of 13 letters, include arbitrations between native superintendents (Driver 2, 8) and rent collections (Driver 10, 11), which imply communication between the Aramaic-speaking letter-writer, and Egyptian speakers. On the corpus generally, *cf.* Whitehead (1978:119-20).
[221] Momigliano (1971:9), Kuhrt (2014:129).
[222] *cf.* Vlassopoulos (2013:22-3).
[223] The date is not uncontentious: the internal reference to 'Year 11' of a reign might refer to Xerxes (475BC: Porten and Yardeni, 1993:xx and 23) or Artaxerxes (454BC: Briant and Descat, 1998:61). 475BC seems likelier on palaeographic grounds (Yardeni, 1994:68).
[224] The 'Words of Ahiqar': P&Y C1.1.
[225] Horden and Purcell (2000:149).
[226] Selden (2013:4 n.14). It has also been suggested that, given the unfavourable tax burden on Greek ships compared to Phoenician (the former paid a 20% tax against the latter's 10%: Yardeni, 1994:70), that these ships must have originated outside the Empire: *cf.* Horden and Purcell (2000:149), Hornblower (2011:68).

even if the captains were Persian subjects, the Ahiqar Palimpsest suggests that either they or the port officials were Greek-Aramaic bilingual, or even that the document was translated from Greek to Egyptian and thence into Aramaic; a Greek travelling to Egypt, therefore, had an alternative to Egyptian when communicating with the authorities, as well as other traders.

2.6 | The Linguistic Situation in Hellenistic Egypt

Long after the Classical Period – indeed, a short time outside the dates considered by this thesis – we find the best-known example of Greek-Egyptian bilingualism. The Rosetta Stone (BM EA24 [=*OGIS* 90]) presents three near-identical versions of the Memphis Decree, which reaffirmed both the loyalty of the priesthood and the Ptolemies' dynastic commitment to the state religion, while advertising the suppression of indigenous dissent at Lykopolis. Dated to Year 9 of Ptolemy V Epiphanes (197/6BC), the stele is the latest in a series of bilingual inscriptions (the 'Ptolemaic Decrees') issued by synods of Egyptian priests.[227] Their common postscript, setting out how they were to be displayed, makes clear the relationship between the three scripts:

> [τὸ δὲ ψήφισμα τοῦτο ἀναγράψαι εἰς στή]-
> [λας σ]τερεοῦ λίθου τοῖς τε ἱεροῖς καὶ ἐγχωρίοις καὶ Ἑλληνικοῖς
> γράμμασιν.
> The decree shall be written on a stele of hard stone in the sacred,
> native and Greek letters.
>
> *OGIS* 90.53-4[228]

Each script served a different social function and was intended for use by different sectors of society. Thus, Hellenistic Egypt was not properly bilingual, but rather plurilingual;[229]

[227] The Decree of Canopus (*OGIS* 56; 238BC) and the Raphia Decree (SB III 7172; 217BC).
[228] Similar postscripts are found on the other tri-script decrees in the series: *OGIS* 56.74-5;
[229] Torallas-Tovar (2010b:17).

scripts and languages were chosen according to context, and while Greek-Egyptian bilingualism was certainly widespread, it by no means permeated all parts of Egypt nor all the organs of the Ptolemaic state. For example, four out of five witnesses of the will of Dryton, from the town of Pathyris, near Thebes, signed in Egyptian, because there were too few Greek-speakers (τοῖς ἐγχωρίοις γράμμασιν διὰ τὸ μὴ εἶναι ἐπὶ τῶν τόπων τοῦς ἴσους Ἕλληνας: *P.Batav.* 4). Another, later, court record (*P.Oxy.* 2.237; AD133) demonstrates that, even four centuries after Greek was introduced to Egypt, translators were still required to interrogate native witnesses in the *chora*. Even in the exceptionally Hellenized Fayyum, bilingual texts abound.[230] Conversely, in parts of the country Egyptian became a minority language. The Ptolemaic court almost exclusively spoke Greek, and the Ptolemies themselves learned little Egyptian: Ptolemy IV communicated with his army through translators (Polyb. 5.83.7). Perhaps the only exception was Cleopatra VII, whose facility with languages enhanced her legend as an exotic seductress (*cf.* Plut. *Ant.* 27.3-4).[231]

The Ptolemaic court has been characterized as a 'social space', a network of relationships between individuals and the person of the monarch.[232] Thus, the functionaries of the court – advisers, ambassadors, generals, priests and even regional governors – were identified as the king's *philoi*.[233] It is hard to determine how many were Egyptian: foreigners operating in a Greek environment often adopted Greek names, while ethnics and even patronymics were malleable tools of self-presentation. Three Ptolemaic *philoi* have been identified as Egyptian, but appear late in the period; the earliest, Dionysios Petoserapis, occupied a powerful position in the court of Ptolemy VI Philometor sometime before 168BC, when he incited a native revolt (Diod. 31.15a). The inclusion of

[230] Torallas-Tovar (2010a:259).
[231] Egyptian is not specifically listed among Cleopatra's languages by Plutarch, who merely contrasts her behaviour with that of the previous Ptolemies who 'had not even made an effort to learn the native language' (τῶν πρὸ αὐτῆς βασιλέων οὐδὲ τὴν Αἰγυπτίαν ἀνασχομένων παραλαβεῖν διάλεκτον: Plut. *Ant.* 27.4). Nevertheless, all Ptolemaic kings probably learned a few words of Egyptian for specific purposes.
[232] *cf.* Moyer (2011b:16-19).
[233] O'Neill (2006:16), Strootman (2014:118-20).

Egyptians in the Ptolemaic court perhaps began under Ptolemy V,[234] who inherited his throne as an infant, and whose Rosetta Stone attests to indigenous insurrection. This move, then, may have been a strategy to assimilate the troublesome (especially southern) *chora*, where Greek influence was slow to gain a foothold. Certainly, it appears that the early Ptolemies allowed few native Egyptians to infiltrate their court.[235] That is not to say, however, that Egyptians were excluded from the Hellenistic administration. In the immediate aftermath of Alexander's conquest, he left Egypt's native civil administration – the nomarchy – intact, and put the Egyptians Doloaspis and Peteisis at its head (Arr. *Anab.* 3.5.2) under the overall watch of the Naukratite Kleomenes; while Ptolemy I Soter similarly maintained the old Egyptian warrior-aristocracy, whose prominence declined under his immediate successors.[236]

Ptolemaic bureaucrats were often bilingual to a high degree of competency, whatever their ethnic background[237] (though some were considered 'Greek' for official purposes[238]). These individuals often had both Greek and Egyptian names for use in the appropriate context,[239] and would similarly switch language depending on their purpose and audience. In a mid-second century BC letter, a mother congratulates her son on learning Egyptian, since he will now be able to 'teach the boys of Phaloubeitis' medical school' (διδάξεις παρὰ Φαλουβῆτι ἰατροκλύστηι τὰ παιδάρια), thereby securing a lifelong

[234] Moyer (2011b:15-16). The *philoi* of the early Ptolemies were almost all from 'Old Greece', Macedon and Alexandria; only later do we find a greater ethnic mix, including Egyptians (*cf.* Strootman, 2014:129, Table 5.2).
[235] Hölbl (2001:27), Strootman (2014:132).
[236] Winnicki (1985:48).
[237] Peremans (1983:269), Torallas-Tovar (2010a:258).
[238] Clarysse and Thompson (2006:138-9), Vlassopoulos (2013:286). Examples include two ethnically Egyptian policemen (*gl-šr*) with the Greek names Pasikles and Diodoros, exempted from the *obol*-tax required of the rest of their families (*P.Sorbonne* 225.114-16, 140-4; *cf.* Clarysse and Thompson, 2006:144).
[239] *cf.* Vlassopoulos (2013:288). This paralleled the onomastic practice of immigrant communities throughout Greek history, but increased in prominence in the later Ptolemaic Period (Clarysse, 1985:57-8).

income (*UPZ* 1.148).[240] Similarly, Egyptian was the language of oneiromancy (*P.Bologna dem.* 3173; *P.Cairo* 10313+10328+3096),[241] and of Egyptian religion more generally, so that bilinguals often dedicated to Egyptian gods in the appropriate language.[242] But these examples of Egyptian-speaking Greeks, while important, are exceptional;[243] for the most part, the situation was reversed. Graeco-Macedonian dominance of court life made knowledge of Greek key to social and career advancement for ambitious Egyptians. The high competence in Greek they attained makes them virtually untraceable; often, we can identify their ethnicity only through their use of the traditional Egyptian reed brush as a writing implement.[244] For those with imperfect Greek, their mistakes are a significant source for Egyptian phonology (§2.2.3).

The primacy of the Hellenic Bureaucracy increased across the Ptolemaic Period, as the corpus of tax receipts, a large group of similarly formulaic documents covering an extended period, aptly demonstrates. The earliest, from the brief reign of Alexander IV, is written in Demotic and signed by the First Prophet of Amun. A half-century later, Demotic texts list tax-collectors (*sḥn*) with the Greek names Xenantas and Zenodoros; from Ptolemy II onwards,[245] these documents were increasingly written entirely or partly in Greek.[246] Elsewhere, the change was even more profound: by the first century BC, Greek had

[240] *cf.* Torallas-Tovar (2010a:260). ἰατροκλύστηι were establishments where enemas (κλύσματα) were administered, in which Phaloubeitis specialized (Andorlini, 2016:163-4). Herodotos considered this practice peculiarly Egyptian (Hdt. 2.77.2), perhaps explaining why Egyptian was the preferred teaching-language.
[241] Kidd (2011). It is plausible that the authors of bilingual dream-interpretations were Egyptians who chose to write mostly in Greek (Prada, 2013:85-6). The Egyptians were famed for their oracular skill (Hdt. 2.82.1-2).
[242] Thus, the mixed-heritage Neoptolemos dedicated himself to Anubis in Egyptian: *P.Berlin* 15791 (*cf.* Clarysse, 1988; Vlassopoulos, 2013:288).
[243] Torallas-Tovar (2010a:260). Probably most Greeks learned limited Egyptian without achieving fluency: Peremans (1983:262).
[244] Clarysse (1993:188-9).
[245] The reduction of the use of Demotic under Ptolemy II must also be read against the backdrop of that king's tax reforms: *cf.* Muhs (2005:8-10).
[246] Clarysse (1993:186-7), Egedi (2015:1335).

supplanted Demotic as the primary language of contract.[247] The decline of the Egyptian language in non-administrative contexts under the Ptolemies must not be over-dramatized,[248] but the eventual morphing of Egyptian into Coptic demonstrates the increasing impact of the Greek language on Egyptian speakers: not only is the Coptic script derivative of Greek, but almost a quarter of its lexicon comprises Greek loan-words.[249] While this development took many centuries, its beginnings are traceable to the intense language-contact begun in our period.[250]

2.7 | Conclusion: the Effect of Language on Atheno-Egyptian Trade

While both Greeks and Egyptians extolled the patriotic virtues of monolingualism, the evidence of low-level, sustained Graeco-Egyptian language contact tells a more complex story. An extensive exchange of human capital – migrants, merchants, mercenaries, *demimondaines* and doctors – seeded long-lived bilingual communities within each society, while the Egyptians, at least, made institutional investments in the provision of translation. The ancients may not have had a theoretically sophisticated model of the 'language effect', then, but they demonstrably responded to the practical obstacles it posed to their desired economic and diplomatic outcomes. But the Greek-Egyptian language barrier was not easily overcome: before Alexander, Greek-Egyptian communicative probabilities remained low,[251] and dissimilarity made acquiring either language difficult.

[247] Manning (2003a:175-6).
[248] While Demotic declined in the administrative sphere, it survived for the writing of religious, scientific and literary texts well after the Roman conquest: *cf.* Lewis (1993), Manning (2003a:175-6).
[249] Kasser (1991:217).
[250] Old Coptic originated in the first century AD, with the writing of a magical text in Egyptian using Greek letters with Demotic additions (*P.BM* 10808; Loprieno, 1995:24-6), but represented the culmination of a long process of Greek transliterations of untranslatable Egyptian words (*cf.* Torallas-Tovar, 2010a:258-9; *cf.* Egedi, 2015:1334).
[251] Accepting Herodotos' figure of 30,000 seventh-century Greek mercenaries (2.163.1), plus around 6,000 inhabitants of early Naukratis (*cf.* Thomas, 2015a:251-2), along with our lowest Egyptian population figure of *c.*1.800,000 for the same period (Table 1.2) then we can presume a highest conceivable Greek language prevalence of around 1.7%, with a likelier figure considerably under 1%. Economists consider a prevalence of <4% negligible (Mack *et al.*, 2014:8).

These language barriers disproportionately affected the grain trade; the sheer volume imported by Athens required large numbers of merchants. It is in the realm of high value, rare or prestige goods, however, that the effect of language barriers is least severe; in fact, the difficulty of procurement and exoticism of such items is often a source of prestige value, ensuring their scarcity in the importing community. The resulting per-unit costs of the language barrier are therefore lower. Numerous modern examples attest to this: despite extreme language barriers, modern Germany is the only European country to enjoy a trade surplus, worth €7 billion, with China, almost entirely thanks to exports of luxury vehicles and chemicals.[252] Similarly, French champagne, Swiss timepieces, American smartphones and Scotch whisky demonstrate the relative imperviousness of prestige goods to the language effect.

This same pattern is traceable for Atheno-Egyptian trade. The exports known to have reached the Greek world – perfumes, faience and glassware, textiles, bronzes, the 'garlands of Naukratis' (Anakreon fr. 89) – are all high-value, low volume, prestige goods.[253] Such trade involved a small number of specialists, incentivized to achieve bilingual proficiency. The main exception is natron – an essential ingredient in glassmaking,[254] bleaching textiles and in medicine[255] – which the Ahiqar Palimpsest reveals was exported in fairly large quantities to Ionia. In this case, the limited effect of the language barrier can be explained through scarcity; naturally-occurring natron is rare in the Mediterranean, with Egypt (Plin. *HN.* 31.109, 111)[256] and Macedon (31.107) the

[252] EuroStat (2016).
[253] *cf.* Bresson (2016a:193).
[254] Most ancient glass from the mid-first millennium BC onwards was natron-based (Degryse and Schneider, 2008:1993).
[255] *cf.* Plin. *HN.* 31.115-17.
[256] Pliny's claim that all Egyptian natron is man-made is false; while Egyptians may have used evaporation basins to supplement their supplies, the sources at Wadi Natrun in particular are naturally-occurring.

primary sources in antiquity.[257] It took Alexander's conquest, and the larger migrations from the Aegean to Egypt, to increase communicative probabilities to a level amenable to the bulk trade in grain.

[257] In addition to Pliny's mention of the Wadi Natrun and Memphite sources, natron could also be found in abundance at El Barnugi (Jackson *et al.* 2016:1-3).

CHAPTER 3
Religious, Ethnic and Elite Networks in Atheno-Egyptian Trade

Ancient trade, even on as large a scale as Athens' grain imports (*cf*. Dem. 20.31-2, §1.1), was an intensely personal affair. An unnamed trader defending himself against Apatourios asserts that, even in sizeable ports like Piraeus and Byzantion,[1] one could be personally acquainted with almost the entire trading community ([Dem.] 33.5). These relationships could, irrespective of nationality, be extremely close: this particular speaker describes his relationship with Byzantian traders using the adverb οἰκείως, literally 'as though belonging to the same household'.[2] Such language also indicates a sense of socially-prescribed obligation towards one another.[3] Despite not having modern terminology at his disposal, this trader describes participation in a network.[4] In both Byzantion and Piraeus, he has contacts – of varying levels of intimacy – who each have contacts, and so on, so that wherever his enterprises take him, he has people with whom to do business and on whom to rely for assistance.[5] This speaker emphasizes his personal role in creating this web of contacts through his presence in foreign ports, yet this represents only part of the picture. Contacts – like *xenos*-relations[6] – could be inherited, or created and reinforced through private and state institutions.[7] Religious associations, *proxenoi* and friendships could all provide ready-made networks in a new port. These institutions were encouraged by

[1] Piraeus had between 25,000 (Morris, 2005:15) and 30,000 (Garland, 1987:58) inhabitants, of which – following Whitehead's figures (1986:83-4) – there were 5,000-6,000 resident aliens (Garland, 1987:61) comprising the core of the trading community.
[2] LSJ *s.v.* οἰκεῖος.
[3] On the social obligations of *oikos*-membership, *cf.* Beringer (1985:41), Gallant (1991:170), Nagle (2006:155, 300-1); the implication is that, as in a family, these obligations were socially, not legally, defined (Roy, 1999:7).
[4] On network theory in Greek history, *cf.* Malkin (2011, esp. 15-20).
[5] On personal networks as 'self-help' in ancient Greece, *cf.* Gallant (1991:170).
[6] Herman (1987:16-17); §3.4.2.
[7] This thesis utilizes a broad definition of institutions as 'stable, valued, recurring patterns of behaviour' (Huntington, 1968:9) or 'integrated systems of rules' circumscribing social interactions (Hodgson, 2015:501). Unlike Hodgson (*ibid.*), I see no contradiction in adopting both definitions.

sympathetic citizens or others with political agency, affording us glimpses into these otherwise untraceable connections.

3.1 | Networks in the Ancient Economy

Networks and associated theoretical frameworks have gained momentum among historians,[8] not least as a heuristic through which to examine Greek colonization[9] and certain specific ancient networks; of Greeks and barbarians,[10] *theoroi*[11] and *proxenoi.*[12] So, too, have economists awoken to the potential of network theory for describing economic phenomena; no longer can we unquestioningly refer to 'markets' as bounded and homogenized entities,[13] but are invited to view them instead as atomized networks of buyers and sellers connected by patterns of commonalities.[14] However, while the macroscale picture of Greek history has benefitted from the 'network perspective', the networks of individuals underpinning economic interactions in the Ancient Mediterranean have escaped sustained inquiry. This is partly an accident of the evidence: we know hardly anything about even the best-documented individuals of antiquity,[15] much less their associates and network ties. But while ancient historians rarely have access to the detailed prosopographic information or dense corpora of source material that underpin network

[8] e.g., Hezser (1997) on networks of Jewish diaspora; Barabási (2003:3-5) on early Christian networks. On applying Networks Analysis to ancient history, *cf.* Alexander and Danowski (1990), Harris-Cline (2012), Taylor and Vlassopoulos (2015).
[9] Malkin (2011), Taylor and Vlassopoulos (2015:13).
[10] Vlassopoulos (2013).
[11] Rutherford (2009).
[12] Mack (2015).
[13] On the shortcomings of existing approaches to explaining trade, *cf.* Casella and Rauch (1997:3-4).
[14] e.g., Kranton and Minehart (2001).
[15] Paucity of evidence hampers even our knowledge of Alexander the Great and Ptolemy I Soter (*cf.* Worthington, 2016:4).

analyses of Mediaeval and Early Modern economies,[16] Network Analysis remains a useful tool for explaining ancient economic activity.

Networks in the economy take numerous forms. Kinship and 'fictive kinship', religious, ethnic, communal, and even entirely artificial networks specifically designed for economic purposes ease economic interaction by ameliorating informational asymmetries and facilitating access to distribution channels.[17] Individuals benefit from multiple network connections, either through inheritance – membership of a family, deme, *polis,* kinship group – or active participation in, for example, a religious association. The characteristics of such networks varied. Some, like the family or kinship group, were expansive, decentralized and self-organized, and without requiring active participation: membership of such groups was inherent, and entailed loosely defined obligations dependant on the strength of individual relationships.[18] Others, such as deme membership or religious associations, were exclusive, centrally organized and required institutionally defined participation in order to continue membership. Network membership is not monolithic and static: according to the situation, an individual might claim or deny membership. New networks could be created through migration[19] or invented to the mutual advantage of economic actors.[20] Apparently inflexible groups, including ethnicities, could also be manipulated, adapted or ignored. Networks even overcame the dichotomies – Greek-Barbarian, male-female, free-slave –often foregrounded in historical analysis,[21] through

[16] e.g., Flemish urban networks (Prevenier *et al.*, 1992), Enlightenment European networks (Murdoch, 2006). For the ancient world, Network Analysis is commonly employed by archaeologists: e.g., of Roman brick manufacturers (Graham, 2006).
[17] *cf.* Casella and Rauch (1997:3-5), Kranton and Minehart (2001:485-6).
[18] The strength of ties is defined as a property of the time investment, emotional intensity, intimacy and reciprocity: Granovetter (1973:1361), *cf.* Mack (2015:150).
[19] *cf.* Smith-Doerr and Powell (2005:379-80).
[20] Through adopting cultural tropes or manipulating history, ethnography and myth: e.g., Hall (1989:1-3), Cartledge (1995:82), Tuplin (1999:47), Skinner (2012:47); *cf.* Low (2007:60-1).
[21] Vlassopoulos (2011:14).

efficiently linking otherwise unconnected individuals via network overlaps and bridges (the 'strength of weak ties').[22]

We must not, however, overstate the potential of Network Analysis as a tool for viewing ancient history. The existence of networks in the Ancient Mediterranean is self-evident: no individual or institution existed in isolation, and, if the phenomenon were described to him,[23] the trader defending himself against Apatourios would have been unsurprised to learn that he participated in networks.[24] But while we can often identify networks, and sometimes describe their characteristics, the picture is inevitably impressionistic. Network Analysis requires quantitative evidence unavailable to ancient historians.[25] As a heuristic, Network Analyses have also drawn criticism for minimizing individual agency in favour of institutions, providing a broad, abstract view divorced from lived experience.[26] We must, therefore, define personnel involved in trade, and their ability to access institutions, before we can assess which networks served to ease Atheno-Egyptian exchange.

3.2 | The Personnel of Ancient Trade

The Greeks had three words for 'trader' (ἔμπορος, ναύκληρος and κάπηλος); studies of ancient trade often begin by attempting to establish what can and cannot be said about their juridical and social status from references to these terms in oratory, philosophy

[22] Granovetter (1973). Consider Milgram's (1967, esp. 66-7) famous 'small world' experiment, establishing an average of 'six degrees of separation' between individuals in Omaha and Boston, and an unconnected Bostonian target.
[23] Malkin (2011:19). That no Greek term exists for 'network' (Gabrielsen, 2009:177) poses no problem to us: the same is true of such concepts as 'economy' (*cf.* Ch. 1), 'imperialism' (Low, 2005:93-4), 'interstate relations' (Low, 2007:2), even 'isolated farmstead' (Osborne, 1985a:19-22), all self-evident realities of Greek life. Wittgenstein's notion (*TLP* 5.62) that concepts can only exist when there is language to describe them is now discredited by linguists and psychologists (Ahearn, 2011:69).
[24] Malkin *et al.* (2009:2).
[25] Mack (2015:150), *cf.* Granovetter (1973:1360-1).
[26] Stevenson and Greenberg (2000).

and comedy.[27] The results of such analyses vary: substantivists conclude that traders were poor and foreign, and, concomitantly, social and political outsiders; others note that our sources are unrepresentative, providing a predominantly elite impression of ancient trade, arguing instead for a more complex picture. The disdain for traders expressed in the extant sources parallels the Aristotelian and Platonic view that profit (κέρδος) upset the natural order by assigning greater value to goods than is inherent (Arist. *Pol.* 1258a35; §4.1.3), and that the avarice and cheating that must – in their view – underpin any profitable enterprise were altogether too grubby for those with noble pretensions (Plat. *Leg.* 918c-e).[28]

It is one thing to claim that ancient traders were 'mainly poor and foreign',[29] but quite another to assert that they were 'politically inert'.[30] Merchants did not live in isolation; they participated in complex communities, able to act in concert to influence decision-makers. This does not mean that *emporoi* formed guilds or corporations on the mediaeval model, nor that they were a cohesive group recognized by the Athenian *demos*; in fact, collective entities were not recognized as legal identities under Athenian law.[31] Instead, each *emporos* belonged to various networks, acting as part of these groups as the opportunity arose. Thus, in Lysias' speech against the grain dealers (σιτοπώλαι), the titular merchants were convicted of acting together to accumulate excess grain to drive up the price (Lys. 22.5-6; §5.5.2),[32] despite lacking a formalized structure to do so. Similarly, when we are told that 'the Egyptians' (οἱ Αἰγύπτιοι: *IG* II^2 337.44-5) built a sanctuary of Isis, we can be sure that this does not mean 'the Egyptian state', nor 'an institutionally-recognized group of resident Egyptians', but rather an *ad hoc* group of *emporoi*, metics, prominent

[27] The methodology of Hasebroek (1933) and Finley (esp. 1935); recently, see Reed (2003), Moreno (2007a, chapter 5).
[28] Woolmer (2008:i-ii).
[29] The quote, from Reed (2003:3) could equally summarize the arguments of Hasebroek and Finley. The wording is – rightly, in my view – considerably more cautious than the general thrust of Reed's argument.
[30] Again, Reed (2003:3) expressing a view shared by other substantivist historians.
[31] Harris (1989:339).
[32] *cf.* Figueira (1986:152), Todd (2000:238).

xenoi, non-Egyptian Isis-worshippers, and sympathetic Athenian citizens, lobbying as a group for this specific purpose.

Finally, we might consider the case of a young Bosporan nobleman, the son of Sopaios, who encountered legal difficulties in Athens. Satyros, King-Archon of the Bosporos, summoned *naukleroi* to assist him (Isok. 17.52). Usually, scholars see this as mere convenience – the *naukleroi* travelled regularly between Pantikapaion and Athens, and so might offer timely aid[33] – but this explanation is unsatisfactory. Most travel in the ancient world was by merchant ship rather than passenger vessel;[34] Satyros could easily have paid a *naukleros* to take an envoy with him. The regularity of Atheno-Bosporan state communications (17.5, 11) also implies that Satyros could use his fleet; in fact, he sent a letter directly to the Athenians in addition to requesting assistance from the *naukleroi* (17.52). Satyros must, then, have asked the *naukleroi* to help Sopaios' son specifically because their profession afforded them a web of contacts through which they could lobby key decision-makers.[35] In this speech, the *naukleroi* are presented as an identifiable, coherent group, regardless of their juridical or social status. This attitude was institutionalized through the maritime courts, the extraordinary procedure through which cases could be brought by or against traders (§5.5.2).[36] The system for identifying merchants was imperfect: Lysias implies that it was sufficient for an individual to merely claim that they were an *emporos* to gain access to the special courts (Lys. 17.5). But the

[33] Reed (2003:86-7).
[34] Casson (1974:66).
[35] In minimizing the importance of the *naukleroi*'s profession, Reed (2003:86-7) ignores other instances of Atheno-Bosporan communication, and the fact that the unnamed defendant also used a trader, Pyron of Pherae, to communicate with Satyros (17.20). This passage justifies the trust that the speaker placed in Pyron, later undermined by bribed slaves (17.23), by emphasizing that Pyron had 'become accustomed to sailing to Pontos' (εἰθισμένον εἰσπλεῖν εἰς τὸν Πόντον); he cannot simply mean that Pyron was a convenient choice of messenger since he was going that way regardless. Pyron is named, and his qualification emphasized, to prove that he could be trusted first to make it to the Bosporos safely, since he knew the waters, and on arrival to utilize his contacts (as in [Dem.] 33.5) to gain access to Satyros.
[36] Todd (1993:334).

fifth-century entry-taxes paid specifically by *naukleroi* and *emporoi* (*IG* I^3 8, 130, 133) suggest that some record existed of those arriving in Piraeus.

Another relevant observation can be made about Sopaios' son: he funded his trip to Athens through the sale of grain on arrival (Isok. 17.4). Elite engagement in trade is traceable among Athenians also: Solon supposedly traded,[37] as did Thales (Plut. *Sol.* 2.1, 4); even Plato apparently self-funded his Egyptian sojourn by selling olive oil (Plut. *Sol.* 2.4).[38] While these individuals did not habitually make their living through trade, and cannot be considered *emporoi*, they are good examples of wealthy, influential individuals who not only shared interests with traders (however temporary), but also presumably had trading contacts, who might exert influence through them. Thus, the lack of an institutional structure through which merchants could act was no barrier. Relationships with citizens and well-established or prominent metics could grant traders agency well beyond what their juridical status might imply, as well as easing the functional mechanics of trade.

3.3 | Religious Networks in the Ancient Mediterranean

Assessments of the impact of religion on economies have been varied, but remain mostly concerned with the psychological and sociological implications.[39] Religious morality often determined attitudes to wealth and legitimate methods of earning;[40] Weber even

[37] Lavery (1974:375-6) treats this narrative credulously, though draws attention to the deliberate contrast between the characters of Plutarch's Solon and Lykourgos.
[38] Riginos (1976:68) considers this story implausible, and we should be wary of Plutarch's interest in presenting trade as honourable. The tradition that Plato visited Egypt was popular and oft-repeated, but incongruities between the various versions may undermine its veracity (§3.4.3).
[39] Karaçuka (2018:57-8).
[40] Consider the centuries-long prohibition on usury (originating with Deut. 23:19-20) among Catholic states, which concentrated moneylending among Jews, who interpretated the passage as permitting lending to gentiles (*cf.* Tawney, 1936:37; Oelsner, 1962).

argued that it was a religious ethic which precipitated modern capitalism.[41] The impact of Greek and Egyptian morality on conceptions of value is treated more fully below (§4.1), but the different dedicatory practices – the Egyptian temple, where perishable goods were donated in bulk and redistributed around the temple community, against the Greek sanctuary where high-value durable dedications were permanently stored in treasuries[42] – conditioned conceptions of and responses to wealth and value (§4.1.2). But perhaps the most immediate consequence of religion on trade were the networks that it promoted.

Religious associations and cult groups both reflect existing social ties and propagate new networks,[43] membership of which eases communication,[44] and enforces reciprocal and co-operative behaviour.[45] Their effectiveness was partially determined by their size: large, centrally-organized religious institutions are less flexible and create weaker ties than smaller, locally-organized religious institutions.[46] Ancient long-distance trade was a complex and unpredictable enterprise, relying primarily on interpersonal trust, founded mostly on reputation (§4.1.6),[47] and shaped by long-term institutional ties that structured their interactions and prescribed conformity.[48] Further, in a world where piracy was rife and where disputes were settled through self-help (§5.5),[49] religious affiliations provided support groups even in unfamiliar ports. For merchants, the most important such institutions centred on specialized seafaring religion, and the foreign cults of port towns.

[41] Weber (1930). His theory of 'Protestant Work Ethic' is undermined by the approximate economic parity between Catholic and Protestant Europe in the Early Modern Period (Delacroix and Nielsen, 2001:533-7).
[42] Seaford (2004:78).
[43] Collar (2009:151-2).
[44] Hodgson (2006:8-9).
[45] Putnam (1993); Karaçuka (2018:61).
[46] Karaçuka (2018:65-7).
[47] On ritual as a promoter of trust, *cf.* Sosis and Ruffle (2003:713-14). *cf.* also reputation and religion among traders in the Maghreb: Greif (1989:868).
[48] Hodgson (2006:2, 14).
[49] While institutionally-defined, self-help was often indistinguishable from piracy (de Souza, 1995:182-3; *cf.* Bresson, 2016a:418).

3.3.1 | *Specialized Religion and Ancient Seafaring Networks*

The Mediterranean was the literal and psychological centre of the Greek world (*cf.* Plat. *Phaed*. 109b);[50] unlike the great Near Eastern land empires, the Hellenic diaspora was both divided and connected by the sea, which served as a conduit for trade, ideas and the projection of power. Despite the intensity of the Greek, especially Athenian, relationship with the sea, it had always been characterized by deep ambivalence.[51] The sea, and places beyond it, were dangerous, while its inherent dynamism[52] could mean the difference between plenty and hunger.[53] It was a liminal, uncontrollable space between life and death;[54] accordingly, sea-crossings were a heroic task,[55] but one which invited suspicion. Resultantly, those who derived their income from the sea maintained specialized religious rites and associations. The sea was considered a sentient being,[56] and rituals were vital for placating the gods and spirits that animated it (*cf.* Pind. *Pyth.* 4.191-6),[57] simultaneously expressing seafaring sub-culture.[58] No Greek, we are told, ever sailed without first consulting the gods (Epictet. *Diatr*. 3.21); once afloat, the ship itself became a sacral space.[59] The seafaring sanctuaries lining major trade routes served as refuges from adverse weather and other dangers, becoming spaces for the exchange of nautical and economic information (*cf.* Xen. *Oik.* 20.27-8).[60] States, too, communicated relevant information to seafarers through sanctuaries. Thus, at Hieron, the gateway to the Black Sea, the Pontic

[50] *cf.* Lindenlauf (2003:417).
[51] Generally, *cf*. Lindenlauf (2003:418). Berg (2013:3-4) traces the origins of this attitude to the late Mesolithic.
[52] McNiven (2003:333).
[53] On which, *cf*. Garnsey (1988:6-7), Garnsey and Whittaker (1983:1) and Moreno (2007a:5-12), §1.1.
[54] Buxton (1994:103).
[55] The ability of heroes – Theseus, Jason, Odysseus, Perseus and others – to survive sea-crossings was an important aspect of their heroic 'coming of age' (Beaulieu, 2016:59-61).
[56] McNiven (2003:333).
[57] Atkins (2009:83).
[58] Specialized religion may have defined the 'seafaring mob' (ναυτικὸς ὄχλος) in Athens (Hasebroek, 1933:65, 84, 101; Reed, 2003:72).
[59] Brody (2008:448), Atkins (2009:84, 105).
[60] Moreno (2008:655-6); *cf*. Bresson (2016a:299-300).

state of Olbia installed a copy of its coinage decree (*IosPE* I² 24),[61] and Leukon of Bosporos advertised his grant of *ateleia* from Athens (Dem. 20.36).[62]

Sanctuaries were also vital navigational aids. Without appreciable assistance from navigational instruments,[63] navigators established their absolute position from visual cues, and their relative direction through dead reckoning.[64] Naturally, navigators preferred routes with which they were intimately familiar. When sailors needed to navigate unknown waters, they recruited local pilots (e.g., Korobios at Hdt. 4.151-62).[65] Notwithstanding familiarity, ancient mariners were regularly forced off-course by changing weather, erratic sailing conditions, navigational errors or human interference. Hence, navigators learned to interpret the Mediterranean seascape: skilled navigators could tell from the 'feel' and direction of the winds,[66] from the activities of seabirds and fish,[67] from patterns of clouds[68] and currents,[69] from the sun[70] and stars,[71] both absolute and relative direction, as well as the location of landmasses.

By analogy with Polynesian seafarers,[72] Greek navigators probably created stories around constellations,[73] formulating conceptual 'star paths' (*cf.* Hom. *Od.* 5.270-5)

[61] Martin (1985:208-13), Bresson (2016a:301).
[62] Moreno (2008:665).
[63] Morton (2001:185). Plato (*Stat.* 298c-d) references unspecified 'nautical instruments' (ναυτικὰ ὄργανα: Davis, 2001:88).
[64] *cf.* d'Arcy (2006:75).
[65] Davis (2001:58).
[66] e.g., the dry Sirocco vs the rain-impregnated Etesians (Davis, 2001:23; Morton, 2001:217; *cf*. d'Arcy, 2006:74).
[67] Davis (2001:90), Morton (2001:225, 227). While explicit evidence for Classical Greece is lacking, this technique was used by later Europeans (Hornell, 1946:142) and Pacific Islanders (*ibid*:143). Perhaps captive land-dwelling birds were used, as in the Biblical tale of Noah (Gen. 8:13; *cf.* Hornell, 1946:142-5).
[68] d'Arcy (2006:76-7).
[69] Semple (1927:361-2), Morton (2001:210), Beresford (2013:178).
[70] A technique hampered by ineffective timekeeping (Morton, 2001:215).
[71] Navigation by stars is extraordinarily well attested in the Greek case: Hom. *Od.* 5.270-5; Hes. *Op.* 598, 609, 615, 619; *Hdt*. 8.6-9; Thuc. 1.45, 2.97, 3.49, 80.2, 81.1, 91, 4.31, 42, 120, 6.65, 7.50, 8.41, 101-12; Xen. *Hell.* 1.1.11, 13-16, 1.6.24-9, 2.1.32-2.3, *Oik.* 2.1.3; [Dem.] 50.20.
[72] d'Arcy (2006:71, 74).
[73] The mythology of the stars is summarised at Arat. *Phaen.* 19-451.

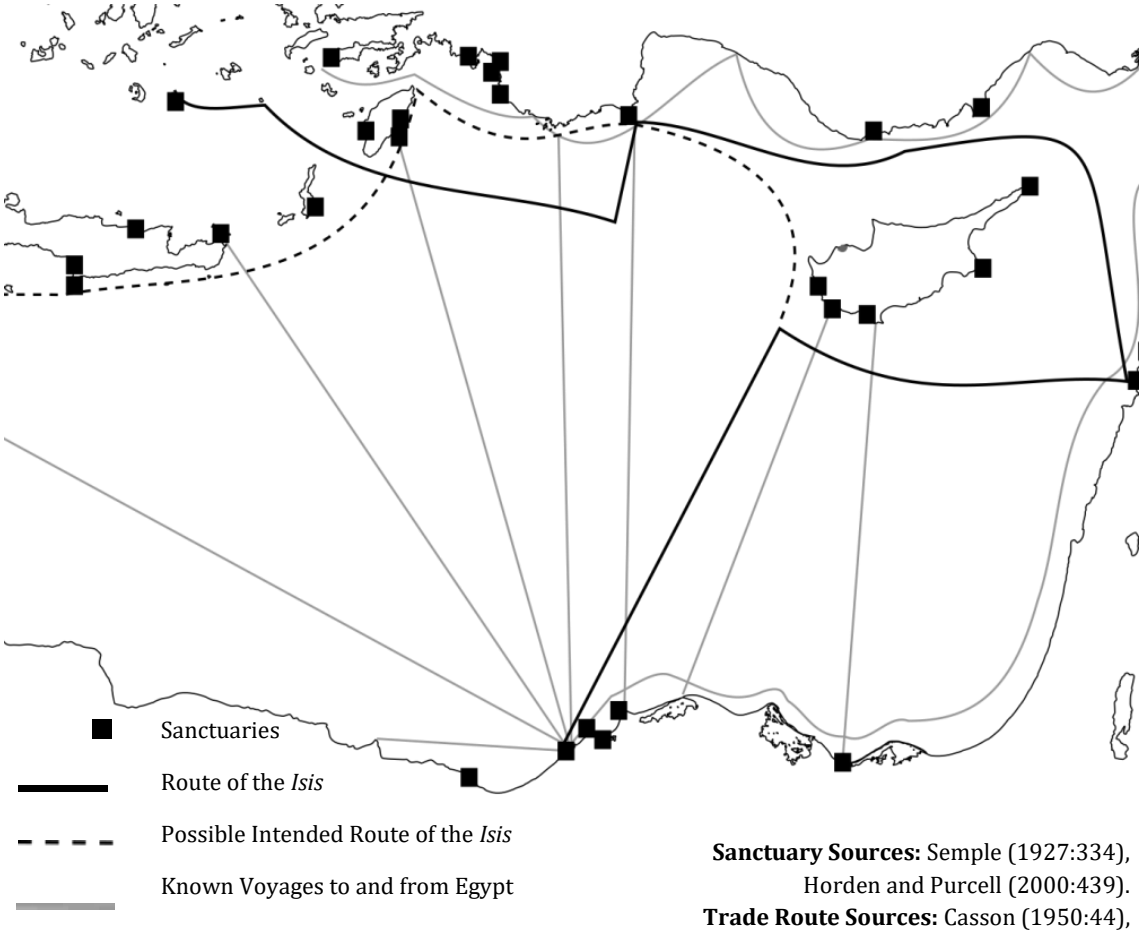
operating as mnemonic devices for transmitting navigational information.[74] During the day, the structure of *periploi* and references in Strabo (*Geog*. 8.7.5, 8.6.4, 8.5.1, 9.1.2, 9.2.8, 14.1.13) suggest that Greeks conceptualised journeys as paths between prominent visual cues (*cf.* Hom. *Il.* 1.312, Ap.Rhod. *Arg.* 1.582-90).[75] Alongside natural features, temples[76] and tombs[77] with mythical significance acted as distance-markers and locational cues. Against the surroundings of foliage and rocks, sometimes hard to distinguish from the waterline, the white marble and distinctive silhouettes of sanctuaries made effective navigational aids,[78] and could, like lighthouses, mark safe routes through difficult waters.[79] While most sanctuaries (e.g., Sounion) were the product of a single state, their international importance is underlined by several multi-state foundations (e.g., Hieron, Leuke and Kalaureia). The middle ground between Greece and Egypt (§5.2.1) was littered with sanctuaries sited on major promontories (Map 3.1). Their usefulness to distressed sailors is hinted in the experience of a Roman ship, the *Isis,* the only merchant ship whose actual route from Egypt to the Aegean is known (Luc. *Nav.* 7-10).[80] Originally destined for Rome, unfavourable winds forced her to Cape Akamas, near the island-sanctuary of Apollo at Geronisos (*cf.* Strab. 14.6.4; Plin. 5.35.1),[81] thence to Sidon (whose harbour was guarded by a large temple),[82] then passing north of Cyprus, near the sanctuaries of Aphrodite Akraia at Cape Andreas (Strab. 14.6.3) and the coastal acropolis of Anemourion ([Skylax] *Peripl.* 102; Strab. 14.5.3), the Chelidonian Islands, and finally to Greece.[83]

[74] *cf.* d'Arcy (2006:71).
[75] Davis (2001:51); Morton (2001:178-83, 190).
[76] Semple (1927, esp. 355). *cf.* Davis (2001:24, 126-7), Morton (2001:200).
[77] *ibid*:197. The same word (σῆμα) described heroes' tombs, constellations and signs more generally (Nagy, 2005:86; *LSJ* s.v. σῆμα). Homer describes Achilles' tomb in terms of its visibility to sailors: Hom. *Od.* 24.80-4.
[78] *cf.* Arnaud (2005:32-3).
[79] Temples sometimes marked the mouths of ports; *cf.* the temple of Artemis Hemeroskopeion, 'day watch': Malkin (2011:198).
[80] Casson (1950:43).
[81] The island's modern name Γερόνησος, 'holy island', references its sanctity (Connelly, 2005:168); Ptolemy XIII and Cleopatra VII were especially associated with the sanctuary (Connelly, 2009a:72).
[82] Probably of Melqart (Guérin, 1880:490), a 'promontory god': *cf.* Semple (1927:366-7), Brody (1998:33-7). Malkin (2011:141) is more cautious about the importance of this role.
[83] Cassson (1950:43-7).

Of these sanctuaries, all but Sidon and Aphrodite Akraia were Hellenistic foundations, largely resulting from Ptolemaic intervention. Egyptian involvement should be expected, given the extent of Ptolemaic influence. It is harder to explain the effort put into constructing sanctuaries in inaccessible, hostile locations. Geronisos, first on the *Isis*' route, had been uninhabited since the Chalcolithic Period, since it lacked a reliable water supply, and had no previous religious pedigree.[84] The site is late Hellenistic, and construction was remarkably swift;[85] building materials were quarried on-site, and massive water cisterns sunk deep into the bedrock,[86] before the shrine itself was constructed, relying heavily on plaster decorations given the paucity of suitable stone.[87] The enormous energy required to make the site habitable suggests the sanctuary's purpose was inherent to its location. Its ritual uses included coming of age rituals for boys from the Cypriote mainland,[88] perhaps following the birth of Cleopatra's son Caesarion, which was celebrated by coin mintages at nearby Paphos.[89] But this function alone fails to explain the sanctuary's location, or why some finds –a portrait of Ptolemy IX Lathyros or X Alexander[90] – predate Cleopatra. It was more likely a sea-marker and refuge for stricken sailors on the newly-important Alexandria-Rome route, who must, like the *Isis*, have regularly been driven to the west of Cyprus by strong summer northwesterlies. Geronisos had two jetties, one each on the north and south shores, in anticipation of changing weather conditions,[91] of course, to maintain communication with the mainland, but also useful for ferrying sailors to and from their merchantmen. Geronisos' usefulness as a sea-marker is emphasized by a peculiarity of the island's geography: at particular times of day, the jutting

[84] Connelly (2005:169).
[85] *ibid.*
[86] Connelly (2002:255; 2005:197).
[87] Connelly (2002:256).
[88] This function was specific to Apollo, in whose Cypriot sanctuaries votive 'temple boys' are found (e.g., Met.Mus. 74.51.1449) recording the 'coming of age' (i.e., weaning) of a toddler (Connelly, 2005:171; 2009b:205). On this ritual at Geronisos, *cf.* Connelly (2007:45-8; 2009b:204-5); generally, *cf.* Laffineur (1997:141-8).
[89] Connelly (2009b:206-7). On the unique Paphos mintages, *cf.* Meadows (2001:178).
[90] Connelly (2009b:292 Fig. 19.22, 293).
[91] Connelly (2007:36).

Map 3.1 | Sea-Routes to Egypt, with known Coastal Sanctuaries



Sanctuary Sources: Semple (1927:334), Horden and Purcell (2000:439).
Trade Route Sources: Casson (1950:44), Arnaud (2005:22, 212).

cliffs of the island, and any structures thereon, spectacularly reflect sunlight, highlighting it among its darker surroundings.[92] Travellers from either end of the route are attested by the Egyptian[93] and Roman pottery found in abundance on the island. Geronisos is an illustrative, though late, example of state interest on the part of the Ptolemies[94] in the construction and maintenance of coastal sanctuaries along an arterial trade route. This interest was prefigured by the entry-taxes fifth-century Athens levied on traders to fund the most famous seafaring sanctuary of all, at Sounion (*IG* I^3 8), along with that of Apollo at

[92] Connelly (2007:35). Other island sanctuaries display similar properties: Leuke was named for the whiteness of its cliffs (Arr. *Peripl.Eux.* 21; *cf.* Hedreen, 2000:320, Rusyaeva, 2003).
[93] Młynarczyk (2009).
[94] *cf.* Connelly (2002:256).

Phaleron (*IG* I^3 130),[95] and the shrine of the Dioscuri – patrons of sailors, and thus a likely hub for the mercantile community – in Athens itself (*IG* I^3 133). Similarly, the shrine to Achilles at Leuke was operated by a consortium of Pontic states,[96] while Hieron, despite competing claims of ownership, remained open to all[97] and was probably a multi-state foundation.[98]

3.3.2 | *Religious Syncretism:* Interpretatio Graeca *and* Interpretatio Aegyptiaca

The international flavour of seafaring sanctuaries was enabled by the common 'religious language' of the Mediterranean.[99] The adaptable polytheism of the ancient world adeptly incorporated foreign deities, modifying them for local purposes. This was often not a case of adopting foreign gods; Greeks considered their deities and heroes to be universal, worshipped under different names by peoples throughout the Mediterranean. Herakles *was* the Phoenician Melqart,[100] and Hestia *was* the Skythian Tabiti (Hdt. 4.59.2). The worship of syncretized deities was seen to enhance, not dilute, the potency of a god, affording them greater geographic scope and responsibility. But in Egypt, this policy of *interpretatio Graeca* encountered new difficulties. Greeks were faced with a long-established religious system, with irredeemably alien practices. The Egyptian pantheon was populated with theriomorphic and hybrid gods, as well as a living deity in the person of the monarch (§5.1.2). While Herodotos emphasized the few examples of thereomorphism in Greek mythology to reduce the conceptual distance from his audience

[95] Based on Lewis' (1960) reconstruction, tentatively combining this fragment with *IG* I^3 128. He groups this inscription with others of the fifth century demonstrating state interest in already-established private cults (1960:193), to which seafarers voluntarily paid dues.
[96] Hedreen (1991:314, 323), Horden and Purcell (2000:442).
[97] Moreno (2008:665).
[98] The interest of various states is demonstrated epigraphically: decrees of Olbia (*IosPE* I^2 24) and Athens (*IG* II^2 212 [=R&O 64]; *cf.* Dem. 20.35-6) were set up there: *cf.* Moreno (2008:665).
[99] Malkin (2011:8).
[100] *ibid.*

(2.41.2),[101] he could not escape Egypt's Otherness. Egyptian religion fetishized death and the afterlife (e.g., 2.78.1), and employed, to Herodotos' eyes, exotic proscriptions and taboos (e.g., circumcision [2.37.2], the shaving and purification of priests [2.37.2-3], priestly prohibitions against eating fish [2.37.4] and heifers [2.41.3]). But while Herodotos considered Egypt 'Other', the well-noted diligence displayed in his Egyptian *logos* belies his respect for the antiquity and robustness of their institutions.[102] Importantly, Herodotos claims that it was the Egyptians who named the Greek pantheon (2.50.1),[103] and taught the Greeks temple etiquette (2.64.1). Certain Egyptian rituals were indeed mimicked in Greece: the boat of Dionysus, carried aloft by priests on an Athenian vase (Oxford 1924.264),[104] resembles Amun-Ra's barque at Karnak, and the 'Adonis gardens' planted by Athenian women in shallow vessels (*cf.* Louvre CA1679)[105] approximate to the 'Osiris bricks' interred in Egyptian tombs (e.g., Oxford 1991.18).[106]

Attempts to syncretize Greek and Egyptian gods (§2.3.2 and §2.4.1) significantly pre-date Herodotos. Thus, we recall the dedications to Mut in the Samian and Perachoran Heraia which demonstrated the equivalence between these goddesses,[107] along with the bilingual statuette dedicated by Malanthios/Barusa to Zeus/Amun (Met.Mus. 21.2.65), who later became first Egyptian god recognized in Athens (§3.3.3). In the context of Atheno-Egyptian relations, the most important syncretism equated Neith, patroness of the Saïte dynasty and their hometown of Saïs, and Athena (e.g., Hdt. 2.28.1, 59.3; Plat. *Tim.* 21e). The goddesses were a natural match: both parthenogenetic, warlike, wise, and attributed with

[101] We will note below (§3.3.3) that it was two anthropomorphic Egyptian gods which achieved widespread recognition on the Greek world: Amun, usually represented in human form, and Isis.
[102] Lloyd (1976:146-7).
[103] Herodotos' assertion here is peculiar. Throughout book two, he cites numerous gods called by different names.
[104] Skinner (2012:103).
[105] Murray (1993:87).
[106] Oakes and Gahlin (2002:407).
[107] Jantzen (1972:34); *cf.* te Velde (1982:136-7).

skill and cunning.[108] This syncretism later manifested in a belief that Saïs itself was an antediluvian Athenian foundation (Diod. 5.57.5, who also records a tradition inverting the relationship [1.28.4-6]). Recognizing the equivalence, Ahmose II dedicated a corslet to Athena at Lindos (Hdt. 3.47.3), and prominent Athenians were drawn to Saïs. These retroactively concocted mythological links probably aided Irethor's[109] plea for Athenian assistance (Thuc. 1.104.1; *cf.* Diod. 11.71.4; §5.2). Herodotos and Plato suggest a firm link between Athena and Neith during the fifth and early part of the fourth centuries, but some later sources prefer to syncretize Athena with Isis, who had evolved into the predominant female deity of the Egyptian pantheon (§3.3.3). The evolution of Athena-Neith into the Athena-Isis syncretism demonstrates-the flexibility of the Mediterranean's common 'religious language'.[110] Gods were correlated on their attributes; as these were gained or lost, or new hybrid Graeco-barbarian deities emerged, they became increasingly localized, and therefore more entrenched, as seen in the Egyptian cults at Athens.

3.3.3 | *The Egyptian Cults at Athens*

Piraeus, diverse and cosmopolitan, became home to a variety of foreign cults towards the end of the fifth century BC. Perhaps starting with the Thracian cult of Bendis, Piraeus also hosted sanctuaries of Karian, Kitian, Phoenician, Phrygian, Syrian and Lydian origin, as well as three long-established Egyptian cults: (Zeus-)Ammon, Isis, and Sarapis.[111] From small cult associations, Athenian interest grew, culminating with a Roman-era Iseion

[108] Rigoglioso (2010:23-4).
[109] Despite being called 'the Libyan king' (ὁ Λιβύων βασιλεύς: Thuc. 1.110.3; *cf.* Ktesias *FrGrHist* 688 F14 [36]), Irethor was probably an Egyptian of the Saïte line: his father's name, Psamtik (Thuc. 1.104.1), is thoroughly Egyptian (Chauveau, 2004:44, Perdu, 2010:152), while his own name recalls another Irethor prominent in (Graeco-)Egyptian legend (*cf.* Ryholt, 2010:715, Xu-Nan, 2017). It is misleading to suggest, as Meiggs (1972:102) does, that he commanded little Egyptian support on the grounds of his descent.
[110] Bowman (1986:176) cautions against seeing Egyptian-Greek syncretisms as straightforward; syncretisms were dependant on time and place.
[111] Garland (1987:109).

on the Akropolis itself[112] (presumably additionally to that in Piraeus), a temple to the Egyptian gods at Marathon,[113] and acquired interests in the Egyptian sanctuaries on Delos.[114] Thus, for Diodorus, the Athenians were among the most zealous adopters of Egyptian cults, and closest adherents of Nilotic traditions (Diod. 1.29.4).[115]

THE CULT OF ZEUS-AMMON

From *c.*1550BC, the cult of Amun achieved predominance over the rest of Egypt's pantheon, mirroring the fortunes of his native city of Thebes, where his cult centre at Karnak was the largest and wealthiest religious establishment in the entire ancient Mediterranean,[116] and whose priestly hierarchy achieved unparalleled influence.[117] From Thebes, Amun's cult was exported around the Egyptian world, with his worship particularly embedded around Napata in Meroë and at the Siwa Oasis. It was at Siwa, in the ungovernable Badlands of the Western Desert, that Amun became especially venerated, by a people the Greeks knew as 'Ammonians,' a Libyan tribe whose leader ('Great Chief of the Foreign Lands' [*nsw-bity wr* [ꜥ3] *ḥ3swt*] in Egyptian, or 'king' [βασιλεύς] to Herodotos) nominally owed obeisance to the Egyptian monarch, but whose remote territory afforded him considerable latitude to conduct his own affairs.[118] It was probably here that Greeks first encountered Amun; foreign hands have been detected in the building of the Temple of the Oracle on the Siwan acropolis (initiated sometime between 570BC and 525BC), which, despite its Egyptian layout and design, bears the saw-toothed chisel marks and lewis holes

[112] Walker (1979).
[113] See recently Mazurek (2018).
[114] Dow (1937:202-3).
[115] Witt (1971:122).
[116] *cf.* Spalinger (1998:241).
[117] The Priesthood of Amun reached its apogee during the ninth century BC, when the High Priest ruled concurrently with the kings of the Twenty-First Dynasty (*cf.* Kitchen, 1986; Taylor, 2000; James and Morkot, 2010).
[118] Perhaps the best example of this can be found at the pylon of the Temple of Amun on the Siwa acropolis: there, the local prince Sutekhirdes is presented as equal in stature to the Pharaoh Ahmose II (Parke, 1967:198).

characteristic of Greek stonemasonry,[119] their only attestation in pre-Hellenistic Egypt. The presence of Greek builders probably indicates the early interest of Kyrene,[120] which was only marginally further away than the Egyptian capital at Saïs, and whose interest in Amun – syncretized as Zeus-Ammon – originates at this time.[121] By the end of the sixth century, the Kyreneans had minted coins bearing the god's profile,[122] constructed a huge temple on the city's outskirts, dedicated a statue of Zeus-Ammon at Delphi, and initiated regular embassies to Siwa, memorialized by dolphin-topped pillars seen by Herodotos (2.32.1). Other Greek visitors may have included troops settled in the oases to watch Egypt's Libyan border, such as the Samians in the 'Islands of the Blessed'.

Zeus-Ammon's fame as an oracular god quickly spread to Greece, where the earliest certain image of him is a sixth-century bronze situla dedicated at Dodona (Louvre Br4235).[123] An earlier ram-headed herm is known from Passava (Gytheio 130)[124] and may be connected either to the cult of Apollo Karneios (the god of flocks and herds),[125] or of Zeus-Ammon, who was venerated in nearby Gytheion (Paus. 3.21.8).[126] A similar herm (now lost)[127] from Phlomochori, has been dated to the mid-seventh century on stylistic grounds, but with reference to few extant Archaic sculptures of rams;[128] the striking resemblance between the Phlomochori and Las herms – both sporting an unusual pyramidal base and with similarly-rendered rams' heads – suggests that they were

[119] Kuhlmann (1996:49-56), Müller *et al.* (2002:217).
[120] Müller *et al.* (2002:217).
[121] This reconstruction undermines the causal link proposed by Parke (1967:203), and followed by many recent scholars, between the Persian conquest of Egypt (and subsequent domination of Kyrene) and Kyrenean recognition of Zeus-Ammon.
[122] Robinson (1927:233-9); *cf.* Parke (1967:203), Austin (2008:213-14).
[123] *cf.* Parke (1967:208).
[124] Schröder (1904).
[125] The preferred explanation of Malkin (1994:153), Cartledge (2002:165); *cf.* Schröder (1904:23-4), who considers it an aniconic allusion to the god.
[126] Classen (1959:351, n.16) dates Ammon's introduction to Gytheion in the fifth century.
[127] Nenci (2015:60, n.102)
[128] Le Roy (1965:371-2), the only archaeologist to have seen the stone in person (*cf.* Nenci, 2015:60 n.102).



Fig. 3.1 | Ram-headed herm from Passava, seventh century BC (Gytheio 130)



Fig. 3.2 | Seated ram-headed deity from Cyprus, sixth century BC (Met.Mus. 74.51.2560)

contemporary. Both herms, and an archaic ram-headed cippus from Glanitsa (near Gortyna), attest to a long presence of ovine gods in the Peloponnese;[129] these gods, syncretized as Apollo Karneios, participated in a two-way exchange, in which Apollo Karneios was exported to the Theran colony at Kyrene and Zeus-Ammon was imported to Old Greece.[130]

Contemporary images of a ram-headed deity from Cyprus (Met.Mus. 74.51.2560,

[129] Wide (1893:86-7), Nenci (2015:23).
[130] On this cultic exchange, *cf.* Malkin (1994:143, 159).



Fig. 3.3 | Hermes Kriophoros detail, showing the upwardly pointed flared horns characteristic of Greek art, *c.*500-490BC (Boston 99.489)



Fig. 3.4 | Ram of Amun, sheltering Taharqa, showing the long, downward-pointing, more closely set horns found in Egyptian art, *c.*690-64BC (Oxford 1931.553)

74.51.2561; BM 1861,1024.26, 1936,1116.1), whose iconographic link to Amun is accepted,[131] closely resemble the ruined herm (figs. 3.1 and 3.2). Cyprus was exposed to Amun before its conquest by Ahmose II (2.182.2), and from an early date, ram-worship on Cyprus had acquired an Egyptian flavour. From the sixth century, numerous coins from Salamis[132] depict a reclining ram[133] (e.g., BM 1870,1102.18-28, 1912,1013.24-5, 1925,105.22-31), a ram's head (e.g., BM 1920,422.8, 1923,1105.17, 1902,103.71), or various animals including a ram (BM 1902,0103.79, 1925,0105.38), alongside the Egyptian *ankh*, while later in the fifth century a god bearing the Kyrenean attributes of Zeus-Ammon is found on the coins of Soli (Copenhagen KP 1426.10; BM 1871,701.6-7).[134] Importantly,

[131] Counts (2009:104). Some identify this deity with the Phoenician syncretization of Amun, Baal-Hammon (Karageorghis, 1977:35-6). The depictions follow Egyptian models: the god sits in a throne, legs together and hands by his side. Some (e.g., BM 1861,1024.26) bear a wig used by Egyptian artists to disguise the join between human and animal elements: Kleibl (2010:154-6).

[132] The British Museum holds 40 of the reclining ram and *ankh* type, 6 of the ram's head plus *ankh* type, and two with other animals. Rams are common on Cypriot coins of this period, featuring on another 48 Salaminian coins either alone or with another decoration; *cf.* Hill (1904:46-65).

[133] The protective stance of the reclining ram recalls the criosphinxes which embellished temples of Amun-Ra, and especially the rams-couchant which came into vogue during the Kushite Period; *cf.* Oxford 1931.553, BM EA1779.

[134] On the British Museum examples, *cf.* Hill (1904:70).

the species of ram depicted is not Cyprus' native *ovis gmelini ophion*, but the Egyptian *ovis aries platyura-aegyptiaca*;[135] the same is probably true of the herms, given that the rams' horns start near the crown of the skull, curl around the ear, and are close against the cheek, rather than curling behind or in front of the ear in a tight spiral and flaring out as in contemporary Greek representations (figs. 3.3 and 3.4), though doubt is cast by the poor quality of the carving.[136] Regardless of precisely which god the herms depict, their unusual (for Greece) theriomorphic forms likely owe something to the iconography of Zeus-Ammon,[137] as well as to pre-existing forms of worship. Zeus-Ammon's cult was also established at Sparta – mother-city of Thera, and thus 'grandmother-city' to Kyrene[138] – where it was observed with particular attention; his oracle reportedly told the Athenians, 'I would rather have the reverent reserve of the Spartans than all the ritual of the Greeks' (τάδε λέγει Ἄμμων· φησὶν ἂν βούλεσθαι αὐτῷ τὴν Λακεδαιμονίων εὐφημίαν εἶναι μᾶλλον ἢ τὰ σύμπαντα τῶν Ἑλλήνων ἱερά: [Plat.] *Alk.* II 149b). Late references to Spartan recognition of Zeus-Ammon stress the antiquity and vitality of the connection (*cf.* Paus. 3.18.3). Lysander was particularly affiliated with the cult, exporting it to the newly conquered Thracian city of Aphytis (Plut. *Lys.* 20.5), which became a significant Ammonian cult-centre. Zeus-Ammon thus became a tool of Spartan control, and perhaps a characteristically Dorian god.

Elsewhere, Pindar apparently donated the cult-statue in the *hieron* of Zeus-Ammon in his native Thebes (Paus. 9.16.1), probably in response to his visit to Kyrene around

[135] Kleibl (2010:153).
[136] The only extant photograph of the Phlomochori herm (Nenci, 2016:258, fig. 16) shows a more exaggerated curve to the horns, though they rest further up the cheek than most Greek depictions of rams, hybridizing Greek and Egyptian styles.
[137] This possibility is entertained by Cook (1914:351). Schröder (1904:23) rightly points out that Ammon is absent from Pausanias' treatment of Las (3.24.6-10), while he does mention a statue of Apollo Karneios (3.24.8). This does not discount the possibility of an Ammonian cult, given that by Pausanias' time the pre-Hellenistic city was in ruins (3.24.6). Foreign cults were certainly present in Las, which hosted the Colchian 'Athena Asia' (3.24.7).
[138] *cf.* Malkin (1994:143-5; 2011:122).

462BC, where he delivered an ode celebrating Arkesilaos IV's victory in the chariot race at Delphi (*Pyth.* 4).[139] The implication must be that the cult of Zeus-Ammon was recently established in Thebes. The location of the sanctuary, probably at the heart of the Theban Kadmeia (Paus. 9.16.1),[140] shows that it quickly achieved a prominent *polis* cult. From the mid-fifth century, the god's profile featured on coins not only throughout Cyrenaica and Cyprus, but also Kyzikos (above a tuna fish; e.g., Boston 04.1274, 04.1276, Hermitage OH-A-Аз-1214, Vienna GR 16095), Aphytis (ANS 1944.100.10355-6, 1944.100.10360),[141] Lycia (BM 1925,0507.6, 1979,0101.737), Phokaia (CNG Triton XXI [2015] Lot 472), Mytilene (e.g., Leu [2017] Lot 510, Boston 04.1456),[142] and Mallos (ANS 1944.100.54099); by the mid-fourth century, we could add Pitane (ANS 1944.100.43379-82, Boston 66.49), Tenos (BM 1866,1201.3469, 1841,B.2179), Thymbra (ANS 1944.100.44043),[143] and Nisyros (BM 1839,1224.174).[144]

Thus, by the time the cult of Zeus-Ammon reached Athens, it had already achieved a long and illustrious history in Greece. Ammon was recognized in Athens by the time of the ill-fated Cypriot (449BC: Plut. *Kim.* 18.7; §5.2.3) or Sicilian expeditions (415/14BC: Ar. *Av.* 716; Plut. *Nik.* 13.2),[145] though Peisthetairos' assertion that the birds will make better gods, since 'we will not have to go to Delphi or to Ammon to sacrifice' (κούκ ἐς Δελφοὺς οὐδ᾽ εἰς Ἄμμων᾽ἐλθόντες ἐκεῖ θύσομεν: Ar. *Av.* 618-20) surely indicates that his oracle was consulted in Siwa. Roman copies of apparently fifth-century Athenian statues of Zeus-Ammon[146] (e.g., Boston 59.715, Kassel Sk.113, Met.Mus. 2012.22), taken alongside the

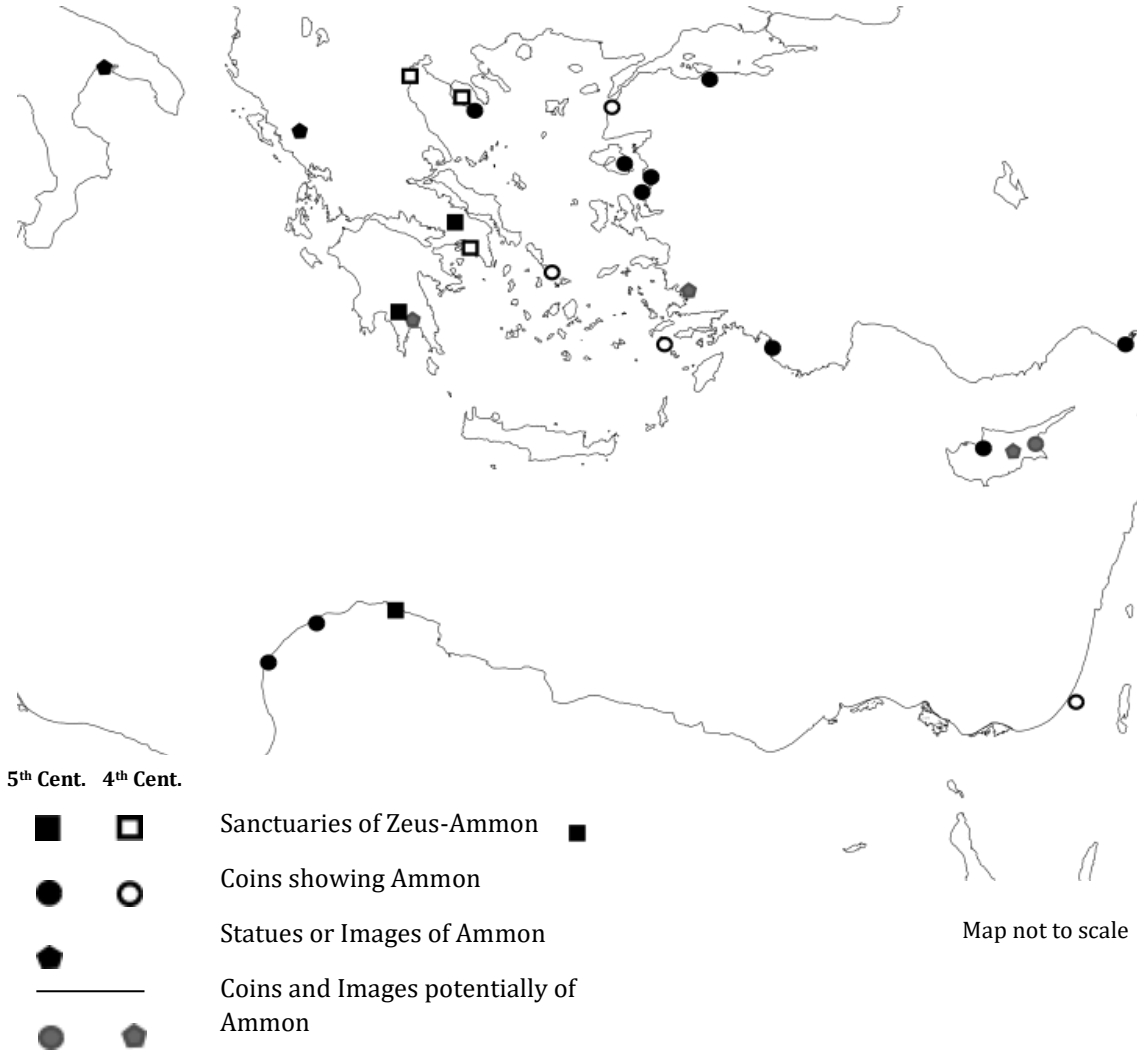
[139] Woodward (1962:5), Symeonoglou (1985:125).
[140] The sanctuary was probably sited under the modern Church of Agios Georgios, at the north end of the Kadmeia: Symeonoglou (1985:126).
[0] Aphytis produced Ammon coins certainly before 350BC, and probably soon after its tribute to Athens ended in 425BC: Head (1911:210), *cf.* Robinson and Clement (1938:237), Flensted-Jensen (2004:826).
[142] *cf.* Wroth (1894:161, no. 57).
[143] Wroth (1894:89).
[144] Head (1897:222); *cf.* Magie (1953:135).
[145] Lambert (2010:164).
[146] On the stylistic dating of the statues, *cf.* Vermeule (1988:111), Picón (2012:12-13).

contemporary recognition of the god at his oracle by Athenians, suggests that Ammon's cult appeared in Athens before the fourth century. However, the evidence is circumstantial: the earliest certain attestation comes from between 371/0BC and 367/6BC, when the god's property (a silver *phiale*, perhaps weighing 172dr.) was listed among the Hekatompedon inventories (*IG* II^2 1424a.176 and 1428.73-4).[147] By 360BC, Athens had produced an Olympic boxing victor named Philammon in devotion to the god (Dem. 18.319; Suda *s.v.* Φιλάμμων); later we learn of further individuals connected to the cult. Pausiades of Phaleron, a priest of Ammon was praised for his public munificence (*IG* II^2 410.19-22), while Pytheas, Supervisor of the Water Supply (ἐπιμελητὴς τῶν κρηνῶν), installed a new fountain-house at the *hieron* of Ammon (*IG* II^3 1 338); the public acclaim afforded to both evidences the official standing of the Piraean cult of Zeus-Ammon.[148] State involvement is further attested by the sale of skins from sacrifices to Zeus-Ammon (*IG* II^2 1496.96),[149] though the value of the skins (45 dr.) indicates its small size. These state-sponsored sacrifices prove Ammon's growing prominence in Athens. Early in the fourth century, the Athenians commissioned the *Ammonias*, a sacred trireme which replaced the ageing *Salaminia* ([Arist.] *Ath.Pol.* 61.7).[150] The name proposes increasing contact between Athens and the Ammonian oracle, perhaps even that the ship was built to convey *theoriai* between Athens and Siwa or Kyrene.[151] Certainly, the cult's membership and wealth were growing; in 262/1BC, the sanctuary buildings were extended considerably (*IG* II^2 1282.6).[152]

Zeus-Ammon, then, had a relatively young and a relatively minor cult in Athenian terms; it was limited to Piraeus (unlike, for example, the cult of Bendis[153]), boasting few adherents, and only partial state involvement. It was not until the fourth century that the

[147] Woodward (1962:5), Lambert (2010:164); *cf.* Harris-Cline (1995:172).
[148] Humphreys (2004:98-9).
[149] Parker (2005:457).
[150] Bubelis (2010:385).
[151] Garland (1987:134).
[152] Oliver (2007:66).
[153] Garland (1987:120-2), Oliver (2007:66).

Map 3.2 | The spread of the cult of (Zeus-)Ammon in the Eastern Mediterranean



cult grew in size and status, reflecting not only the greater intensity of Atheno-Egyptian relations, but also her closeness to Kyrene. The god was, after all, Zeus-Ammon; not the Egyptian Amun, but Zeus operating as patron of Libya. While the early origins of his cult, and his continued oracular presence at Siwa, were Egyptian, the iconography of Zeus-Ammon in Greece originated in Kyrene. While his temple at Piraeus is not extant, remains of Ammon-sanctuaries elsewhere, in both Kyrene and the Aegean, demonstrate the Hellenization of his cult. It is likely, therefore, that Athenians considered him a primarily Kyrenean god right up to the Hellenistic Period, when both the god and Kyrene itself were appropriated first by Alexander, then the Ptolemaic regime.

Whatever the truth behind Alexander's trip to Siwa in 331BC, where he was proclaimed Zeus-Ammon's son (Arr. *Anab.* 3.4.5; Diod. 17.52; Callisthenes *FrGrHist* 124 F14 [*apud.* Strab. 17.1.43]; Plut. *Alex.* 27.5; *cf.* §2.3.2), the oracle's assertion of divinity left a lasting impression on the young king. But the myth was propagated most strongly by Alexanders' successors (§4.4.1). Anxious to demonstrate their legitimacy as his heirs, the image of Zeus-Ammon – and the deified Alexander, bearing his attributes – soon appeared on the coins of Ptolemy II Philadelphos (e.g., BM 2001,1201.7790-3) and Lysimachus (e.g., Chicago 1922.4924, BM 1919,0820.1). It was only in Egypt that Alexander's descent from Zeus-Ammon was promoted during his lifetime. Here, Alexander adopted five names, following standard pharaonic practice, including the *praenomen st.p.n-rˁ mri-imn*, 'chosen by Ra, beloved of Amun'. Certainly posthumously, but perhaps during his reign, his 'Son of Ra' (*sꜣ rˁ*), or birth-, name was modified from a transliteration of Alexander, *ꜣrksindrs,* to include the epithet 'Son of Amun' (*sꜣ imn*).[154]

THE CULT OF ISIS

Isis was a particularly ancient goddess, first attested alongside her brother-husband Osiris in the Pyramid Texts of King Unas (*c.* 2353-23BC).[155] By Herodotos' time, her cult was already widespread throughout her homeland, those Levantine cities historically linked to Egypt,[156] and perhaps Cyprus. A sixth-century Cypriot sculpture from Naukratis (BM 1888,0601.31; fig. 3.5) shows a nursing mother, whose child wears the Egyptian 'Sidelock of Youth', and which may evidence syncretization between Isis and

[154] The surviving examples are from the Temple of Alexander and Philip Arrhideus at Hermopolis Magna and the Alexander's temple at Bahariya Oasis (Bosch-Puche, 2014:93).
[155] e.g., Utterances 4, 42, 217-19, 222.
[156] Her cult appeared in Byblos in the seventh century BC (Tessier, 1996:76; Hollis, 2009:1), where Osiris' body supposedly washed up (Plut. *dIO*. 15; Witt, 1971:40). There, she supplanted another Egyptian goddess, Hathor, whose worship in Byblos began in the third millennium BC, and was syncretized with Isis even in Egypt. *cf.* Witt (1971:30), Hollis (2009).



Fig. 3.5 | An unknown goddess nursing a child with an Egyptian hairstyle. Cypriot, *c.*550BC (BM 1888,0601.31)



Fig. 3.6 | Isis breastfeeding the infant Horus, Saqqara, *c.*664-525BC. Note the nudity of the child, the 'Sidelock of Youth', and near-identical pose (Brooklyn 37.938E)

Cyprus' native Aphrodite.[157] Certainly, the iconography is Isiac, demonstrated by comparison with contemporary Egyptian representations (fig. 3.6). Herodotos also records the early spread of her cult to Kyrene, where it was taboo for women to eat beef 'because of the Egyptian Isis' (διὰ τὴν ἐν Αἰγύπτῳ Ἶσιν: 4.186.2), and where she was honoured with festivals and fasts.[158] Isis' profile expanded especially under Ahmose II, whose Delta heritage closely associated him with the Isis-Osiris-Horus mythology;[159] his hometown of

[157] Masson-Berghoff and Villing (2016:60).
[158] Vlassopoulos (2013:150).
[159] Osiris was linked particularly to the Delta towns of Busiris (considered his birthplace) and Leontopolis (*cf.* Louvre C286 ll. 7-8; Witt, 1971:43); it was in the Delta that Isis hid her infant son Horus after Osiris' murder (*cf.* Hdt. 2.156.4, Plut. *dIO.* 18; Witt, 1971:40), and where Horus fought his uncle for supremacy (Oden, 1979:365). At Busiris, there was a famous festival of Isis, attended, Herodotos says, by many thousands (2.59.1-2, 61.1). Isis' association with the Delta was expressed through iconography, including papyrus plants (the 'heraldic' symbol of the Delta: Wilkinson, 2003:148).

Saïs later hosted a major Isiac ceremony (Hdt. 2.62.1)[160] and was home to a famous statue of the goddess (Plut. *dIO.* 9). Ahmose II's devotion is demonstrated by the notable Isaeum he built in Memphis (Hdt. 2.176.2), one of the earliest temples devoted solely to her; before this, she was worshipped alongside her husband or as a subordinate of Hathor.[161] Memphis, through Ahmose II, earned prominence in the dissemination of Isiac practice. It was supposedly from a single Memphite stela that the *Hymn of Isis* was disseminated (τάδε ἐγράφηι ἐκ τῆς στήλης τῆς ἐν Μέμφει, ἥτις ἕστηκεν πρὸς τῷ Ἡφαιστιήωι: *IK.Kyme* 41.3-4), while later Romans called her the 'cow of Memphis' (*vacca Memphitis*: Ovid *Ars.Amat.* 3.393)[162] recognizing her bovine cult, founded in the seventh century BC.

Isis' international fame was such that Herodotos could expect his Athenian audience to recognise her name and that of her husband: while to Herodotos, Amun *was* Zeus (e.g., 2.42.1, 3-4, 54.1, 55.2, 56.2, 74.1, 83.1, 143.1; 'Ammon' only appears in connection to the Ammonians: 2.32.1, 42.5), Neith *was* Athena (2.28.1, 83.1) and Ptah *was* Hephaistos (2.3.1, 101.2, 112.1, 147.2, 151.1, 153.1, 176.1), he referred to Isis and Osiris by their native names, transliterated from the Egyptian *3s.t* and *wsjr*, throughout, highlighting Isis' syncretism with Demeter only in passing (2.59.2, 156.5). Other Greek authors also declined to present Isis in Greek terms: around 500BC, the Ionian Puthermos dedicated a statuette in Egypt of the goddess suckling Horus, calling her Isis (*SEG* 27.1115).[163] This dedication was not alone: early Greek recognition of the goddess was reflected in the internment of Isis figurines in eighth- and seventh-century BC graves in Eleusis,[164] Perachora[165] and on Rhodes.[166] But these were isolated outposts of Isiac cult until the goddess arrived in Athens three centuries later.

[160] Naoum (2008:74-5).
[161] Witt (1971:55), Naoum (2008:18, 104). On Isis and Hathor, *cf.* Žabkar (1980:130, n.22).
[162] Witt (1971:102).
[163] Vlassopoulos (2013:160).
[164] Coldstream (1977:79-81). For Isis and Demeter at Eleusis, *cf.* Hölbl, 1994:274-5; *cf.* Naoum, 2008:21.
[165] Dunbabin (1962:461-4).
[166] Hölbl (1994:279-80), who suggests that the figures may have originated on the island.

The Isaeum in Piraeus certainly predates the archonship of Nikokrates (333/2BC; *IG* II^2 337.2-3),[167] when the establishment of Isis' cult by 'the Egyptians' (§3.2) was cited as a precedent for the award of *enkteisis* to the Kitians. How far it predated the arrival of Kitian Aphrodite, and when Athenians themselves became involved, is less clear,[168] but a now-lost inscription (*IG* II^2 1927), informs us that Diodorus of Rhamnous was the son of 'Isigenes'.[169] That inscription, listing the public arbitrators (οἱ διαιτηταὶ: *cf.* [Arist.] *Ath.Pol.* 53.2), predates 325BC (compare *IG* II^2 1926, *SEG* 32.170 [= *IG* II^3 4 32]); we might sensibly presume, therefore, that Isigenes was born in the early or middle fourth century, either to parents who were devotees of Isis, or else religious fervour inspired a later name-change. Either way, his name indicates that Athenian recognition of the cult was almost immediate.[170] This is not unparalleled: the other major foreign deity in Piraeus, the Thracian Bendis, enjoyed a public cult by 429BC (*IG* I^3 383.143) and an elected Athenian priesthood by 411BC (*IG* I^3 136).[171] Her worship had separate *orgeones* for Thracians and Greeks.[172] We have also already met the Athenian priests of Zeus-Ammon.

Early citizen involvement speaks to a reciprocal process where Greeks and Egyptians together instigated the cult for mutual gain.[173] But despite early recognition, Isis' cult remained minor until the Roman Period, when Isiac cult exploded across the Mediterranean.[174] By this time, her cult expanded out of Piraeus[175] to include a sanctuary

[167] Dunand (1973:5).
[168] Dunand (1973:5) insists that the involvement of Egyptians in the foundation meant that the cult itself must have been '*un culte entièrement égyptien*' (*cf.* Dunand, 1973:8). Certainly, by the end of the third century, equality of access to the foreign cults in Piraeus had been achieved (Garland, 1987:101).
[169] Dow (1937:221), Dunand (1973:5), Naoum (2008:54).
[170] A point conceded by Dunand (1973:6).
[171] Garland (1987:118).
[172] Ferguson (1949:153, n.65), Garland (1987:119).
[173] Dow (1937), Dunand (1973:5-6), Simms (1989).
[174] Isis' highest ebb came under the patronage of Roman Emperors. From the Augustan era, over 100 Athenian grave reliefs portray women with the Isiac attributes (Walters, 1988).
[175] The Piraeus Isaeum was apparently rededicated in the third century BC, given the cult-statue of Isis from this period (Dunand, 1973:8).

on the Akropolis' southern slope (*SEG* 29.291),[176] one in Pikermi (*SIRIS* 33a),[177] and perhaps another in Rhamnous (*cf. SEG* 41.74).[178] Even cursory statistical analysis of Athenian theophoric names shows an explosion in Isiac derivatives from the second century onwards:[179] 491 Isiac names are attested at Athens,[180] with Isidotos (173 instances) and Isidoros (167 instances) particularly well-attested.[181] By Diodorus' time, the Athenians were reputed for their devotion to Isis, and keenly advertised their Egyptian links. Egyptian descent was proposed for the chthonic Erechtheus, and Egyptian origins found for Athenian religious practices (1.29.1-5). They became the only Greeks to routinely swear by Isis, and grew to 'closely resemble the Egyptians in both their appearance and customs' (ταῖς ἰδέαις καὶ τοῖς ἤθεσιν ὁμοιοτάτους εἶναι τοῖς Αἰγυπτίοις: 1.29.4).

The Hellenistic Period saw a dramatic profusion of Isis sanctuaries throughout the Greek world. In the late fourth,[182] or early third,[183] century BC Isis was established at Eretria; like the cult at Athens, epigraphy reveals Egyptian involvement in its establishment (*IG* XII suppl. 562). Similarly, the third century saw Isis' arrival on Delos, where she became particularly established. Delos, after all, sat on the Egyptian grain route, was dominated by Athens until 315BC,[184] and, from 288BC, became a *de facto* vassal of the Ptolemies.[185] But the intensity of Delian engagement with Egyptian Cults – Isis, Sarapis and Anubis – sets this island apart, as does the Athenian interest in developing the cults there. Around this same period, Isis achieved important sanctuaries on the Akrokorinth (*cf.* Paus. 2.4.6) and Corinth's harbour (2.2.3),[186] Cyprus (Strab. *Geog.* 14.6.3), and an apparently

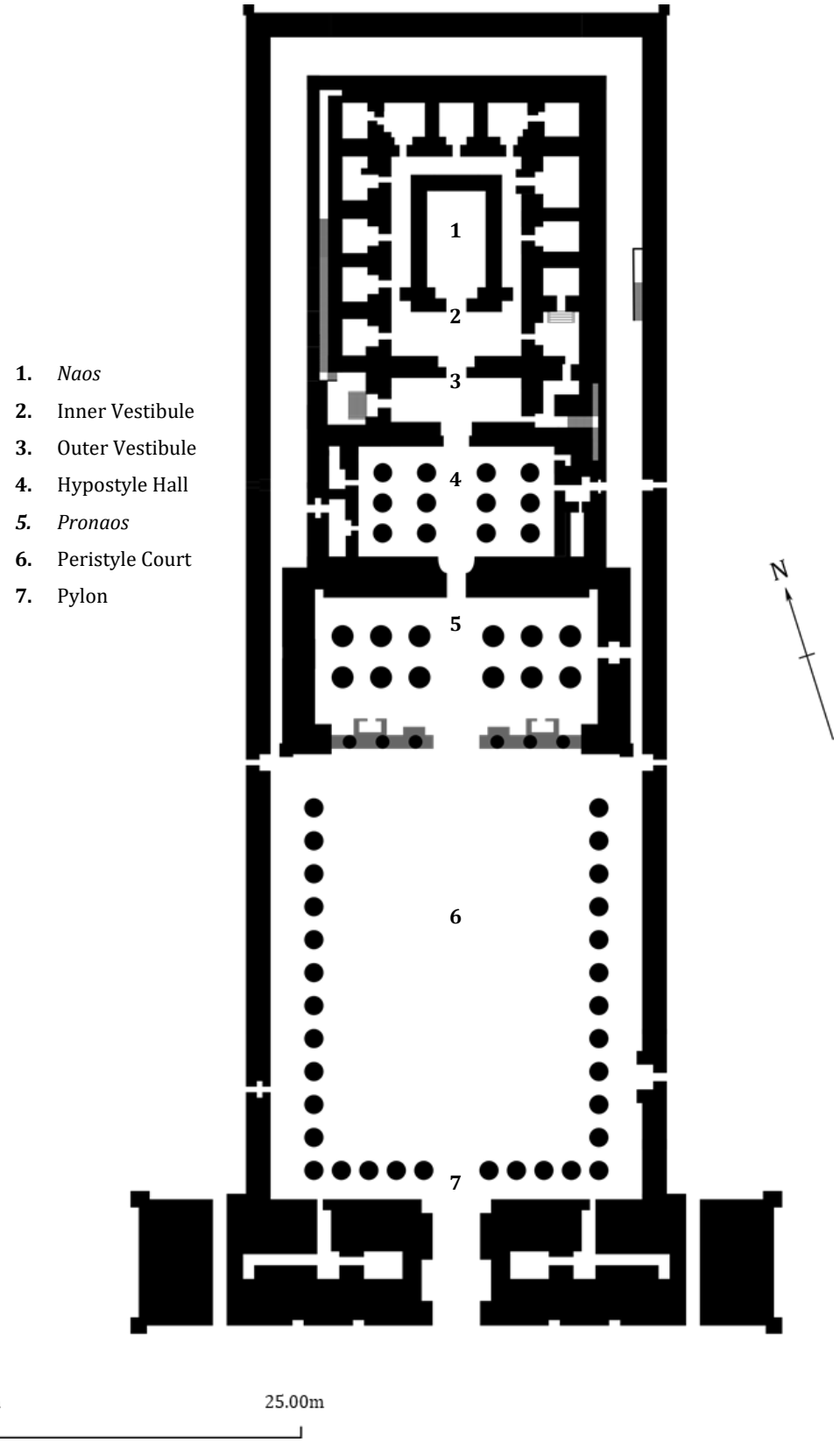
[176] Walker (1979).
[177] Pollitt (1965), Naoum (2008:58).
[178] Naoum (2008:58).
[179] *ibid*: 249, Chart F. *cf.* Dunand (1973:6).
[180] Approximately 5% of the 8,332 unique names listed in *LGPN* IIa.
[181] *cf*. *LGPN* IIa
[182] Fraser (1960:40).
[183] Naoum (2008:60).
[184] Reger (1994a:1-2).
[185] *ibid*: 32-3.
[186] Dunand (1973:18).

prominent sanctuary at Tithorea (Paus. 10.32.13), probably dated to this *polis'* second-century nadir.[187]

In the Hellenistic Period, when narrow *polis*-identities declined in favour of huge cosmopolitan states, and when the preoccupations of many turned from the community to the individual,[188] that Isis-worship spread quickest and achieved a characteristically Greek flavour. It was these developments that promoted Isis' popularity in Greece. The adoption of Egyptian gods was always problematic: theriomorphic deities were anathema to Greek thought, inviting derision from various Classical writers (Anaxadrides fr. 39; Isok. 11.26; Plut. *dIO* 379d-e Luc. *Deo. Concil.* 10, *Imagin.* 11, *Zeus. Trag.* 42; Dio Chrys. 51.16; Stat. *Silv.* 3.2.113).[189] Isis, meanwhile, was represented anthropomorphically – though sometimes with cow's horns which could be explained through her association with Io (Hdt. 2.41.2; Diod. 1.24.7; Io is called 'the cow-horned maiden' [βούκερως παρθένος] in Aisch. *PB.* 588)[190] – ensuring one less hurdle to Hellenization. Equally useful was her indefinability: Isis of the Innumerable Names (Ἶσις Μυριόνομος), as she was known,[191] had too many responsibilities to be syncretized with a single Greek goddess (*cf.* Diod. 1.25.1-2), and thus had no native competitor among the Greeks. Her incomprehensibility gave her a universality that attracted individuals throughout the Hellenic world. But it was a development in cult-practice, the Isiac Mysteries, that elevated her to the premier goddess of the Hellenistic Period. Her exotic origins, and association with Demeter, made her an excellent candidate for a Greek Mystery Cult. Mysteries were foreign to Egypt,[192] though Herodotos saw the Egyptian practice of mythological re-enactment as analogous to (even the origin of) Greek custom (2.171.1-3; *cf.* Diod. 1.29.2, Plut. *dIO*. 378d-e).

[187] *cf.* Bricault (1997:121-2).
[188] Tripolitis (2002:2).
[189] Witt (1971:25-6, 123), Gruen (2011:111).
[190] On the Hellenistic equating of Isis and Io generally, *cf.* Griffiths (1986).
[191] Witt (1971:112).
[192] Bremmer (2014:110-11), *cf.* Burkert (1987:40-1). Witt (1971:152) agrees with Herodotos.

Plan 3.1 | Egyptian temple architecture: Edfu, *c.*237BC



Approx. Scale: 1:685

Source: after Breasted (1905:27, Plan 16).

Still other features of Egyptian religion reminded Greeks of mystery cult. The layout of Egyptian temples[193] presupposes a hierarchical structure, where access to the god was limited. The Ptolemaic temple at Edfu is a typical, and well-preserved, example (plan 3.1): laid out along a single axis, the internal spaces become smaller and less public, from the great open court where private dedications were set up by wealthy individuals,[194] through to the small, cave-like *cella*. Everything led to this focal-point, where the structure's longitudinal axis terminated, and the 'story' of the temple's decoration reached its climax.[195] Access to these intimate spaces was governed by one's position in the priestly hierarchy, determined by specialist knowledge, royal patronage, and degrees of ritual purity.[196] The spectacular image of the god was seen by very few, only publicly accessible during the Opet Festival when it was paraded in a partially-enclosed sacred barque.[197] This, and the 'secret rites' (*ḏsrw štȝw*: *CT* IV.81h) characterizing much Egyptian cult activity,[198] fit certain connotations of the word μυστήριον: the maintenance of secrecy, accessed *via* specialized knowledge.[199]

Finally, to a Greek, the focus on ritual purity was reminiscent of the Mysteries. Herodotos was particularly impressed with the careful observances of Egypt's priesthood: they wore only freshly-washed linen in the temple, practised circumcision, shaved their whole bodies, and bathed in cold water twice daily (2.37.2-3); the Egyptians were the first to prohibit intercourse in temples, and require abstinence from temple visitors (2.64.1); sacrificial bulls were checked for even single black hairs (2.38.1-3), while the taboo against

[193] 'Temple Syntax': Dunand and Zivie-Coche (2004:99).
[194] The forecourt was sometimes called the 'Court of Offering' (*wsḫt ḥbyt*: *cf.* Fairman, 1954:168).
[195] Dunand and Zivie-Coche (2004:99). Egyptian temple-design referenced the Heliopolitan creation myth: open courts represent the Primordial Sea (Nun), the colonnades recall marshland, and the *naos* substitutes for the first mound to emerge from the swamp (Snape, 1996:29).
[196] Quack (2013:118-19).
[197] Schott (1934:63-90), Assmann (1984:14-16).
[198] Tobin (1991:187, n.2) stresses that the Egyptian does not directly equate to μυστήριον, nor τελετή, the term used by Herodotos (2.171.2-3).
[199] *cf.* Witt (1971:153), *LSJ s.v.* τελετή

consuming sacred or unclean animals was so strong that Egyptians refused even to kiss those who failed to uphold it (2.41.3) and might throw themselves into the river on contact with swine (2.47.1-2). Many of Herodotos' observations are easily corroborated.[200] Most Egyptian temples have freshwater bathing pools, and priests are always bald in Egyptian art. Ritual purity also extended to the cult-statue of the god (*cf. P.Berlin* 3055).[201] Certain observances survived the Isis Cult's transmission to Greece: Apuleius identifies abstinence, the wearing of new linen, and bathing rituals (*Met.* 11.7).[202]

This peculiar secrecy and obsessive cleanliness prompted Greek writers to apply the language of the Mysteries to Egyptian religion generally; Lucian has Zeus criticize Momos' mockery because he is 'uninitiated' (ἀμύητος: Luc. *Deo. Concil.* 11) in Egyptian religion. But Egyptian practice lacked one defining aspect of Greek Mysteries: the use of ordeals to admit initiates.[203] Theoretically, any Greek might be admitted to the Mysteries should they willingly undergo the ordeal; in Egyptian religion, access to the inner temple was governed by hierarchy, often hereditary. Given this discrepancy, defining Egyptian rituals as Mysteries served to reconcile Egyptian and Greek practice. This probably motivated the conversion of Isis into a Mystery cult. Exactly when this occurred is unclear, but it is usually linked to the religious reforms of Ptolemy I in the late fourth century BC.[204] The architects of these reforms – Manetho, a Hellenized Egyptian priest, and the Athenian Timotheos (Plut. *dIO*. 362a)[205] – attest to a central role for Athens. The Isiac Mysteries were especially observed by merchants. Like specialized seafaring religion (§3.3.1), Mystery Cults were dense networks of individuals with obligations to one another, conditioned by

[200] Petrovic and Petrovic (2016:26).
[201] Quack (2013:116).
[202] Witt (1971:157-60).
[203] *cf.* Witt (1971:153).
[204] Bricault (2004:548). Witt (1971:152-3) sees the Isiac Mysteries as continuing previous Egyptian practice.
[205] Witt (1971:21-2, 52),

the Mystery's internal hierarchy.[206] But, unlike seafarers' cults, initiates of the Isiac Mysteries originated throughout society; metics and citizens worshipped together, and the close-knit relationships formed may have provided merchants with the secondary political agency outlined above (§3.2). And, unlike site-specific Mystery Cults, such as at Eleusis and Samothrace, the Isiac Mysteries were Mediterranean-wide; thus, Apuleius' Lucian completed his initiation in Rome having begun in Corinth (*Met.* 11.26).

In Egypt's unforgiving terrain, the Nile offered not only a lifeline, but also a vital highway. Just as Pharaoh surveyed his kingdom from his richly-decorated Nile barge,[207] so too were gods presumed to travel by boat. The journey of the sun-god Ra across the sky was by barge, on which Isis was present (*cf.* Sheshonq's famous pectoral, Cairo JE72171), while the Opet festival brought the god's image by hand-borne barque down sacred avenues to the river.[208] Water was therefore central, both to the purification rituals described above, and the firm link between Isis and the Nile: her image carried a *situla* of Nile water (*cf.* Apul. *Met.* 11.4), which was exported for her ceremonies across the Mediterranean. Resultantly, Isis acquired two important aquatic responsibilities. First, her tears for her murdered husband Osiris were thought to cause the inundation, ensuring Egypt's rich harvests (§1.2.1).[209] Second, she became associated with the sea and seafaring; by the third century, Isis *Euploia* and *Pelagia* (*cf. IG* XII.2 113; *cf.* Apul. *Met.* 11.25),[210] who ensured fair sailing and the safety of ships, became Isis *Limenoskopos* and *Limenes*, watching over harbours.[211] In the second century BC, Timoxenos, a Rhodian trierarch

[206] *cf.* Lucius' 'spiritual father' Mithras, who guides his initiation (*cf.* Witt, 1971:158).
[207] A famous example is the barge on which Cleopatra VII entertained Caesar (Ath. 5.204c-206d). Such vessels' importance is underlined by their burial alongside various Pharaohs (Cairo CG4925-6, FMNH 31760).
[208] *cf.* Murnane (1979). Emblems carried alongside the barque survive: e.g., MMAlex. SCA975, SCA997.
[209] Bleeker (1958:15), Witt (1971:166). Hence, the presence of both practical and symbolic Nilometers in Isis' temples throughout Egypt (Wild, 1981:33).
[210] Witt (1971:20-1). The earliest dedications to Isis as a navigation goddess come from third-century Rhodes (Naoum, 2008:90-1).
[211] Witt (1971:144). See also her Egyptian designation as Isis *Pharia*, patron of Alexandria's lighthouse: e.g., *CIG* 4683b, 4944b, 5119 (*cf.* Bruneau, 1961:444-5; Witt, 1971:47).

stationed on Tenos, dedicated to Isis and Sarapis to secure a safe onward voyage (*IG* XII.5 914), and by the first century, Isis was honoured in a festival celebrating the start of the sailing season. Known as the πλοιαφέσια or *Isidis Navigium* (Apul. *Met.* 11.47),[212] it involved processing the goddess in an Egyptian-style ceremonial barque, overseen by officials with the title ναύαρχος (e.g., *IG* XII Suppl. 557-8, 565).[213] In this connection, we may presume that the spread of Isiac cult benefited from the Ptolemaic investment in seafaring sanctuaries identified above (§3.3.1).[214]

THE CULT OF SARAPIS AND PTOLEMAIC RELIGIOUS REFORM

The conquest of Egypt by Alexander, and the accession of Ptolemy I Soter, required a new religious settlement between the Graeco-Macedonian administration and the still-powerful native priesthood. Egyptian tradition looked badly on past conquerors who had disrespected the native religion,[215] even when, as in the infamous case of Kambyses' mortal wounding of the Apis Bull (Hdt. 3.29.1-3; Plut. *dIO* 44), that tradition was inaccurate.[216] Alexander diligently avoided these mistakes:[217] on arrival in Memphis, he sacrificed immediately to Apis (Arr. *Anab.* 3.1.2-3), and his general Peukestas posted a notice prohibiting Macedonian troops from entering priestly property (*SB* 14.111942).[218] Apart from a temporary dispute caused by the voracity of Kleomenes ([Arist.] *Oik.* 1352a16-b25), generous support of the priesthood continued into the reigns of the early Ptolemies. Ptolemy I, for example, re-endowed temple land confiscated under Xerxes, donated land to existing temple foundations, and devoted huge resources, including fifty talents of his own

[212] Witt (1971:98, 165-77), Naoum (2008:63-4).
[213] Vidman (1966:270).
[214] *cf.* Witt (1971:21).
[215] e.g., by curtailing the income of the temples: *cf. P.Bib.Nat.* 215 6.2; Kuhrt (1996:664).
[216] In fact, the funerary stela of this particular Apis (Louvre IM4133) shows that he survived until the sixth year of Kambyses' reign, when the Great King donated towards his resting place and sarcophagus (Posener, 1936:33; Thompson, 2012:99, n.3).
[217] Witt (1971:46-7), Pfeiffer (2008:389).
[218] Thompson (2012:99).

money, to the burial of the Apis (Diod. 1.84.8; Cairo CG22182; §5.1.5).[219] He also began an impressive temple-building programme, including to Amun at Naukratis (§5.3.1).[220] His son, Ptolemy II Philadelphus, invested particularly in the cult of Isis[221] and doubtless was instrumental in the cult's expansion. But investment in Egyptian religion was but part of a wider strategy. In balancing the needs of Greeks and Egyptians, Isis enjoyed the particular interest of Egypt's new rulers. When Alexander founded the city that bore his name, he set aside a designated plot for an Isaeum (Arr. *Anab.* 3.1.5). She alone among the Egyptian pantheon was mentioned in Alexander's command, and not even Amun/Zeus-Ammon, who sponsored his kingship, achieved a temple in the new city.[222] Isis and her mysteries formed one pillar of this 'new theology'.[223] The other significant adaptation was the creation of an entirely new god: her consort, Sarapis.

The pre-history of Sarapis is well-known: his worship developed from that of the Apis Bull. Even before the country's predynastic unification, bulls had symbolized the vitality of Egyptian rulers. From this originated two bull-cults, in which living bulls harboured the sacred essence (*k3*) of a god; *mn-wr*, Hellenized as Mnevis, at Heliopolis, and the Apis at Memphis. After death, the Apis became recognised as Osiris (Diod. 1.85.4; Strab. 17.1.31),[224] brother-husband of Isis (herself identified with the Apis-calf's mother: Brooklyn 73.25)[225] and god of rebirth, and was mummified (e.g., BM EA6771) and interred

[219] See translation in Bevan (1927:31), with Pfeiffer (2008:389), Thompson (2012:106-7), Worthington (2016:187-8).
[220] Worthington (2016:198).
[221] Tarn (1928:248).
[222] In the narratives of Arrian (*Anab.* 3.3.1) and Plutarch (*Alex.* 26.6-10), the visit to the Ammonian oracle occurred after the foundation of Alexandria, perhaps explaining his absence from the order, though this seems a baffling omission. Given the importance of oracular instructions in the founding of Greek cities, and the puzzling absence of divine involvement in Arrian's narrative (Alexander finds the site of his new city, 'and it struck him that the site was excellent for founding a city there' [καὶ ἔδοξεν αὐτῷ ὁ χῶρος κάλλιστος κτίσαι ἐν αὐτῷ πόλιν]: *Anab.* 3.1.5), he may have visited Siwa beforehand (Welles, 1962).
[223] This formulation of Witt (1971:21-2) oversells Ptolemy's achievement: Egyptian religion never achieved a systematic theology. On the diversity of Egyptian religion, and its intensely local character, *cf.* Witt (1971:51).
[224] Stambaugh (1972:60-2).
[225] Meeks and Favard-Meeks (1996:138), Nicholson (2005:46, 70).

with great ceremony in a dedicated necropolis (*P.Vindob.* 3873). This cult provoked fascination among Greeks since Herodotos' visit, around which time the Hellenomemphites had already begun dedicating to Apis (Πανεπι: BM 1898,0225.1).[226] The cult's prominence increased under the Saïtes and Egypt's fourth-century renaissance. Psamtik I constructed the catacombs for the mummified Apis (*cf.* Louvre E3335),[227] a stall for the living bull in Ptah's temple (Hdt. 2.153.1),[228] and began the tradition of regular stelae commemorating the death of each Apis;[229] Ahmose II contributed the first granite sarcophagus for an Apis (*cf.* Louvre N406),[230] while Nakhtnebef engaged in an extensive refurbishment,[231] embellishing it with a *dromos* of 600 sphinxes (e.g., Louvre N391) and colossal statuary (Louvre N390).

It is unclear how the Egyptian animal-cult of Apis became the Hellenized anthropomorphic cult of Sarapis. Usually, it is placed within Ptolemy I's wider religious reforms, designed by Timotheos and Manetho,[232] but others point to Arrian's (*Anab.* 7.26.2) and Plutarch's (*Alex*. 76.4) accounts of Alexander's death. These suggest that a temple to Sarapis existed in Babylon, where Alexander's intimates consulted the god about his health. Taken alongside Plutarch's anecdote (*Alex.* 39.3) of Alexander's companion Serapion, and the later mention of an island dedicated to Sarapis (νῆσος Σαραπίδος) near Babylon (Ptol. *Geog.* 6.7.46, 8.22.18), this suggests that Sarapis was either created by, or predated, Alexander.[233] This reconstruction is open to challenge: Arrian claims as his source the royal diaries (αἰ ἐφημερίδες αἰ βασίλειοι: *Anab.* 7.26.2), though probably erroneously.[234] Ptolemy, of course, was interested in linking his new dynasty's patron deity

[226] Jeffrey (1961:355), Masson (1977:61-3). *cf.* Masson-Berghoff and Goddio (2016:83).
[227] Zivie (1982:30), Marković (2017:152)
[228] Zivie (1982:30); *cf.* Jones and Jones (1988:110), Colburn (2014:63), who favour a later date.
[229] Jurman (2010:248), Marković and Ilic (2018:89).
[230] Marković (2017:152).
[231] Jones (1990:145).
[232] Witt (1971:43, 53).
[233] Stiehl (1963).
[234] Wilcken (1927:77-9), *contra* Stiehl (1963:31-3).

to Alexander, to legitimate his rapid promotion from minor royal companion to King-Pharaoh (§4.4.1),[235] and his controversial seizure of Alexander's body for burial in Egypt (Diod. 18.28.3, Paus. 1.6.3, Strab. 17.1.8).[236] Equally problematic are Plutarch's (*dIO* 362a) and Tacitus' (*Ann.* 4.83-4) accounts, relating a dream instructing Ptolemy to recover a statue of Pluto from Sinope which, Timotheos and Manetho reveal, was Sarapis all along.[237] Dreams were centrally important to Sarapis' cult: he became a healing god similar to Asklepios, apparently curing Demetrios of Phaleron's blindness (DL 5.76). Sleeping in his sanctuary became the primary mechanism through which healing or divine instruction were dispensed (*cf. IG* X.2 1 255).[238]

Whenever the cult of Sarapis originated, and most attribute it to Ptolemy I Soter,[239] it met with immediate success. The pedigree of the Apis made him palatable to Egyptians who, though rarely among Sarapis' adherents, tolerated his installation at Memphis; the vigour of Greek interest was expressed through the Dionysiac statues and dedications which lined the *dromos*.[240] The cult's longevity in Egypt, evidenced by a third-century AD graffito at Kalabsha (*WChr.* 116),[241] demonstrates how effectively Sarapis reconciled Egypt's new rulers to both their subject peoples, linking the traditional Pharaonic capital at Memphis to the Ptolemies' new base at Alexandria. A distinctively Ptolemaic creation, Sarapis became a tool of his sponsors' diplomatic and economic efforts. Whereas the Piraeus cult of Isis was a spontaneous foundation by unspecified 'Egyptians', Sarapis' Athenian cult was an imposition by the Ptolemaic monarchy (Paus. 1.18.4).

[235] *cf.* Worthington (2016:85-6).
[236] Tradition suggests that Alexander wished his body to be buried at Siwa (Diod. 18.3.5, Justin 12.15.7, 13.4.6).
[237] Linking the new deity with the chthonic deities of central Greece (Witt, 1971:53).
[238] Sokolowski (1974).
[239] Witt (1971), Pfeiffer (2008).
[240] Thompson (2012:25, 197).
[241] Bowman (1986:175).

3.4 | Ties of Kinship, *Xenia* and Diplomacy between Egypt and Athens

A majority of scholars,[242] recognizing that the normative state of relations between Greek *poleis* was war,[243] have been pessimistic about the quality of Hellenic diplomacy. But the Atheno-Egyptian relationship provides a curious counterbalance to this picture: if Athens' diplomacy with other *poleis* appears lacking, then the stability of the Atheno-Egyptian relationship, over three periods of Egyptian independence between 664BC and 342BC, appears remarkable. The first evidence of friendly relations comes from the reign of Psamtik I, who allied himself with the Athenians (Diod. 1.67.8-9) to check Persian aggression in the Middle East (*cf.* his quadruple alliance with Sparta, Babylon and Lydia: Hdt. 1.77.1-4). Even following Egypt's capitulation to Persia, the Athenians remained closely connected with restive Delta dynasts:[244] hoards of Athenian tetradrachms first appear in Egypt at this time (§4.3.2), with the largest broadly coinciding with periods of anti-Persian insurrection (e.g., *IGCH* 1644, a hoard of 127 coins from *c.*475BC, when Xerxes' accession precipitated a serious revolt:[245] Hdt. 7.1.3, 4.1, 7.1). Similarly, the Athenians aided the Delta kinglet Irethor, with an impressively large force.[246] Over the next decade, the Athenians were linked to the dynasts Psamtik, who gifted grain to Athens (Philoch. *FrGrHist.* 328 F119 and F130; Plut. *Per.*37.3), and Amenirdsu, whose revolt drew sixty ships from Kimon's assault on Cyprus (Thuc. 1.112.1-4; Plut. *Kim*. 18.1-19.2; §5.2.3).[247] Kimon's death during this expedition ended Athens' official military ambitions in Egypt,[248] but immediately before the Peloponnesian War, Plutarch attests to public clamouring for a renewed Egyptian offensive (*Per.* 20.2). Relations resumed in 388BC, with an alliance

[242] Low (2007:1-3).
[243] e.g., Hasebroek (1933:118).
[244] Ruzicka (2012:3).
[245] Ruzicka (2012:26-8). Darius I faced similar insurrection in 522/1BC (Kuhrt, 1996:665).
[246] Perhaps 40 ships (Ktes. *Pers.* 36; Westlake, 1950:210; Libourel, 1971:606), or 200 (Thuc. 1.104.2).
[247] Parker (1976:32); though Barnes (1953:176) argues, based on Diod. 12.3.1-4, that Thucydides conflates two campaigns here.
[248] Rhodes (2006:47).

mentioned in Aristophanes (*Plut.* 178), while the later fourth century brought envoys from Pharaoh Djedhor (*IG* II^2 119) after which Chabrias commanded his mercenary forces (Strab. 16.760, 17.893, 18.679; Plin. *HN.* 5.68; Diod. 15.42.2-3; Nep. *Chab.* 2.3).

The longstanding Atheno-Egyptian relationship is still more remarkable considering that Egypt did not participate in the apparatus of Greek interstate relations (§5.1.3-4), whereas the relationship between north Euxine Graeco-Skythian cultures and Athens relied on their adoption (and adaptation) of Hellenic political institutions (§6.1.1),[249] especially proxeny.[250] 151 proxeny decrees survive from the region,[251] with 25 fourth-century examples alone. But proxeny is a peculiar institution, rooted in the characteristically Greek institution of *xenia* and which relied on a characteristically Greek system of competitive honours,[252] in which the award of honour by the community encouraged ever-greater euergetism (§4.1.5).[253] In Egypt, where honour was conferred by proximity to Pharaoh, and where outsiders were treated with particular suspicion, proxeny was of limited attractiveness.

The only pre-Hellenistic *proxenoi* from Egypt were Greeks: Damoxenos, son of Hermon (*I.Lindos* 16 app.) and an unknown son of Pytheas were both made *proxenoi* of the Lindians in Naukratis (*I.Lindos* 16). These grants are not only unique for Egypt, but also among the nine founder-states of Naukratis (Hdt. 2.178.2). Even with the influx of Graeco-Macedonian settlers following Alexander's conquest (§1.2.4), proxeny's foothold in Egypt remained weak. *Proxenoi* remain limited to Hellenized cities, with seven more grants of *proxenia* made to Naukratites, including by Athens (*IG* II^3 294.7-13).[254] Alexandrians

[249] e.g., the *polis* (Tsetskhladze, 1997), Olbian democracy (Vinogradov and Kryžickij, 1995: 136).
[250] Mack (2015:4).
[251] Cojocaru (2009:357).
[252] *cf.* Mack (2015:91).
[253] *cf.* Miller (2016:368, 420).
[254] Mack (2015:32-3).

feature more prominently, but mostly from the second century BC or later. The three third-century examples were granted respectively by Athens (*IG* II³ 847) and Kos (*IG* XI.4 650, 742). Hellenized Egyptian cities, therefore, occupied a peripheral place in Athens' proxeny network, the principal instrument of her foreign policy. Instead, Athens was forced to adapt her diplomatic repertoire to suit a very different kind of foreign trading partner: a unitary barbarian kingdom that, due to its millennia of tradition, was inflexible in its foreign policy practice.

3.4.1 | *The Ties of Fictive Kinship*

New Institutional Economics emphasises the role of kinship in perpetuating and cementing economic relationships.[255] Poor interethnic understanding is shown by much scholarship to suppress economic performance[256] and reduce cohesion;[257] conversely, economic outcomes are enhanced where institutions exist to bridge the ethnic divide.[258] The exact mechanisms determining preference for intra-kin exchange are difficult to isolate, given the close connection between kinship and other non-tariff trade-barriers, including language, social structure or administrative borders.[259] Thus, among the Hausa and Zarma peoples, who straddle the artificially imposed and poorly demarcated Niger-Nigeria border, inter-ethnic trade barriers are more associated with the role of gender in their respective cultures than resistance to interethnic trade.[260] Nonetheless, networks of kin – and the obligations they entail – do have a demonstrable positive effect on trade outcomes.[261]

[255] K. Mitchell (2000:392-3).
[256] Easterly and Levine (1997), Alesina *et al.* (2003). This is especially true where a large ethnic minority is confronted with an ethnic majority (Horowitz, 1985).
[257] *cf.* Esteban *et al.* (2012:1311-12).
[258] Montalvo and Reynal-Querol (2005:796).
[259] *cf.* Alesina and la Ferrara (2005:762), Montalvo and Reynal-Querol (2005:796).
[260] Aker *et al.* (2010:4).
[261] Granovetter (1985:482).

A preference for intra-kin exchange should be evident in premodern trade, but for the ancients, especially Greeks, kinship and ethnicity were nebulous, ambiguous concepts which could be pragmatically emphasised, ignored or even redefined entirely.[262] Thus the Athenians, responding to changes in their geopolitical ambitions between 450BC and 300BC, abandoned Ionian identity in favour of autochthony (*cf.* Dem. 19.261; §5.1.1).[263] Later still, they even claimed ancestry from Saïtes ([Theopomp.] *FrGrHist.*72 F20b; Diod. 1.28.4-6), or *vice-versa* (Kall. *FrGrHist.* 124 F51; Diod. 5.57.5). We need not afford undue credence to this 'genetic link' between Athens and Saïs[264] to recognize its importance. Its pedigree was fairly strong: Plato reports around 360BC that the Saïtes 'profess to be great Athens-lovers, and somehow related to our people' (μάλα δὲ φιλαθήναιοι καί τινα τρόπον οἰκεῖοι τῶνδ' εἶναί φασιν: *Tim.* 21e); soon after (*apud.* Prokl. *in Tim.* 1.97.27 [Diehl]), the Atthidographers Phanodemos (*FrGrHist*. 325 F25), Kallisthenes (*FrGrHist.* 124 F51) and Pseudo-Theopompos (or Anaximenes[265] [?] *FrGrHist.* 72 F20b) debated the nature of the Atheno-Saïtic relationship.[266] A lost work, Ariston's *The Colony of the Athenians <in Egypt>* (Ἀθηναίων ἀποικίαν <ἐν Αἰγύπτῳ>: Plut. *dIO.* 365e [2nd Century BC]),[267] surely refers (at least partly) to Saïs. These texts retrospectively impose Egyptian heritage on Athens' ancient heroes: Peteos, father of Athens' leader at Troy (Hom. *Il.* 2.552), was 'clearly

[262] *cf.* Tuplin (1999:48), Skinner (2012:18); Low (2007:50-1, 60-3) *cf.* Isok. 4.50.
[263] Rosivach (1987:294).
[264] As does Bernal (2006:564-6). This Athenian-Saïte relationship was accepted uncritically until the nineteenth century: e.g., Stackhouse (1824:203), Müller (1825:129), Wilkinson (1847:283). However, we must recognize that the entire postulated relationship is based on a Greek notion of colonization (by settlement) that contradicts everything we understand about Egyptian imperial expansion in e.g., Nubia.
[265] Pausanias (6.18.5) reports that Anaximenes published a pamphlet, the *Trikaranos*, in Theopompos' name to discredit him. Anaximenes' authorship (followed by, e.g., Vasunia, 2001:231) is not universally accepted: Flower (1994:21-3).
[266] Vasunia (2001:231).
[267] This work is often translated as *On Athenian Colonization* (e.g., Trompf, 1961:51) due to difficulties interpreting the singular ἀποικία, but the Egyptian context implies a focus on Atheno-Saïtic relations. Jacoby, commenting on this passage (*FrGrHist.* 337 F1 app. crit.), adds the emendation <εἰς Αἴγυπτον> due to this context and on the precedent of Αἰγυπτίων ἀποικίαι (*Colonies of the Egyptians*) by Ariston's near-contemporary Istros (*FrGrHist.* 334 F44).

Egyptian' (φανερῶς Αἰγύπτιον: Diod. 1.28.6),[268] Erechtheus was also apparently Egyptian (1.29.1), while Kekrops hailed from Saïs (Schol. *ad* Ar. *Plout.* 775; *cf.* Tzetzes *ad Lyko.* 3).[269]

Myths regarding Egyptian colonization pepper Greek history,[270] with this Atheno-Saïte tradition a late addition. Herodotos does not mention it in his lengthy discussions of the Saïte monarchy,[271] nor does Thucydides, despite its relevance to Athens' support of Irethor (1.104.1) and Amyrtaios (1.112.3), nor even Isokrates in his *Busiris*. The first secure reference comes in Plato's *Timaios* (21e); his assertion that Athenians and Saïtes were 'somehow related' indicates that the tradition was then embryonic. He later attributes the similarities between Athens and Saïs to their common patroness, Athena, who founded each separately (*Tim.* 23d-e), rather than to a genetic link. However, some later historians have argued that Plato was aware of the debate over which city founded which, based on his otherwise puzzling comment that Athens was a thousand years older than Saïs (*Tim.* 23d-e, 24c). Similarly, the tradition ascribing Egyptian heritage to Athens' founding heroes was also late:[272] Demosthenes still argued for Athenian autochthony around 343BC (19.261), while Plato in his *Kritias* falls short of postulating Egyptian origins for Kekrops and Erechtheus (110a).

It is no great mystery why this relationship would be formulated in the fourth century. Plato's *Timaios* and *Kritias* were both written *c.*360BC, exactly when Chabrias' involvement in Egypt was culminating. A Saïte dynast, Amenirdsu, had chased out the

[268] His name has been equated with the Late Period Egyptian name *p3-di* (e.g., Louvre IM2789) by Burton (1972:125); *cf.* Griffith (1909:449), Ranke (1935:121) and Bernal (2006:674).
[269] Burton (1972:124). *cf.* Philoch. *FrGrHist.* 328 F93, Suda *s.v.* Κέκροψ.
[270] Consider the foundation myths of Argos (Manetho *FrGrHist.* 609 F53; *cf.* Myres, 1930:324, Hicks, 1962:97-100), the Egyptian origins of Kolchis (Hdt. 2.104.1-2) or more generally (Diod. 1.28.1-3, perhaps after Hekataios): *cf.* Rutherford (2011:462-4).
[271] Herodotos probably visited Saïs, since his accurate knowledge of the Saïte dynasty is the only properly historical part of his Egyptian *logos*: von Fritz (1936:335, 337-8). Of course, the historicity of Herodotos' sojourn in Egypt is debated (Armayor, 1978; §2.3.3)
[272] *cf.* Müller (1825:129).

Persians; his successors, despite their different dynastic seats (Mendis and Sebennytos, respectively) harked back to the first Saïte monarchy, Ahmose II in particular, as Egypt's spectacular last hurrah. It was from appeals to Egypt's Saïte past that these kings derived their legitimacy.[273] Thus, Nakhtnebef in the famous Naukratis Stele (Cairo JE34002)[274] devotes a tithe charged on trade in the 'Ionian Sea' (*w3ḏ-wr-n ḫ3w-nbwt*; i.e. the Mediterranean) to Neith at Saïs, where he was crowned earlier that year.[275] Thirtieth Dynasty art referred back to Saïte exemplars,[276] while Nakhtnebef and his successors embarked on a massive temple construction and renovation programme.[277] Saïs remained the spiritual heart of Late Period kingship, enabling these Pharaohs to draw on a shared Egyptian-Athenian past to win hearts and minds in Athens (§3.4.2). This is reflected in the Platonist Attikos' accusation (*apud.* Prokl. *in Tim.* 1.97.27 [Diehl]) that Pseudo-Theopompos inverted the colony-metropolis relationship in response to a delegation from Saïs who 'came to him and wished to revive their kinship with the Athenians' (ἐπ' αὐτοῦ γὰρ ἀφικέσθαι τινὰς ἐκ τῆς Σάεως ἀνανεουμένους τὴν πρὸς Ἀθηναίους συγγένειαν).

Kinship, even when fictive, was a significant category of Greek interstate relations: it obliged military support (Thuc. 1.71.4; Dem. 18.186),[278] demanded goodwill (εὔνοια) and friendship (φιλία),[279] and ensured assistance in times of need (Isok. 12.164-5, 14.51).[280] While kinship was central to arguments for Greek ethnic unity (Hdt. 8.144.2; Plat. *Resp.* 470c1-2), it is not uncommonly extended across ethnicities: Graeco-Persian kinship is

[273] Spencer (2006:47).
[274] *cf.* Erman and Wilcken (1900), Gunn (1943), von Bomhard (2012). It is paired with another identical stele from Herakleion-Thonis (NMA 285,SCA277; *cf.* Masson-Berghoff and Villing, 2016:50-1).
[275] Spencer (2006:47), Minas-Nerpel (2018:121).
[276] Spencer (2006:47). Consider a statuette indistinguishable between Saïte and 29th Dynasty style (MMAlex. SCA1305; *cf.* Masson-Berghoff and Goddio, 2016:116), or a bust (BM EA97) variously identified as Ahmose II or Nakhthorhebyt, due to their near-identical portraiture: Myśliwiec (1988:50, 64, 71).
[277] Arnold (1999:106-119), Wilkinson (2010:463-4). Neith's Saïtic temple was also restored: Arnold (1999:108).
[278] Graham (1964:10-12, 86). Metropolis-colony warfare was considered shameful: *cf.* Hdt. 8.22.1.
[279] Graham (1964:107-9).
[280] Hall (1997:37), Low (2007:48-9, 51).

postulated in tragedy (Aiskh. *Pers.* 180-7), while barbarians including Alexander I of Makedon (Hdt. 5.22.1-2), Xerxes (Hdt. 7.150.2), and the Thracian Seuthes (Xen. *Anab.* 7.2.31) emphasized their apparent Greekness. Kinship was centrally important for colonial foundations: *metropoleis* were expected to take an active interest in their colonists' fortunes,[281] in exchange for the colony's honouring of their founders.[282] The unique situation of Athens and Saïs, where disagreement ensued over which was the metropolis, ensured a versatile relationship, allowing the Athenians to justify their costly interventions in support of Irethor and Amenirdsu without requiring that the Saïtes honour the Athenians as their founders.

3.4.2 | *Atheno-Egyptian* Xenia *Relations*

Despite the existence of an Egyptian unitary state, it was specifically the city of Saïs with whom the Athenians claimed kinship. Their shared patron deity, Athena/Neith, was surely an important factor in this, but so too was a hereditary reciprocal relationship with Saïs' leading family. The Saïte kings of the seventh century BC were well-known for their philhellenism, utilizing Greek troops to secure their restive homeland and counterbalance Persia's growing influence abroad. Saïte monarchs courted prominent Greeks especially: the Corinthian tyrant Periander's nephew was named Psammetichos, almost certainly because of a *xenia*-relationship with Necho II (Arist. *Pol.* 1315b),[283] while Ahmose II sent gifts to the Spartans (Hdt. 3.47.1; *cf.* Plut. *Mal. Hdt.* 859c) typical of *xenoi*. These relationships continued beyond the dynasty's fall, into the Persian period and the return to native rule in the fourth century BC.

[281] Our best evidence for these unspoken norms comes when they are flouted. For example, when Epidamnos was refused the assistance of its *metropolis*, Korkyra (Thuc.1.24.6-7).
[282] See the relationship between the Opontians and Naupaktans: the latter were required to swear an oath to the former, renewed every thirty years: Tod 24 (*cf.* Graham, 1964:45). Conversely, *cf.* Thuc. 1.25.3-4.
[283] Lloyd (1975:55), Herman (1987:102). Name-exchange was common in *xenia* (Herman, 1987:19-20).

While known as 'the Libyan king' (ὁ Λιβύων βασιλεύς; Thuc. 1.110.3), it would be wrong to suggest that the fifth century revolutionary Irethor was a foreigner without local support;[284] his name is thoroughly Egyptian (*ir.t-ḥr-r.r=w,* 'the Eye of Horus is against them': *O.Manawir* 5446),[285] shared with a semi-legendary prince of two centuries prior;[286] he was proclaimed Pharaoh in the traditional sense (*O.Manawir* 5446);[287] and Thucydides implies that he had liberated almost all of Egypt before he sought Athenian support (1.104.2).[288] His base at Marea in the Delta, and his father's name, Psamtik, permits an educated guess that he was of Saïtic descent.[289] The same is probably true of the Psamtik who donated grain to Athens in 445/4BC (Philoch. *FrGrHist*. 328 F119 and F130; Plut. *Per*. 37.3). Amenirdsu (Thuc. 1.112.1-4; Ktes. *FrGrHist.* 688 F13),[290] the rebel supported by Kimon's expedition in 449BC, is little-known, but his appellation 'the King in the Marshes' (τοῦ ἐν τοῖς ἕλεσι βασιλέως: Thuc. 1.112.3) reveals that his headquarters, too, was in the Delta.[291] His name also proposes a link to the Saïte Dynasty: in 404BC, another Amenirdsu, the sole king of the year-long Twenty-Eighth Dynasty,[292] freed Egypt from the Persians. The Greeks knew him as 'Amyrtaios of Saïs' (Ἀμύρτεος Σαίτης: Manetho *FrGrHist.* 609 F2) and as 'Psammetichos' (Diod. 14.35.4-5) like his Saïtic forebears.[293] His demonym reveals that his brief reign resurrected Saïte rule, and he was probably the grandson of his namesake;[294] incidentally, Herodotos reveals that the first Amenirdsu's son Pausiris was shown clemency by the Persians (3.15.3),[295] and perhaps even maintained his family's

[284] The interpretation of Meiggs (1972:93).
[285] *Dem. Nam.* P.72. The name commonly appears in the Late Period of Egyptian history: e.g., BM EA15171 (Ptolemaic), EA20745, EA57271 (8th-7th Century); Brooklyn 07.422 (7th Century); MetMus. 07.228.33 (4th Century).
[286] Ryholt (2010:715).
[287] Kahn (2008a:430-1).
[288] *cf.* Ruzicka's dating of the Persian campaign to reconquer Egypt (2012:31).
[289] Perdu (2010:152). Irethor is also the son of Psammetichos in Herodotos (7.7.3).
[290] Parker (1976:32), Kahn (2008a:436-7), Perdu (2010:152), Ruzicka (2012:33).
[291] Mallet (1979:41), Kahn (2008a:437).
[292] Perdu (2010:152), Ruzicka (2012:37).
[293] Ray (1987:80), Chauveau (1996:44-7), Ruzicka (2012:38-9). Diodorus specifically claims that he was 'a descendant of the famous Psammetichos [i.e., Psamtik I]' (ἀπόγονον ὄντα τοῦ Ψαμμητίχου: 14.35.4).
[294] Perdu (2010:152).
[295] Kahn (2008a:436).

influence and Greek connections.[296] Accepting, as seems reasonable, the Saïte descent of these dynasts, the scattered evidence for their contact with Athens resembles a hereditary relationship with either the *demos* at-large or with prominent Athenian individuals. We might sensibly presume *xenia*, characterised by reciprocal gift-giving as between Ahmose II and Polykrates of Samos (Hdt. 3.39.2). *Xenia* was one Greek institution that, as Ahmose II and Necho II's activities demonstrate, the Egyptian monarchy was able to adapt to,[297] and which persistent Athenian interest suggests survived the Persian conquest.

3.4.3 | *Egyptian Interest among the Athenian Elite*

Athenian history reveals numerous citizens especially interested in all things Egyptian. Visits to Egypt became important in the education of prominent Athenians, given her reputation as a storehouse of esoteric wisdom, medical and mathematical knowledge, and of curiosities and antiquities (*cf.* Hdt.).[298] These individuals built up a rich web of interpersonal connections, probably including the *xenia*-relationships with prominent Egyptians postulated above (§3.4.2). These relationships lubricated trade, imbuing both Athenian and Egyptian elites with a shared interest in promoting and expanding their bilateral trade, and – through elite control of Athens' democratic institutions[299] – giving Egyptian merchants the secondary agency required to pursue their interests (§3.2).

[296] Perdu (2010:152).
[297] Reciprocal ritualized friendships were not an exclusively Greek phenomenon: Herman (1987:12).
[298] Hanrahan (1961:36-7), MacFarquhar (1966:112-13).
[299] Models of mass-elite interaction in Athens emphasize alternatively elite control of democratic institutions (Moreno, 2007a:211-308), and mass control of the elite through the same (Ober, 1989); *cf.* Engen (2010:10), Sears (2013:19, 49-50). Whether or not Egyptophile Athenians exerted much influence is debatable; certainly, they were less prominent than those engaged elsewhere: Sears (2013:40).

SOLON

Solon's visit to Egypt is well-attested (Hdt. 1.30.1; Plat. *Tim.* 21e, *Crit.* 110a-c; [Arist.] *Ath.Pol.* 11.1; Plut. *Sol.* 26.1, *dIO*. 354e; Posidonios *FrGrHist.* 87 F28; Diod. 1.96.2),[300] but aspects of his travels test historical credibility. First, the length of his sojourn – a decade (Hdt. 1.29.1; Plut. *Sol.* 26.1) – has strong mythological pedigree, being the length of Philoktetes' stay on Lemnos (Hdt. 4.145.3), the Titanomachy (Hes. *Theog.* 635), the Trojan Wars (Hom. *Od.* 14.240) and Odysseus' *nostos* (24.322).[301] Similarly, given the Greek perception of Egypt as a prototype, Egyptian sojourns by Greek sages became a literary mainstay, featuring in stories of Pythagoras (DL 8.2-3), the Spartan Lykourgos (Plut. *Lyk.* 4), Thales (DL 1.24, 27), and Kleoboulos (DL 1.89).The chronology is also problematic: Herodotos (1.29.1) and Plutarch (*Sol.* 26.1) place it after his reforms in Athens, while Plato (*Tim.* 21e) suggests it was before.[302] Indeed, certain events of Solon's travels are sometimes dismissed as purely mythological,[303] notably his conference with Kroisos in Sardis, which is often seen as a vehicle framing Herodotos' philosophy.[304] While aspects of Solon's travels are certainly ahistorical, his visit to Egypt for the purpose of trade and travel (κατ' ἐμπορίαν ἅμα καὶ θεωρίαν: [Arist.] *Ath.Pol.* 11.1) seems more probable: Solon himself described his stay 'where Nile pours forth his floods, near the Canopic shore' (Νείλου ἐπὶ προχοῇσι Κανωβίδος ἐγγύθεν ἀκτῆς: *Sol.* 26.1 [= Sol. Frag, 7 Bergk.]). Accepting the veracity of Solon's visit, it is likely that he had an audience with Ahmose II, as

[300] Markianos (1974:7).
[301] *cf.* Thucydides' assertion of a ten-year Peloponnesian War (1.11); Cawkwell (1976:274).
[302] Markianos (1974) offers full discussion of the chronological issues with Herodotos' Solonic narrative.
[303] Linforth's (1919:95-7) agnostic approach proposes that Plato invented the entire episode. Curiously, Linforth ignores Herodotos' testimony entirely.
[304] Freeman (1926:184), Immerwahr (1966:313), Fornara (1971:18-21), Redfield (1985:102), Shapiro (1996:362), *contra.* Markianos (1974:9).

Herodotos reports (1.30.1),[305] and with the Saïte priest 'Sonchis' (Plut. *Sol.* 26.1; *cf.* Plat. *Tim.* 21e and *Crit.* 110a-c).[306]

LYKOURGOS III AND IV

The grant of *enktesis* to the Kitians in 333/2 (*IG* II^2 337: §3.3.3) was proposed by the orator and treasurer Lykourgos,[307] who cited the precedent of the Egyptian sanctuary of Isis. In adducing this example, he goes beyond rhetorical concerns: it has been suggested that he references the achievement of another Lykourgos, his grandfather, in proposing the Egyptian grant.[308] The elder Lykourgos was a noted Egyptophile: Aristophanes renamed him Ibis in his *Birds* (ἶβις Λυκούργῳ: 1296), which an unnamed scholiast explained resulted from Egyptian descent or leanings. Another comedian, Pherekretes (frag. 11) also claims Lykourgos was of Egyptian stock, while Kratinos accused him of wearing a καλάσιρις (a robe particular to Egypt: frag. 30).[309] The evidence linking Lykourgos III to the *enktesis* for the Egyptians is circumstantial; instead, some scholars suggest that Lykourgos IV, a prominent speaker on religious matters, was a likelier candidate.[310] It is certainly plausible that the younger Lykourgos inherited his grandfather's infamous Egyptophilia.[311]

CHABRIAS

The distinguished general Chabrias was involved in Egypt repeatedly throughout his long career (§5.2.3), beginning *c.*389/8BC, when our sources hint at a triangular alliance

[305] Markianos (1974:7). This, too, is sometimes considered non-historical: e.g., Linforth (1919:299-300).
[306] The idea of Greeks visiting Egypt and becoming friends with the Philhellene (Hdt. 2.178.1) Ahmose II became of a trope, featuring in the story of Pythagoras' visit: DL. 8.3 (*cf.* Hanrahan, 1961:38).
[307] On whom, see Mitchel (1973), *APF* 9251.
[308] Köhler (1871:328-53); *cf.* Dow (1937:185), Simms (1989).
[309] Simms (1989:217).
[310] Dow (1937:185), Pecirka (1967:59-60).
[311] Though see Simms (1989:219-21), who considers Lykourgos IV as a more likely proposer for the awarding of *enktesis* to the Egyptians, but discounts the notion of a hereditary interest in Egypt.

between Athens, Egypt and Cyprian Salamis (Ar. *Pl.* 178; *cf.* Diod. 15.3.4, 8).[312] Evagoras of Salamis had revolted against the Persians from about 390BC (*IG* I^3 1 113, II^2 20; Isok. 9.64; Theopompus *FrGrHist.* 103; Diod. 14.2.4, 98.3-4, 110, 15.9.2-4, 8-9.2), perhaps co-ordinating with his ally, the Pharaoh Hakor, to distract the Persians from attacking Egypt (*cf.* Isok. 4.140-1).[313] Evagoras requested Athenian assistance, and in 388/7BC Chabrias was sent (Xen. *Hell.* 5.1.10; Nep. *Chab.* 2.2-3; Dem. 20.76). Despite considerable success on Cyprus (*cf.* Dem. 20.76; Nep. *Chab.* 2.3), he was forced by the King's Peace to withdraw.[314] Chabrias then left – of his own accord (Diod. 15.29.1-4; Nep. *Chab.* 2.3), but with the tacit acceptance of the Athenian *demos*[315] – to join Hakor's service, returning when he was recalled at the request of the Persian Pharnabazos (Diod. 15.9.3-5, 29; *cf.* Nep. *Chab.* 3.1).[316] Egypt was thereafter plunged into turmoil: Hakor died a year after Chabrias' recall, and his son Nefaarud II barely lasted the summer of 379BC before his overthrow in a military coup.[317] His successor, Nakhtnebef, remained defensive, rebuffing a Persian assault in 374/3BC (Polyaen. 3.9.38, 47; Diod. 15.41.4, 43.1),[318] until the Satrap's Revolt of 366/5BC, and the simultaneous resumption of Atheno-Spartan anti-Persian activities,[319] enabled a more aggressive policy. He appointed his son Djedhor as co-regent (*P.Bib.Nat.* 215 IV.16-17),[320] and together they courted Greek assistance. An embassy was sent to Athens (*IG* II^2 119), where Chabrias was *strategos*; Chabrias certainly, therefore, met with the Egyptian

[312] Ruzicka (2012:80).
[313] *ibid*:66. The date of this intervention is contentious: for the view (derived from Diod. 14.110.3) that Persia invaded Egypt *c.*387/6BC, *cf.* Dandamaev (1989:297), Shrimpton (1991:2-7).
[314] Ruzicka (2012:84), Sears (2013:38-9).
[315] Hence the Persians could insist that he be recalled. Similarly, see the actions of prominent Athenians during Demainetos' expedition to support Konon, who secretly agreed the use of a trireme, but denied it at the next meeting of the *boule* (*P.Oxy.* 842A IX.1).
[316] Lloyd (1994:348).
[317] Erman and Wilcken (1900), Lloyd (1994:340-1), Myśliwiec (2000:164).
[318] Ruzicka (2012:114-21).
[319] Prompted by Artaxerxes II's support of Thebes (Xen. *Hell.* 7.1.33-40; Plut. *Pelop.* 30; Isok. 6.27; *cf.* Ruzicka, 2012:134-5).
[320] Johnson (1974:15-16). For the suggestion that Djedhor merely achieved high rank, *cf.* Engsheden (2006:63).

envoys, who convinced him to, again, unilaterally involve himself in Egypt (Plut. *Ages.* 37.5; Diod. 15.92.3; Nep. *Chab.* 2.3).[321]

The strong personal relationship between Chabrias and Djedhor is perhaps the best-attested example of Egyptian-Athenian elite interaction. For example, while the Spartan King Agesilaos was also allied with Egypt (Xen. *Ages.* 2.28; Plut. *Ages.* 36.3; Diod. 15.92.2), and had expected total command of the Egyptian forces, Djedhor relegated him to leading the Greek mercenaries, and ceded command of his navy to Chabrias (Xen. *Ages.* 2.28-30; Plut. *Ages.* 37.1-2).[322] But perhaps the most interesting indication of the strength of the relationship is what happened after his father, Nakhtnebef, died. To finance the vast mercenary force – 10,000 infantrymen and 200 triremes[323] – imported from Greece, Djedhor levied new taxes and expropriated land and goods from the temple treasuries ([Arist.] *Oik.* 2.22.5; Polyaen. 3.11.5), undermining the centuries-old settlement between Pharaoh and his priesthood. Oblivious to the discontent caused, Djedhor disappeared to prosecute the war in the Levant, leaving his brother Tjahapimu behind as regent.[324] Tjahapimu convinced his son Nakhthorhebyt – a commander under Djedhor – to turn on his uncle (Diod. 15.92.3; *cf.* Plut. *Ages.* 37.3). In this tense moment, Djedhor's Greek commanders had to decide whom to support. Agesilaos sent back to Sparta for advice, and had the decision referred back to him in the field (Plut. *Ages*. 37.4-5): recognizing the febrile situation in Egypt, and the discontent directed at the Greek presence (*cf.* Xen. *Ages.* 2.31),[325] Agesilaos backed Nakhthorhebyt, emphasizing Sparta's relationship with Egypt

[321] Ruzicka (2012:142).
[322] Cartledge (1987:328), Ruzicka (2012:142).
[323] Ruzicka (2012:142-3).
[324] Tjahapimu has been identified as Djedhor's brother (de Meulenaere, 1963:92), or uncle (Engsheden, 2006:64-6).
[325] Ruzicka (2012:148).

rather than Djedhor personally (Plut. *Ages.* 37.4; *cf.* Xen. *Ages.* 2.31). Chabrias, however, backed his friend, even lobbying Agesilaos to reconsider (Plut. *Ages.* 37.4).[326]

Demetrios of Phaleron

When Demetrios of Phaleron, the noted philosopher who governed Athens under the Macedonian king Kassander,[327] was expelled from Athens following its conquest by Demetrios Poliorketes, he went first to Thebes, then – following Kassander's death – to Egypt (Plut. *De exil.* 601f-2a). This was a sensible decision: Ptolemy I Soter was Demetrios Poliorketes' greatest rival, but remained at arms' length from the fighting in the Aegean.[328] Egypt was thus an attractive destination for Athenian exiles generally: the priest Timotheos had already joined Ptolemy's court (Plut. *dIO.* 362a), while Kallias of Sphettos (*cf. IG* II^3 1 911) fled there to escape Poliorketes' regime, and later, the brothers Chremonides and Glaukon were also exiled there (*cf. P.Cair.Zen.* II.59173; *Syll.*^{3} 462).[329] The number of Greeks in Egypt with the ethnic Ἀθηναῖος peaked in the second century BC;[330] in the following century, one Zoilos was honoured for his services to Athens generally and 'to those citizens arriving in Egypt' ([ἰδίαι τοῖς ἀφικν]ουμένοις τῶμ πολιτῶν ε[ἰς Αἴγυπτον]: *IG* II^3 1 1287.1-12), emphasizing the prominence of this expatriate population.[331]

Once in Egypt, historians emphasize Demetrios' relationship with the Pharaoh. Ptolemy expended considerable effort to attract men of learning, particularly Athenians,[332]

[326] Diodorus is much kinder to Agesilaos. In his narrative (15.93.2-6), Agesilaos rescues Djedhor's kingship from the usurper Nakhthorhebyt: *cf.* Xen. *Ages.* 2.31, Westlake (1986:271-2).
[327] On the regime of Demetrios, *cf.* Mossé (1973:102-8), Green (1990:36-51).
[328] Worthington (2016:83-4). On Egypt's natural defensive advantages, *cf.* Ruzicka (2012:14-16).
[329] Oliver (2007:91).
[330] Martin (1989).
[331] Oliver (2007:92).
[332] He unsuccessfully tried to lure Demetrios' teacher Theophrastos from the Lykeion (DL 5.37; *cf.* Worthington, 2016:140). Theophrastos had been taught by Aristotle, tutor of Alexander, with whom Ptolemy wished to be associated (Worthington, 2016:141).

to enrich Alexandria's cultural and intellectual life.[333] Demetrios, educated at the Lykeion under Theophrastos (Strab. 9.1.20; DL 5.36), immediately achieved prominence in Ptolemy's court. They supposedly become close personal friends (Plut. *De exil.* 602a), though he was overlooked in favour of Zenotodos of Ephesos as the first 'chief librarian' at the Mouseion which he apparently inspired or founded ([Aristeas.] 9-12).[334] Nevertheless, Ptolemy relied on Demetrios' advice frequently, including on reforming Egypt's laws to recognize the new settlement between conqueror and native (Ael. *Var.Hist.* 3.17), and even on his succession (DL. 5.78). Demetrios' interest in Egypt may have predated his exile. Pausiades, the priest of Ammon honoured in *IG* II^2 410.19-22 (§3.3.3), also came from Phaleron, 5km southeast of Piraeus. The cult of Ammon appears to have been organized locally, with priest elected from among a small group of *orgeones* rather than Athens-wide.[335] The decree itself dates from *c.*330BC, when Demetrios was in his twenties:[336] given the small size of Phaleron, Demetrios probably knew Pausiades personally,[337] who was probably not the only incumbent from Phaleron in Demetrios' lifetime. Demetrios' upbringing in Phaleron, therefore, probably exposed him to several Egyptians and Egypt-focussed individuals.

3.5 | Conclusion

These four examples lead us to two important conclusions. The first is that well-connected Athenians travelled to Egypt throughout their shared history for education,

[333] Worthington (2016:139-44).
[334] *cf.* Worthington (2016:142). Note, however, that the only ancient account of the library's foundation is the problematic *Letter of Aristeas*; indeed, it might have been founded under Ptolemy II Philadelphos (*cf.* Bagnall, 2002), after Demetrios was exiled for supporting the wrong claimant following Soter's death (DL 5.78; *cf.* Bagnall, 2002:348).
[335] Lambert (2010:164), based on *IG* II^2 1282, which attests to a religious association.
[336] Dorandi (1999:49-50).
[337] There were 186 demes in Classical Athens (Traill, 1975:76). Given a fourth century population of 100,000 citizens, with a total of 200,000 people including slaves and metics (following Moreno, 2007a:29-30), that gives an average of around 500 citizens and 1,000 total population per deme.

tourism, military service or refuge; it is reasonable to infer that these individuals – and others about whose Egyptian connections we know little (e.g., Plato, Diod. 1.96.2; Cic. *Resp.* 1.10.16) – to some extent represented Egyptian interests in the *boule* (§3.2). Thus, either Lykourgos III or IV's proposal of a grant of *ateleia*, or Chabrias' decision to involve himself in Egypt, even the unnamed advocates of Athenian intervention on behalf of Irethor and Amenirdsu, demonstrate a persistent interest undermining the idea that Egypt was considered unattractive, compared to Thrace or the Pontos, to adventurous and enterprising Athenians.[338] This activity intensified during the fourth century, mirrored by the more enthusiastic adoption of Egyptian cults in Piraeus, as well as the retrospective establishment of the Saïtic colonization myth. But merely identifying the institutional and individual networks that have formed the backbone of this chapter, and to realize that they become denser in the fourth century – exactly when Atheno-Egyptian grain trade expanded – is insufficient unless we can identify how such networks enabled closer economic ties.

The networks we have identified primarily offered protection to merchants operating between Athens and Egypt: sanctuaries littering trade routes offered safe havens in poor conditions, membership of specific cults afforded traders with ready-made groups of associates in foreign ports, *xenia* and interpersonal relations with elite Athenians gave Egyptian merchants political agency in Athens well beyond their juridical status. Secondly, these networks reduced informational asymmetries (e.g., about sailing conditions, the quality of the Egyptian harvest, or the receptiveness of the Athenian market to imports) and reduced the cultural asymmetries between Greek and barbarian. Finally, as our next chapter demonstrates, networks prevented miscalculations as to the economic or social value that members placed on goods, services and reputation.

[338] Sears (2011:40).

CHAPTER 4
Value and Values: Morality, Coinage and the Psychology of Atheno-Egyptian Trade

A fragment of Archippos (fr. 23 K.-A.) introduces the metic Hermaios, a nefarious Egyptian fishmonger. He stands accused, probably by the fish themselves,[1] of defrauding the *polis*: allegedly, he removed the distinctive rough skin (ῥίνη) of dogfish (γαλεός), so that honest Athenians were duped into buying the fillets as sea-bass (λάβραξ). While the crime is unproven, the disapproval is strongly-worded: Hermaios is 'polluted' (μιαρός), both physically, with the blood of gutted fish, and morally.[2] Archippos' audiences would have recognized this outrage. Hermaios committed two serious infractions: first, he dismissed the relationship between 'price' and 'value', and secondly, he misjudged the esteem of Athenians for seafood.[3] While in Hermaios' homeland river and Red Sea fish were mainstays of the local diet,[4] for Athenians, the Mediterranean's poverty made seafood a delicacy.[5] In Athens, it was joked, a politician could win over the people by reducing the price of sardines (Ar. *Eq.* 624-82),[6] while fishmongers every day 'steal away our entire property' (οὐχὶ δεκατεύουσι γὰρ τὰς οὐσίας ἐν ταῖς πόλεσι καθήμενοι, ὅλας δ' ἁφαιροῦνται καθ' ἑκάστην ἡμέραν: Alexis fr. 204.3-6 K.-A.; *cf.* fr. 76.7-8 K.-A.; Diphilos 32 K.-A.) with their high prices.[7]

[1] *cf.* Ar. *Av.* 1076-83, where the titular birds accuse the bird-seller: *cf.* Csapo (1994:40-1), Storey (2012:7).
[2] *cf.* LSJ *s.v.* μιαρός.
[3] On the Athenian 'passion' for fish, see Davidson (1997, esp. 3-20). The proverbial 'fish eater' (ὀψοφᾶγος) was the paradigmatic hedonist: Davidson (1997:20-2, 144-7), Bresson (2016a:185).
[4] Fish bones are abundant in Egyptian sites, especially Nile catfish (*B. docmak* and *B. bajad*) and Nile perch (*L. niloticus*): *cf.* Boessneck (1988:118-33); isotopic analyses of human remains, however, indicate that consumption of marine resources in Egypt may have been overestimated: Touzeau *et. al.* (2014).
[5] Davidson (1997:188), *cf.* Horden and Purcell (2000:191), Bresson (2016a:175).
[6] van Leeuwen (1900), Schaps (2004:123).
[7] On fish prices, *cf.* Gallant (1985:39-40), Schaps (1988), Davidson (1997:186-7), Bresson (2016a:177).

It was in the Athenian *agora*, among the fishmongers, that economic and social value collided. It was, from the earliest times, the place where disputes were adjudicated (Hom. *Il.* 18.497-508),[8] and assemblies convened (Apollodoros *FrGrHist.* 244 F113).[9] It was, importantly, where the Athenians displayed their laws,[10] and, by the fourth century, was home to the *Metrōon*, the state archive (§5.5.2).[11] It was a transformative place: under public scrutiny in the *agora*, politicians were evaluated,[12] *hetairai* became *pornai*,[13] and the accused were brought to justice.[14] From perhaps the sixth century BC,[15] the *agora* also became the locus of Athenian commerce. Retail, law, religion, and choragic competition were symbolically combined in the one location,[16] even after the Assembly and theatre vacated the *agora* itself,[17] merging social and economic exchanges in the Athenian imagination. Thus, Aristophanes imagined choragic performances being weighed against one another on commercial scales (Ar. *Ran.* 1368-70),[18] while for Euboulos (fr. 74 K.-A.), laws, summonses, witnesses and indictments could be bought together alongside the varied goods of the *agora*.[19] This intimate link between social, political and economic exchanges[20] was thereby embedded deep within the physical fabric of the city.

This collision of economy and society is central to the Primitivist-Substantivist view of the Ancient Economy. In such thinking, morality achieved precedence over profit. The elite, we are told, disdained trade[21] and 'banausic professions' (Xen. *Oik*. 4.2; Plat. *Resp.*

[8] Schaps (2004:111).
[9] Thompson and Wycherley (1972:19).
[10] Gagarin (2020:27).
[11] Thompson and Wycherley (1972:35-6), Sickinger (1999:114-22).
[12] von Reden (1995a:112-13).
[13] Davidson (1997:112).
[14] Thompson and Wycherley (1972:52-71), Wycherley (1978:91), Boegehold *et al.* (1995:91-8).
[15] Thompson and Wycherley (1972:19), Wycherley (1978:27), Schaps (2004:113), Camp (2010:15).
[16] Forsén (1993), von Reden (1995a:111).
[17] Thompson and Wycherley (1972:48), von Reden (1995a:111).
[18] von Reden (1995a:114), Wiles (2000:176-7), Rosen (2004:206).
[19] Wycherley (1978:91).
[20] von Reden (1995a:106).
[21] Hasebroek (1933:10, 16, 36), Polanyi (1957a:79). Hasebroek's (1933:10) assertion that the (elite) speaker of [Dem.] 33.4 gave up trading as soon as possible due to a disdain of trade is incorrect: the

415c; Arist. *Pol.* 1278a8)[22] in favour of land-ownership (Xen. *Oik.* 5.11),[23] leisure (Arist. *Nik.Eth.* 1177b), and status.[24] Profit (κέρδος), and those who sought it,[25] implied moral deficiency,[26] upsetting Aristotle's natural order by relegating the role of inherent value in price-setting (Arist. *Pol.* 1258a35; §4.1.2).[27] While the elite voices who best attest to these views are unrepresentative of society-at-large,[28] they remain our most comprehensive sources for Athenian values. And values matter, economically: while our next chapter deals with the state-sponsored solutions at which Athens and Egypt eventually arrived, state institutions comprise only part of the enforcement mechanisms which reduce the transaction costs of trade. Such interventions can be avoided altogether if the social values of the participants in a transaction are compatible.[29] We should not, therefore, consider morality incompatible with economic realities; the values held by transacting parties aid or confound exchanges in the same way as any non-tariff trade barrier, and, while it is impossible to ascribe a market rate for morality, we may nonetheless identify the costs and benefits of moral behaviour in economic exchanges, and determine the effect of compatible values on their success.[30] Incompatibility, and miscalculation of one's opponent's resolve to uphold their values, are among the primary causes of conflict,[31] and likely contributors to the failure of economic transactions. Resultantly, the conflation of the economic and moral remains common in modern discourse: consider Chamberlain's 'peace at almost any

speaker's concern was the danger (κίνδυνος) inherent in trading, and he made an asset of his trading experience throughout the speech. On the postulated difference between 'trade' and 'expeditions', *cf.* Mele (1979), Morris (1986:6-7), von Reden (1995a:59), *contra* Humphreys (1978:166-7).

[22] Austin and Vidal-Naquet (1977:11-13), Balme (1984:141).

[23] Michell (1940:38); *cf.* von Reden (1995a:5), Bissa (2009:12).

[24] Finley (1973); *cf.* Bissa (2009:4), Engen (2010:10).

[25] Campbell (1985:189), Möller (2007:370); Moreno (2007a:232-41) traces these connotations to Plato.

[26] Möller (2000:40).

[27] von Reden (1995a:59-61, 182-3), Schaps (2004:177-8). On the etymology of κέρδος and its cognate κερδᾰλέος (crafty, cunning) from PIE **ḱerd-* (cunning), *cf. EDG s.v.* κέρδος, *DELG s.v.* κέρδος, Cozzo (1988:13-15), von Reden (1995a:59-61), LSJ *s.v.* κέρδος and κερδᾰλέος.

[28] Finley himself had reservations about this (1985a:37-8, 52).

[29] Gössling (2003:127-9), Greif (2005), Karayiannis and Hatzis (2012:622), Chiotis (2015:188).

[30] Gössling (2003:121).

[31] Levy (1983:86, 89-90), Bueno de Mesquita (1985:157-76), Fearon (1995, esp. 381-2).

price',[32] the moral dubiousness of a 'cheap joke' (which might lead one to 'feel cheap')[33] or our chapter title 'Value and Values'.

Too little is known about the earliest Greek thought to properly assess Isokrates' claim that philosophy was derived from Egypt (11.22). The 'Grand Tour' to Egypt was an intellectual rite of passage among Greek thinkers[34] including Solon (*cf.* §3.4.3), Thales (Diog.Laert. 1.6), Pythagoras (Diog.Laert. 8.2), Herodotos and Plato (Plut. *Sol.* 2.4). But if, as sometimes postulated, the circumstances of the redistributive Mycenaean system implied a common inheritance between Greek and Near Eastern thought,[35] the divergence between the two must have been early. Little, if any, Egyptian philosophy survives in Greek thought;[36] even where parallels exist, as between Egyptian *mꜣʿt* and Greek δίκη, the comparison is superficial.[37] The resulting incompatibility of values had an unmeasurable, yet significant, prohibitive effect on the success of Pre-Hellenistic Graeco-Egyptian trade which, in a pattern repeated throughout this thesis, was only partially mitigated by the integration of Greeks into the Saïte Egyptian military, and the foundation of Naukratis and Herakleion-Thonis (§§5.3.1-2).

These social values extended, as Hermaios the fishmonger learned, into the world of price-formation, as well as informing the economically vital institutions of justice and contract. Value is an economic, social, even personal construct;[38] the various ways in which economic value,[39] and from it price, is constructed (§4.1.6), depend on the relative

[32] Grant-Duff (1938:201).
[33] On moral usages of 'cheap', *cf. OED s.v*. cheap.
[34] Lefkowitz (1998:251-3).
[35] Vernant (1982:9-11).
[36] Murray (1993:235-6), Trigger (1993:93).
[37] Tobin (1987).
[38] Kahneman and Tversky (1984:349).
[39] *cf.* Murakami (2016:58-61), Hayden (2018:9-39).

perspectives of both buyer and seller (what anthropologists call 'regimes of value').[40] In a barter, where free and equal participants exchange goods for which they have demand and which are different in kind,[41] subjective value comes to the fore. Both participants haggle, determined to effect the exchange at minimal cost to themselves. Whether an exchange is considered 'good value' depends on each participant's circumstances: if a farmer had a tough year, due to circumstances specific to his farm, the 'value' of his grain – i.e. the minimum exchange at which he would part with it – would be higher, regardless of the global circumstances of grain production.[42] Without money, there are no external measures against which the exchange could be equalized.[43] Conflicting notions of value, then, were preoccupations for ancient societies, resolved in the first instance through mitigation of informational asymmetries, and, failing that, arbitration (§5.5).

4.1 | Community, Compensation and Constructing Value

It is difficult to pinpoint what caused the apparent divergence between Greek and Egyptian values; proposing that it was the disappearance of redistributive palace economies in the Aegean[44] risks initiating a circular argument, since the relationship between economic and social values is bi-directional and self-reinforcing. Instead, we might consider the sizes of the communities involved. While Egypt's landscape served to unify its peoples through the common conduit of the Nile,[45] the diverse environments of

[40] von Reden (1995a:5, 9), Murakami (2016:60-1). For example, a religious icon bought by an art dealer, transmutes its value from sacred to the purely aesthetic (Humphrey and Hugh-Jones, 1992:1, 9).
[41] The definition of Humphrey and Hugh-Jones (1992:1).
[42] This response deals with the two 'regimes of value' through which the farmer views his grain: first, as a means of sustenance, and second as an output of his labour and a product in whose quality he is invested. For similar attitudes among Scottish sheep farmers, *cf.* Gray (1984:54-5).
[43] Humphrey and Hugh-Jones (1992:1).
[44] e.g., Austin and Vidal-Naquet (1977:36), Finley (1979:62, 64), Vernant (1982:9, 10-11); *cf.* Osborne (2009:46-7). On socio-cultural values as a product of 'modes of production', see Marx (1973:474), Godelier (1978:224).
[45] Butzer (1976, esp. 110-11). The Nile was not merely a highway; the manpower required to harness its productivity is often claimed to have instigated the unitary Egyptian state: Wittfogel (1938, 1957, 1971:560), *cf.* Wright (1978:51); though *cf.* Butzer (1976:109-10), Maisels (1990:204-5), Eyre (1999:33).

the Aegean encouraged more localized thinking. Greek communities were small, with eighth-century BC remains indicating populations of hundreds or thousands,[46] rather than the tens or hundreds of thousands found in the fifth and fourth centuries – or, indeed, the perhaps two million of Pharaonic Egypt (§1.2.4). It is to this atomized social organization, where the community loomed large, that this chapter traces the key social values that divided Greek from Egyptian,[47] and precipitated the greatest revolution in the construction of economic value: the invention of coinage (§4.2).

4.1.1 | *Subjective Value and the Community: the Worth of a Man in Homer*

The *Iliad*, the earliest example of Greek literature, is primarily concerned with the tension between regimes of value,[48] and asks a fundamental economic question: what is the worth of human life (*cf.* §4.2.2)?[49] The poem centres on one event: during a raid, Achilles, self-proclaimed 'best of the Achaeans' (ὅ τ᾽ ἄριστον Ἀχαιῶν: Hom. *Il.* 1.412), kidnapped 'beautiful-cheeked Briseïs' (Βρισηΐς καλλιπάρῃος: 24.676); when Agamemnon demanded Briseïs for himself (1.172-87), having returned Chryseïs[50] to appease Apollo and alleviate the plague he wrought on the Greeks (1.304-17; *cf.* 93-100), Achilles withdrew from the fighting and refused the gifts offered in recompense (9.387). The *Iliad*, then, is the story of Achilles' anger; but this was not ordinary anger (ὀργή), but rather μῆνις, hard-to-define godlike wrath,[51] which 'brought the Achaeans countless agonies' (ἠ μυρί᾽ Ἀχαιοῖς ἄλγε᾽ ἔθηκε: 1.2). Achilles' anger is unbound, with broad consequences.[52] As

[46] Snodgrass (1971:368), Finley (1979:51), Murray (1993:64-5), Osborne (2009:66-75).
[47] On 'city-state systems' and 'territorial states' as analytical categories, *cf.* Maisels (1990, esp. 11-12), Trigger (1993:8-9),
[48] von Reden (1995a:21), Seaford (2004:38).
[49] Zelizer (2011).
[50] Perhaps significantly, meaning "the golden one" (Woodhouse, 1910, *s.v.* Chryseis), no doubt in reference to Apollo, but also perhaps signifying her value.
[51] *cf.* LSJ *s.v.* μῆνις, giving the definition 'wrath […] freq. of the gods' as well as 'revengeful temper'.
[52] Rynearson (2013:15).

Athena reminds Ares (15.135-41), μῆνις (in this case, of Zeus) indiscriminately affects one's entire community.[53]

From Homer's perspective, Achilles was indeed the greatest of men:[54] neither Diomedes (5.103, 839), Agamemnon (11.251-2), nor Patroklos could replace him;[55] Ajax claimed to be greatest (ἄριστος), but only in Achilles' absence (2.768-9; *cf.* 17.276-80);[56] even Hektor was overcome by the 'far greater' (μέγ᾽ ἀμείνων) Achilles (22.158-9).[57] Achilles' greatness was deeply wrought in his physical appearance; 'he was huge and handsome, for he seemed like the gods' (ὅσσος ἔην οἷός τε: θεοῖσι γὰρ ἄντα ἐώκει: 24.630)[58] Not only Homer, but the gods themselves, had ordained him best. This is the source of Achilles' anger. He (unsurprisingly) values his own talents (1.161-8) and life (9.400-5) highly; this valuation does not tally with the share of plunder he receives ordinarily (1.163-4),[59] and now Agamemnon, entitled by rank to a greater share (1.277-9), has taken even that away, subverting the reciprocity between the hero and his community.[60]

For Achilles, then, shares of plunder should compensate skill or success, rather than status.[61] The aggregate of a hero's share of gifts is his τιμή (honour),[62] which proleptically[63] anticipates the hero's death in service to his community.[64] His mortal

[53] Muellner (1996:7).
[54] Nagy (1979:2); the structure of the *Iliad* culminates with Achilles *aristeia*: Goldhill (1991:72).
[55] Rynearson (2013:14).
[56] Nagy (1979:27), Ahrensdorf (2014:73).
[57] Ahrensdorf (2014:73).
[58] Rynearson (2013:13).
[59] The mismatch between self- and community evaluation parallels the 'ἀρετή-standards' which defined Homeric society: Scott (1981:1), Holway (1989:273).
[60] Redfield (1975:103), Wilson (2002:95), Seaford (2004:37), Holmes (2007:52), Rynearson (2013:13).
[61] Similarly, Sarpedon justified his prosperity through excellence in battle: Hom. *Il.* 12.310-28; *cf.* Redfield (1975:100-3), Lynn-George (1988:155-7), von Reden (1995a:63).
[62] Redfield (1975), *cf.* von Reden (1995a:14, 39 n.36). On defining honour, *cf.* Athanassakis (1992:156).
[63] On 'prolepsis' in Athenian honours, *cf.* Deene (2012:172-3).
[64] Redfield (1975:100), Seaford (2004:38). Generally, on compensating the loss of productive members of a household, *cf.* van Gennep (1960:119).

reward is paralleled by the κλέος (glory) earned after death,[65] with the greatest allotment reserved for those, like Achilles, whose 'share' (αἶσα)[66] of life is less (1.416).[67] The material manifestation of the hero's τιμή became blood-money (ποινή) paid by the community to compensate for his loss,[68] depicted through the metaphor of Ares as a moneychanger (χρυσαμοιβὸς), weighing the bodies of the war-dead against the grief suffered by their households (Aischyl. *Ag.* 438-48).[69] To refuse τιμή was, argued Ajax, tantamount to refusing the blood-money offered in amends by a murderer (Hom. *Il.* 9.632-6; *cf. Od.* 23.118-22),[70] the very scenario shown in the pivotal scene on Achilles' shield (*Il.* 18.497-508). On the boss of Achilles' shield, a dispute over refused blood-money was being adjudicated; but a far greater reward, two talents of gold, awaited the elder whose judgement was most satisfactory.[71] Achilles' refusal to accept the 'ample'[72] restitution Agamemnon offered[73] reflects his changing subjective valuation of the situation:[74] Agamemnon must now compensate not just for the girl, but also the damage to Achilles' honour.[75] Yet, as in the deliberations on Achilles' shield, it was the community (the λαοί Ἀχαιῶν),[76] represented by its elders (γέροντες), that determined just τιμή,[77] rather than Achilles' subjective valuation.

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[65] von Reden (1995a:18-19).
[66] LSJ *s.v.* αἶσα. The word also refers to a portion in a common meal (e.g., *Inscr.Cypr.* 148, *IG* V.2 40).
[67] Nagy (2007:67-8) presents the story of Achilles as a choice between κλέος and νόστος ('homecoming'). *cf.* Nagy (2013:26-7); *cf.* von Reden (1995a:21).
[68] Sinos (1980:51). Another aspect of this composition, heroization, ensured that the posthumous rites became the responsibility of the community rather than just the family: Currie (2005:5).
[69] Rose (1957), von Reden (1995a:158), Seaford (2004:158). Compare the weighing of souls: Hom. *Il.* 22.208-13; *cf.* BM B639, Seidenberg and Casey (1980:192).
[70] von Reden (1995a:19).
[71] Murray (1993:59-60).
[72] A 'princely atonement' in Murray's (1907:213) view.
[73] Bowra (1930:16-19), Lloyd-Jones (1983:17), Wilson (2002:3-4); Achilles' refusal is sometimes taken as a wholesale rejection of materialism: Whitman (1958), Sale (1963:86). Alden (2001:257) sees no contradiction in Achilles' actions.
[74] *cf.* Nagy (1979:184), Lynn-George (1988:154), von Reden (1995a:20), Seaford (2004:36).
[75] Mills (2002:59).
[76] Achilles recognized the community's role in assigning honour: 'it is not fitting for the people to call back things once given' (λαοὺς δ' οὐκ ἐπέοικε παλίλλογα ταῦτ ἐπαγείρειν: Hom. *Il.* 1.126). *cf.* Haubold (2000:52).
[77] On Iliadic heroes as community representatives, *cf.* Hom. *Il.* 2.488-9, where, before listing the heroes, the poet admits 'but I could not relate or name the multitude, not if I had ten tongues, nor ten mouths' (πληθὺν δ᾽ οὐκ ἂν ἐγὼ μυθήσομαι οὐδ᾽ ὀνομήνω, οὐδ᾽ εἴ μοι δέκα μὲν γλῶσσαι, δέκα δὲ στόματ᾽ εἶεν);

The subversion of these linked concepts of τῑμή and ποινή,[78] which we can define as 'compensation', drives the *Iliad*'s narrative.[79] First, Agamemnon refuses compensation for Chryseïs (1.8-32), and then takes another man's τιμή in the person of Briseïs (1.172-87); Achilles retaliates, refusing Agamemnon's offers of compensation (9.307-429), and then exacts compensation for the life of his beloved Patroklos through the life of Hektor (18.93, 19.208).[80] The cycle is only ended when Priam offers a ransom for Hektor's body (24.576-9), resolving the sequence of polluted exchanges.[81] The *Iliad* plays out the tension between subjective and objective value that was resolved, in the historical Greek *polis*, by giving the community responsibility for value-assessment – a responsibility which reached its logical extreme with the invention of coinage (§4.2). Resultantly, the word found its way into the later language of Greek exchange:[82] τιμή came to mean 'worth, value, price' or a 'valuation or estimate' (as per Plat. *Leg.* 744e, Arist. *Rhet.* 1391a1).[83]

4.1.2 | *Purchasing Honour and Redistributing Sacrifices*

The *Iliad*, then, operates an 'economy of pain'[84] and glory, rooted in the concept of restorative justice. Τιμή and κλέος compensated for a life cut short[85] in the form of material goods while alive, and of poetry and heroic rites after death (κλέος ἄφθιτον).[86] In the historical Archaic Greek *polis*, τιμή was easier to attain. A man's worth was still measured

cf. Finley (1979:51). For Agamemnon as representative of the Achaeans, *cf.* Haubold (2000:54-5), Holmes (2007:53).
[78] Cairns (2011:87). The two derive from the PIE root **k^{w}ei-* via **k^{w}oi-neh* (punishment, vengeance) and **k^{w}eh-i-* (observe, honour): *EDG s.v.* ποινή and τῑμή.
[79] *cf.* Mills (2002:83).
[80] The death of Patroklos demands a life, even Achilles' own: *cf.* Nagy (1979:185).
[81] Lynn-George (1988:170-4).
[82] von Reden (1995a:157). Wilson (2002:20-2), Holmes (2007:51).
[83] *cf.* LSJ *s.v.* τῑμή.
[84] The phrasing of Holmes (2007).
[85] Currie (2005:4).
[86] Nagy (1979:174-8, 2003:56-8, 2013:86-7).

competitively, in full view of the community and judged by its representatives,[87] but the invention of hoplite warfare made individualism on the battlefield more dangerous than useful,[88] elevating communal values at the expense of aristocratic.[89] Instead, the elite scratched their agonistic itch in athletic, choragic and poetic competition:[90] the fatherly advice given to heroes, to 'always be the best, and superior to others' (αἰὲν ἀριστεύειν καὶ ὑπείροχον ἔμμεναι ἄλλων: 6.208, 11.784) remained the aristocratic creed,[91] especially significant for the new brand of Greek tyrants (§5.1.1).[92]

But ἀρετή was pointless unless publicly expressed; in a remarkable shift, honour and fame became commoditized through poetry. A whole genre of chorally-performed epinician poetry evolved celebrating the aristocratic victors of athletic contests.[93] Athletic victory, like martial prowess, brought honour to the community, as well as the individual; through epinician celebrations, that honour was magnified.[94] The professional[95] travelling poet became an essential accessory to athletic victory;[96] no longer constrained to recalling the mythic past, the poet inherited some of the Muses' authority,[97] transforming poetic composition into a marketable skill. Pindar, epinician *extraordinaire*, nostalgically remembers when the love of a beautiful boy was sufficient to inspire poetry, 'for the Muse was not yet a profit-lover, nor did she work for hire' (ἀ Μοῖσα γὰρ οὐ φιλοκερδής πω τότ'

[87] Note that the Greek for competition, ἀγών, derives from ἄγω, in the sense of 'bring together', and linked to ἀγείρω ('gather'), hence ἀγορά ('assembly'): Nagy (1994:136-7).
[88] *cf.* Crowley (2012:9, 125). This compares with the ethos of the Athenian Navy, where the performance on and between triremes was aided by 'co-operative competition': Potts (2011).
[89] Murray (1993:124-36, 202), Osborne (2009:164-5).
[90] Murray (1993:202-7).
[91] Rose (1974:154-5), Kurke (1991:4).
[92] McGlew (1993:35-6).
[93] Kurke (1991:3). Epinician poetry was re-performed in the context of the *symposion*: Morrison (2012:111-15). On crowns, statues and other symbols of κῦδος, *cf.* Kurke (1993).
[94] *cf.* Goldhill (1991:130).
[95] *cf.* Nagy (1989:135).
[96] Nagy (1994:340-1).
[97] Whereas the Homeric narrator relies on the Muses to relate events (Morrison, 2007:73, *contra* Bowie, 1993:13-14), the epinicians depict themselves as familiar, if not equal, with the Muses: Morrison (2007:84-5).

ἦν οὐδ᾽ ἐργάτις: Pind. *Isth.* 2.10; *cf. Pyth.* 11.41-2); but it was he and his patrons,[98] not the Muses, who profited from his words.[99] Between poet and patron flowed a self-reinforcing cycle of τιμή, φίλος and material wealth;[100] much like the Homeric hero gathered τιμή, Pindar's praise formed a 'treasure-house of hymns' (ὕμνων θησαυρὸς: *Pyth.* 6.7),[101] enriching the poet (*cf. Pyth.* 1.90, *Isth.* 1.67-9), providing physical evidence of his skill, rendering his ἐπινίκια more desirable in the process.

Pindar represented a tradition which esteemed honourable spending – on renown, one's community, and the gods (e.g., *Ol.* 2.1-8, 93-100, *Pyth.* 7.1-9; Bakchyl. 3.10-17).[102] In this context comes the peculiarly Greek notion of valuating sacrifices. When economic value is expressed in Homer, it is done through cattle (Hom. *Il.* 2.459, 6.234-6, 21.79, 23.702-5, 885, *Od.* 1.430-1, 22.56-8; *cf. h.Merc.* 436-8).[103] Greek sacrifice was reciprocal gift-giving *par excellence*,[104] the human end of a transactional relationship with the divine, with cattle the most prestigious animal sacrifice.[105] The commonest form of Greek sacrifice, θυσία, involved stripping the carcass, wrapping the femora, sacrum and tailbones in fat, and burning them (alongside the internal organs) on a pyre.[106] The rest of the animal was

[98] *cf.* the wealth *poleis* bestowed on victorious athletes: Hornblower (2004:3-4. 256).
[99] Pindar's meaning is debated (*cf.* Woodbury, 1968): some presume he was unpaid, at least in this instance, and here attacks the 'mercenary' poet Simonides (Wilamowitz-Moellendorff, 1922:311-12); others that he was hinting at an unpaid fee (Bury, 1892:250), complaining about the cost of choruses (F. Cairns, 2011), or even encouraging his employer, Thrasyboulos, to become a poet himself (inferred from *Pyth.* 6.48-9) to boost his failing resources (Norwood, 1945:155-6). *cf.* the debate over whether Pindar was paid for *Pyth.* 6, also for Thrasyboulos: Athanassaki (2012:135). These interpretations poorly fit our conclusions; I prefer to reframe Pindar's discomfort about money as concern for his own aristocratic status (*cf.* Murray, 1993:205). Pindar was unlikely to admit he *needed* to earn from poetry, so shifts the blame to the profit-hungry Muses.
[100] Goldhill (1991:130).
[101] Pindar suggests that praise is worthier than a physical monument, since his mental treasure-house can better withstand the elements: Athanassaki (2012:136).
[102] von Reden (1995a:83).
[103] Giannisi (2004). Schaps (2004:77-8), Seaford (2004:27, 34-5), Heiden (2008:96).
[104] Ullucci (2012:24-8); *cf.* Mikalson (2010:56-7), Parker (2011:132).
[105] Burkert (1985:55), Georgoudi (2010:99-100).
[106] Burkert (1985:56-7), Ekroth (2017:15, 19-20).

butchered and distributed among the assembled worshippers (κρεανομία);[107] equality (ἰσονομία) was the aim,[108] since sacrificial meat was usually boiled rather than roasted[109] so that the varying quality of cuts was evened out.[110] Nonetheless, certain cuts were reserved for particular members of the community. These honours, the γέρας[111] (distributed according to age and prestige) and ἱερώσυνα (distributed among the priesthood),[112] were governed by the 'sacred laws'.[113] Thereby, sacrificial distributions symbolically shared τιμή among the community,[114] cementing social hierarchies. Sacrifice became an acceptable forum to express wealth (§4.1.5), and through which cults recognized the contributions of their members.

4.1.3 | *Aristotelian Value*

From the earliest Greek literature, then, two key ideas pervade Greek economic thinking: compensatory value, and community involvement in settling price disputes. In short, it was up to buyers and, especially, sellers to negotiate prices (§4.1.6), with price essentially a function of the subjective value the seller placed on it. For Aristotle, the premier extant Greek economic thinker, there were two determinants of price (Arist. *Pol.* 1257a7-14): utility value (*cf. Pol.* 1256b30-1, 1257b19-20; *Rhet.* 1361a23-4) and exchange value (*Pol.* 1257a6-15).[115] The latter only occurs because a thing is useful (χρήσιμος), which for Aristotle meant contributing to 'the good life' (τὸ εὖ ζῆν: 1252b30, 1280b40; *cf.*

[107] Davidson (1997:291). This ritual apparently originated with Prometheus, who perverted man's relationship with the gods, ending mortal-divine community: Hes. *Theog.* 535-61; *cf.* Parker (2011:125), Ekroth (2017:15).
[108] Davidson (1997:291). On 'fairness' in Athenian economic ideology, *cf.* Bitros and Karayiannis (2008:217).
[109] Ekroth (2017:21).
[110] Davidson (2017:290-1).
[111] The term used by Achilles to refer to his plunder: Hom. *Il.* 1.352-5.
[112] Carbon (2017:152).
[113] Lupu (2005:100), Carbon and Pirenne-Delforge (2012:174).
[114] Nagy (1979:215), Clay (2003:107-8); *cf.* Stocking (2017:10).
[115] Meikle (1994:28-9), Schaps (2004:27), Pack (2010:4), Aspers and Beckert (2011:13), Hayden (2018:10).

Plat. *Resp.* 373a).[116] But Aristotelian utility is impermanent, dependant on an individual's needs (Arist. *Nik.Eth.* 1156a21-2);[117] similarly, the utility of an object declines as the quantity increases (*Pol.* 1323b7-10), since their purpose cannot be fulfilled beyond need.

Aristotle's determinations of value were conceived in moralistic as well as economic terms;[118] utility value – roughly equivalent to compensatory value – was an aspect of 'natural acquisition', the attempt to achieve the αὐτάρκεια so esteemed in Greek thought (Xen. *Por.* 1.1; Plat. *Leg.* 705b; Arist. *Pol.* 1253a1-2, 1256b4),[119] Barter, Aristotle thought, was acceptable because it matched utility to need at both ends of the bargain.[120] Both participants were consumers, and the utility of both commodities compensated each participant for the loss of another useful object. So long as an object's utility was limited according to need (1257b31), such trading counted as 'natural'. 'True wealth' (ὅ ἀληθινὸς πλοῦτος: 1256b30) consisted 'in using things rather than owning them' (ἐν τῷ χρῆσθαι μᾶλλον ἢ ἐν τῷ κεκτῆσθαι: *Rhet.* 1361a23-4, *cf. Pol.* 1256b30-1, 1257b19-20), or using them to create further wealth. The invention of coined money complicated this relationship (§4.2), since its only use was in exchange.

4.1.4 | *m3ʿt and Measurement: Balance, Justice and Value in Ancient Egypt*

Value- and price-formation in pre-Ptolemaic Egypt has suffered from scholarly neglect. The view that 'pre-monetary Egypt […] remains irreducibly alien'[121] persists; the enduring assumption among many classicists and Egyptologists[122] has been that, before

[116] *cf.* Gordon (1964:117), Hayden (2018:13-14).
[117] Gordon (1964:117).
[118] Meikle (1994:26).
[119] Polanyi (1957a:79), Austin (1994:558), Lewis (2009:373), Bresson (2016b:43-4).
[120] Meikle (1994:27).
[121] Seaford (2004:316).
[122] Exceptions include Silver (1985), Warburton (1997, 2000), Kemp (2006), Eyre (2015), Muhs (2016), Hayden (2018). Bleiberg (1996:12) accepts that private enterprise existed in times of governmental weakness.

the Ptolemies,[123] there was no 'price-forming market' in Egypt.[124] This picture of a purely redistributive command economy is taken too far,[125] since alongside the temples stood both smaller religious and private enterprises,[126] which were vital actors in the movement of goods and capital. While high-value foreign trade was closely connected with the palace,[127] it was in the riverside markets[128] that the majority of economic transactions occurred;[129] and while no Egyptian author took Aristotle's interest in moralistic price-formation,[130] the same intersection between economic and social values is identifiable.

Vocabulary and Value in Ancient Egypt

While the Greeks possessed a wealth of specific language describing trade and the personnel involved, the Egyptian vocabulary was more limiting. No words existed for 'buy' or 'sell', as in Greek (ὠνέομαι and πωλέω);[131] instead, Egyptians used the verbs *ini* ('to bring, to acquire') and *rdi* ('to give') followed by the formulaic phrase *ḥr r ỉsw ḳr r ḏbȝ* ('in exchange for').[132] The verb *rdi* had deep religious undertones, exemplified by the traditional offering-formula 'an offering which the King gives to…' (*ḥtp-di-nsw*);[133] but, as in Hellenic sacrifice, the formula is transactional. Following this incipit came the name of the god invoked, a list of offerings, and finally the name of a beneficiary.[134] The formula has

[123] Even studies of the Ptolemaic Era often ignore the Demotic evidence: Hayden (2018:4).
[124] e.g., Janssen (1975:560-2; 1981:66-7), Bleiberg (1996), Seaford (2004:332).
[125] Warburton (2000:65), Smith (2003:65), Kemp (2006:302-3).
[126] Kemp (2006:305), Eyre (2010:295), Muhs (2016:10-11).
[127] Lloyd (1983:329), Trigger (1993:64), Bleiberg (1996:24), Eyre (2010:296). This may not have constituted a formal monopoly: VerSteeg (2002:188-9).
[128] Eyre (1998; 2010:295-6), Muhs (2016:127-8), Wong (2017). One Egyptian word for market, *mry.t*, means literally 'riverside, quay, harbour' (Römer, 1992:259). Pictorial representations indicate that markets primarily dealt in goods beyond the means of the local peasantry: James (1984:265-7), Livingstone-Thomas (2011:554).
[129] Though *cf.* Morkot (2005:184) who argues for a marketless Egypt.
[130] Warburton (1997:26), Manning (2018:194). On individual-level economic thinking in Egypt, *cf.* Kemp (2006:306).
[131] Smith (2003:65).
[132] Peet (1932:124), Hayes (1973:390), Römer (1992:261-2), Bleiberg (1995:1376-7; 1996:23), Seaford (2004:331).
[133] Allen (2014:373).
[134] Franke (2003), Allen (2014:373-4).

two notable features. First, Pharaoh's role as a symbolic intermediary (§5.1.2):[135] this formula most frequently appears on private dedications or funerary furniture,[136] so the King's involvement was not expected. Instead, the beneficiary claimed the national temple-offerings, carried out on Pharaoh's behalf,[137] as his own so that, even if the requisite ancestral offerings ceased, his spirit was catered for in perpetuity. The second notable feature is the complexity of the transaction. The sequence of events implied is that Pharaoh makes offerings to the named god, who in turn magically redirects these offerings (*di=f prt-ḫrw*, 'that he may give') to the soul (*kꜣ*) of the deceased.[138] The 'offering-which-the-King-gives' is unspecified, but the sustenance returned to the *kꜣ* is enumerated thoroughly.[139] This was no simple consumer-to-consumer barter, as esteemed by Aristotle. Instead, the gods profited from the vast temple contributions of Pharaoh, provided to 'sustain' them,[140] and in return benefitted the King's temporal realm, and redistributed their surpluses among the deceased.

Despite lacking words for 'buy' and 'sell' in the modern sense, the Egyptians nonetheless differentiated participants in a transaction. From the earliest artistic depictions of markets, there is a detectable difference between the 'suppliers' sat before their produce and the 'customers', who usually carry a bag over their shoulders,[141] sometimes with captions recording their haggling.[142] Later, these positions were crystallized in language: *mḫr*, 'buyer', and *mkri*, 'seller', borrowed from Semitic[143] (*cf.*

[135] Wilkinson (2003:54-6), Okon (2012:94), Simmance (2017:4-5).
[136] Examples from our period include Oxford AN1895.153, 155-6, Liverpool 53.72d (private coffins), Cairo JE41332, Louvre IM2620, Norwich 1921.37.4, 1921.37.22 (stelae).
[137] There was only very limited public involvement in Egyptian temple ritual: Spalinger (1998:241-2).
[138] Leprohon (1990:163-4), Franke (2003:40-1).
[139] One early example lists 92 offerings, specifying their quality: Detroit 71.292.B, Fischer (1972:69-73).
[140] Assmann (2001:4-5), Quirke (2014:97).
[141] Römer (1992:262). 'Supplier' and 'customer' inexactly translates his *Anbieter* and *Nachfrager*. Differentiation also occurred in costume and commodities carried: Hodjash and Berlev (1980:45-6), Livingstone-Thomas (2011:562), Rahmstorf (2018:24).
[142] Hodjash and Berlev (1980:40): Seller: 'You will like them, these [sandals] are good!', Buyer: 'Take a measure of barley for them.' *cf.* Erman (1971:494-6).
[143] Gardiner (1947:95), Hoch (1994:150-1).

Akkadian *maḫīru*, Hebrew מָחִיד). The Egyptians also had specific vocabulary describing 'merchants' (*šwty*),[144] who engaged in trade (*šwy, swn.t*). Usually in state employ,[145] *šwty.w* seem to have focused on foreign trade; in the *Onomasticon* of Amenope, (*On.Am.* G3.11-12.210) *šwty* is listed thematically alongside sailing vocabulary,[146] while *šwty.w* could simultaneously captain a ship (*P.Turin* vso. 1.7-9),[147] and if you needed a merchant 'you should look for him to see if he has already returned from Syria' (*mtw.k-wḫ3-p3-šwty mtw.k-ptr in-sw-ywyw ḥr-ḫ3rw*: *P.Bologna* 1094.5.5-6). Some *šwty.w* were foreigners,[148] and we must imagine that is how Greek traders were categorized. We also hear of *šwty.w* as petty traders within Egypt, travelling the Nile and pitching up at temporary markets (*P.Lansing.* 4, 8-10),[149] indicating something more systematic than hawking extras picked up abroad on an 'official' trade mission.[150] The word's etymology is uncertain, but there are probable links to *šwy* 'trade, emptying' and *š3w* 'worth, value', and potentially from the Sumerian *šu ti/šu.teğ* 'receive, oppose', with the commercial sense of 'be equivalent to',[151] indicating their important role in price-formation. Other terms may refer to merchants: *bṯy*, is sometimes translated as 'trader',[152] but this is uncertain,[153] while *sḫsḫty*, 'runner, courier' (*P.Sallier* II 7.6), may have more secure commercial connections.[154]

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[144] Translations vary: 'merchant' (Gardiner, 1947:4-5, Bleiberg, 1996:13-14; Eyre, 2010:296), '*Kaufmann*' ('dealer': Römer, 1992), or 'broker' (Vernus, 2003:48). von Reden (2007:240-1) links them to Ptolemaic 'οἱ παρά τινος' agents. Erman (1971:494, n.4) sees no link between Coptic ϣωτ (merchant) and *šwty*.

[145] While some scholars claim that *šwty* were 'always' state employees (Kelder, 2009:345, n.54), at least some engaged in private enterprise (e.g., slave trading [*P.Cairo* JE65739], or reselling stolen goods [*P.BM* 10068 rto, 4.1-21]) regardless of their 'employer' (Römer, 1992:179-81). Some *šwty* in *P.BM* 10068 were apparently under the authority (*r-ḫt*) of (or even slaves, *ḥm*, of) private individuals, in one case another *šwty* (rto. 4.11; *cf.* Römer, 1992:283). Bleiberg (1996:22) insists that *šwty* only traded illicitly.

[146] Gardiner (1947:94-5), Hoch (1994:150-1).

[147] Römer (1992:281); admittedly, this particular *šwty* was acting illegally, embezzling grain from the Temple of Khnum, but one could not pilot a ship without experience.

[148] Römer (1992:278-9).

[149] Bleiberg (1996:13-14), Eyre (2010:296). *cf.* Blackman and Peet (1925:288), Erman and Lange (1925:22), Lichtheim (1976a:170). The papyrus is problematic: a school text replete with errors, exalting the scribal profession at the expense of others (*cf.* Erman and Lange, 1925:5-9; Lichtheim, 1976a:168).

[150] Silver (1985:135), Kemp (2006:332-3).

[151] Römer (1992:270), Warburton (2019:147, n.3).

[152] Silver (1985:135-6), and, with less certainty, Erman (1927:69, n.3).

[153] Brunner (1944:31), Bleiberg (1996:15-16). It has variously been translated as 'reed-gatherer' (Helck, 1970), or 'arrow-maker' (Simpson *et al.*, 2003:433). The *Wörterbuch* (*s.v. bṯy*) is noncommittal: 'a profession, and a title preceding names, documented in the New Kingdom'.

[154] Helck (1970), Simpson *et al.* (2003:434).

Finally, the word for 'exchange', *ḏbꜣ*, as in the formulaic phrase 'in exchange for' (*ḥr r ỉsw ḳr r ḏbꜣ*), fulfilled various lexical purposes.[155] Practical mathematical problems might describe 'a method to *substitute* (*ḏbꜣ*) beer with bread' (*tp ḏbꜣ ḥnḳ.t m tꜣ.w*: *Rhind Mathematical Papyrus* [=*P.BM* 10057-8], Problem 77);[156] or *ḏbꜣ* might be a divine reward (*P.Anastasi* I 3.2);[157] a commercial interaction (*P.Turin* 2008+2016 4.19); or a payment (*P.Gurob* vso. 1.4-18).[158] But in all of these, like the Greek τιμή, the overriding sense was compensation (as per *O.Berlin* 12630 rto. 3). For Egyptians, like Greeks, price (*swn.t*) represented a negotiated outcome compensating the seller for the loss of the use-value of the traded good.[159]

BALANCE AND MEASUREMENT

If one social value defined Egyptian life, it was *mꜣꜥt*, a nebulous concept[160] often translated as 'truth', 'order', or 'justice', but intimately related to *mḫy.t,* 'balance',[161] as opposed to *ỉzft* ('chaos', 'imbalance'). The concept is best expressed through the pivotal scene[162] of the *Book of the Dead*, the vignette accompanying Spell 125 (fig. 4.1). There, in a richly-decorated hall, beneath 42 assessors and in sight of Osiris, 'Lord of Judgement' (*nb-wpw*), the deceased's heart, considered the seat of intellect, memory and conscience, is weighed against the feather of Ma'at, the goddess emblematic of the concept.[163] To successfully pass the trial, the feather and heart should balance perfectly;[164] fail and the

[155] For an overview, *cf. DLE s.v. ḏbꜣ*.
[156] Imhausen (2014:181, n31).
[157] Translation of Gardiner (1911:7).
[158] *cf.* Gardiner (1948, № 16).
[159] Römer (1992:263).
[160] Or 'polysemic' and enjoying 'conceptual elasticity': Karenga (2004:5). *cf.* Cua (1978:138), Morenz (1984:16).
[161] *cf. DLE s.v. mꜣꜥt.*, *cf.* Karenga (2004:130), Lazaridis (2008:2), Ockinga (2013:252).
[162] Peck (2000:27), Taylor (2010:205-209).
[163] Stevenson (2015:78).
[164] Taylor (2010:209).

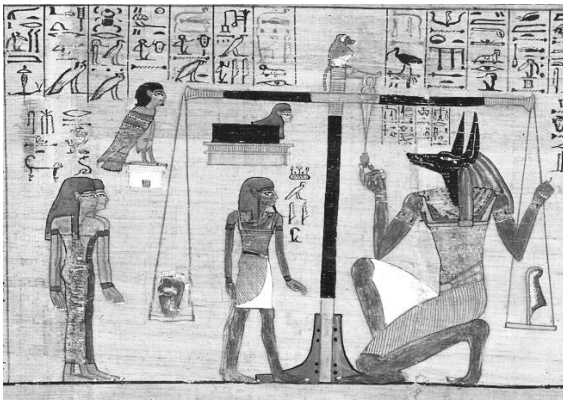


Fig. 4.1 | The Weighing of the Heart, from the *Book of the Dead* of Ani, *c.*1275BC (BM EA10470/3).



Fig. 4.2 | The Goldsmith's Weighman, from the Tomb of Nebamun and Ipuki, *c.*1390-49BC (TT181, facsimile Met.Mus. 30.4.103)

heart will be consumed by 'The Devourer' (*ʿm-mwt*), and the deceased will die a second, permanent, death.

The vignette's focus is the equal-arm balance, tended by Anubis, 'weigher of righteousness' (*ḥrd pȝ uṯʿ mȝʿt*: *P.BM* 10470/3 30B.16). The balance itself is of an ingenious design attested in the archaeological record (e.g., Sci.Mus. 1921-425/6, 1929-657): a plumb-bob is suspended from three lines;[165] only when the beam is exactly balanced are all three taught,[166] allowing the weighman to tell from feel alone whether the pans were balanced. The scene directly parallels the commercial sphere: in the tomb of Nebamun and Ipuki (TT181), an identical balance appears in a goldsmith's workshop.[167] In that image (fig. 4.2), a weighman balances ten gold rings against a weight shaped like a bull's head. Like Anubis, his hand feels for the tautness of the plumb-lines. The rings were known as *dbn*,[168] also the standard unit of weight, approximately 91.00g.[169] The weighman already knows that the rings *should* balance at 10*dbn* (910.00g). In the other scale-pan sits the bull's-head

[165] The examples cited have holes for the suspension of plumb-lines, which no longer survive.
[166] Cotterell and Kamminga (1990:85, with fig. 4.7); *cf.* Shaw (2015:158-9).
[167] Wilkinson (1983:36-7).
[168] Robens *et al*. (2014:50).
[169] Though extant archaeological examples also approximate fractions of *dbn*: e.g., Jerusalem 71.00438 (¼ *dbn*).

weight,[170] symbolizing the assay-house at the Memphite temple of Ptah,[171] which balances the rings, so also weighs 10*dbn*. Just as the bull's-head weight was an official standard, guaranteed by the priesthood, ensuring the quality of the gold, the feather of Ma'at was the universal standard of morality.[172] Unlike Greek morality, embedded within the community, Egyptian morality was guaranteed from without, a divine abstraction.[173] The integrity of the balance was imperative: a list of proverbs warns 'do not be deceitful with a scale' (*m-ir ḳrf mḫ3.t*) alongside the usual prohibitions against theft and lying (*P.Ashm.* 1984.77 vso. 2.6).[174] The resulting socio-religious importance of balances is underscored by their rich decoration– even when made from mundane materials (e.g., Cairo CG31489) – and the specially-decorated cases which protected them (e.g., Boston 01.7426).

4.1.5 | *Consumption, Display and Community*

Egyptian and Athenian exchange were both compensatory, concerned with equality between participants. But the derivation of value from, in the Greek case, temporal community, contrasting an Egyptian sense of extra-communal ordinance, fundamentally shaped attitudes to wealth and consumption. It is widely accepted that the visible disposal of wealth is a primary tool through which elites cement their place within social hierarchies.[175] In Egypt, wealth derived from proximity to Pharaoh (himself a god) or temple power structures:[176] tomb biographies enumerated in detail the (perhaps) exaggerated wealth of their owners, evidencing their piety and loyalty,[177] as well as providing a measure of their social status. The deceased are often given epithets

[170] Examples exist from the archaeological record: Met.Mus. 30.8.109, 68.139.2.
[171] *cf.* Porten (1968:67-8), Préaux (1978:281), Manning (2010:131, 134).
[172] Teeter (1997:83-4).
[173] On abstractions in Egyptian religion, *cf.* Montserrat (2000:37).
[174] Lazaridis (2007:27-8).
[175] Davidson (1997:230), Kemp (2006:308-9), Scheidel (2013:18-19). The theory originated with Veblen (1899).
[176] Bleiberg (1996:11).
[177] *cf.* Kemp (2006:275-6) on the 'reward ceremony', and its links to the temple infrastructure.

emphasizing their (properly acquired) wealth, describing their 'beautiful' (*nfr*), or 'abundant' (*ʿš3*), monuments (*mnw*), boats (*ḥʿww*) or clothing (*ḥbsw*),[178] alongside their official titles. The tomb itself was the climax of such consumption: since wealth was the reward for *m3ʿt*,[179] displaying it through a large well-appointed tomb may have aided the deceased's case for entering paradise. Alongside the commercial imagery of the Weighing of the Heart, we can again chart an overlap between economic and moral value.

Within the small, omnipresent *polis* community, however, it is hard to imagine an Athenian Marie Antoinette insisting '*qu'ils mangent de la brioche!*'[180] – despite attempts to present Athenian history as a 'class struggle'.[181] Conspicuous consumption, expressed through durable means, provoked suspicion in Athens. While Egypt's wealth was well-known (*cf.* Hom. *Il.* 4.406, 9.383), consumption and acquisitiveness were considered Lydian (Xenophanes fr. 3) or, especially, Persian (e.g., Hdt. 8.26.2-3) vices:[182] Attic vases depict Persian satraps enthroned, attended by richly-clad fan-bearing servants (e.g., Istanbul 7501, Stockholm V294),[183] while Aristophanes complained about Persian 'ambassadors, with their peacocks and pretensions' (πρέσβεσιν καὶ τοῖς ταὦσι τοῖς τ' ἁλαζονεύμασιν.: *Ach.* 62).[184] This does not mean that Athenians were immune from using wealth to enhance their prestige. Athenian elites competitively placed their wealth at the state's disposal (*cf.* Dem. 23.206-7), a procedure legitimated by the liturgical system (§4.2.3).[185] This was carefully managed, with individual wealth subordinated to state

[178] Doxey (1998:35).
[179] *cf. P.Insinger* 32.15: 'wealth is for *mʿ3t*, poverty for falsehood'; *cf.* Lichtheim (1983:153), Karenga (2004:131).
[180] Like all good quotes, this is misattributed: Lanser (2003:273-4).
[181] e.g., Wason (1973), de Ste Croix (1981).
[182] von Reden (1995a:98-9), Davidson (1997:283-4), Francis (1998:3-4).
[183] Miller (1997:201-2), Bridges (2014:133-4). Egyptian fans were status-symbols clad in gold and made from imported ebony and ivory: e.g., Cairo JE61999, JE62000, JE62001. The 'fan-bearer at the King's right hand' (*ṯʿ(.y)-ḫw ḥr wnmy n nsw*) was an important position in Pharaoh's household (Hartwig, 2010:164).
[184] Miller (1997:189).
[185] Christ (1990:150).

objectives. For example, prizes were awarded to the trierarch who equipped his crew first (Dem. 51.1),[186] not the trierarch who spent the most. The theatrical chorus, a collective, was financed by an individual, while actors, as individuals, were paid by the state.[187] Refusal to contribute liturgies was reprehensible,[188] with refuseniks publicly shamed in the lawcourts (e.g., [Lys.] 6.48; Dem. 42.21)[189] and epigraphically (Isai. 5.38, *IG* II^2 1581.1-2).[190] The leisure-time afforded by wealth was supposed to be spent in the Assembly,[191] and the *polis* extended this privilege to the poor through state pay (*cf.* Thuc. 2.37.1).[192]

Elite Athenians did, nonetheless, consume (or contribute) conspicuously. In rhetoric, an individual's standing could be bolstered using their liturgical record, the burden of which was balanced by the honour it conveyed.[193] This honour was physically expressed by the city, through crowns and inscriptions lauding λειτουργοί (e.g., *IG* II^3 1 1035),[194] assimilating them to athletic victors (§4.12). Athenian elite consumption was less concerned with the durable;[195] even Medias' lavish expenditure (Dem. 21.158) was nothing by contemporary Near Eastern standards.[196] Instead, Athenians relished the sensual and ephemeral – *symposia*, food, drink, courtesans – and, so long as such revelries remained private (unlike when the Herms were mutilated: Thuc. 6.28.1-2; Andok. 1.62),[197] and were

[186] Gabrielsen (1994:219-20), Cohen (1995:75).
[187] von Reden (1995a:147).
[188] *cf.* Liddel (2007:149-50).
[189] Ober (1989:215), Liddel (2007:150).
[190] Christ (1990:152), who notes, however, that compliance was more commonly recorded than avoidance.
[191] Ober (1989:192).
[192] Markle (1985), Sinclair (1988:117). On opening up political participation, *cf.* Osborne (2018:214-15).
[193] Whitehead (1977:81), Christ (1990:153-4).
[194] Christ (1990:152).
[195] Sympotic pottery offers an important exception: Bazant (1985:59), von Reden (1997:196).
[196] Davidson (1997:230-1).
[197] Osborne (1985b:64-7), Davidson (1997:268-9), Hornblower (2008:379). The Mutilations were compounded by the profanation of the Mysteries, also by drunken youths, but otherwise unconnected: Pelling (2000:30), Todd (2004:94), Hornblower (2008:371). The response was unprecedented, with immunity offered even to slave witnesses (Thuc. 6.27.2), and between fifty and one hundred men exiled (6.61.1).

enjoyed in moderation (*cf.* Aischin. 1.42; Plat. *Gorg.* 493a-4e; §4.2.3),[198] they were accepted, even eulogized, in poetic and philosophical discourse.[199]

4.1.6 | *Price-Formation in the Ancient World*

Value, we have seen, is multifaceted. Goods have not only exchange value, utility value (§4.1.3) and scarcity,[200] but also social, moral, cultural, religious, and personal value, dependent on the perspectives of both the buyer and seller.[201] Resultantly, prices are 'social facts',[202] and the traceable (though small) fluctuations in ancient prices resulted not only from supply and demand, but also from social and cultural circumstances.[203] Even today, extra-market concerns drive pricing decisions, especially when new products enter the market. Consider the fashionable training-shoe market, saturated with products competing in various price brackets.[204] The use-value of new trainers is limited: pairs not used for high-intensity athletic training might last a decade, and each consumer only really *needs* a single pair. Instead, manufacturers market their shoes as luxury items, at artificially high prices, creating an illusion of desirability and stimulating demand.[205] Economists frame price-formation in various ways, attempting to resolve a paradox of utility identified by Plato (*Euthyd.* 304b) and Adam Smith: why is water, virtually infinitely useful, less expensive than diamonds, whose utility is primarily aesthetic?[206] Smith's

[198] Dover (1974:125-6), Davidson (1997:238).
[199] Davidson (1997:238-9).
[200] Langholm (1979:42-6), Schaps (2004:29).
[201] *cf.* Hayden (2018:26).
[202] Durkheim (1893:411, 422-3), Beckert (2011:757-8). On '*faits sociaux*', *cf.* Durkheim (1895:5-19).
[203] *cf.* e.g., Menu (1997:259), Monson (2012b:193-8), Hayden (2018:62).
[204] Cain (2019).
[205] i.e., trainers display 'positive Price Elasticity'. For most consumables, as price increases, substitutes are preferred; for so-called Veblen Goods, like trainers, demand is correlated to the prestige that they generate (i.e., their purpose is conspicuous display), inverting usual laws of demand: Leibenstein (1950:202).
[206] Smith (1776:1.4.13). Their hardiness means diamonds now have numerous uses (USGS, 2020), not current for Adam Smith.

answer[207] lay in a thread of thinking linking Thomas Aquinas to Marxian economists, identifying value as an embodiment of the labour expended in production.[208] The Labour Theory of Value has come under persistent attack,[209] and the most prominent contemporary theory of price-formation inverts the relationship, asserting that value encourages increased labour.[210]

Marginalism explains the discrepancies between utility and value with reference to 'marginal utility', the extra ability of an object to satisfy consumer wants.[211] This resolves the excess value of diamonds over water: because, globally, there are so many fewer diamonds than litres of water, the marginal utility *per unit* is far greater. Marginalism, therefore, holds that utility decreases as quantity increases,[212] an observation pre-empted by Aristotle (*Pol.* 1323b).[213] Marginalism remains controversial since it returns to assumptions of unfailing rationality (§1.5),[214] but by treating prices as institutions, [215] it well explains the complexities of ancient price-formation. By rehabilitating the social component to price-formation, we can account for cultural influences on consumer choice,[216] making sense of 'innate wants' (satisfiable needs, e.g., food) and 'acquired wants' (socio-culturally influenced).[217] These 'acquired wants' differ according to social status,[218] revealing the plurality of consumer decisions.

[207] Smith (1776:1.5.1-2).
[208] Marx (1867:4; 1977:81), le Goff (1980:61), Hayden (2018:17); *cf.* Tawney (1926:48), Parry and Bloch (1989:3).
[209] e.g., von Böhm-Bawerk (1949:70-5), Steedman (1977:207), Bowles and Gintis (1981:5, 19), Roemer (1981:204), Carling (1984), Howey (1989:42). Most damaging is the number of exceptions. For example, hand-mined diamonds are priced equally with those found accidentally, while identical products might be produced by a machine in fewer man-hours than a craftsman.
[210] Whatley (1833:33).
[211] Kauder (1965:127-34), Whynes (1983:67-71).
[212] It was first formulated by Jevons (1871:62). *cf.* Menger (1871), Walras (1874, 1877). Diminishing utility is not without critics: *cf.* Kauder (1965:137-40).
[213] Hayden (2018:14).
[214] Bleiberg (1996:7).
[215] Tool (1991), Hodgson (1998:169-70), Hira and Hira (2000:270, 272-3).
[216] *cf.* Leibenstein (1950:196-9, 202-6), Velthius (2005:3).
[217] Witt (2001:23-6), Hayden (2018:24-5).
[218] Akerlof and Kranton (2010:13).

HAGGLING, BRANDING, SAMPLES AND TRUST: PRICE-FORMATION IN PRACTICE

Studies have repeatedly demonstrated the stability of prices throughout Antiquity,[219] even allowing for the complexities of comparison across space and time. Some scholars claim that this stability discounts the possibility of price-forming markets in the ancient world.[220] Yet, one of the few 'common-sense' economic observations which primitivists identify in the ancient evidence is a knowledge of 'supply-and-demand' economics (*cf.* Arist. *Nik.Eth.* 1133b).[221] We have noted (§1.5) that several ancient sources display knowledge of scarcity-driven price fluctuations: we need only recount Xenophon's description of the impact of supply on the livelihoods of coppersmiths, farmers, and miners (*Por.* 4.6).[222] Such fluctuations may well have been short-lived,[223] with sustained increases occurring only on a multi-decadal scale.[224] But this does not reflect the absence of markets, but rather the difficulty of disseminating information in antiquity. Decisions impacting agricultural markets must be taken a year in advance of the sale of produce,[225] and farmers were unable to predict the outcome of their harvest, or disseminate this information effectively.[226] During individual transactions in the *agora*, prices were determined through negotiation (framed in Athenian thought as conflict: Dem. 18.247),[227] usually on a case-by-case basis.[228] Here the seller is at an advantage, since they hold all the information about the product, while the buyer knows little (if anything).[229] Hermaios the fishmonger took

[219] Černý (1954:904-6) on New Kingdom Egypt, Hayden (2018) on Ptolemaic Egypt; *cf.* Schaps (2004:208).
[220] Finley (1985a:142, 178), *cf.* Garnsey (1999:32).
[221] Finley (1970:4; 1985a:135); *cf.* Lewis (2009:380). Problematically, Polanyi (1957a:68, 1957b:251, 257) considered 'supply-and-demand' driven decision-making characteristic of capitalist market economies. Generally, *cf.* Cohen (1992:3 n.2, 1993:197, n.1), Amemiya (2007:58), Bresson (2016a:434). On ancient exploitation of supply-and-demand dynamics for profit, *cf.* Bitros and Karayiannis (2008:214).
[222] Bresson (2016a:14-15), Harris and Lewis (2016:2).
[223] Finley (1985a:178), Engen (2010:93). Bissa (2009:4, 9-11).
[224] *cf.* Bissa (2009:11).
[225] Page (2000:245); *cf.* Venables (2006:740-1).
[226] *cf.* Michell (1940:228), Bissa (2009:11), Migeotte (2009:118).
[227] Hayden (2018:27), *cf.* Johnstone (2011:12-13).
[228] Johnstone (2011:14), Lawall (2016:256-7), Uchendu (1967:37).
[229] Samuelson (1984:995), Mishra *et al.* (1998:277), Lawall (2016:258); *cf.* Johnstone (2011:13-14).

advantage of this informational asymmetry:[230] his customers could not know until after the fact that his sea-bass was shark. Overcoming informational asymmetry is vital to the success of transactions,[231] and there were numerous potential mitigations. First, the seller can cultivate trust. In an Egyptian market scene referenced above (§4.1.4), a seller (*mkri*) assures his customer that he will like the sandals on offer;[232] if the customer concurs, a relationship of trust is established, and the buyer is more likely to return.[233] The whole relationship is performed publicly, and external witnesses (potential customers) who see both the public assurance of quality, and the (positive) return of the customer trust the seller by association. The seller thus earns a reputation, his 'brand'.

'Brands' operate as a heuristic (§1.5), enabling customers to circumvent complex decision-making by reducing informational asymmetry.[234] 'Brands' in this sense certainly existed in the ancient world. Regional specialisms were celebrated: Attic honey (Ar. *Pax.* 253-4),[235] Chian wine (Theopomp. *FrGrHist.* 115 F276; Athen. *Deip.* 29e, 32f, 33a-c; Plin. *HN.* 14.73; *cf.* Ar. *Ekkl.* 1139),[236] Lakonian cups (Ar. frag. 225 K.-A.), Naukratite garlands (Anakr. Fr. 434),[237] and Egyptian perfume (*cf.* Plin. *HN.* 13.26) packaged in distinctive blue-glass or faience bottles (e.g., Met.Mus. 86.1.90, 17.194.2279, 17.194.2281, Baltimore 48.2863).[238] We also find personal brands: Pistias, an armourer, had a reputation for quality that commanded high prices (Xen. *Mem.* 3.10.9-10), [239] while the various potters and pot-painters who signed their work (e.g., Nikosthenes: Bologna G9-PU197, Louvre

[230] The phrasing of Akerlof (1970). *cf.* Bresson (2016a:250-4).
[231] Samuelson (1984:996).
[232] Hodjash and Berlev (1980:40).
[233] Beckert (2011:762-3).
[234] Mandrik (1996), Erdem and Swait (1998:133-4), Grassl (1999:346).
[235] Bresson (2016a:130-1).
[236] Rotroff and Oakley (1992:47), Davidson (1997:192-3), Bresson (2016a:126-7).
[237] Syropoulos (2007:93).
[238] Brun (2000:278-9, 289), Syropoulos (2007:93); *cf.* the Egyptian *parfumier* Athenogenes (Hyp. 3.3; §2.4.2).
[239] Bitros and Karayiannis (2008:216).

F123;[240] Exekias: Munich 8729, Rome 50599; Andokides: Met.Mus. 63.11.6, Berlin F2159; Menon: Philadelphia MS5399)[241] doubtless intended to build an artistic reputation and increase the prices of their output.[242]

Informational asymmetry was also overcome through the use of samples (δείγματα), well-attested throughout antiquity (*cf.* Ar. *Av.* 1044-5).[243] Displaying a sample for testing, the seller increased the buyer's confidence in the product. A scene from Euripides' *Cyclops* provides an example: Odysseus insists on viewing the Cyclops' goods, declaring 'bring them out: daylight befits merchandise' (ἐκφέρετε: φῶς γὰρ ἐμπολήμασιν πρέπει: Eur. *Cycl.* 137). Offered wine in exchange, Silenos too insists on trying it first: 'a taste invites the purchase' (ᾗ γὰρ γεῦμα τὴν ὠνὴν καλεῖ: 150). Of course, the consumer must trust that the part represented the whole,[244] and unless the sample was randomized, this was not guaranteed. Examining samples in advance might require specialized knowledge: Xenophon devoted much of his advice about horsemanship to determining the quality of the animal pre-purchase (*cf.* Xen. *Per.Hipp.* 1.1).[245] Sampling also reduced transaction costs. The Deigma itself was a place (*cf.* Dem. 50.24; [Dem.] 35.29; Xen. *Hell.* 5.1.21), perhaps a building,[246] where samples were laid out.[247] Its location, in the *emporion* at Piraeus,[248] demonstrates the particular problem of informational asymmetry which persisted for foreign merchants, partly because they were probably unknown to the

[240] Nikosthenes was a prolific pot-signer, with 133 extant examples: Bresson and de Callataÿ (2013:22, n.10).
[241] *cf.* Beazley (1921), Robertson (1972), B. Cohen (1991).
[242] The distribution of signatures, even within a particular oeuvre, appears random (Immerwahr, 1984:341).
[243] Bresson (2016a:309).
[244] The use of samples as a rhetorical metaphor indicates that this relationship usually held: e.g., Plut. *Dem.* 23.4, *cf.* Bresson (2016a:309). On the subordination of the part to the whole in Aristotle, *cf.* Mayhew (1997).
[245] Johnstone (2011:17).
[246] Judeich (1905:394), Gofas (1982). Certainly, the Roman Deigma at Piraeus was a large-scale building project, costing some 50 talents: Dickenson (2017:253).
[247] Garland (1987:84, 154), Langridge-Noti (2015:176-7), Bresson (2016a:310).
[248] Garland (1987:83-5).

purchaser, and partly because of the quantities on sale. The display of samples, sometimes under temporary shelters, is also seen in Egyptian market scenes (§4.1.4), and their word *sit.y* (sample, verification),[249] a cognate of *sipt* (inspection),[250] suggests a similar process in Egyptian markets.

Finally, informational asymmetry can be overcome through advertising prices in advance. In an open market, without pre-determined prices, it is not only sellers who compete, but also buyers. Each market stall becomes essentially an auction, with buyers suffering from a multidirectional informational asymmetry: both information about the product and about what competing customers might pay for it is lacking.[251] Even if the price marked on a product remains open to haggling, it at least provides a guide to the seller's valuation,[252] narrowing the potential range of offers. By signalling their valuation, sellers allow for direct comparison between similar products. In the Athenian *agora*, where stalls were grouped by product (Xen. *Oik.* 8.22), this worked to the buyers' advantage, ensuring that no seller could enjoy localized market dominance.[253] Evidence for pre-determined prices in antiquity is limited. The prices inscribed on painted pottery (e.g., BM 1921,0710.2),[254] or on wine amphorae,[255] probably record an agreed price rather than marketing them in advance, since they usually indicate group prices (e.g., '20 painted [pots], 1 drachma 4 obols' [ΔΔ ποι[κιλαί] |-||||: Newcastle 199]).[256] Instead, Greek *poleis*, especially from the fourth century, fixed prices or limited per-unit profit.

[249] *Wb. s.v. sit.y*, *cf.* Imhausen (2014:178).
[250] *DLE s.v. sipt*.
[251] Maskin and Riley (2000:414), Andreoni *et al.* (2006).
[252] i.e., 'signalling' (Spence, 1973).
[253] *cf.* Sherman and Weiss (2015:2078).
[254] Johnston (1974:148-9), Chankowski (2013).
[255] Lang (1956:13-15), Rotroff and Oakley (1992:47).
[256] Shefton (1970:60-1), Schaps (2004:112, fig. 10). Shefton (1970:60) asserts that the price was inscribed pre-firing, *contra* Johnston (1979:225); if so, this may refer to a pre-ordered batch: *cf.* Webster (1972:275).

4.2 | Coined Money and the Social Meanings of Exchange

It is unclear what prompted the invention of coinage, in Greece or, more probably, Lydia (Hdt. 1.94.1; Pollux 9.83)[257] sometime before 560BC.[258] Money-functions had existed in varying form for centuries (§4.3),[259] without any need for coinage. A popular explanation finds its origins in Greek community sacrifice (§4.1.2),[260] which left little permanent commemoration, with the inedibles burned and meat consumed. With this in mind, eighth-century Greeks clad parts of the sacrificial animal in precious metals,[261] dedicated bronze figurines to ritually substitute live sacrifice,[262] and offered representations of the cooking instruments involved in sacrifice – cauldrons (with tripods) and, most relevantly, spits.[263] The cladding of animal-parts supposedly instigated the Greek fetishization of precious metals.[264] Meanwhile, roasting-spits survive in particularly large quantities (e.g., BM 1923,0212.628-31),[265] sometimes with inscriptions (Nicosia KMRR253.T49/16). Simultaneously, the funding of sacrifices changed: adherents now paid for them (*cf.* Hdt. 6.57.1; Thuc. 2.15.2; *IG* I^3 78.10-12),[266] and these contributions (and the sacrificial distributions: *cf.* [Xen.] *Ath.Pol.* 2.9) needed to be accountable and comparable.[267] The iron roasting-spit (ὀβελὸς), and a standard amount thereof (the 'handful' of six, δράγμα, from

[257] *cf.* Kraay (1976:313), Seaford (2004:125).
[258] This is a *terminus ante quem* derived from excavations at Ephesos (Bammer, 1990; Howgego, 1995:2; Karwiese, 1995:118-19; Bammer and Muss, 1996:89; Schaps, 2004:95-6). The argument that coinage was invented *c.*600BC (Weidauer, 1975; Crawford, 1983:185-6; Spier, 1990:110-11; *cf.* Migeotte, 2009:55), or even as early as 700BC (Head, 1908:74-93; *cf.* Price 1983:9, n.16), optimistically interprets our limited sources; we cannot tell how long before 560BC coin appeared (Howgego, 1995:2; le Rider, 2001; Seaford, 2004:129-30).
[259] Finley (1973:166), von Reden (1995a:181; *cf.* 2007:1-2), Schaps (2004:4, 103). On defining 'money', *cf.* Pryor (1977:150-7), Davies (1994:29).
[260] Originating with Laum (1924).
[261] Burkert (1983:72, 79), Seaford (2004:62).
[262] Coldstream (1977:388), Seaford (2004:64, 102), Pedley (2005:101), Osborne (2009:87); *contra* Patay-Horváth (2020:5).
[263] Osborne (2009:87-8).
[264] *cf.* Seaford (2004:65), Pedley (2005:8).
[265] 100 from the Argive Heraion: Seaford (2004:103).
[266] Parker (1996:52-3), Burkert (1983:7), Seaford (2004:84).
[267] Certainly, valuations of animal contributions were taken: Plut. Sol. 23.3, *IG* II^2 1672; *cf.* Connor (1987).

δράσσομαι 'to grasp'),[268] became units of account. When coinage developed, this vocabulary became fossilized as νόμος ('currency', perhaps from νέμω 'distribute',[269] *via* ἰσονομία, 'equal share [i.e., of a sacrifice]'),[270] obol (ὀβολός) and drachma (δραχμή).[271] Similarly, it has been proposed that the earliest Attic coinage was issued in connection with the Great Panathenaea.[272]

Ancient Historians, then, are usually 'Chartalists', seeing money as a social development imposed by state actors to universalize units of account.[273] Aristotle, conversely, suggested that coinage developed to facilitate trade, using conveniently valuable metals[274] to make commodities comparable (Arist. *Pol.* 1257a19-b14, *Nik.Eth.* 1133a19-b28, *Mag.Mor.* 1194a; *cf.* Dem. 24.213; Plat. *Resp.* 371d; Arist. *Ath.Pol.* 10).[275] Aristotle expounds 'Metalism',[276] proposing that money was a technical development, universalizing systems of exchange.[277] This, however, fails to settle a further important question (§4.3): why, in the absence of any dramatic metallurgical advancement, did coinage emerge among Lydians and Greeks rather than their neighbours? While not a metallurgical advancement, coinage was a conceptual revolution. For the first time, money-functions (recognized in antiquity) were brought together in one object:[278] it served as a medium of exchange (*cf.* Plat. *Resp.* 371b; Arist. *Pol.* 1257a31-41), overcoming the 'double coincidence of wants';[279] a standard against which to compare values (Plat. *Leg.* 918b;

[268] *EDG s.v.* δράσσομαι
[269] *EDG s.v.* νέμω, from the PIE **nem-*, 'distribute, take'; *cf.* Laum (1924:114-15).
[270] Davidson (1997:290-1); *cf.* Will (1954:226-9), Laroche (1949:14-16), von Reden (1995a:177).
[271] Cook (1958:257), Waldstein (1902:61-3, 1905:41).
[272] Ure (1922), Carradice and Price (1988:27).
[273] Gerloff (1947), Tcherneva (2006:70). Others argue that money originated to pay mercenaries (e.g., Cook, 1958; Bogaert, 1964:127-8; Kraay, 1964:89) or facilitate state pay (*cf.* Seaford, 2004:97-9; Schaps, 2004:99).
[274] Mill (1909:3.7.2), Schaps (2004:8).
[275] Meikle (1991a:168-9; 1995:129-46), von Reden (1995a:124 n.29), Schaps (2004:6-7), Seaford (2004:5, 131-2, 259). Early coinage served as a weight standard: Grayson (1974:288-90, 341-2).
[276] On Metalist and Chartalist as designations, *cf.* Hart (1986:643-7).
[277] *cf.* Parry and Bloch (1989:1-19), von Reden (1995a:172).
[278] On the functions separately, *cf.* Pryor (1977:163-71), and §4.3.
[279] Davies (1994:17-22).

Arist. *Nik.Eth.* 1133b16-28); a reliable store of value (Arist. *Nik.Eth.* 1133b14-16); and a means of payment.[280] For this, precious metal coins were ideal, thanks to their size, durability, portability, infinite exchangeability, and guaranteed acceptability (§4.2.1). Most extant ancient coins were too valuable for day-to-day retail trading,[281] but the survival rate of high-value coins is substantially better than for smaller denominations.[282] Given this, the evidence of the Athenian *agora*, where low-value coins predominate, may indicate a rapid uptake by small-scale traders.[283] We must therefore presume that, while its penetration was uneven (§4.2.1), the conceptual revolution precipitated by coinage reached widely in the societies that adopted it.

4.2.1 | *The Invention of Coinage: a Psycho-Social Revolution*

Perhaps the only opportunity Western scholarship has taken to examine contemporaneously the impact of money on a society never before exposed to it[284] was a problematic[285] AD1949-53 study of the central-Nigerian Tiv people.[286] One firm conclusion drawn from the Tiv example is that introducing fiat money[287] has such deep social and psychological implications that it may fairly quickly dismantle and homogenize thousand-year-old modes of exchange.[288] While the Greeks experienced similarly deep changes, they,

[280] On these functions, *cf.* Polanyi (1957b:264-6), Bohannan (1959:491), Schaps (2004:13-14).
[281] Cook (1958:260), Kraay (1976:318 n.2), Rhodes (1981), Schaps (2004:100).
[282] Holle (1978:187-8).
[283] Kroll (1993:4), Schaps (2004:109). The idea that large value coins were solely for distance trading is unlikely; coin-finds remain concentrated around their location of issue: Kraay (1964:76-85, 88).
[284] Parry and Bloch (1989:7).
[285] The study was criticised by contemporaries for unduly dismissing economic thinking (Schneider, 1969:931-2; Nash, 1969:672), and primitivizing descriptions of the pre-monetary Tiv (Dorward, 1976). Nonetheless, the study frequently appears in discussions of Greek monetization: Morris (1986:9), von Reden (1995a:74 n.7), van Wees (1998:38, 48), Jameson (2002:167), Seaford (2004:165 n.85).
[286] Bohannan (1955; 1959), Bohannan and Dalton (1962), Bohannan and Bohannan (1968).
[287] Beforehand, brass rods were used as commodity money among the Tiv: Bohannan (1955:67; 1959:498). Token money was introduced thanks to the tax demands of the colonial government: Bohannan (1959:499).
[288] Bohannan (1955:67-8; 1959:501).

unlike the Tiv,[289] did not live in a monetized world: as early adopters (if not inventors) of coin, monetization did not undermine Greek institutions so much as reinforce and reshape pre-existing facets of Greek life.[290] While it is to coined money that some have traced the abstract thought of pre-Socratic Metaphysics,[291] the commensurability of diverse goods from which the dual focus of individual and community in the democratic state is derived (*cf.* Arist. *Nik.Eth.* 1133a17-19, b16-19),[292] the linguistic exchanges expressed in Greek poetry,[293] or the market economy,[294] we might better imagine coin as a catalyst. But, certainly, coined money invited new modes of valuation,[295] including measurable morality (§4.2.2),[296] and new ways of imagining property, contract (§5.4), and sale.

As the profound consequences of monetization suggest,[297] coins were produced in very large quantities: for the Archaic Period, the first eighty years of coinage, the now-outdated *IGCH* lists 99 hoards containing over 7,250 coins.[298] One sixth-century hoard (*CH* 1.3)[299] contained 906 coins; the two smallest denominations were struck using 394 obverse dies, suggesting production in the millions.[300] Coin usage increased rapidly following the turn of the sixth century,[301] by which time Greek states operated over 100 mints.[302] But despite the potentially huge circulation of coins in the Greek world, the

[289] Bohannan (1959:503).
[290] *cf.* Will (1954:210-26), Schaps (2004:16, 194-5).
[291] Frankel (1977:7), Gernet (1981b), von Reden (1995a:172-3), Seaford (2004:11-12); *cf.* Shell (1978:1-22), Schaps (2004:1).
[292] Seaford (2004:87).
[293] Kurke (1991:1-12, 165).
[294] Helfferich (1927:3), Schaps (2004:9).
[295] e.g., Children, asked to match blank circles with coins of different denominations, consistently overestimate coin size, with the overestimation increasing with the value of the coin they were asked to identify (McCurdy, 1956:161 T.2). In similar experiments, the scale of the overestimation was also inversely proportional to the subject's socio-economic status (Bruner and Goodman, 1947; Furnham, 2014:28).
[296] Parry and Bloch (1989:4); *cf.* Coser (1977:194).
[297] *cf.* von Reden (1995a:174).
[298] A number of hoards contained an unknown quantity of coins. *IGCH* discounts 255 hoards previously recorded in *BGCH*.
[299] Not featured in *IGCH*.
[300] Kim (1994:23-6; 2001:12), Howgego (1995:7), Seaford (2004:135).
[301] Howgego (1990:3), von Reden (1995a:174).
[302] Holle (1978:1).

penetration of coinage was only ever incomplete.[303] While farmers needed coin to access the *agora* and pay seasonal labourers,[304] and some may have transferred all their agricultural wealth to coin (*cf.* Plut. *Per.* 16.3-4),[305] monetization was limited in the countryside. Access to coin was problematic even in urban centres (§4.4.2), so the flow of money[306] out of the city was intermittent at best.[307] Resultantly, a hybrid rural economy emerged, characterized by the inconsistent use of coined money alongside barter.[308] This is not unusual: even today, monetized and barter exchanges often co-exist. Most often this occurs where central authority is lacking[309] currencies are unstable,[310] or participants opt-out of the monetary system.[311] but barter can form a statistically significant proportion of economic interactions even in sophisticated and stable modern economies.[312]

Alongside its general pervasiveness, it was the power of money which had the strongest psychological consequences. Among the Tiv, the strongest feeling expressed towards fiat currency was suspicion;[313] they, like many other peoples, anthropomorphize money, ascribing to it a sinister agency.[314] The Greeks thought similarly (*cf.* Eur. *Phoen.* 439-40, *Hek.* 865, *Suppl.* 875-6): money was generative, creating friends, tyranny, beauty,

[303] Schaps (2004:198).
[304] Burford (1993:190-3), Schaps (2004:164).
[305] Schaps (2004:168). de Ste Croix (1981:132) disbelieves Plutarch entirely.
[306] On the flows of coin from the city as a commodity, *cf.* Osborne (1991:120).
[307] *cf.* Hopkins (1980).
[308] Schaps (2004:198); *cf.* von Reden (2007:2-3).
[309] Woodruff (1999:83-4); von Reden (2007:13-14).
[310] In modern Greece (BBC, 2011), Zimbabwe (Mtomba, 2016; Moyo, 2017) and Venezuela (Graham-Harrison *et al.*, 2019; BBC, 2019).
[311] e.g., the Lhosi of Nepal, certain West African agriculturalists, and the Muria of Central India: Humphrey and Hugh-Jones (1992:4, 15).
[312] It has been estimated that barter exchanges in the USA were worth $10 billion in 1998 (Guriev and Kvassov, 2004:329). Similarly, barter was commonplace between capitalist states and the former Communist bloc (Neale, 1976; Humphrey and Hugh-Jones, 1992:4; *cf.* the famous case of PepsiCo bartering its product for Soviet tomato sauce, vodka and the scrappage rights for decommissioned warships: Ramirez, 1990). On the co-existence of different modes of money, *cf.* von Reden (2007:3).
[313] Bohannan (1959:501).
[314] e.g., the 'almighty dollar' (Irving, 1837:317), 'money is power' (Ames, 1741:4), 'the principal cause of poverty' (Tressell, 1914:130), 'the love of money is the root of all evil' (ῥίζα πάντων τῶν κακῶν ἐστιν ἡ φιλαργυρία: 1 Timothy 6:10), or the bad omen of dreaming of money: Shakespeare *Merchant of Venice* 2.5.17-18. On money's agency, *cf.* Key (2012:215-16).

skill, and enjoyment (Soph. Fr. 88);[315] transformative, not only making goods commensurable (Heraklitos Fr. 90 DK),[316] but also turning good men bad (Soph. *Ant.* 295-301), and making the weak powerful (Hdt. 3.122.3-4);[317] and was omnipotent (Ar. *Plut.* 182), more powerful even than Zeus (135). Charon's obol, buried with deceased Greeks, was the key to accessing the underworld (*cf.* Ar. *Ran.* 140-1; Juv. *Sat.* 3.265-8):[318] it was no coincidence that Hermes, psychopomp and traverser of thresholds,[319] was also the merchants' patron. Money's power, as the Greeks knew, derives from semiotics: it is the symbology of money that enables it to mediate social relations.[320]

Even precious metal coins have only limited use-value: to become a consumer product, like jewellery, they need adapting (e.g., melting down), and are usually too small to be sufficient alone.[321] Instead, coins derive their exchange value (partly) from the sign (σῆμα) stamped thereon.[322] Greek thinking afforded signs great power. They were essential tools of heroic revelation (e.g., Hom. *Od.* 19.392-3; Eur. *El.* 573-4),[323] and, in the form of the hero's tomb (also σῆμα: §3.3.1), even originated heroic status.[324] But the power of signs depends on recognition (ἀναγνώρισις),[325] a dialogic relationship with its interpreter. In other words, there is nothing inevitable about the conventional value of money above its inherent value; it resulted from general acceptance of the meanings of its

[315] Seaford (2004:4).
[316] *ibid*: 94.
[317] *Ibid*: 4.
[318] *cf.* Stevens (1991).
[319] Crane (1988:16), Louden (2011:132).
[320] Wennerlind (2001:557).
[321] Their value is therefore 'potential': Seaford (2004:5-6. 9). Even coins turned directly into jewellery, a common Hellenistic practice, needed mounting or drilling: BM 1928,1105.1, 1959,0710.19.
[322] Gernet (1981a:112), von Reden (1995a:172), Schaps (2004:100), Seaford (2004:120).
[323] Nagy (1983:36), von Reden (1995a:27).
[324] Death defined Greek heroes (Pache, 2009:89), specifically the right kind of death at the right time (Nagy, 2013:32, 397), since this preconditioned heroic cult. Cults often centred on his supposed tomb (*cf.* Antonaccio, 1994; Whitley, 1994:214, 218-22), his resting-place and the sign (σῆμα) of his status (*cf.* Rabadjiev, 2016:295).
[325] von Reden (1995a:28-31).



Obv.



Rev.

Fig. 4.3 | Silver Athenian Tetradrachm, displaying Test Cuts, *c.*410BC (Madison 1979.219)



Obv.



Rev.

Fig. 4.4 | *Fourrée* Athenian Tetradrachm, *c.*406BC (BM G.652)

signs.[326] These signs perhaps derive from the 'heraldic' symbols of those who commissioned them (hence, *Wappenmünzen*);[327] certainly, many early coin devices mirror those on hoplite shields,[328] but this hypothesis remains controversial.[329] Whether they symbolized the personal authority of the issuer, such devices signified a guarantee of value and acceptance on behalf of the state and, eventually, encoded information regarding a coin's value,[330] thereby lowering transaction costs.[331] Symbols thereby overcame the problem of purity.[332] Greek coins were not mere tokens: their value was underwritten by the precious metal of their manufacture.[333] This is reflected in both the purity of the metal (§4.3.2)[334] and in the steps taken to assess it. Greek coins often bear test cuts (e.g., Madison 1979.219 [fig. 4.3]; BM 1914,0103.12), while, by the fourth century, the state provided a

[326] Gernet (1981a:112), von Reden (1995a:172), Wennerlind (2001:557).
[327] The theory of Seltman (1924:xviii, 19-24); *cf.* Boardman (1968), Kroll (1981:2-4), von Reden (1995a:178, 180). *cf.* the legend 'I am the *sema* of Phanes' (ΦΑΝΕΟΣ ΕΜΙ ΣΗΜΑ) on an electrum stater (BM BNK.G.950; Howgego, 1995:4; Seaford, 2004:117)
[328] Common devices included animals (real and mythical, human heads, gorgoneia and geometric patterns (Spier, 1990:111; Kroll, 1993:5; van Alfen, 2012:89). The comparison with hoplite shields is largely from vases: e.g., rams' heads (coin: Boston 01.5551, vase: BM 1889,0418.1), triskeles (coin: Münzkab. 18203259, vase: Athens NM26746), lion's head (coin: Harvard 1972.120, vase: BM 1867,0508.940; *cf.* Eur. *Phoen.* 1120-1).
[329] Kroll (1981:2). The existence of Athenian 'heraldry' is disputed: van Buchem (1926:181-3), Lacroix (1956).
[330] Pavlek *et al.* (2019).
[331] *cf.* Bresson (2009:90).
[332] *cf.* Kraay (1976:9-11), Schaps (2004:30).
[333] Schaps (2004:30), Seaford (2004:6, 171).
[334] Kraay (1976:2). Hence, the use of ἀργύριον and χρυσός for 'money': von Reden (1995a:173). Even after monetization, bullion remained a store of value: Thuc. 2.13.4, 6.8.1, Lys. 12.11 (*cf.* Howgego, 1990:4-7, 13-15), Seaford (2004:88), *contra* Finley (1973:56, 166).

coin-tester (δοκιμαστὴς) in the *agora* (*IG* II² 1604.56, 1612.220; *SEG* 26.72).[335] These assurances were necessary in the face of counterfeit (usually *fourrée*) coins (e.g., BM G.652 [fig. 4.4]; *cf. SEG* 26.72 ll. 10-11),[336] but it may have been the varying purities of metals themselves which prompted the invention of coinage.

The first coins were made not of pure metal, but electrum, a silver-gold alloy. Asia Minor's electrum varied in quality (10% to 30% silver).[337] Greeks became aware of this thanks to variations in density (*cf.* Hdt. 1.50.2-3),[338] though the greatest variations were visible to the naked eye.[339] Lydian royal coins have a much higher silver content, but less variation (45-55%).[340] The suggestion, then, arose that Lydians marked coins to prove their value in comparison to a gold or silver standard.[341] Put simply, the trust of the consumer migrated from the metal to the sign,[342] which reinforced the intrinsic value of a precious-metal coinage (fiduciarity).[343] Instead of being measurable, value became *countable*:[344] soon the coin's intrinsic value was superseded by the conventional value embodied by the symbol (*cf.* Dem. 24.214; [Arist.] *Oik.* 1348b-50a),[345] resulting in the sixth-century lead coins of Samos (e.g., ANS 1979.116.1; *cf.* Hdt. 3.56.2),[346] the 'light tetradrachms' of Macedon, iron Byzantine coins (*cf.* Ar. *Nub.* 247-9),[347] and the Athenian (e.g., ANS 1944.100.24995, 1944.100.83604)[348] and Ptolemaic (§§4.4.2-3) bronze coinages. The eventual primacy of conventional value was reflected linguistically: νόμισμα,

[335] MacDowell (1973:158), Schaps (2004:181), Johnstone (2011:12-13), Harris (2013:28-9).
[336] Wallace (2001:131); *cf.* Kroll (1993:17-18).
[337] Wallace (1987:386), Cahill and Kroll (2005:613, n.103); *cf.* Waldbaum (1983:186), Meeks (2000:100), Cowell and Hyne (2000:172), Schaps (2004:98-9); *cf.* Burns (1927:159),
[338] Wallace (1987:390). Bolin (1958:35) notes that electrum is hard to verify in a market scenario.
[339] Figueira (1998:96), Cowell and Hyne (2000:172); *cf.* Wallace (1987:388).
[340] Cahill and Kroll (2005:613, nn.103-4); *cf.* Cowell and Hyne (2000:172), Schaps (2004:98-9).
[341] Furtwängler (1987:158), *cf.* Wallace (1987:392-3).
[342] Kraay (1976:323), Seaford (2004:136); *cf.* Crawford (1983:185).
[343] Price (1979:358), Peacock (2006:643), Migeotte (2009:58).
[344] Schaps (2004:104).
[345] Seaford (2004:136-7).
[346] Kraay (1976:30).
[347] Iron coins were also common in the Peloponnese: Oeconomides (1993), Hodkinson (2000:161-2),
[348] Picard (1989:681), Kroll (1993:25-6), Seaford (2004:138).

'currency', was derived from νόμος, 'law, custom' (Arist. *Nik.Eth.* 1133b1, *cf. Magn.Mor.* 1194a),[349] while coins became known by their devices (owls, turtles, archers).[350] These symbols earned patriotic significance. Modern money has become intrinsically linked to national identity,[351] with national images like Marianne, royal portraits or the Irish harp surviving even into the multinational Euro.[352] Similarly, for Athenians, the purity and breadth of acceptance of their Owls[353] became bound up first with their tributary empire, and then with Athenian ideals of self (*cf.* Ar. *Ran.* 716-25).[354] For Athens' dependant allies, the restriction of their native mints was perhaps a signal of their effective subjugation.[355]

4.2.2 | *'Money Can't Buy': Limiting the Market and the Moral Economy*

Coinage, then, was a potent and omnipresent feature of Hellenic life. Resultantly, the Greeks are sometimes presented as a race of Victor Frankensteins, overawed by the uncontrollable power of their creation.[356] This characterization tallies with one strand of elite Athenian thinking. The general Aristotelian rule that utility decreases with the quantity possessed (*Pol.* 1323b7-10; *cf.* §4.1.6) is broken in the case of coinage (1257b28-9).[357] Since coinage is commensurable to all goods (*cf.* Herakl. F.890 D.-K.), and infinitely fungible,[358] it supposedly poisons and supersedes social relations:[359] in Marx's words,[360] money was a '*radikaler Leveller*',[361] allowing anonymous transactions outside of

[349] Laroche (1949:14-16), von Reden (1995a:173), Seaford (2004:142-3).
[350] Woodbury (1980:110), Seaford (2004:171 n.115).
[351] Seaford (2004:1-2).
[352] *cf. OJEC* 323 28.12.2008, pp. 24-5.
[353] Kraay (1956:63), von Reden (1995a:180).
[354] von Reden (1995a:181), Figueira (1998:503-4); *cf.* Nicolet-Pierre and Kroll (1990:7).
[355] Gardner (1913:153); Figueira (1998:52) points out that many subject *poleis* had never minted coins, and therefore the strength of the prohibition has been overstated.
[356] Engels (1884:77-8), Seaford (1994:224-5); *cf.* von Reden (1997:170).
[357] Schaps (2004:175-6).
[358] Simmel (1900:101), Seaford (2004:11-12. 28-9).
[359] Fine and Lapavitsas (2000:367), Schaps (2004:121), Seaford (2004:156), Martin (2013:61-3); *cf.* Marx (1977:169), Parry and Bloch (1989:4, 6), Dodd (2014:241).
[360] Marx was a classicist by training (*cf.* Marx, 1841), heavily influencing his thought: Wheen (1999:32).
[361] Marx (1867:93); *cf.* Simmel (1905:414), Schaps (2004:210), Zelizer, (2011:96).

established communal values,[362] and embedding inequalities.[363] All other needs are subordinated to money. Commonly, then, it is characterized as a degradingly 'promiscuous symbol',[364] the agent of globalization and enemy of individualism.[365]

For Greeks, money's indiscriminacy led to insatiability. Moderation (self-restraint [σωφροσύνη]: Ar. *Nub.* 962, *Plut.* 563; Andok. 1.131; Plat. *Charm.* 160e, *Resp.* 430e, *Symp.* 196c; Arist. *Pol.* 1263b9, *Nik.Eth.* 1117b23; or, self-mastery [ἐγκρατεία]: Xen. *Ages.* 4.3, *Mem.* 1.5.1, 2.1.1; Plat. *Resp.* 390b; Isok. 1.21, 3.44; *cf.* Pind. *Isth.* 70-2) was a cardinal virtue among the Athenian elite:[366] things should only be done in season,[367] within the limits suggested by nature (e.g., trade: Hes. *Op.* 648, 694;[368] war: Dem. 9.48[369]). Excessive desire was problematic, regardless of what was coveted:[370] insatiable honour-seeking was as dangerous as avarice, an attempt to transcend the limits of one's mortality (ὕβρις).[371] Unrestricted desire – even for female company – was considered a feminine quality (e.g., Aiskh. *Ag.* 1625-6);[372] the conspicuous consumption we observed in Egypt (§4.1.5) was thus unbecoming of the Athenian citizen, for whom manliness (ἀνδρεία) was a moral necessity (*cf.* Arist. *Rhet.* 1366b11, *Nik.Eth.* 1115a6).[373] While we must accept a polyvalent attitude to male-male desire in Athens,[374] it was not homosexuality, or even passivity in

[362] Altmann (1903:58), Mauss (1990), Schaps (2004:32).
[363] *cf.* Hardt and Negri (2001:326), Zelizer (2011:97).
[364] Simmel (1900:587), Davidson (1997:119-20), Seaford (2004:157, 294), Fine and Lapavitsas (2000:372), Zelizer (2011:20, 95). For an ancient view, Ar. *Plut.* 153-9.
[365] Frankel (1977:31-2), Parry and Bloch (1989:4); alternatively, money can be characterized as freeing the individual: Roberts and Stephenson (1983:13, 20-1).
[366] Low (2007:145); *cf.* Dover (1974:66), Nagy (1985:54).
[367] On seasonality in ancient Greek thought, *cf.* Nagy (2013:328).
[368] Seaford (2004:286).
[369] Ober (1994:13, 17), though *cf.* Krentz (2002:27), noting that Demosthenes relates a historical, not contemporary, norm. Certainly, indiscriminacy was problematic in war, demonstrated by the disesteem of ranged fighters: Thuc. 4.40.2 (Hanson, 1989:15).
[370] Davidson (1997:142).
[371] von Reden (1995a:95).
[372] Dover (1978:105-6), Davidson (1997:165), Miller (1997:192-3)
[373] Roisman (2005, esp. 7-10); *cf.* Low (2007:134).
[374] *cf.* Cohen (1987:3),

homosexual relations,[375] that rendered the much-maligned κίναιδος effeminate (μαλακία; *cf.* Ar. *Thesm.* 130-2; Aiskin. 1.131), but his insatiability (*cf.* Plut. *Mor.* 126a, 705e).[376] Coined money became a countable indicator of unrestricted desire. Particularly problematic was the squandering of inherited wealth, common in Athens (Andok. 1.131; Plat. *Resp.* 330b; Lys. 19.48; [Dem.] 42.4; Arist. *Rhet. 1405a*).[377] The infinite fungibility of money also makes it infinitely spendable (Arist. *Pol.* 1256b40), circulating apparently without limit (1258a10-14).[378] Profligacy can therefore eat through (κατεσθῖειν) an inheritance within a generation (Anaxippos 1/31-5 K.-A.).[379] Money-wealth could also be concealed, against the better interests of the state: the Greeks esteemed visible (φανερός) over invisible (ἀφανής) wealth, as less disposable.[380] With ἀφανής property, one could masquerade as a pauper by hiding one's fortune (e.g., Plaut. *Aul.* 105-12).[381]

Historians typically contrast 'modern' money, combining all money-functions, with 'limited-use' or 'primitive' money,[382] 'embedded' in social institutions.[383] Resultantly, they have overlooked the social meanings of 'modern' money.[384] Since value is socio-culturally dependent,[385] societies can and do restrict the market, and the relationships that money can form.[386] Some objects are so valuable that society elects to make them economically worthless. The British crown jewels, for example, are uninsured,[387] despite the immense price-tag of the raw materials in, e.g., St Edward's Crown (RCT 31700), and their storied

[375] Though, this view remains common: Dover (1978:75-6), Winkler (1990:45-6), Halperin (2002:32-4), Tarnopolsky (2010:39); *cf.* Foucault (1985:85-6).
[376] Davidson (1997:174, 176, 179; 2001:23); *cf.* Winkler (1990:45-6) and Halperin (2002:32-4), who see a causal relationship between penetration and insatiability.
[377] *cf.* Davies (1971:260; 1981:86), Dover (1974:74-5), Davidson (1997:184-5).
[378] Schaps (2004:176-7), Seaford (2004:175-6).
[379] Davidson (1997:209).
[380] Davidson (1997:207), Seaford (2004:256).
[381] Schaps (2004:202-3).
[382] *cf.* Bohannan (1959:498), Seaford (2004:2-3), Zelizer (2011:97); *cf.* §4.2.1.
[383] Parry and Bloch (1989:7), von Reden (1995a:2-3, 105), Seaford (2004:2-3).
[384] e.g., von Reden (1995a:60, 105; 2007:2, 4), Seaford (2004:4, 95, 151-2, 248),
[385] von Reden (1995a:60).
[386] Simiand (1934), Schaps (2004:199, 206).
[387] Miller (2019).

provenance,[388] because they are irreplaceable, and too distinctive for a thief to sell.[389] Where items of historico-cultural significance are sold, this usually happens at auctions, in full public view, and sometimes with institutionally-preferred buyers (e.g., museums) given an advantage.[390] Human beings have, since Late Antiquity (Just. *Dig.* 9.3.7), been excluded from most markets,[391] though economic value may still be placed on human life (e.g., life insurance, compensation for bereavement in war or accidents).[392] Normal market forces do not apply in this realm of value: slavery[393] and the sale of human organs[394] are generally prohibited, despite potential economic advantages,[395] while attitudes to commercialized surrogacy[396] and adoption vary.[397] While the sale of cadavers for medical research is legal in some American states, in practice they never occur.[398] Such attitudes are polyvalent and sometimes contradictory,[399] but in all modern societies limits (juridical and cultural) are placed on the market.

It is not just prohibitions that limit the spending of 'modern' money. The source of money influences its eventual disposal, much like in the ancient 'gift economy'.[400] A

[388] The crown has featured in every post-Restoration coronation (Mears *et al.*, 1994:23), and was thought to contain gold from St Edward the Confessor's coronet (Holmes, 1959:221-3; Holmes and Sitwell, 1972:3-7, 53; Barclay, 2008:170).
[389] *cf.* Caesar (2013), Tarmy (2016).
[390] *cf.* Maurice and Turnor (1992) for this practice in Britain.
[391] Wallwork (1972:145), Zelizer (2011:19).
[392] Zelizer (2011:13-14). The bereaved inevitably accuse such payments of under-valuation (Feinberg, 2005:xxi-iii; Foderato, 2008).
[393] UNGA A/RES/III/217A (1948) art. 4
[394] Titmuss (1971:198). Iran is an exception: Griffin (2007), Major (2008).
[395] Some argue that transplants could be more efficiently handled by market forces (Parsons *et al.* 1973:46), but the apparent economic efficiency of slavery (Gray, 1930; Fogel and Engerman, 1974) has been regularly challenged: e.g., von Mises (1949:625).
[396] Illegal in the UK: *Surrogacy Arrangement Act*, 1985 c.49 s.2; semi-legal in Canada: *cf. Assisted Human Reproduction Act*, 2004 c.2 s.12; legalized in certain US states: e.g., *Oklahoma Gestational Agreement Act*, 2019 Okla. Stat. Tit. 10 §557.1 (*cf.* CBCN, 2018).
[397] Again, the market is proposed as a solution to the adoption crisis: Landes and Posner (1978:324-5)
[398] Zelizer (2011:20).
[399] Paradoxically, the same United States that tolerated slavery until AD1865 (*US Const.* am. XIII §§1-2), and where baby sales continued beyond AD1939 (Gardner, 1939; *cf.* Zelizer, 2011:61-3), expressed moral outrage at the idea of life insurance: Holwig (1856:4), Phelps (1895:12-13); *cf.* Zelizer (2011:21, 26-7).
[400] Kopytoff's (1986, esp. 69-70) 'cultural biography of things'. *cf.* Mauss (1990:12, 47-8), von Reden (1995a:60).

windfall is treated differently from regular income, for example, with lottery or gameshow prizes more likely to be spent on one-off large purchases than servicing debt, while inheritance is often spent with the deceased in mind.[401] Illicit earnings (e.g., from prostitution) are usually disposed of quickly and self-destructively, while the same individuals budget legal income for legitimate outgoings.[402] Often, the income of children (e.g., from part-time work) is excluded from a household's finances, so that different levels of disposable income exist within the same family.[403] These limits to the fungibility of money are known as 'mental accounting';[404] the same heuristic that makes it easier to spend money on a credit card,[405] or privileges a gambler's initial stake over his or her winnings.[406] Mental accounting led Greeks to ascribe polyvalent value to objects,[407] and so may explain coined money's usage in a world of uneven acceptance.

4.2.3 | *Money, Sex and Power: Morality and Coinage*

Coinage did not escape the moral landscape, but was situated within it.[408] Money regulates human relationships,[409] most commonly by creating obligation. To work for a wage (μισθός)[410] meant to abandon autonomy, subordinating oneself to an employer (*cf.* Plat. *Apol.* 31b-c; Xen. *Apol.* 16; Arist. *Rhet.* 1367a32).[411] Of course, mental accounting might differentiate between the μισθός of a private employer to that of the state or gods (Aisch.

[401] Zelizer (2011:138-9).
[402] Hoigard and Finstad (1992:49).
[403] Young (1952:305), Hartmann (1981:370-5), Wong (1984).
[404] Thaler (1985; 1999), Kahneman and Tversky (1982), Heath and Soll (1996), Zhang and Sussman (2018).
[405] Prelec and Simester (2001).
[406] Belsky and Gilovich (1999:31-3).
[407] von Reden (1995a:155-6).
[408] *cf.* e.g., the continuation of gift-relationships: Herman (1987:88-97).
[409] Seaford (2004:1, 293); *cf.* Marx (1867:128).
[410] Even in its earlier sense of 'reward' or 'prize' (Benveniste, 1969:163-4; Will, 1975), μισθός described a relationship between unequals (von Reden, 1995a:89-90).
[411] de Ste Croix (1981:90, 116-17).

3.183, Plat. *Resp.* 613e; though, *cf.* Ar. *Vesp.* 712; Plat. *Resp.* 345e-7d, 357a),[412] as well as between μισθός as recompense and μισθός that demanded a return (e.g., Aisch. 3.85; *cf.* Dem. 19.142; Din. 2.1).[413] Elites disdained wage-labourers for abandoning autonomy (*cf.* Hom. *Od.* 11.488-91; Hes. *Op.* 602; Eur. *El.* 130-1, 201-6; Dem. 42.45; Isok. 14.48; Isai. 5.39),[414] seeing them as servile. But mental accounting permitted a cognitive dissonance to play out: state pay freed workers to participate in Athenian democracy.[415] It was even worse to owe money (Hes. *Op.* 349-63),[416] though there is debate over the extent of credit in Athens.[417] Thus, an individual could be 'strong by means of money' (τοῖσι χρήμασι σθένων: Eur. *El.* 939), which became a deciding factor in both war (Thuc. 1.83, 1.142, 2.13; Ar. *Plut.* 184-5; *cf.* [Xen.] *Ath.Pol.* 3.3; [Arist.] *Ath.Pol.* 27.3)[418] and politics. Control of financial resources was essential for Peististratos (Thuc. 6.54.6; [Arist.] *Ath.Pol.* 16.2), Alkibiades (Thuc. 6.16.3) and Kimon (Theopomp. *FrGrHist.* 115 F89; Plut. *Kim.* 10.5; [Arist.] *Ath.Pol.* 27.3), while Perikles innovated, promoting his position with state finances ([Arist.] *Ath.Pol.* 27.3; *cf.* Thuc. 2.41.1-4).[419] Perikles here offered an alternative to the later Roman model of patronage (*cf.* Dem. 18.205),[420] subordinating Athenian citizens only to the state.[421] Yet effective elite control of the food supply[422] ensured that wealth continued to fuel inequalities.

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[412] This polyvalency is problematized in von Reden (1995a:90-3).
[413] *cf.* Herman (1987:75), von Reden (1995a:118-19), Roisman (2005:148-9). In practice, regular employment was more like patronage (Mrozek, 1989:161; Gallant, 1991:164-5), though wage-labour was rare (Glotz, 1926:172-5; Schaps, 2004:156-7).
[414] de Ste Croix (1981:185-6), Finley (1979:57), Schaps (2004:152-3).
[415] Fuks (1951:171-3), Finley (1985a:73).
[416] Millett (1984:101-3).
[417] While some argue that credit was rare (Finley, 1951:81-7; Bogaert, 1968:356-7; Millett, 1991:229-32), there is evidence for a thriving credit system (Migeotte, 1984:393-400; Cohen, 1992:32-6; Schaps, 2004:189-90).
[418] *cf.* Kallet (1993, esp. 7-8), Seaford (2004:164),
[419] Connor (1992:72), Schmitt-Pantel (1992:196-201), Schaps (2004:126-135).
[420] Naturally, alternative models of patronage existed: Saller (1982), Millett (1989:16), Wallace-Hadrill (1989:1-4), von Reden (1995a:129), Zelneck-Abramovitz (2000), Alwine (2016). Kron's (2011:134, T.1) crude calculations reveal less wealth disparity in Athens than e.g., Renaissance Italian cities or 20th Century Britain or America.
[421] Finley (1983:39-40), Davies (1981:117), Millett (1989:38), Schaps (2004:136-7), Ober (2005:99-100).
[422] Moreno (2007a:211-308), Pacheco (2016:19); alternatively, a model of mass control of elites has been proposed: Ober (1989:35-52); *cf.* Engen (2010:10), Sears (2013:19, 49-50).

Liturgies redirected these elite instincts to the state's advantage (§4.1.5),[423] and contributions thereto became a countable indicator of moral rectitude, just as the proverbial 'three-obol' payment to a sex-worker (Plat.Com. Fr. 188.17 K.-A., Machon Fr. 300-10 K.-A.) measured how far he or she had fallen.[424] Bribery, prostitution and commerce were linked in oratorical invective: a citizen male who sold himself, like Timarchos, both metaphorically and literally abdicated his status (Aisch. 1.14, 19-20, 184).[425] Both commerce and sex were considered asymmetrical exchanges,[426] and were explicitly linked in vase-painting. Both images of prostitution (e.g., Athens NM1441, Toledo 1972.55) and freeborn pederasty (e.g., Met.Mus. 52.11.4) depict exchanges of coin-purses,[427] alongside traditional aristocratic gifts (animals [Würzburg L482], musical instruments and athletic equipment [Met.Mus. 41.162.86], or fruit [New Haven 1933.175]).[428] In pederastic scenes, the unwillingness of the potential *eromenos,* recoiled or tightly wrapped in his *himation* (e.g., Würzburg L487), redeems his citizen-status. The moneybags measure the boy's moral fortitude in resisting unbecoming advances. Similarly, a profligate's squandered estate or a criminal's compensation payment[429] made their deviances countable (*cf.* Arist. *Nik.Eth.* 1132b31-3a6). Money subverted absolute morality, by providing a gradient against which it could be measured.[430]

[423] Humphreys (1978:219), Donlan (1980:52-75), Ober (1989:199), Kurke (1991:167-9), von Reden (1995a:84, 131, 179), Davidson (1997:239-42), Schaps (2004:130).
[424] Davidson (1997:118).
[425] Since sexual relations between citizen males were prohibited: Dover (1978:35-7), Halperin (1990:96), Cohen (1991:178-80), von Reden (1995a:197). *cf.* MacDowell (2000:15-25), Phillips (2013:120-2).
[426] Dover (1978:105); *cf.* Keuls' (1985:180) 'economic phallus'.
[427] Beazley (1931), Herbig (1954:270-1), Keuls (1985:260-4), von Reden (1995a:197), Alternatively, Shapiro (1981:137) suggests that the bag signifies male authority, Lewis (2002:93-4, 110-11) proposes a chaste exchange, while Sorkin-Rabinowitz (2011:132-3) doubts that they are moneybags. Some question whether domestic scenes of '*hetairai*' are even transactional: Beazley (1931:24) *contra* Rodenwaldt (1932:7), Crome (1966:245-7).
[428] *cf.* Koch-Harnack (1983:97-105), Lewis (1985:213-22), Reinsberg (1989:176), Lear and Cantarella (2008:39).
[429] Compensation for crime was one of the earliest uses for coin: Will (1955:17), Austin and Vidal-Naquet (1977:56-8), Polanyi (1977:105-7), von Reden (1995a:177), Seaford (2004:90-2).
[430] Will (1954:214-26), MacFarlane (1985:72), Parry and Bloch (1989:3-5, 17), Davidson (1997:207), Schaps (2004:108, 195-7); *cf.* Seaford (2004:204).

4.3 | Coinage and the Monetization of the Egyptian Economy

One of the great remaining mysteries of coined money is that it was not invented in the Near East centuries before it appeared in Lydia;[431] the invention of coinage was the culmination of centuries of precious metals fulfilling money-functions,[432] with weight-marked ingots found throughout the Near East (e.g., Met.Mus. 69.24.11, 1989.281.16, and in Egypt: Num.Gen. [2019] Lot. 101),[433] and the Greek mna (μνᾶ) borrowed from Semitic (*cf.* Hebr. מנה).[434] Egyptians were especially well-used to reckoning value in weights of copper, silver or gold.[435] One explanation concerns cult-practice: the Egyptian or Mesopotamian temple relied on a daily liturgy of perishable offerings,[436] rather than the durable dedications characteristic in Greece (§4.1.2). This explanation is unsatisfactory, since it fails to recognize the plurality of sacrificial practices in Near Eastern Kingdoms, including durable dedications,[437] though, as noted above, the social circumstances of Greek sacrifice were important preconditions.[438] Alternatively, it has been suggested that Egypt's centralized redistributive economy precluded monetization.[439] Yet, markets existed in Egypt (§4.1.4), alongside flourishing private enterprise.[440] We have also demonstrated that different forms of market organization can co-exist: indeed, in the Greek case, monetary exchange was never universal (*cf. IG* XII.9 1273/4.2-3, mandating fines paid in 'acceptable wealth' [χρέματα δόκιμα]),[441] while aspects of the redistributive economy survived in temples and festivals (Ar. *Nub.* 386).[442]

[431] Kraay (1976:317), Seaford (2004:6-7, 113).
[432] Kim (2001:15-20), Seaford (2004:93, 113).
[433] von Reden (1995a:178), Valloggia (2018).
[434] Seaford (2004:125), *EDG s.v.* μνᾶ.
[435] Schaps (2004:41-2), von Reden (2007:31).
[436] *cf.* Teeter (2013:311-12).
[437] Oppenheim (1977:106); *cf.* Seaford (2004:85-6).
[438] *cf.* Seaford (2011:40).
[439] Curtis (1951:482-91), Bleiberg (1996:25-6), Schaps (2004:36-7, 108), Seaford (2004:113-14).
[440] Kemp (2006:252-5), Lesko (1994:20-1), McDowell (1994:46).
[441] Seaford (2004:141). χρέματα could mean any possession, not just money (*cf.* Thuc. 2.60.5, Arist. *Pol.* 1256a1-3; von Reden, 1995a:174)
[442] Seaford (2004:86).

Instead, we may propose a more nuanced precondition of coined money: the size and structure of communities. We have already demonstrated the pivotal role communities played in Greek constructions of value, from apportioning heroic τῑμή (§4.1.1), via sacrificial contributions (§4.1.2), to the community appropriation of private wealth (§4.1.5). Decision-making in democratic Greek *poleis* involved an unprecedented proportion of the citizen body: in Athens, the political organs of the state (*Ekklesia* and *Boule*) alone involved thirty percent of citizen males.[443] The vastness of Egypt meant that only an infinitesimal fraction of the population had any stake in government: instead, as demonstrated above (§4.1.4), Egypt was ruled by abstractions. Pharaoh, so sacred that his name was rarely used in his lifetime,[444] was himself an abstraction to most of his people (§5.1.2), positioned between the competing forces of order (*mꜣꜥt*) and chaos (*izf.t*).[445] This does not mean that large, centralized states did not produce coinage; following their conquest of Lydia, the Persians became avid minters. Their native coinage was late, however; until 515BC, they relied on the designs and standards of their Anatolian subjects.[446] Persian coins were always limited both in their geographical scope,[447] and their range of uses.[448] There was nothing inevitable, then, about the invention and widespread adoption of coinage among Greek *poleis*. Instead, it was at least partly a product of the geography and concomitant mentality of the atomized Greek world.

Greek and Lydian coins are found in Egypt from the sixth century BC, and from the Achaemenid Period onwards are especially numerous. Their presence is usually explained

[443] Given quora of 6,000 for the *Ekklesia* and 500 for the *boule* (ignoring the likely overlap of personnel: Hansen, 1983:136), and a fourth-century citizen population of *c.*30,000 (Hansen, 1991:92; Sallares, 1991:53).
[444] Egyptians called their monarch *ḥm* ('his majesty') or *pr-ꜥꜣ* ('Great House', Pharaoh): *cf.* Doxey (1998:113-14).
[445] On the plurality of meanings for these terms, see above, §4.1.4. On the royal duty of maintaining *mꜥꜣt*, *cf.* Assmann (1990:51-2), Teeter (2013:310), Tyson-Smith (2013:239).
[446] Alram (2012:63-4).
[447] le Rider (2001:166-7, 170-4).
[448] Naster (1970:604); *cf.* Seaford (2004:129).

in relation to mercenary service, or sometimes to the tribute to Persia (§1.3.2). Regarding mercenaries, this thinking inspired the famous 'corn and coin' hypothesis, which held that Greek coins were imported to pay Greek mercenaries, in exchange for Egyptian grain.[449] We have already argued against regular export of Egyptian grain to Athens before the fourth century; the same was not necessarily true for other Greek states, notably Sparta (§6.2), which may have imported Egyptian grain *ad hoc*. Otherwise, we might note that, of the twelve *poleis* engaged in founding the Naukratite Hellenion (Hdt. 2.178.2; §5.3.1), only Chios, which specialized in viticulture,[450] and the infertile trading states of Aigina, Phaselis and Phokaia[451] would have had any want for grain. In the Aegean, the introduction of coinage increased both the demand for silver and the velocity with which it circulated,[452] resulting in a surplus available for exchange.[453] Greek coinage was, in most cases, almost pure,[454] and so had high export-value outside of the minting state's territory; perfect both for paying mercenaries, and melting down into luxury items for the native elite.[455] But the Egyptian want for silver to fulfil either of these purposes has been consistently overrated.

4.3.1 | *Greek Coin in Late-Period Egypt: the Changing Nature of Mercenary Service*

The first Greeks to arrive in Egypt were almost certainly the troops hired by Psamtik I, though their role in his rise to power is debatable. It is clear that he used the wealth and security provided by his special relationship with Assyria[456] to secure support

[449] Formulated by Milne (1939:178-9) and Sutherland (1943:136), and followed by Roebuck (1950), Austin (1970), Sullivan (1981; 1996), Murray (1993:231); *cf.* Seaford (2004:199). Important objections have been raised by Lloyd (1975:30).
[450] Roebuck (1950:239).
[451] Möller (2000:211).
[452] Schaps (2004:121). The relationship is in practice more complicated: large coin mintages can decrease velocity due to hoarding, while windfalls of precious metals caused by the opening of the Laureion mines and the Roman conquest of Egypt could increase it: Howgego (1995:122-4).
[453] Milne (1939:178).
[454] Seaford (2004:149).
[455] Sutherland (1943:136).
[456] Kuhrt (1996:145).

from his ally Gyges of Lydia (*cf.* BM 91026 [=*ARAB* II 785]).[457] Diodorus (1.66.12) and Herodotos (2.152.5) both assert that it was the tactical advantage afforded to Psamtik by his (largely Greek) troops which enabled his victory over rival Delta dynasts, though the Assyrian sources do not mention a foreign force in Psamtik's hire until after his secession from Assyria.[458] Herodotos' assertion that the Psamtik's troops were Ionian and Karian pirates, whose arrival fulfilled an oracle (2.152.3-5),[459] is unlikely. While Egypt was frequently subject to pirate raids (e.g., Hom. *Od.* 17.422-38), and a sudden influx of pirates would not be unexpected,[460] this reconstruction perhaps owes more to the folk-memory of raids by the 'Sea Peoples', bronze-armoured Aegean raiders who made regular incursions into Egypt between the thirteenth and tenth centuries BC.[461] It is more likely that Psamtik specifically requested troops:[462] Greek and Karians commonly served Levantine commanders in the chaotic aftermath of Assyria's collapse (§5.2.2).[463] Mercenary service was an honourable profession for elite glory-hunters, including Alkaios' brother Antimenidas (Alk. 48, 350), and the apparent superiority of Greek troops in armament and professionalism made them popular bodyguards for Eastern rulers (Polyain. *Strat.* 1.23.1).[464] Probably, then, Psamtik 'called up' (μεταπεμψάμενος: Diod. 1.66.12) troops directly from their homelands,[465] taking advantage of the prevailing socio-economic difficulties in Anatolia.[466]

[457] Luraghi (2006:638), Wallinga (1993:85-6).
[458] Niemeier (2001:17).
[459] This account is paralleled by Diodorus (1.66-7).
[460] Wallinga (1991:185).
[461] On the Sea Peoples, *cf.* Killebrew and Lehmann (2013:1-8).
[462] *cf.* Trundle (2004:107), for fifth-century 'recruiting officers' (ξενολόγοι), *cf.* Isok. 5.96; Xen. *Ages.* 1.1.6.
[463] Niemeier (2001:18).
[464] Parke (1933:1, 9). Greek military superiority has been overstated: Rop (2019).
[465] Diodorus' usage reflects the later model of mercenary service exemplified in Xenophon's *Anabasis* (1.2.1); as shown below (§4.3.3), fourth-century mercenary service evolved considerably, making it incomparable.
[466] Luraghi (2006:22). Poverty forced Karian farmers into foreign service (Trundle, 2004:43), a situation exacerbated by Kimmerian invaders (Hdt. 1.6.3; *ARAB* II 785), and population pressures (Austin, 1970:17). Certainly, Saïte interest in East Greece focussed on mercenary recruiting-grounds (Wallinga, 1991:180). Naukratis may later have contributed Greek troops (Niemeier, 2001:10).

Away from Egypt, and in later times, mercenaries operated small units made up of elites and those in their employ.[467] Their service was time-limited, and they returned home once the campaign ended (*cf.* Antimenidas: Alk. 350).[468] While this was probably the case for some of the Greeks in seventh-century Egypt,[469] the Egyptians envisaged Greek troops as a long-term part of their military strategy, securing Egypt's borders (§2.3.1).[470] There is evidence for Greek habitation at Daphnae (Tell Defenneh),[471] a fortress guarding the Arabian border (Hdt. 2.30.2), as well as a site known as T.21 in the Sinai (perhaps Biblical Migdol?) dating from the Saïte Period[472] and the Egyptian-occupied fort at Meṣad Ḥashavyahu near modern Tel Aviv.[473]

These Greek mercenary establishments are comparable to the permanent Jewish garrison at Elephantine; indeed, the statue-inscription of their commander, Nesuhor (*ARE* IV.994), places Greek and Jewish troops alongside each other. The establishment of the Elephantine garrison is usually attributed (based on [Aristeas] 1.3) to the reign of Psamtik II,[474] perhaps after the 597BC occupation of Jerusalem (2 *Kings* 24:16) or the Babylonian invasion of 586BC (Jer. 43:5-7). It is not unreasonable, however, to chart the garrison's origins to Psamtik I,[475] a revision supported by our recent knowledge of his Nubian campaigns.[476] Either way, papyri demonstrate that the garrison far predated the Persian invasion of 525BC,[477] and continued there until Alexander's conquest.[478] The establishment of a temple to Yahweh, the remains of extensive residential areas, and epistolary evidence

[467] Niemeier (2001:328).
[468] Austin (1970:16).
[469] Agut-Labordère (2013:992).
[470] Austin (1970:18).
[471] Petrie (1888:52), Braun (1982:44).
[472] Oren (1984a:13).
[473] Naveh (1962:98).
[474] Hadas (1973:101).
[475] *cf.* Sauneron and Yoyotte (1952:131-6).
[476] Kahn (2007:510).
[477] Rosenberg (2004:4).
[478] Kuhrt (1996:643).

(e.g., *P.Padua* 1) demonstrate that mercenaries and their families settled permanently on this frontier. Comparing this better-attested situation with the evidence of Hellenomemphites and Karomemphites, and other Greek settlements in Egypt (§2.3.1), the model of Greek service in Egypt becomes totally removed from the familiar notion of the fourth-century mercenary.

These Greeks and Karians were organized into 'Foreign Legions', evidenced by Padismatawy's designation as 'commander of the Greeks' (*mr ḥ3w-nbwt*: Cairo JE31566)[479] and he who 'commanded the foreign speakers' (ἀλογλόσος δ' ἦχε: M&L 7.4). We have also already met Hor, the admiral whose title was identical to Padismatawy's. It was in this naval aspect that Greeks were most useful. The invention of the trireme revolutionized naval warfare; ramming became the tactic of choice, but Egyptian ships had neither rams nor a keel, which afforded the strength and stability required to withstand this new sort of attack.[480] Ramming required skilled crews: scholars studying the reconstructed trireme *Olympias* discovered that, to achieve performances anywhere near those attested in ancient literature, the technical knowledge and physical conditioning of the crew would have to be substantially greater than experienced modern oarsmen achieved after a week of intense training.[481] The complex manoeuvres required by trireme combat meant perfecting the contact of the oar-blade with the water,[482] and perfect synchronicity among the 170 oar-crew.[483] Proficient crews were highly regarded by trierarchs (*cf.* Ar. *Ach.* 545-55) and attracted better wages ([Dem.] 50.14-16).

[479] He was also 'commander of the foreigners' (*mr ḫ3sty.w*). On the titles of Padismatawy, see Lefebvre (1925), Yoyotte (1953) and Agut-Labordère (2012:295-6)
[480] Lloyd (1972:271).
[481] Coates *et al.* (1990:1, 10, 13), Rankov (1993:51-2).
[482] Coates *et al.* (1990:28, 78-9).
[483] An effective crew was said to be 'beaten together' (συγκεκροτημένα: Polyaen. *Strat.* 3.11.7; Polyb. 1.61.3; the opposite was true of the hastily assembled crew at Thuc. 8.95.2), a result of arduous practice (Casson, 1971:278, 1991:58, 88, Hamel, 2015:24).

Unsurprisingly, then, mercenaries often filled empty trireme benches; foreign states might use financial inducements to provoke Athens' mercenaries to desert (Thuc. 1.121.3), a prospect recognised by Perikles (143.1) and Cyrus the Younger (*Hell.* 1.5.4).[484] The prevalence of naval mercenaries in the fourth century is undeniable; Apollodoros, during his trierarchy, preferred hired oarsmen over inferior citizen rowers ([Dem.] 50.7), a practice lamented by Isokrates (8.7). It is likely, then, that Saïte triremes were partly crewed by Greeks, and that they were intended to contribute to the long-term development of the Egyptian navy.[485] Finding suitable crewmen would not have been difficult. The Saïtes maintained relations with several nautically-inclined *poleis*: at Corinth – birthplace of the trireme (Thuc. 1.13.2-5) –Necho II and the tyrant Periander enjoyed a *xenia* relationship (§3.4.2); Ahmose II was closely allied with Polykrates of Samos, who boasted a formidable naval force (Hdt. 3.122.2; Thuc. 1.13.6); Milesians apparently brought warships on a raid to Egypt (17.1.18); while 'long-oared Aegina' (δολιχήρετμον Αἴγιναν: Pind. *Ol.* 8.20) established its own temenos at Naukratis (Hdt. 2.178.3).[486]

4.3.2 | *Greek Coin in Late-Period Egypt: the Use of Silver in Egypt*

The evidence is therefore strong that the Greek 'mercenaries' in Egypt were actually a permanent border-protection and naval force. As we have seen before (§2.3.1), Herodotos (e.g., 2.152.5) thought of these men as ἐπίκουροι (fighters-alongside) rather than the μισθοφόροι (wage-earners) described by Diodorus (1.66.12), and this distinction perhaps results from the permanence of the Greek military presence in Egypt. This inconsistent terminology has rightly undergone significant investigation; the move from Herodotos' ἐπικούροι to Diodorus' μισθοφόροι has been identified as part of a

[484] Amit (1965:39).
[485] Sullivan (1981:10).
[486] It is suggested that Naukratis also provided seamen for Egypt's nascent navy (Lloyd, 1975:57).

chronological shift,[487] from the euphemistic to the unapologetically literal.[488] According to this hypothesis, at some unspecified time before Herodotos, ἐπίκουρος lost its Homeric, non-mercenary, sense. But Herodotos almost exclusively uses ἐπίκουρος to mean 'ally' (1.64.2, 154.4, 2.152.14, 163.2-3, 168.12, 3.4.2, 3.11.3, 11.12, 45.14, 54.6, 145.15, 146.13-19, 6.39.14, 7.189.3), and is forced to qualify which ἐπίκουροι worked for a wage (e.g., 3.45.3).[489] His terminology is precise, distinguishing the type of pay these soldiers accepted. We have little evidence for mercenary pay in seventh-century Egypt, but what we have exclusively refers to payment-in-kind.[490] Pedon (Pamukkale 3162), whom we have met, delighted in his reward of land[491] and gold bracelets (*SEG* 37.994.3-9; *cf.* §2.3.1) – both common rewards for Egyptians favoured by Pharaoh,[492] especially in military contexts. Herodotos demonstrates that Pedon was not exceptional: he mentions that Psamtik I rewarded his Greek troops with land for settlement (διδόναι χώρους ἐνοικῆσαι: 2.154.1).

We may confidently suggest, then, that at least some –probably most – of the Greeks in Pharaoh's employ received in-kind payment,[493] like their Egyptian contemporaries. However, this leaves the problem of hoards of Greek coins from Egypt. Of the many Greek coins found in Egypt (at least 9,255),[494] a small proportion are of archaic

[487] Parke (1933:20-1), Trundle (2004:10).
[488] Parke (1933:13).
[489] Lavelle (1997:258), who sees Psamtik's troops as the first 'mercenary' ἐπικούροι.
[490] Money was not the only motivator of military service; Psamtik's Greeks were likely a similar band of criminals, glory-hunters and down-and-outs as modern French Foreign Legionnaires, attracted by anonymity and adventure: *cf.* Parke (1933:3), Schaps (2004:146).
[491] Pedon's wording, suggesting he was awarded 'a city', is problematic. It is usually thought he exaggerates a reward of land with dependents, or was given some kind of governorship (Moyer, 2011a:57).
[492] Many New Kingdom officials boasted of their rewards in their tomb biographies (e.g., Ahmose Pen-Nekhbet: 'the King of the Two Lands Aakheperkare [i.e., Thutmose I, 1527-15BC] gave me: of gold, four rings, four necklaces, one bracelet, six flies, three lions, two golden battle-axes' [*rdj.n n(=j) nsw-bjtj ʿ3-ḫpr-k3-rʿ nbw ʿwʿw 4 śbw 4 msktw 1 ʿff 6 m3j 3 nbw jqhw 2*: *ARE* II.23]). *cf.* Erman (1971:119); *cf.* Ahmose's statue inscriptions Louvre C.49 and Edinburgh A.1948.486 (Davies, 2014). As for land, Herodotos tells us that the *machimoi* were each granted a twelve-acre plot (2.168.1), an assertion supported by the biography of another Ahmose, who Pharaoh Seqenenre Tao (*c.*1560-55BC) 'endowed with very many fields' (*s3ḫ.kw m 3ḫwt ʿś3w wrt*: *ARE* II.6). Similar rewards were given to Pedon's near-contemporary Esnaisut (ÄM 17700; *cf.* Agut-Labordère, 2012:296).
[493] The awarding of land to Greeks was continued in the Ptolemaic Period: von Reden (2007:22).
[494] Muhs (2016:191-2).

date – 428 in thirteen hoards, approximately 5%.[495] Only one such hoard (*IGCH* 1632) might date to the Saïte Period: a find from '*irgendwo in Ägypten*', containing five Lydian gold staters.[496] When the hoard was deposited is uncertain; the coins are hard to date, but their weight-standard indicates a loose *terminus post quem* of the reign of Croesus (*c.*560BC-*c.*547/6BC).[497] If this hoard was Saïte, and the coins within it intended for the payment of mercenaries, we must ask why, if mercenaries accepted Lydian gold in payment, did the Egyptians not simply mint their own using their plentiful supply of gold (as they did later: §4.3.3)?[498] The remaining Archaic hoards postdate the Persian occupation, and reflect not Egypt's need for Greek mercenaries, but rather a fundamentally different relationship with coined money among the ruling elite.

By the Saïte Period, Egypt had never had money; that is to say, no one item combined the functions of a unit of account, store of value and medium of exchange.[499] Metals, precious and common, were used as units of account from the earliest times. Thus, an Old Kingdom stele (Cairo JE42787) values a bed and some cloth in terms of pieces (*šꜣts*) of metal (probably copper);[500] by the New Kingdom, a *šʿty* of metal weighed one-twelfth of a *dbn* (91.0g),[501] by then the standard unit of account. Between the two was the *qdt*, a tenth of a *dbn* (see prefatory note). Various objects were used as media of exchange in Egypt, with their value given in weights of metal; our Old Kingdom stela records the use of furniture and cloth, while come the Middle Kingdom, rents were paid in *dbn* of copper alongside cloth and grain and anything else at hand (*P.Hekanakht* 2 vso. 1-3). As for stores

[495] Thompson *et al.* (1973:227-30) lists eleven (*IGCH* 1632-43), of which one is from the Cyrenaica rather than Egypt. to these can be added two listed by Price (1975, no.7 and 1976, no. 10); *cf.* Muhs (2016:191-2).
[496] Regling (1904:25).
[497] Colburn (2014:355-6).
[498] While the suggestion that 'gold was not exactly easy to come by' (Colburn, 2014:360) poorly reflects our knowledge of, for example, the relative price of gold and silver in Egypt (see below), we must emphasize that most Egyptian gold came from areas when Pharaonic authority was weak.
[499] Though some Egyptologists argue grain fulfilled all these functions: e.g., Menu (2004:217-19).
[500] Hölscher (1912:111-12), Menu (1985:251-4), Eyre (2013:143).
[501] Peet (1934), Clagett (1999:292), Muhs (2016:37).

of value, that function was again fulfilled by a variety of commodities – grain, cloth, copper, silver and gold – though durable metals were preferred.[502] By the Third Intermediate Period (1070BC-664BC), silver had become more abundant in Egypt relative to gold.[503] While in the New Kingdom the value of gold to silver was in the ratio 2:1 (*cf.* P.BM 10068),[504] after Alexander's conquests his Egyptian gold coins were valued at 10:1 versus silver[505] –the same ratio as in fourth-century Greece.[506] This increase in supply, predating Greek involvement in Egypt, was reflected in the increase of silver among items of elite display.[507] Thus, we find the silver coffins of Psabikhanu I (Cairo JE85912; *c.*1001BC) and Shoshenq II (Cairo JE72154; *c.*883BC), and that Osorkon I (922BC-887BC) donated around 226,800kg of silver to the temples during his reign (*ARE* IV.730-7).[508]

We must not, therefore, overestimate Egypt's want for silver. Investigation of the metallurgical composition of Egyptian silver artefacts has challenged the notion that Egypt made no use of indigenous supplies.[509] Much Egyptian silver is revealed to be 'aurian silver' (or 'kustelite'),[510] a naturally-occurring alloy containing >5% gold,[511] to which the Egyptians intentionally added copper for hardness and aesthetics (Pliny. *HN.* 33.46).[512] Aurian silver was sourced from gold mines in Egypt and Nubia,[513] while New Kingdom texts refer to silver imports from the Levant (*ARE* II.446-7,459, 490-1, 482, 485, 518, 584,

[502] Muhs (2016:9).
[503] Gale and Stós-Gale (1981:103-4), Müller-Wollermann (2007:1351), Muhs (2016:230).
[504] Milne (1929:150; 1939:178), Černý (1954:904-6).
[505] Muhs (2016:230). In earlier times, silver may have even been more valuable than gold: Milne (1929:150).
[506] Bresson (2016a:262 table 10.1; 275). This ratio was remarkably stable in Western Europe, remaining current at the time of Shakespeare's *Merchant of Venice* (2.7.52-3: 'Or shall I think in silver she's immured, being ten times undervalued to tried gold?')
[507] Müller-Wollermann (2007:1351).
[508] Milne (1939:178), Müller-Wollermann (2007:1352). For a sense of scale, the maximum output of the Laurion mines in the fifth century was around a hundredth of that (2,373kg: Lucas, 1928:313).
[509] Gale and Stós-Gale (1981:103), Ogden (2000:170).
[510] Lucas (1928:317; 1948:281), Gale and Stós-Gale (1981:103).
[511] Aurian silver containing 1-20% gold is rare (Petrovskaya, 1979:825), though most Egyptian silver falls in this range (Gale and Stós-Gale, 1981:110, fig. 1).
[512] Lucas (1948:282-3), Ogden (2000:170).
[513] These accounted for only a small portion of Egypt's silver. Her own argentiferous galena deposits were not exploited in antiquity: Müller-Wollermann (2007:1351).

820), Libya (*ARE* III.584) and an unidentified country north of Egypt (*t3 ntr,* 'God's Land': *ARE* III.116, 274).[514] Even into the Saïte Period, the silver used in elite display remained largely aurian, as in the case of silver rings (Liverpool M11997, M11999) originally described as 'electrum', but we also find other sources – argentiferous galena, a lead alloy – which may originate from mines in the Levant, or even Laurion or Antiparos (e.g., the statuette Met.Mus. 30.8.93).[515]

Egypt, then, was less reliant on Greek silver than has been suggested. The general pattern of increasing availability of silver from *c.*1070BC resulted in the widespread adoption of silver weights as stores of wealth and units of value.[516] Hence, we find the Elephantine Hoard, a collection of *Hacksilber* in a vase of the Third Intermediate or Saïte Period, which was parcelled into standard weights of approximately 13.15g,[517] and the Tell el-Atrib hoard containing *Hacksilber* totalling over 50kg.[518] Silver also became used (in conjunction with other commodities) as a medium of exchange for large purchases: Shoshenq I, before ascending the throne, purchased 100 *aroura* of land, a garden, ten oxen, and the services of twenty-three people for a total of 28 *dbn* and 9⅓ *qdt* (approx. 2.63kg) of silver (Cairo JE66285);[519] otherwise, payments are made in commodities worth a weight of silver (e.g., wheat in *P.Brooklyn* 16.205, or wine and beer in *P.Cairo* CG50060). Sometimes, gold (Cairo JE37888) or even livestock (*P.Louvre* E7850) were used as media of exchange.[520] By the Persian Period, some import taxes were collected in silver, including

[514] Lucas (1948:280). *t3 ntr* usually refers to Punt, in the Horn of Africa, but this reference places it to the north.
[515] Becker *et al.* (1994:47), Müller-Wollermann (2007:1351). On argentiferous galena in Greece, *cf.* Sarton (1952:296), Kevrekidis *et al.* (2015). There remain a number of substantial Late Period Egyptian artworks in silver (e.g., BM EA60006, Louvre E27431, St Louis 223:1924) not yet subjected to technical analysis.
[516] Muhs (2016:159, 191).
[517] Noeske (1993:204-5), Muhs (2016:161).
[518] Engelbach (1924:181-5), Kroll (2001:3-4), Muhs (2016:191-2). *cf.* the el-Till hoard, which contained 1kg of *Hacksilber*: Bleiberg (1996:21-2).
[519] Blackman (1941), Muhs (2016:160).
[520] Donker van Heel (1996:222-5), Muhs (2016:190).

those in the Ahiqar Palimpsest (P&Y C3.7); it is perhaps to this silver that Darius referred in his Susa inscription (*DSf*. 40-1),[521] though a native aurian silver source cannot be ruled out.

4.3.3 | *The First Egyptian Coin Mintages*

With the possible exception of *IGCH* 1632, our first Egyptian hoards of Greek silver coins originate in the Persian Period – some 1,248 coins among fifteen hoards found, with one exception (*IGCH* 1644), in the Delta.[522] It is after this time that equivalences for Greek coinages are first mentioned in Demotic (*O.Manawir* 620, 661) and Aramaic (P&Y A4.2, B3.12, B4.5-6) texts,[523] and that the first imitation Athenian tetradrachms were minted in Egypt (e.g., Ann Arbor 1984.01.0137).[524] Some imitation 'obols' of the fourth century were marked with the hieroglyphic legend *w3ḥ* ('enduring'; e.g., ANS 1944.100.62652 [fig. 4.5]),[525] or the Greek NAY (ANS 1944.100.75458 [fig. 4.6]),[526] suggesting that their circulation may have been confined to Naukratis.[527] The distribution of dies for imitation Athenian tetradrachms, however, implies that – by the fourth century BC – Egypt had begun

[521] Thompson *et al.* (1973:225). For the inscription, *cf.* Olmstead (1948:168), Hinz (1950).
[522] Thompson *et al.* (1973:227-31); Colburn (2014:357). These hoards make up *c.*14% of the total Greek coins known from Egypt.
[523] Muhs (2016:191). The equivalences – five Attic tetradrachms (i.e., 86g total) per *dbn* (91.00g), two *qdt* (18.20g total) per tetradrachm (17.20g), and two *shekels* (16.60g total) per tetradrachm – are inexact, and must represent a state-mandated exchange rate (von Reden, 2007:49; Colburn, 2014:373-4). This indicates that, by the fifth century, coins were thought of as more than standardized weights of precious metals.
[524] These mintages were either late Persian, or slightly postdate the Persian occupation in 404BC: Newell (1938:60), Colburn (2014:353), Muhs (2016:191). They were first identified as imitations by Buttrey (1982; 1984), from a hoard of *c.*2,000 found in the Fayyum (*CH* 10.442). A now-lost cube die from Egypt (Meadows, 2011:102-6; Colburn, 2014:375) and its cousin from Herakleion-Thonis (Meadows, 2011:99-101) support the Egyptian provenance of these imitations.
[525] Curtis (1957:75), van Alfen (2002:20), Muhs (2016:191). Almost all come from a single hoard (*IGCH* 2165), found in Sicily. The purpose of the hieroglyph is unknown (Daumas, 1974:572). These coins do not follow a recognizable weight standard, falling somewhat between the Attic obol and hemiobol (van Alfen, 2002:20). On their dates, *cf.* van Alfen (2011:88, T.3).
[526] Newell (1938:60-2), van Alfen (2002:21). This series may be later (le Rider, 1997:93), though dating Egyptian mintages is notoriously difficult (Bresson, 2000:75).
[527] Muhs (2016:191).

large-scale decentralized production of Owls;[528] this sits within a wider trend of local imitations compensating for the drop in the supply of Athenian silver after the Peloponnesian War.[529] The causes of Egypt's increasing interest in silver are unclear; the suggestion that it was used for Persian tribute[530] has been considered above (§1.3.2), where we suggested that grain formed the bulk of Egypt's tribute. Perhaps importantly, metallurgical analysis of the imitation Owls from Asyut and Tel-Mikhal share a trace-element profile with Laurion silver,[531] so are likely reminted from old Athenian coins. Reminting to distinguish good silver (i.e., old tetradrachms) from bad (new *fourrée* tetradrachms) would explain both the origin and high purity of the silver. Either way, this mintage in no way represented a 'monetization' of the Egyptian economy.[532]

The interest in coined silver in Achaemenid Egypt remained its commodity value (*cf.* Hdt. 3.96.2; Strab. 15.3.21): many coins from Egyptian hoards show gouges, strike-marks and cuts (e.g., Malibu 79.NB.33) for testing quality.[533] Similarly, Egyptian coin hoards often contain unminted *Hacksilber* (e.g., *IGCH* 1636-7, 1639-40, 1644-5, 1647, 1649, 1651),[534] and bullion remained a common medium of exchange (*P.BM* 10113, *P.Hou* 12; this remained the case even in official Aramaic documents under the Persians: P&Y B3.1 and 4.2). This interest in the fineness of silver is reflected in the coins found in Egypt: metallurgical analysis of the Asyut Hoard (*IGCH* 1644) reveals coins of 95.20-99.60%

[528] The official nature of this mintage is underscored by tetradrachms inscribed for the satraps Sabakes and Mazakes (in Aramaic: e.g., ANS 1944.100.75462), or Artaxerxes III (in Demotic).
[529] van Alfen (2011:55-6). The paucity of silver is highlighted by the introduction of debased and plated coinage as an emergency measure (e.g., BM 1919,0101.1, ANS 0000.999.53648): *cf.* Giovannini (1975).
[530] Colburn (2014:359-68; 2018b:114). A one-off import of Egyptian silver is recorded in the 'Susa Foundation Charter' (*DSf* 40-1; *cf.* Colburn, 2014:361 n.23; for problems interpreting this passage, *cf.* Root, 2010:178-86).
[531] Ponting *et al.* (2011:123).
[532] Suggested by Buttrey (1982:139) and Müller-Wollermann (2007:1358-9), and rightly discounted by Figueira (1998:531-3), who (like van Alfen, 2011:85) connects the coins with Persian use of Greek mercenaries.
[533] Colburn (2018c:114).
[534] Schaps (2004:106), von Reden (2007:32); *cf.* Colburn (2014:358, T.6.2), demonstrating that bullion and *Hacksilber* continue to be found in Egyptian hoards even into the Ptolemaic Period.





Fig. 4.5 | Imitation Athenian 'Obol', with *w3ḥ* hieroglyph (𓅱) highlighted, post-350BC (ANS 1944.100.62652)





Fig. 4.6 | Imitation Athenian 'Obol', with NAϒ in place of AΘE on the reverse, *c.* 400-320BC (ANS 1944.100.75458)

purity.[535] It was perhaps this interest in purity, enforced by a standard and perhaps a countermark, that inspired the otherwise puzzling Herodotean anecdote of the exceptionally fine coinage of the early satrap Aryandes (Hdt. 4.166.2), of which no physical trace has ever been identified.[536]

The first properly native Egyptian mintages came in the mid-fourth century BC, under Djedhor, to whom are attributed sweeping (and unpopular) economic reforms, and a close relationship with the Athenian Chabrias (§3.4.3). The only secure example is a gold coin bearing an adapted Athenian design (BM 1925,0808.1, fig. 4.7).[537] On the obverse, the helmeted head of Athena stares rightwards, and on the reverse an owl; however, the olive branch typical of Athenian tetradrachms was replaced by a papyrus frond, and the inscription AΘE (abbreviated Ἀθηναίων, 'of the Athenians') with TAΩ (abbreviated Ταχὼς, a Greek transliteration of Djedhor).[538] The coin weighs 8.27g, closer to the Persian daric standard (8.36g; e.g., Boston 30.50)[539] than the Attic gold staters (8.60g; e.g., Harvard 1.1965.1624) minted in the financial emergency following the Peloponnesian War. Since,

[535] Gale *et al.* (1980:14-20), Colburn (2014:371).
[536] Despite some dissenters (Tuplin, 1989; Sheedy and Gore, 2011), it is usually agreed that no such coinage ever existed (Colburn, 2014:369-71). The idea that it represents a fineness standard originates with van Alfen (2004:23-4).
[537] Hill (1926:130-4).
[538] *cf.* Müller-Wollermann (2007:1357).
[539] Psoma (2016:102).



Obv.



Rev.

Fig. 4.7 | Egyptian Gold Stater of Djedhor, imitating an Athenian Tetradrachm, with TAΩ replacing AΘE on the reverse, *c.*362-360BC (BM 1925,0808.1)



Obv.



Rev.

Fig. 4.8 | Coin of Nakhthorhebyt (?) with alternative *nfr-nb* inscription on the reverse, *c.* 400-350BC (ANS 1965.139.1)

however, Persian darics were sometimes found in Athens (Ar. *Ekkl.* 601-2; *IG* I^3 383.17-18, 356.48; Lys. 12.11),[540] and were likely used for exceptionally large payments or as bullion, it remains possible that Djedhor minted these coins to pay for Athenian and Spartan men and materiel, perhaps using gold requisitioned from private individuals and the temples ([Arist.] *Oik.* 2.22.5; Polyaen. *Strat.* 3.11.5).[541] Another type formerly attributed to Djedhor, a silver tetradrachm imitation bearing an off-flan Demotic inscription (BM 1953,1013.1, [fig. 4.11]), has since been reassigned to Artaxerxes III on comparison with other examples (ANS 2008.15.39-41).[542] Similarly, a fractional issue, first attributed to Djedhor,[543] depicting Athena and the hieroglyphs *nfr-nb* between two eagles, with a sprig of olive (ANS 1965.139.1, fig. 4.8), is a better iconographic fit with his successor, Nakhthorhebyt.

The most important and numerous Egyptian coins were minted by Nakhthorhebyt.[544] The more secure type are gold staters (e.g., ANS 1963.268.72 [fig. 4.9],

[540] Miller (1997:73-4). Large hoards of darics are known from Attika: *IGCH* 32 ('several hundred').
[541] Dandamaev (1989:300), Ruzicka (2012:142).
[542] Mørkholm (1974).
[543] Curtis (1957:72).
[544] The attribution is that of Jenkins (1955:150), but is by no means certain: van Alfen (2002:23). Studies of the first coin discovered (Hermitage OH-A-Aз-1417; Bolshakov, 1992:6-9) considered it inauthentic (Hill, 1900:371, n.4; Wroth, 1902:140) while others suggested it was not a coin but a δοκίμιον (weight standard), against which imported staters could be measured (Svoronos, 1902:27-31).



Fig. 4.9 | Egyptian Gold Stater of Nakhthorhebyt, *c.*359-343BC (ANS 1963.268.72)

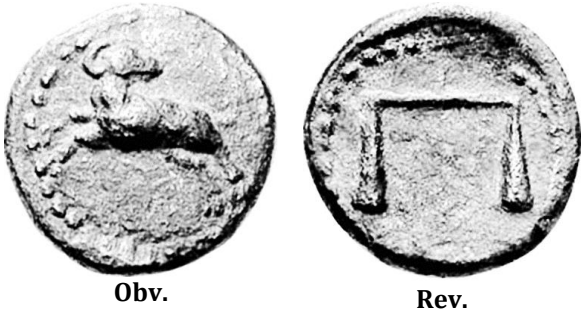


Fig. 4.10 | Coin mis-attributed to Nakhthorhebyt, reassigned to Antioch, 2nd Century AD (?) (CNG Triton VIII [2005] Lot 570)

BM 1954,1006.1, Gandur FGA-ARCH-EG-0363, Hildesheim F27, Jerusalem 76.01452), bearing the image of a prancing stallion and the hieroglyphic inscription *nfr-nb* ('good/fine gold'),[545] an unambiguous assurance of the coin's purity,[546] as well as a potential cryptographic reference to the chief-god Amun.[547] Our evidence suggests a substantial issue: 49 *nfr-nb* staters are extant, divisible into five types;[548] based on three distinct obverses and reverses, with O_1 and O_2 sharing R_1 and R_2, with O_3 and R_3 occurring separately.[549] These die linkages indicate that at least two anvils operated simultaneously, suggesting an intensive and large-scale production.[550] If the silver coin ANS 1965.139.1 (fig. 4.8), close to an Attic drachma, can be attributed to Nakhthorhebyt, then we have evidence for a multi-denominational currency system, suggesting that coins were used for an increasing diversity of purposes. This represents a more sophisticated usage than mere bullion,[551] though there is insufficient evidence to suggest widespread circulation. Conversely, we can discount the still-common attribution to Nakhthorhebyt of a series of

[545] Given Egyptian linguistic playfulness, the phrase can also mean 'golden stallion', from the Egyptian *nfr* ('young horse': Chassinat, 1923:133; Ashmawy, 2005:147). The prancing stallion perhaps symbolized the Egyptian state, and the staters were probably nicknamed 'stallions' (Faucher *et al.*, 2012:152).
[546] The examples in St Petersburg (Hermitage OH-A-A3-1417) and Paris (Cab.Med. Y12809) contain 93.50% and 92.81% gold respectively (Faucher *et al*., 2012:158).
[547] For the use of Gardiner signs S12 and F35 to cryptographically render 'Amun', *cf.* Drioton (1957:21-6).
[548] *cf.* Faucher *et al.* (2012:148-151).
[549] e.g., O_1/R_1: ANS 1963.268.72; O_1/R_2: Cambridge CM.107.1958; O_2/R_1: BM 1954,1006.1, Vienna GR37707; O_2/R_2: Lausanne ACM2769; O_3/R_3: Hermitage OH-A-A3-1417.
[550] As at Leukas (Crawford, 1983:209-210).
[551] As argued by Naville (1925:286), Ogden (1990:47).

bronze coins (e.g., ANS 2010.56.1. fig. 4.10) whose Obverses depict a leaping ram and Reverses a set of scales superficially similar to Egyptian exemplars (§4.1.4).[552] The iconography has Egyptian parallels – the ram could reference Amun, though its style is Greek – but their provenance is unclear. The attribution to Nakhthorhebyt[553] is untenable, given that none were found in Egypt. Their striking resemblance with the third-century AD output of Antioch (e.g., ANS 1961.154.40)[554] has led some to revise their date accordingly.[555] Furthermore, it is unclear why Egypt, whose use of coinage was conditional on interactions with foreign powers, would produce a base-metal fiat issue.

Nakhthorhebyt's gold staters were minted at a weight of *c.*8.50g,[556] like the later Macedonian and Ptolemaic gold staters (§4.2.4), on which basis their age is occasionally revised.[557] Like them, this coin was clearly not designed for daily use; at the Ptolemaic exchange rate, it was worth 20 silver drachmae,[558] enough to feed an individual for a year.[559] But there were advantages to this standard even before the Ptolemaic Period: it was uniquely exchangeable in an Egyptian context. At the fourth-century exchange rate, 20 drachmae equated to 1 *dbn*, while approximating to both the Attic gold stater and Persian daric. Secondly, it utilized a resource, gold, of which Egypt had (both indigenously and imported) a relatively stable supply, and techniques developed by the Greeks who were Djedhor's and Nakhthorhebyt's closest allies and economic advisors.

[552] The attribution to Nakhthorhebyt is frequent in auction catalogues, where much may be gained from advertising a 'pharaonic' coin, but also persists in the American Numismatic Society catalogue.
[553] Weiser (1995:16), who (mis)identifies the leaping creature as a gazelle.
[554] Including the coins purportedly depicting the Star of Bethlehem, apparently the transit of Jupiter through the constellation Aries: Molnar (1999:3-4), whose conclusions should be taken cautiously.
[555] Butcher (2004:405). A zodiacal interpretation is preferable over Egyptian origins.
[556] They range from 8.14/15g (Cab.Med. Y12809, Münzkab. 18203010, though the latter is damaged) to 8.94g (for a defective coin, Cairo JE98410); for some, this range militates against their use as coins (Ogden, 1990:47).
[557] Hill (1926:133).
[558] With a drachma at 4.30g, and the gold:silver price ratio at 1:10.
[559] von Reden (2007:40).

Unlike the 'fighters-alongside' of Psamtik's army, the Greeks in fourth-century Egypt were more recognizably mercenaries.[560] While the involvement of the Spartans under Agesilaos probably resulted from Egyptian-Spartan diplomacy (*cf.* Diod. 15.90.1-4; Plut. *Ages.* 36.3), especially given Agesilaos' deference to the Spartan state in the wake of Nakhthorhebyt's rebellion (Plut. *Ages.* 37.2-6), it is clear that Chabrias' Athenian contingent was operating under private initiative (§3.4.3). Gold, certainly in later Ptolemaic contexts, represented state payments.[561] Thus, after the Battle of Raphia, the army was rewarded with 300,000 *chrusoi* (Ptolemaic gold staters; Cairo CG50048.18), even though minting of that coin had ceased.[562] State expenditure under Djedhor and Nakhthorhebyt increased massively to finance their military campaigns, precipitating an acute economic crisis.[563] While Pharaohs could ordinarily rely on *corvée* labour to build fortifications and produce armaments, conscription to man their armies, and taxation in-kind to re-allocate resources for war, a campaign against the fourth-century Persian Empire required materiel Egypt struggled to produce at home, and mercenaries trained in tactics whose development in Egypt had been inconsistent and interrupted by Persian occupation.[564] Thus, Djedhor supposedly had either 200 (Diod. 15.92.2) or 120 ([Arist.] *Oik.* 2.37) 'expensively adorned' (πολυτελῶς κεκοσμημένας: Diod. 15.92.2) triremes fitted out by Chabrias at Athens,[565] who provided shore-training in rowing and strategy to novice Egyptians (Polyaen. *Strat.* 3.11.7).[566] Djedhor also supposedly donated triremes – acquired from abroad – and 500

[560] The readiness with which Greek mercenaries defected from Djedhor to Nakhthorhebyt, the extraordinary measures taken to fund the campaign (Ruzicka, 2012:142; Trundle, 2004:107), the fact that Djedhor lent his mercenaries to Tennes (Diod. 16.42.2) and that they were left under their own commanders, are characteristic of the fourth-century model of Greek mercenary activity (*cf.* Trundle, 2004:146-7)
[561] *cf.* von Reden (2007:48-50).
[562] Cuvigny (2003:115), von Reden (2007:50).
[563] Wilkinson (2010:458).
[564] Some doubt the existence of Greek triremes in Saïte Egypt: Basch (1969:231-2), Casson (1971:81, n.19).
[565] *cf.* Rop (2019:109).
[566] This was usually seen as an emergency measure (Casson, 1971:279 n.32), the effectiveness of this method was demonstrated by sea-trials for the reconstructed trireme *Olympias* (Coates *et al.*, 1990:10, 60).

talents of silver to the rebellious Ionian cities (Diod. 15.92.1). Coinage, then, enabled Djedhor and Nakhthorhebyt to deepen their relationships in the Greek world and finance their mercenary forces. The high-value gold staters were probably not intended for mercenaries' coin-purses, instead comprising up-front payments to mercenary captains, later divided into their men's daily wages (*cf.* Dem. 50.7).[567] If the silver coin attributed to Nakhthorhebyt (fig. 4.8) was mercenary pay, it would represent a good daily wage for a mercenary: at 5.00g, it approximates to seven obols, between the daily drachma of the fifth-century Athenian hoplite (Thuc. 3.17.4) and the 1½ drachmas suggested for citizen trireme-rowers by Plutarch (*Per.* 11.4),[568] and close to the 7½ daily obols (i.e., 1½ darics per month) Cyrus' mercenaries received during a time of crisis (Xen. *Anab.* 1.3.21).[569] This respectable pay-packet reflects the severity of Egypt's situation.

Artaxerxes III eventually retook Egypt, using a vast part-mercenary force (Theopomp. *FrGrHist.* 115 F263; Diod. 16.44.1), exiling Nakhthorhebyt (Diod. 16.51.1), denuding the country of its defences (16.51.2), ransoming the temple treasuries, and installing Egyptian collaborators in senior posts (Naples 1035.8; *cf.* Egyptians depicted in Persian garb: Brooklyn 71.139).[570] But while Artaxerxes also relied on Greek mercenaries,[571] and many remained in Egypt, the minting of native coinage ceased: instead, Artaxerxes and the satraps Sabakes[572] and Mazakes[573], resumed the production of imitation Owls, with Demotic Egyptian (e.g., BM 1953,1013.1 [fig. 4.11], 1990,0121.1) or

[567] Gabrielsen (1994:122), Trundle (2004:90).
[568] Trundle (2004:92); *cf.* Roy (1967:316).
[569] Pritchett (1991:20), Loomis (1998:47-8), Trundle (2004:93).
[570] Ruzicka (2012:177-98). For the Naples stela, *cf.* Tresson (1930), Kuhrt (1996:675). The installation of collaborators repeated the practice of Cambyses (*cf.* Mus.Vat. 22690; Lloyd, 1982; Colburn, 2020).
[571] According to Diodorus, it was the trust he invested in his Greek troops, against Nakhthorhebyt's refusal to share command, which ensured his success: *cf.* 16.47.5, 48.2, 49.7; Ruzicka (2012:179, 182-3), Fischer-Bovet (2014:213-14); *cf.* Rop (2019:149).
[572] The attribution to Sabakes, based on restoring the inscription as סויך (Six, 1888:132-7) remains uncertain (Babelon, 1893:100-1; *cf.* Newell, 1938:63-4).
[573] Mazakes' inscription is less contentious: Newell (1938:73).



Obv.



Rev.

Fig. 4.11 | Imitation Athenian Tetradrachm, with [ʒ]*rtḫš*[*šš*] *pr-*ʿʒ (Artaxerxes, Pharaoh) in Demotic, *c.*.343-32BC (BM 1953.1013.1)



Obv.



Rev.

Fig. 4.12 | Imitation Athenian Tetradrachm with סויך (Sabakes) in Aramaic, *c.*340-33BC (ANS 1944.100.75462)



Obv.



Rev.

Fig. 4.13 | Bronze fractional coinage with סויך (Sabakes) in Aramaic, *c.* 338-33BC (ANS 1944.100.75464)



Obv.



Rev.

Fig. 4.14 | Bronze fractional coinage with מזדך (Mazakes) in Aramaic, *c.*333-320BC (ANS 1944.100.75465)

Aramaic (ANS 1944.100.75462 [fig. 4.12], Cab.Med. 1973.1.190) legends.[574] The issues were large: for Sabakes' tetradrachms, eleven Obverse and twenty-five Reverse dies are traceable, though displaying conformity of style.[575] Additionally, both Sabakes (ANS 1944.100.75464 [fig. 4.13])[576] and Mazakes (ANS 1944.100.75465 [fig. 4.14]) minted fractional bronze issues.[577] The certain bronzes of Sabakes[578] and Mazakes[579] were both apparently acquired in Egypt, though the galley on the latter's reverse is a Sidonian motif

[574] Newell (1938:62-75), Nicolet-Pierre (1979).
[575] Nicolet-Pierre (1979:223-5).
[576] Another bronze type attributed to Sabakes by Nicolet-Pierre (1979:228), depicting obv. a 'satrapal head' and rev. an archer may be later: while I was unable to examine the reverse of the Paris example (Cab.Med. Y28449), the damaged reverse of the extant London example (BM G.798) seems to me to read מזדך, 'Mazakes', as the catalogue states, rather than סויך, 'Sabakes'. Another example, CNG 251 [2011] Lot. 179, has an off-flan inscription showing only the terminal *kāp* shared by both names.
[577] Howgego (1995:9), Muhs (2005:5-6), who ignores the Sabakes issues, Winzer (2005:48-9); the bronzes are not mentioned at all in, e.g., Kraay (1976:295-6).
[578] Newell (1938:66) reports the coin was first sold 'in an old piece of paper marked "Myt-Rahineh"'; hardly reliable provenance.
[579] *ibid*:73.

(e.g., ANS 1969.157.16).[580] Without context, we cannot guarantee that these bronzes circulated in Egypt: while Sabakes is only known from his Egyptian satrapy, during which he died at Issos (Arr. *Anab.* 2.11.8), Mazakes may have been satrap in Mesopotamia afterwards.[581] If they are genuinely Egyptian, then these fractional bronzes indicate a fiat-currency circulation, probably confined to a few localities or populations. Unfortunately, more cannot be said unless new finds improve the picture.

4.4 | Ptolemaic Coinage and Egyptian Society

Despite the understandable zeal of some numismatists and coin-dealers to identify (especially bronze) mintages as Pharaonic, the evidence, besides that of imitation Athenian tetradrachms and the *nfr-nb* coinage, is concerningly thin. Nonetheless, Egypt's pre-Ptolemaic coinage, though restricted in its circulation,[582] laid the groundwork for the eventual monetization of much of the Egyptian economy.[583] Egyptians were predisposed to monetary thinking, thanks to their long-standing habit of measuring goods against fixed values of other commodities (§4.3.2),[584] and to the complex semiotics of ancient Egyptian life.[585] But appropriate modes of thinking are not sufficient for monetization: it requires a series of formal and informal institutions,[586] re-framing the individual-state relationship[587] and superseding pre-coinage moneys;[588] institutions not needed in Egypt before

[580] *ibid*:75, Elayi and Elayi (1992), Betlyon (2019:387).
[581] Mitchiner (1975:7), le Rider (2003:217).
[582] Muhs (2005:4-5).
[583] *cf.* Howgego (1995:53), Manning (2010:130). In this chapter, monetization refers to the introduction of coinage for all money-functions (§4.2.2); we should nonetheless recognize that the pre-coinage Egypt was part-monetized: *cf.* von Reden (2010:18, 43).
[584] Kemp (2006:319-26).
[585] Egyptians were especially attuned to complex semiosis, in ritual (Assmann, 1992a), art (Angenot, 2015), and their multi-symbolic hieroglyphic script. On the adaptivity of Egyptian semiotics, *cf.* Goldwasser (1992:447-8).
[586] Manning (2005:8), von Reden (2007:5); *cf.* Bresson (2016a:271-4). Among these institutions was the Hellenistic model of Kingship: §5.1.5, *cf.* Préaux (1978:280-1).
[587] Manning (2010:140-52).
[588] von Reden (2007:3).

Alexander's conquest.[589] 'Monetization' thus reductively describes a process which actually took three centuries[590] and only ever applied very unevenly across Egypt's vast territory.[591] It is often presumed that, even in the Ptolemaic Period, the permeation of coinage among native Egyptian structures was modest,[592] and even that it distinguished parallel Greek and native economies.[593] This is an exaggeration; the Ptolemies actively promoted monetization, especially among native elites,[594] but also in the village economy,[595] though the supply of coin was never sufficient to meet the various demands of taxation.[596] The division was rather between the city and the countryside, reflecting not only logistical difficulties, but also the purposes of Ptolemaic coinage: to unify the kingdom, legitimate Ptolemaic rule, and create a surplus of cash and grain.

4.4.1 | *Legitimizing the Ptolemaic State*

Ptolemy I Soter had a problem of legitimacy (§5.1.5). If we are to believe our Greek sources, Alexander was accepted almost immediately as a successor to the native Thirtieth Dynasty,[597] both through the oracular proclamation at Siwa (Arr. *Anab.* 3.3.1-4.5), and the manipulation of Egyptian memory of Persian rule.[598] Alexander's sudden death found his

[589] Bleiberg (1996:25-6).
[590] von Reden (2007:32), Colburn (2018c:105).
[591] von Reden (2019:219). Coinage failed to penetrate into Upper Egypt until rather later: Manning (2010:132), Colburn (2018c:107).
[592] e.g., Rathbone (1989:165), Manning (2006:12); despite considering Egypt 'highly monetized', Bowman (1986:90-1) recognizes the variable coin supply.
[593] *cf.* von Reden (2007:5).
[594] Muhs (2005:8).
[595] Bowman (1986:91), Rowlandson (2001:154), though *cf.* Manning (2010:135).
[596] Manning (2010:133).
[597] *cf.* Bowman (1986:22), Lloyd (2010b:86). Alexander was depicted in Egyptian style (e.g., Frankfurt St.P.565), adopted Egyptian nomenclature (e.g., Gandur FGA-ARCH-EG-0162, Met.Mus. 66.99.133; Lane-Fox, 1973:196), and was perhaps crowned at Memphis ([Kall.] 1.34.2, Merkelbach, 1954:24, Green, 1970:269, Lloyd, 2010b:87-8; Thompson, 2012:129; *contra* Badian, 1985:433, n.1, Burstein, 1991, Worthington, 2016:33). A late tradition even claimed he was fathered by Nakhthorhebyt: [Kall.] 1.7.
[598] The memory of Persian rule represented cruel conquerors who disrespected the native (especially religious) institutions: *cf.* Diod. 16.51.2, and the *Demotic Chronicle.* The Persians were, however, receptive to the indigenous cultures of their conquests, meaning a more nuanced picture is warranted: Burstein (1994), Colburn (2015).

intellectually-disabled brother,[599] Philip III Arrhidaios, installed as king in place of Alexander's yet-unborn son (Alexander IV), with the general Perdikkas as regent (Diod. 18.2.).[600] Thus, for the first years of Ptolemaic control, another legitimate Pharaoh reigned: initially Arrhidaios, and, after he came of age, Alexander IV. Both self-represented as Pharaoh (Arrhidaios: Boston 75.11A-D,[601] BM EA938; Alexander IV: Cairo CG22182)[602] and invested in Egypt's temple infrastructure.[603] Even when he ascended to the throne in his own right, Ptolemy had no familial link to Alexander with which to impress his Graeco-Macedonian subjects,[604] nor could he easily claim descent from the Egyptian gods.

To remedy the latter, Ptolemy adopted Egyptian religious practices wholesale, engaging in an impressive temple-construction programme; for the former, Ptolemy understood the propagandistic importance of coinage. He was the first *diadochos* to adapt Alexander's coinage, with imitations of his Herakles-type minted immediately in 323BC (e.g., ANS 1947.98.326 [fig. 4.15]. 1947.98-327-9; Oxford HCR23791-2), with a distinctive mintmark of Amun-Ra as a ram wearing an Egyptian dual-plumed crown (*cf.* BM EA812 [fig. 4.16]; UCL 60872; Grand Rapids 1991.1.137; Met.Mus. 10.130.556; *cf.* §3.3.3).[605] Soon, Ptolemy instigated his own mintage: coins depicting Alexander as Zeus-Ammon and wearing an elephant skin (e.g., BM 1987,0649.508 [fig. 4.17]; Cab.Med. 41757441). As well as evoking Dionysian associations,[606] the elephant's scalp evoked Alexander's Indian

[599] Plut. *Alex.* 77.5; Diod. 18.2.2; on Arrhidaios' impairment, *cf.* Prag (1990:23), Worthington (2008:175).
[600] Green (2007:24-6), Worthington (2016:72); all despite Ptolemy's apparent protests: Justin *Epitome.* 13.2.
[601] Bothmer (1952).
[602] The lunate carving is unlabelled, and perhaps deliberately ambiguous, but Alexander IV is unequivocally called Pharaoh within the text: Lloyd (2010b:90-1).
[603] Arrhidaios constructed a barque-shrine at Karnak (Bothmer, 1952; Blyth, 2006:225-7), and embellished the temple at Kom Ombo (*cf.* MoA, 2017). Alexander IV made improvements at Elephantine (Minas-Nerpel, 2018:147-8) and Sebennytos (Arnold, 1999:141).
[604] Lianou (2010:125); though, a late tradition claims that Ptolemy was fathered by Philip II, and survived exposure prompted by the wrath of Lagos: Curt. 9.8.22; Paus. 1.6.2; Ael. fr. 285. Collins (1997:436), Lianou (2010:128), Worthington (2016:9).
[605] Zervos (1974:292-300), le Rider (2003:255-8), Sheedy and Ockinga (2015). A mint was established at Memphis *c.*326/5BC, but its output was initially low: von Reden (2019:220).
[606] Pollitt (1986:28).




Obv. **Rev.**

Fig. 4.15 | Silver Tetradrachm of Alexander the Great minted in Memphis, *c.*332-20BC (ANS 1947.98.326)




Fig. 4.16 | *Left*: Ram's-head mintmark, *c.*332-20BC (detail of ANS 1947.98.326); *Right*: ram-headed Amun from a Stela, *c.*1292-1077BC (detail of BM EA812)




Obv. **Rev.**

Fig. 4.17 | Silver Tetradrachm of Ptolemy I Soter, depicting the deified Alexander in an elephant skin, *c.*323-312BC (BM 1987,0649.508)




Obv. **Rev.**

Fig. 4.18 | Silver Tetradrachm of Ptolemy I Soter, with ΑΛΕΞΑΝΔΡΟΝ/ΠΤΟΛΕΜΑΙΟΥ reverse, 312-11BC (Münzkab. 18203059)

campaign. Ptolemy was no great general; his service was as one of Alexander's bodyguards, and his military exploits before becoming satrap or King-Pharaoh were limited. It is only in Afghanistan and India that Ptolemy could plausibly claim command pedigree. There, he led contingents in the defeat and capture of Bessos (Diod. 17.83.7-9; Arr. *Anab.* 3.29.6-30.5),[607] and against the Aspasians (Ptolemy *FrGrHist.* 138 F18 [*apud.* Arr. *Anab.* 4.24.3-4]),[608] as well as being heroically wounded in combat (with a poisoned arrow, conveniently cured by Alexander: Diod. 17.103.3-8; Curt. 9.8.21-8; Just. 12.10.3; Cic. *de Div.* 2.135).[609] By presenting Alexander as a Herakles-like vanquisher of elephants,[610] and therefore

[607] Worthington (2016:46).
[608] Here, Ptolemy relates his own personal bravery in Homeric terms: Worthington (2016:54-5).
[609] Ellis (1994:10-13); this episode is conspicuous by its absence from Arrian: Worthington (2016:63, n.32). *cf.* Welles (1963:115).
[610] This recalled the coins of Philip II, who emphasized his Heraklid lineage through portraying the lion-scalp wearing hero on the obverse of his didrachms (e.g., ANS 1944.107.1): *cf.* Thonemann (2015:10).

conqueror of India,[611] on his coins, Ptolemy drew attention to his own military credentials.[612] This association was synched with an issue where ΑΛΕΞΑΝΔΡΕΙΟΝ and ΠΤΟΛΕΜΑΙΟΥ had equal billing (e.g., Münzkab. 1884/99, fig. 4.18), and the first issue with Ptolemy's portrait, a gold stater whose Reverse depicted Alexander on an elephant-drawn chariot (e.g., ANS 1997.9.69, fig. 4.19).[613]

Ptolemy's portrait soon replaced Alexander's even on the silver and new bronze coinages, and the Conqueror was replaced on the reverse by the distinctive Ptolemaic eagle-and- thunderbolt.[614] But, despite Ptolemy's distinctive hooked nose and prominent chin,[615] his depiction strongly resembles Argead portraiture (e.g., Philip II: Yale 2016.94.7, fig. 4.20), with unruly hair, youthful looks,[616] and a royal band-diadem.[617] Depicting a living monarch on coinage was a remarkable innovation: not only was Ptolemy represented as the living god-king through traditional Egyptian art-forms (e.g., BM EA1641), he appeared as godlike to his Hellenic subjects, not through borrowing divine attributes (e.g., the horns of Zeus-Ammon), but in his own right, manipulating the existing semiotics of Greek coinage,[618] to reconcile Pharaonic and Hellenistic Kingship. This portrait, and claims of divinity, survived onto later Ptolemaic coinages.[619] The claims were made explicit by Ptolemy II Philadelphos, in joint coins with his sister-wife Arsinoë II, bearing the

[611] On the association of elephants and India, *cf.* Maritz (2004:41), Schneider (2009:325), Iossif and Lorber (2010:156), Meeus (2014:280-1), Worthington (2016:107). In ancient times, the conquest of even part of India was unparalleled; resultantly elephant iconography took on a personal association with Alexander and thence with Alexandria and Africa: Maritz (2004).
[612] Faulkner (1953:42).
[613] Zervos (1967:9), von Reden (2007:39), Lorber (2012:33), Thonemann (2015:19).
[614] Lorber (2012:33-4).
[615] On Ptolemy's image, *cf.* Worthington (2016:14-15). While Greek artists were hesitant to adopt Egyptian styles, this 'official' Greek image of Ptolemy seems to have influenced Egyptian representations (Stanwick, 2002:11; Ashton, 2010:977). Nevertheless, Ptolemy's coin portraits show the benevolent smile characteristic of the Egyptian canon (Worthington, 2016:15).
[616] Despite being in his mid-fifties at the time, presuming a birth-date of *c.*367/6BC: Worthington (2016:11).
[617] Thonemann (2015:153).
[618] *cf.* Yarrow (2013:349-50), Sheedy and Ockinga (2015:199-202).
[619] Johnson (1999), von Reden (2007:54-5).




Obv. **Rev.**

Fig. 4.19 | Gold stater with a portrait of Ptolemy I, and Alexander in an elephant-drawn chariot, *c.*299-5BC (ANS 1997.9.69)




Obv. **Rev.**

Fig. 4.20 | Kolophonian gold stater of Philip III/Alexander IV, depicting Philip II, *c.*323-09BC (Yale 2016.94.7)




Obv. **Rev.**

Fig. 4.21 | Gold mnaieon depicting jugate portraits of Ptolemy II and Arsinoë II, and Ptolemy I and Berenike I, *c.*282-72BC (ANS 1977.158.112)




Obv. **Rev.**

Fig. 4.22 | Gold mnaieon depicting Ptolemy IV with the attributes of Poseidon, Helios and Zeus, 219-17BC (ANS 1997.9.178)

inscription ΑΔΕΛΦΩΝ ΘΕΩΝ (e.g., ANS 1977.158.112, fig. 4.21),[620] and reached its apogee through depictions of Ptolemy IV Philopator with multiple divine attributes (e.g., ANS 1997.9.178, fig. 4.22).[621]

4.4.2 | *The Acceptance of Coinage and the 'Hellenization' of Egypt*

Propagandistic usage of coins presupposes extensive circulation, predicated on widespread acceptance. Yet, monetizing a country as vast as Egypt was problematic, and the acceptability of money in exchange remained uneven.[622] The particular difficulties of

[620] von Reden (2007:50-2), Thonemann (2015:151). These mintages reflect substantial monetary reform: von Reden (2007:50).
[621] Johnson (1999), Thonemann (2015:156).
[622] Unlike highly monetized economies, where money displaces substitutes (Handa, 2000:208-9), alternatives including bullion, material goods, and grain were widespread.

monetizing cereal agriculture encouraged the view of Egypt as a 'binary economy',[623] though this overplays the contrast. Through enforcing cash-payment for some taxes, the Ptolemies ensured that coin circulated widely, even at a low level.[624] While it is possible, accepting some ancient reports ([Arist.] *Oik.* 1351a6-12), that previous Pharaohs extracted wealth directly from their wealthier subjects during economic crises,[625] this was never in coin, and in-kind payment or *corvée* labour remained the norm.[626] Kleomenes of Naukratis perhaps insisted on cash-taxes paid on grain sales by nomarchs and certain others ([Arist.] *Oik.* 1352a19-23, b25-6), though this hardly spread coinage among the population at-large.[627] For the Ptolemies,[628] conversely, taxation extended the use of coinage throughout their new realm,[629] not merely for propaganda, but to raise revenue, unify their diverse subjects,[630] and assimilate Egypt into the wider Hellenic economy.[631]

Taxation represented the only contact most Egyptians had with the money economy.[632] These taxes were predominantly recirculated within the communities in which they were collected, owing to the costs of transporting coin to Alexandria, embedding the use of money for local government functions. From the beginning, Ptolemaic coinage was trimetallic, with issues in gold, silver and bronze.[633] Bronzes were better suited to everyday use (a silver tetradrachm, Ptolemy's most numerous coin, could

[623] *cf.* Migeotte (2009:124-5), von Reden (2007:16, 299).
[624] *cf.* Muhs (2005:3-8), von Reden (2007:299), Colburn (2018c:109).
[625] Muhs (2005:4), Clarysse and Thompson (2006:14-15).
[626] The Ptolemies continued harvest taxes: Muhs (2005:1). 'Money taxes' could be valued in $qd.t$ of silver, in the Persian Period (e.g., *P.Cair.Dem.* III 50062a; Muhs, 2005:4), though they were not necessarily paid in coin.
[627] *cf.* von Reden (2019:220). This demonstrates the cash exploitation of the agrarian economy: Muhs (2005:7).
[628] There is little evidence for Ptolemy I's economic policies: Worthington (2016:192), Monson (2019:148-9), von Reden (2019:220).
[629] Muhs (2005:7), von Reden (2007:299), Monson (2019:149).
[630] Manning (2006:11-12). Mints rivalled decentralized temple power-structures: Colburn (2018c:107-9).
[631] *cf.* Worthington (2016:194).
[632] von Reden (2007:65); *cf.* Manning (2003a:233). The contemporary Demotic word for tax, $ḥḏ$ (*cf.* Muhs, 2005:6), literally means 'silver' (*DLE s.v.* $ḥḏ$).
[633] All three to prefigured earlier in the fourth century: §4.3.3.

buy nearly a week's grain for our model ancient family [§1.2.5]),[634] as demonstrated by the archaeological record: they mostly occur individually rather than in hoards,[635] implying more regular use. Similarly, the gold coinage was only useful for large (often state) payments, as a unit of account,[636] or as a store of value.[637] Thus, the trimetallic coinage operated increasingly as separate currencies, a situation compounded by the ἀλλαγή (an *agio*, up to 10.45%)[638] charged on the exchange of bronze into silver, effectively devaluing the bronze coinage by that amount.[639] By the death of Ptolemy IV Philopator, the links between the silver and bronze standards were severed completely.[640]

4.4.3 | *Coinage Standards, Closed Currencies and Athenian Trade*

This revolutionary bronze coinage[641] was of little interest to traders outside Ptolemy's kingdom, since the coins had negligible inherent value. Their interest was in gold and silver coins, in which significant transactions might be made, and which (as commodities themselves) maintained something of their value abroad. Initially, like the other *diadochoi*, Ptolemy minted tetradrachms on the Attic weight standard (17.28g by Alexander's reign);[642] in doing so, whether wittingly or not,[643] Ptolemy reduced the transaction costs which beleaguered Atheno-Ptolemaic trade: Athenians no longer needed

[634] *cf.* von Reden (2007:40).
[635] Muhs (2005:8).
[636] Cuvigny (2003:111-13).
[637] von Reden (2007:48-9). Notably, the coins used to promote Ptolemaic divinity were often gold (von Reden, 2007:48-56), perhaps reflecting the Egyptian association between gold and the flesh of the gods (*AEL* 2:55, Teeter, 2000:155; hence its use for funerary facemasks: Cairo JE60672, JE85913, JE86063).
[638] Or 2½ obols per tetradrachm (χαλκοῦ εἰς κ̄σ̄ς): von Reden (2007:114), Clarysse and Thompson (2009:232-3).
[639] Mental Accounting heuristics (§4.2.2) reveal that stringent enforcement of the ἀλλαγή would lead Egyptians to think of the bronze coinage as approximately 10% less valuable than silver.
[640] Manning (2006:8), von Reden (2007:72-5), Hayden (2018:70-4). Reekmans (1951:67-8) first noted this change as a doubling of prices in the papyri, proposing that it stemmed from a change in the bronze standard, alongside a shift towards bronze for accounting (Reekmans, 1948:17-23). Others suggest a debasement of the silver standard (Gara, 1984:134), a standardization of accounting (Hazzard, 1995:83), or a response to the economic crisis accompanying Ptolemy IV's succession (Maresch, 1996:1-18).
[641] *cf.* von Reden (2007:301).
[642] Mørkholm (1991:8), Lorber (2005:45).
[643] The role of weight standards in trade promotion is not uncontroversial: Psoma (2016:90-1).

costly exchange calculations; any shortfall in supply of Ptolemaic tetradrachms could be easily overcome, by substituting equivalent Athenian tetradrachms;[644] acceptance of Athenian tetradrachms by Egyptians was assured; and, once back in Athens, merchants could dispose of excess Ptolemaic currency. But, shortly after his coronation as King-Pharaoh, Ptolemy broke with his rivals, abandoning the Attic standard in favour of the 'Rhodian' (15.60g)[645] Certainly, this was a statement of political independence: as the Athenians had themselves realized (*IG* I^3 1453),[646] enforced weight standards could be important forms of imperial control. But this was also a step towards shielding Egypt's monetary system from external influence: within twenty years of enforcing this reduced standard, another reduction was made, to a new 'Phoenician' or 'Ptolemaic' standard (14.20g). Traders arriving in Ptolemaic territory were required to exchange their currency for Ptolemaic, and paid a sizeable tax for the privilege. Metallurgical analysis reveals that some foreign coins acquired by these means were reminted into Ptolemaic currency,[647] implying that this was a significant source of precious metals for the Ptolemies.[648] Some suggest that the mint official Demetrios' complaint, that nobody was available in Alexandria to assay foreign currency (*P.Cair.Zen.* 1 59021), demonstrates an interest in the fineness of foreign currency.[649] His letter explicitly mentions 'precise' (άκριβὲς; i.e., fine) coins, distinguishing them from *fourrée* or debased coins.[650] But there were advantages to the closed currency. Modern local currencies,[651] such as the Wörgl '*Freigeld*',[652] increase

[644] Shortfalls were commonplace: Reekmans (1993:206, n.31), Sargent and Velde (2000:131), le Rider and de Callataÿ (2006:143), von Reden (2007:47-8, 298), Bresson (2015:119-20).
[645] Hill (1940:180). The identification of this standard as Rhodian is probably in error: Emmons (1954:71).
[646] Mattingly (1996:51-2), Rhodes (2006:176-7). For an optimistic economic interpretation, *cf.* Ellithorpe (2019).
[647] Duyrat and Olivier (2010:86, fig. 5), Olivier and Lorber (2013:119-22).
[648] Ptolemaic currency was especially pure (98.20-98.75%; Bresson, 2015:126, n.17), so, despite the lighter standard, the mint required plenty of precious metals.
[649] Bagnall and Derow (1994:163).
[650] le Rider (1998b), Bresson (2015:126).
[651] This comparison is imperfect: local currencies complement national currencies, often employing demurrage to encourage circulation, but restricted acceptance offers similar advantages.
[652] Blanc (1998:475-7), Barinaga (2020).

the velocity with which money circulates in their region,[653] and reduces the disappearance of locally-spent money into the wider economy (the 'local multiplier effect').[654] The closed system, then, would have encouraged monetization and increased the revenues available to the state, both objectives of the Ptolemaic regime. As the most reliable producers of grain, there were few alternatives open to merchants, some of which maintained closed systems (e.g., Olbia, *Syll.* 3.218),[655] so the process was unlikely to damage Egyptian trade prospects.

4.5 | Conclusion: Money, Morality and Atheno-Egyptian Trade

Reciprocally moral behaviour is fundamental to economic transactions, reducing the costs of searching, bargaining and enforcing agreements,[656] a compromise between desired outcomes that promotes a 'least-worst-case scenario',[657] reducing the informational asymmetries between participants in a transaction. We have demonstrated the overlap in Greek and Egyptian moral thinking, intensely focussed on fairness in transactions. However, their conceptions of value were fundamentally different. Whereas for the Greeks, fairness was arbitrated by the community, for Egyptians it was an external moral ideal. The gap was widened with the invention of coined money, which fundamentally impacted Greek moral thinking. Yet, as in other areas, the fourth century saw the gradual adoption of coinage in Egypt, and perhaps too the beginnings of the concomitant change in thinking that precipitated. By Alexander's conquest, then, the foundations were laid for the Hellenization of Egyptian thinking on value and values, opening the Egyptian economy to outside influence.

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[653] NEF (2015:110); *cf.* Blanc (1998:476).
[654] Crawford (2011), Johnson and Harvey-Wilson (2017:3).
[655] Seaford (2004:141-2), Bresson (2015:139). Other grain-exporters, Cyprus or Kyrene, were Ptolemaic territories anyway.
[656] Platteau (1994a:535-7), Karayiannis and Hatzis (2012:625).
[657] From an evolutionary perspective, *cf.* Dawkins (1976:90-1, 180).

CHAPTER 5
Stifling and Aiding Trade: Cultures of Diplomacy, Justice and Administration

If compatible notions of moral and economic value lead to mutually beneficial outcomes,[1] then it is in the interest of transacting parties to observe them.[2] Nonetheless, participants will sometimes see individual advantage in flouting these conventions. Traditionally, public shame (αίδώς) helped to ensure social conformity:[3] if he was, in fact, real, Hermaios the fishmonger was unlikely to cheat his customers again after his humiliation in the theatre, besides the fact of damage to his 'brand' (§4.1.6) hurting his purse. But shame is often insufficient to outweigh selfish advantage; instead, the state must limit the autonomous decision-making of individuals.[4] In our own era, the state has an unprecedented interest in the lives of its citizens,[5] regulating most spheres of human interaction. This was emphatically untrue of the ancient state, whose effective scope for intervention was limited.[6] A pessimistic view is commonly held of pre-Roman jurisprudence in both Athens[7] and Egypt.[8] In neither case was special training required to prosecute, defend or pass judgement: Athenian jurists were amateurs, with only orators maintaining a professional interest in legal matters;[9] in Egypt, village elders, priests and

[1] Chiotis (2015:188).
[2] Klein and Leffler's (1981:616) 'non-governmental repeat-purchase contract-enforcement mechanism'.
[3] Karayiannis and Hatzis (2012:624). On ancient 'Shame Cultures', *cf.* Horden and Purcell (2000, esp. 508), Konstan (2003).
[4] This is the 'coercive' or 'positivistic' definition of law: Kelsen (1949: 63), Hoebel (1954:26-8), Akers (1965:302); for criticism, *cf.* Gibbs (1968:430-42). Law's role in imposing 'order' (τάξις), restraining immorality, was central to Aristotle's political community (Arist. *Pol.* 1253a32-40; Cohen, 1995:37-8).
[5] The UK Parliament, for example, passed 1,370 Acts and 65,723 Statutory Instruments between 1987 and 2019 (Loft, 2019:4-9).
[6] *cf.* Lanni (2016:1).
[7] Todd (1993:3-4), Harris (1994:130-1), Johnstone (1999:1-2), Lanni (2004:277-8); *cf.* Cohen (1995:183-95).
[8] *cf.* Theodorides (1971:291). Contrast Manning's (2012) more positive view.
[9] Todd (1993:77-8), Lanni (2012:120-1). The courts were nonetheless oath-bound to uphold the law, and jury-pay probably encouraged a recurring faction of jurors who thereby gained legal experience: Harris (1994:137), *cf.* Ar. *Vesp.* 655-65.

pharaonic officials were called upon to form *ad hoc* panels of judges.[10] Similarly, neither the Greek νόμος[11] nor the Egyptian *hp*[12] linguistically distinguishes laws from customs or habitual practices. For this reason, we shall treat commercial law alongside other state interventions impacting the Atheno-Egyptian grain trade.

Alongside war, maritime trade[13] was foremost among the ancient state's legislative, diplomatic and administrative priorities. But while law and legal process were fundamental transaction costs,[14] they were not the only administrative trade-barriers in antiquity. If anything constituted a 'trade agreement' before modern times, it was a diplomatic arrangement satisfying the security requirements of trade.[15] War, which was presumed unless peaceful contact was specifically arranged,[16] piracy,[17] rogue states and self-help[18] weighed heavily on traders, while the hinterlands where they operated were often as dangerous as the sea itself.[19] These agreements were the product of diplomacy, hampered by cultural incompatibility. It is hard to imagine two more distinct governmental cultures than those of Athens, the ancient world's arch-democracy, and Egypt, ruled by its oldest and grandest monarchy. This incompatibility brought complexities unlikely to befall similarly-governed states, reducing their chance of concluding a mutually beneficial trading agreement.[20] Even the most innocuous modern borders constitute formidable trade barriers, reducing flows across them by up to twenty

[10] Theodorides (1971:311-13); Muhs (2015:82-3; 2016:178-9). Theodorides (1971:311) nonetheless proposes 'specialist scribes' with recurring interests in legal matters.
[11] LSJ *s.v.* νόμος.
[12] Lorton (1986:58), van den Boorn (1988:167-8), Lippert (2012a:2).
[13] On the administrative distinction between maritime and landed trade, *cf.* Cohen (2005:290-2).
[14] On the design of law as a transaction cost, *cf.* Almlöf and Bjuggren (2019).
[15] Polanyi (1963: 30); *cf.* Bresson (2016a:303).
[16] Hasebroek (1933:118), *cf.* Ma (2000:110)
[17] de Souza (1995:190).
[18] *cf.* de Souza (1995:182-3), Bresson (2016a:418).
[19] Revere (1957:42).
[20] Empirical studies of modern American trade demonstrate the importance of 'a shared basic political philosophy and foreign policy aims' to the ability to conclude trade agreements: Dixon and Moon (1993:20-1).

times.[21] Only through diplomacy, jurisdictional conformity,[22] and the reduction of tariffs and institutional barriers,[23] could Athenians and Egyptians ameliorate these frictions.

5.1 | King-Demos, Democracy, Monarchy and Authority

Prominently positioned in the Athenian *agora*, at the heart of the *polis*, stood the statues of the Tyrannicides, Harmodios and Aristogeiton (*cf.* Paus. 1.8.5).[24] They were perhaps the first mortals depicted in public sculpture in Greece (Plin. *HN.* 34.17; *cf.* Dem. 20.70);[25] after Xerxes sacked Athens, and looted the original bronzes (Arr. *Anab.* 3.16.7-8, 7.19.1-2; Paus. 1.8.5; Plin. *HN.* 34.70),[26] their distinctive marble replacements[27] became symbolic of Athens, depicted on vases (BM B605, Würzburg L515),[28] coins (ANS 1944.100.42712), and the theatre-seat known as the Elgin Throne (Malibu 74.AA.12). That their actions did not end the Peisistratid tyranny, or even Hippias' reign (Hdt. 6.123.2; Thuc. 6.53.3), is immaterial:[29] the Athenian state was founded upon rejecting tyranny,[30] and so maintained an irrepressibly dim view of one-man rule (μοναρχία; §5.1.1).[31] But monarchy, not democracy, was the dominant constitution in the Ancient Mediterranean, and was hardly unusual among Greek *poleis*.[32]

[21] For the US-Canadian border: Venables (2006:741).
[22] *cf.* Olson (1982:118-20).
[23] Grant (2000:416).
[24] Thompson and Wycherley (1972:157-8).
[25] Mattusch (1982:23).
[26] Ober (2003:217). The theft, and repatriation, of the originals fits conveniently with Alexander's narrative as the restorer of Hellenic culture, leading a minority of scholars to question its historicity (Müller, 2016).
[27] Roman copies survive (Naples 6009-10), alongside an apparent Roman plaster-cast of the original Aristogeiton (Baia 174.479; Richter, 1970:296-7; Mattusch, 1982:26).
[28] Shefton (1960).
[29] A later popular tradition that made Hipparchos the tyrant (Athen. *Deip.* 695a-b; *MP.* ep. 45; [Plat.] *Hipp.* 228b) is discounted by Thucydides (6.54.2); *cf.* Taylor (1981:70-1), Raaflaub (2003:65-6), Harding (2008:92, 96).
[30] Braund (2002:109), Kallet (2003:117). On the Tyrannicides as role-models for democratic Athenians, *cf.* Aisch. 1.132, Plat. *Symp.* 182c, Arist. *Rhet.* 1398a.
[31] Davie (1979:160).
[32] According to Hansen's (2004:84) analysis, of known fourth-century constitutions, 59 were democratic, 47 oligarchic, and 39 monarchic.

The statue-group of the Tyrannicides is readily contrasted with the colossi of Ramses II which confronted the Greek troops at Abu Simbel (M&L 7). While already centuries old, to Greeks – approaching the sculptures devoid of context – they powerfully expressed the potency of Egyptian kingship:[33] at *c.*20.00m tall, they far overshadowed the largest contemporary Greek sculpture, Phidias' Zeus at Olympia (13.36m).[34] Colossal sculpture was equally vital in Saïte propaganda, as evidenced by a recently-discovered *c.*11.00m fragmentary statue of Psamtik I,[35] though few examples survive, and the revivalist style of Saïte art[36] has frequently led to misidentification.[37] The contrast with the Tyrannicides group is clear. Those statues reminded decision-makers of the risks of individual accumulation of power.[38] In Egypt, colossal images of both reigning and past pharaohs, often (as in the case of Abu Simbel) on the kingdom's borders, expressed pharaonic power, delimited his domain, and reaffirmed his position at the apex of Egypt's political, military, cultural, religious, economic and social life.[39] This difference was not, however, merely ideological.

Pre-Ptolemaic Egyptian opinions of Athenian democracy are unknown. For the Athenians, however, monarchy was not merely alternative, but antithetical to democratic interests;[40] the subjects of a monarch were portrayed as unfree (*cf.* Solon's expression μονάρχου [...] δουλοσύνην, 'slavery to a monarch' [fr. 9.3-4 West]; also Eur. *Hel.* 276), and therefore slavish by nature.[41] The Persians, especially, were considered effeminate,

[33] *cf.* Simpson (1982:266).
[34] Lapatin (2001:81). Greek competitive emulation made the size and expense of similarly-conceived monuments integral to their prestige (Renfrew, 1986: 11-13; Hartog, 1988:230-7; *cf.* Snodgrass, 1986:56). The chryselephantine Olympian Zeus itself responded to Athena Parthenos (Taraporewalla, 2011:33-4).
[35] BBC (2017), Youssef (2017), Betrò (2018:171).
[36] Wilson (2010:253-5).
[37] *cf.* el-Aref (2017), Treviňo (2018).
[38] Hölscher (1998:160, 181). On the tyrannicide paradigm, *cf.* Scanlon (1987:294), Nemetz-Carlson (2012:27).
[39] Simpson (1982:266-7, 271).
[40] Braund (2002:104).
[41] Brock (2004:210); the argument worked both ways: Braund (2002:107).

luxuriant (i.e., incapable of self-mastery), and submissive (§4.1.5); their Great King, conversely, was portrayed by sixth- and fifth-century authors as the 'master' (δεσπότης) of the Persians (Hdt. 3.34.2, 7.5.2;[42] Aisch. *Pers.* 666), who were his slaves (δοῦλοι: Hdt. 8.102.2; *cf.* Aisch. *Pers.* 241-2).[43] Even Ahmose II, despite his favourable presentation in Herodotos, 'induced the Egyptians to agree to be slaves' (προσηγάγετο τοὺς Αἰγυπτίους ὥστε δικαιοῦν δουλεύειν: Hdt. 2.172.5).[44] We might assume that, added to their dim view of Egyptian manliness (ἀνδρεία)[45] and freedom (ἐλευθερία), Athenians were unlikely to respect the complex protocols of Pharaoh's court,[46] while the Egyptians never adapted to the Greek diplomacy of institutions, relying instead on a Near Eastern diplomacy of individuals (§5.1.2).

5.1.1 | *Competing Ideals of Kingship: the Athenian View*

Ancient Greek thought was characterized by dichotomies (*cf.* Arist. *Metaph.* 986a21-5);[47] the simultaneous democracy-monarchy and freedom-slavery oppositions were especially anxiety-provoking for Athenians. The intolerable condition of servility was always precariously close. Despite Aristotle's claims of biologically-inherent 'Natural Slavery' (*cf. Pol.* 1254b16-20, 1254b24-6),[48] even he recognized that slaves were physically indistinguishable from citizens and *metics* (*Pol.* 1254b27-34; *cf.* [Xen.] *Ath.Pol.* 1.10).[49]

[42] In both cases, high-ranking Persians themselves use the term.
[43] Munson (1988:95), Mitchell (2006b:179).
[44] Brock (2004:210).
[45] Herodotos (3.12.1) attempts to rehabilitate Egyptian manliness, at least relative to the Persians, through his anecdote extolling their robust skulls; *cf.* Thomas (2000:31-2).
[46] *cf.* Egypt's complex palace architecture, designed to accommodate these rituals (O'Connor, 1995:264-5). Flouting diplomatic protocols has concrete consequences: *cf.* the impact on Sino-British trade of George Macartney's refusal to *kow-tow* (磕头) to the Qianlong Emperor (Hevia, 1995:79-80).
[47] Rosivach (1999:140). The idea is especially associated with Anaximander (*cf.* Arist. *Phys.* 204b27-9) and Pythagoras: *cf.* Vamvacas (2009:37-8, 71). On Platonic dichotomies, *cf.* Franklin (2011).
[48] Calvert (1987:368). Aristotle probably did not originate the theory (*cf.* Garnsey, 1996:12-13; Cambiano, 1987:29). Vlassopoulos (2011:116) suggests that it was a minority opinion in its own time. For some Greeks tyranny was a two-way process: to rule, others must have submitted (*cf.* Thuc. 4.61.5). Aristotle concludes that the act of yielding resulted from a defect of nature.
[49] Vlassopoulos (2011:126). On racist dehumanization in other slave systems, *cf.* Engerman (2020:325).

While Athenians stereotyped red-haired Thracians and effeminate Phrygians as slavish,[50] only perhaps 70% of slaves were barbarians.[51] Given that victors could do as they pleased with war-captives (Arist. *Pol.* 1255a6-7),[52] and most Greek conflicts were intra-Hellenic,[53] it was not just naturally-submissive barbarians at risk of monarchic domination: one need not be 'slavish' to be a slave. It is in this context that the statues of the Tyrannicides, reminders of Athens' painful monarchic past, should be read.

The ever-threatening spectre of monarchy persisted in sixth- and fifth-century Athenian discourse. At this formative stage of Athenian democracy, monarchy and tyranny were poorly differentiated, sharing an interchangeable vocabulary:[54] while originally a neutral term for single rulers with powers beyond the constitutional norms of the *polis* (Archil. fr. 19 West),[55] by the time of Alkman and Solon τύραννος became a derisive term,[56] referring to any ruler who ruled unconstitutionally without legal constraint (Arist. *Pol* 1295a19-23).[57] In Athenian usage, τύραννος need not even refer to an individual, with oligarchy and tyranny conflated in democratic fears (Thuc. 6.60.1; Andok. 1.96-8; Isok. 16.36-8),[58] while the oligarchy of 404-3BC became the 'Thirty Tyrants' (οἱ τριάκοντα τύραννοι: Arist. *Rhet.* 1401a; Diod. 14.2.1; *cf.* Lys. 2.59; Xen. *Hell.* 2.3.16, 2.4.1, 3.5.133, 6.3.8),[59] not because of a specific legal definition of tyranny, but because they shared negative characteristics with the stereotype.[60]

[50] Hall (1989:110) stresses the equivalence of Θρᾷξ and δοῦλος in, e.g., Euripides. Two of six comic masks depicting slaves were red-haired (Webster, 1949:103), though free characters could also have 'red-ish' hair (Webster, 1949:110).
[51] Estimated from grave stelae: Hall (1989:196 n.114).
[52] Cambiano (1987:30).
[53] Garlan (1987:16-17).
[54] Andrewes (1956:27), Braund (2002:108); *cf*. Lewis (2009:10).
[55] Davie (1979:160), Lewis (2009:7).
[56] Graham (2017:3).
[57] Robinson (1936:68), Graham (2017:2-3).
[58] Mitchell (2006b:178).
[59] On the use of the term, see Krentz (1982:16, n.2).
[60] The 'tyranny' of the thirty was imposed by Lysander (Xen. *Hell.* 2.3.1-3), and characterized by 'lawlessness' (ἀνομία), such that the Athenians later erased them from the official magistrate-lists (*cf.* Xen. *Hell.* 2.3.1; Loraux, 2001:256), and violence (Wolpert, 2006:213-14); *cf.* Scanlon (1987:287-8).

Tyranny, then, was anti-democracy, characterized by self-interest (Thuc. 1.17.1), even profit-seeking (Eur. *Suppl.* 409-25), at the expense of the community.[61] Just as the *polis*-community legitimized social and economic value (§4.1), it similarly legitimized justice and governance. Where the tension between individual and community was resolved in favour of the former, this was (to Athenians) tyranny;[62] within the community, an individual persuades, while without it he commands.[63] This view is naturally Athenocentric: Pindar, for example, did not find the monarchs he celebrated morally objectionable (*cf.* Pind. *Pyth.* 2.86-8).[64] Even Herodotos, generally hostile to one-man rule (2.172.5, 3.142.3-5, 3.143.2, 7.135.3),[65] debated the merits of monarchy. In his famous 'constitutional debate' (3.80.2-82.5), the Persian prince Darius distinguishes good monarchy from bad (3.82.1), depending on the quality of the monarch.[66] While his opponent Otanes, advocating democracy, asserts that absolute power corrupts absolutely (3.80.3),[67] Darius instead praises the stability, unity and efficiency of monarchy (3.82.2-3).[68] While Darius' views seem alien to Athenian discourse, the language of the debate, particularly Otanes' defence of democracy, are paralleled in contemporary Athenian literature and may reflect a more nuanced discourse on constitutions now lost to time.[69]

This debate preserves the origins of the increasingly prominent distinction between tyrants and other kinds of monarch.[70] Thucydides noted the contradiction that the

[61] Mitchell (2006b:179-80).
[62] While Athenian thought esteemed individual liberty, the aim was an equal share of law and political participation (ἰσονομία). For definitions of ἰσονομία, *cf.* Meier (1990:162), Ober (2008:6), Lombardini (2013:394-6).
[63] *cf.* Arendt (1958:26).
[64] Hornblower (2006a).
[65] Davie (1979:161); *cf.* Mitchell (2006b:179).
[66] Braund (2002:105).
[67] The phrasing of Dalberg-Acton (1887).
[68] Atack (2019:13). Some have proposed that Herodotos was a closet monarchist (Davie, 1979:163), or (more plausibly) drew on less hostile non-Athenian views of monarchy, evident in Heraklitos (Atack, 2019:17-19).
[69] Gould (1989:15).
[70] The genesis of this thinking appears in Herodotus: Atack (2019:16-17).

famously anti-tyrant Spartans (Thuc. 1.18.1)[71] were ruled by a hereditary diarchy (Xen. *Lak.Pol,* 15.1-9),[72] while Plato echoed Darius' arguments for a philosopher-monarch (*Resp.* 473d). By the fourth century, Isokrates could eulogize Evagoras of Salamis (9.23-4, 41-64; §5.1.3)[73] and rehabilitate the mythical Pharaoh Busiris (11.40; §5.1.2), while Xenophon fulsomely praised Cyrus (e.g., *Cyr.* 1.1.6)[74] and Agesilaos (e.g., *Ages.* 1.1). Aristotle made the distinction explicit, contrasting corrupted tyranny (τυραννίς) and true monarchy (βασιλεία: *Pol.* 1279b5). Isokrates and Aristotle followed Herodotos and Plato in presenting monarchy as the superior constitution, provided that the incumbent is of sufficient moral character (*Pol.* 1284b27-34).[75] It is unsurprising that Isokratean and Aristotelian thought should be amenable to monarchy: Aristotle spent his youth at the Macedonian court, where his father was physician to Amyntas III (DL 5.1),[76] and later escaped Athens to Assos where he married the adoptive daughter of the tyrant Hermias (DL 5.3; *Suda s.v.* Ἀριστοτέλης);[77] meanwhile, Isokrates and his school were at the centre of a web of connections between elite Athenians and foreign potentates (§5.1.3).[78]

Isokrates and Aristotle were writing at a moment of reckoning in Athenian self-definition. The Peloponnesian Wars, their traumatic aftermath,[79] and the long post-war recovery, encouraged the creation of the Atthidographic genre of local history.[80] The

[71] Braund (2002:109).
[72] *cf.* Miller (1998) and Sahlins (2011). Spartan Kings, by their austerity (Plut. *Kleo.* 13.1) and adherence to constitutional norms (Hdt. 5.75.2; Xen. *Lak.Pol.*15.7; Plut. *Lyk.* 7.2-3, 29.3), bucked the traditional perception of tyrants; nonetheless, some Greeks considered Spartans overly obedient (Plut. *Lyk.* 30.3), if not strictly servile.
[73] Isokrates *Evagoras* was probably the earliest prose encomium for a leader (Isok. 9.8; Race, 1987:131).
[74] Johnson (2005:177-8), however, identifies a more polyvalent view of Cyrus in Xenophon.
[75] Davie (1979:161-2), Miller (1998:501).
[76] Chroust (1972:367-8), Miller (1998:504-6). Ober (1998:311) notes Aristotle's polyvalent views of monarchy *versus* aristocracy.
[77] Miller (1998:508).
[78] *cf.* Moreno (2007a:175-6).
[79] The economic consequences were catastrophic: Piraeus became less attractive to tax-farmers (Andok. 1.133; *cf.* Dillon, 1987:159), and it took Persian funding to rebuild the Long Walls (Xen. *Hell.* 4.8.9; *IG* II^2 1656-7).
[80] Jacoby (1949:1), Harding (2008:1-2). The earliest example, Hellanikos' Ἀττικὴ ξυγγραφή (Thuc. 1.97.2), probably dates from 404/3BC (Jacoby, 1949:1).

simultaneous rejection of Athens' Ionian origins in favour of autochthony (*cf.* Dem. 19.261) reimagined the chthonic demigod Erechtheus (*cf.* Hom. *Il.* 2.547-8; Hdt. 8.55.1)[81] as a mortal king and heroic πρόγονος of the *demos* (Soph. *Aj.* 216; Eur. *Med.* 824, *Ion.* 1060).[82] While this move reinforced the perception of Athenian ethnic homogeneity,[83] and bolstered the democracy,[84] it also signified a shift in views of monarchy. Alongside Erechtheus, King Theseus became a paradigm of Athenian virtue, especially in the context of the theatre,[85] even appearing as a counterpoint to the Tyrannicides on the Elgin Throne (Malibu 74.AA.12). Conversely, Athenian imperialism, the unprecedented role of citizens in the Athenian courts,[86] and their readiness to be swayed by deceptive rhetoric,[87] precipitated the persistent characterization of the people themselves as δῆμος τύραννος (*cf.* Ar. *Eq.* 1111; Thuc. 1.124.3, 2.63.2; [Xen.] 1.14; Plat. *Gorg.* 466b-c; Arist. 1296a1-5),[88] further undermining the democracy-tyranny dichotomy.

5.1.2 | *Competing Ideals of Kingship: the Egyptian View*

It is unclear whether Athenians considered Egypt's Pharaoh a tyrant. Theoretically, at least, there was no limit to Pharaoh's power. He (or, exceptionally, she[89]) was the earthly incarnation (*ḥm*) of the god Horus,[90] responsible for maintaining cosmic order, and mediating between the Egyptians to their gods (§4.1.4).[91] Just as the creator-god Ptah

[81] On Erechtheus as an object of worship, *cf. IG* II^2 1357, II^2 580; Harding (2008:46-7).
[82] Rosivach (1987:306-7). This idea was prefigured in Pindar (*Isth.* 2.19, *Pyth.* 10-11).
[83] Hall (1997:54).
[84] Rosivach (1987:294).
[85] Atack (2014:347; 2019:39).
[86] Raaflaub (2003:92, n.100).
[87] Landauer (2012:186).
[88] Tuplin (1985), Braund (2002:110-12).
[89] Monges (1993:566), *cf.* Obenga (1992:168). There were perhaps six women who ruled as Pharaoh, but others ruled jointly with their husbands (or, in the case of Nefernefruaten Nefertiti, both), and were represented with equal monumentality (Lesko, 1991). While queenship was always essential to Egyptian kingship (Troy, 1986:12), coregency is mostly associated with the Ptolemies.
[90] Blumenthal (1970:23), Morris (2010:201). Pharaonic divinity is curiously absent from Greek sources: Collins (2014:841).
[91] Lloyd (2002:376), Strudwick (2005:85), Morris (2010:208), Richards (2010:56).

summoned the world into being through his utterances (BM EA498 ll. 57-8),[92] so, too, the decrees ruling Egyptian life and religion originated in Pharaoh's spoken word.[93] He was the Lord of the Two Lands (*nb tꜣwy*; *viz*. Upper and Lower Egypt), but, as 'Lord of All Lands' (*nb n ḫꜣswt nbt*), he could legitimately exert power far beyond Egypt's borders (§5.1.4).[94] Some Pharaohs were even powerful enough to take on the religious establishment, as when Akhenaten dismantled the priesthood in favour of the monotheistic Aten-cult.[95] It was perhaps this perception of rule without constraint which originated tales of the Pharaoh Busiris, who sacrificed visitors arriving in Egypt, and met his comeuppance at the hands of Herakles (Diod. 4.27.2-3; Appol. *Bibl.* 2.5.11). This myth, first recorded by Pherekydes (*FrGrHist.* 3 F17), was a popular subject for vase-painting (e.g. Cincinnati 1959.1, Vienna IV.3576), though only in Athens and Magna Graecia,[96] and comedies, with six known plays titled *Busiris*.[97] This is unsurprising: like much vase-painting, it inverts hospitality and demonizes the 'Other'.[98] But both Herodotos (2.45.1-2) and Isokrates (11.15, 40) challenged its veracity,[99] while vase depictions moved from the characteristically 'Egyptian' (bald-headed or woolly-haired, and circumcised, priests: e.g. Rome 57.912, BM E38, Oxford G270, Athens 9683 [fig. 5.1]; or even a uraeus diadem: Palermo 1986)[100] to the

[92] Breasted (1901:464), Bodine (2009:18-19).
[93] Morris (2010:208).
[94] *cf.* Wilkinson and Doyle (2017:82). Compare the Assyrian *šar kiššati* and *šar mātāti* (King of the Lands, King of the Foreign Countries) and the Persian *šāhān šāh* (King of Kings).
[95] *cf.* Frankfort (1958), Redford (2013), Assmann (2014:62-3).
[96] Livingstone (2001:87), Vasunia (2001:189-90).
[97] Livingstone (2001:77); *cf.* Blank (2013:14, n.36).
[98] Sympotic vase-painting, depicting debauchery, Otherness and *joie du vin*, provided anti-paradigms to provide moral instruction for Athenian youths: Lissarrague (1990a:11).
[99] Isokrates' work playfully inverted Polykrates' own revision of the myth, so it is questionable whether Isokrates intended to rehabilitate Busiris (Papillon, 1996), use him as a didactic device (Livingstone, 2001:1-2, 13), an offensive distraction to highlight the speech's quality over its subject (Vasunia, 2001:195-9), or a tool to attack Polykrates (Blank, 2013:16-17). Isokrates (11.9) does not consider the subject 'serious' (σπουδαῖος), but whether he means Busiris himself or the idea of encomia for myth is unclear (Papillon, 1996:20).
[100] On baldness as characteristically Egyptian, *cf.* Hdt. 2.37.2, 3.12.1; for circumcision, *cf.* Hdt. 2.37.2, McNiven (1995:11-13). The Egyptian themes in Busiris depictions are exceptional: Greek myths rarely reference their foreign settings (Honzl, 2017: 8).



Fig. 5.1 | Herakles slays Busiris and bald, circumcised Priests, a detail of an Attic Red-Figured Pelike of *c.*470BC (Athens 9683)



Fig. 5.2 | Busiris (enthroned, far right) depicted in skin-tight Persian-style body-suit, a detail of an Attic Red-Figured Kylix of *c.* 475-25BC (Berlin F2345)

vaguely 'Eastern' (Berlin F2345 [fig. 5.2]) or even Greek (Bologna 174), before disappearing altogether.[101]

If the Busiris myth implies Athenians considered Pharaohs tyrants, flouting even fundamental hospitality,[102] the reality appears very different. As god-king, Pharaoh's life was so severely proscribed by ritual and convention,[103] over three millennia old by the Saïte Period,[104] that he was powerless to exercise the freedoms enjoyed by even the meagrest Athenian citizen (*cf.* Diod. 1.70.1). Pharaoh was probably also restrained in the exercise of his powers (Diod. 1.71.1), with some modern scholarship questioning the unfettered performance of Pharaoh's whim, considering him (at least during some periods) more figurehead than active participant.[105] The degree to which Pharaohs were

[101] Spier (2018:107).
[102] As Herman (1987:31-4) points out, hospitality and institutions of 'guest-friendship' are not just Greek.
[103] Morris (2010:210-11), *cf.* Riccardo (2005:5155).
[104] *cf.* Baines (1997:127), Richards (2010:55).
[105] Baines and Yoffee (1998:224). Certainly, Pharaoh had limited ability to control Egypt's peripheral territories: Manning (2010:57).

constrained certainly fluctuated with time and the character of the incumbent;[106] in our period, both a Libyan aristocrat, the 'Great Chief of the Ma' (*wr ꜥ3 n m3*), and the High Priest of Amun at Thebes, provided alternative loci of power.[107] Herodotos' anecdote of Ahmose II's *bon vivant* lifestyle (2.173.1-4) indicates the disregard Egyptians felt for Pharaohs who failed to uphold the paradigm, exposing the tension between the divinity of his office, and the imperfect humanity of the individual.[108]

Imperfect perhaps, but the Saïtes were at least Egyptian, and could thus self-represent as restorers of order and unity after decades of irregular foreign rule and civil insurrection.[109] For Herodotos, the Egyptians could not survive without a strong centralized monarchy (οὐδένα γὰρ χρόνον οἷοί τε ἦσαν ἄνευ βασιλέος διαιτᾶσθαι: 2.147.2); Psamtik may thereby be characterized as a unifying constitutional ruler on the model of Theseus (*cf.* Thuc. 2.15.1-2),[110] achieving the Kingship through persuasion and military prowess (*cf.* Plut. *Thes.* 29.4-5).[111] The Saïtes, at least, relied heavily on advisors in the High Council (*ꜥḥꜥ ḥr*); the statues of the Vizier Harsiese (Philadelphia E16025)[112] and General Djedptahiufankh (Cairo JE36949)[113] boast of their indispensability in council, while the Elephantine Stela of Ahmose II (Aswan 19) begins with a description of the King-in-Council.[114] Beyond the legitimating practice of council consultation, Greek mythic paradigms existed for even the most exotic aspects of pharaonic rule. Pharaoh's role as guardian (or, in the Saïte case, restorer) of cosmic order (§1.2.1),[115] for example, is recalled in the magical recovery of Ithaka on Odysseus' return (Hom. *Od.* 111-14).[116]

[106] Morris (2010:211).
[107] *cf.* Agut-Labordère (2013:976).
[108] On this tension, *cf.* Strudwick (2005:85), Morris (2010:211), Wilkinson (2010:371).
[109] *cf.* Dodson (2012:169-70), Atack (2019:26-7).
[110] *cf.* Diamant (1982).
[111] Atack (2019:47).
[112] de Meulenaere (1982).
[113] de Meulenaere (1965).
[114] Ladynin (2006:47); generally, *cf.* Agut-Labordère (2013:970-2).
[115] Richards (2010:56).
[116] Atack (2019:8).

5.1.3 | *Interaction in Action: Athens and Monarchies*

Despite considering monarchy and democracy antithetical, both Greek and foreign kings could be admired by Athenians,[117] while the δῆμος τύραννος was conceived in unambiguously negative terms (§5.1.1). In fact, Athenian anti-tyrannical rhetoric often reflected worse on the submissive subjects than on the tyrant himself.[118] Nonetheless, the diplomacy between Athens and her neighbouring monarchies was sufficiently fraught that Athens' oligarchs could argue that the Great King was unable to negotiate with Athens while it was a democracy (Thuc. 8.53.2-3).[119] Given the prevalence of monarchies in the Mediterranean, however, excluding them from Athens' diplomatic network was impossible. From the fourth century, when Athens' declining imperial power increased diplomacy's prominence,[120] Athens did indeed manage fruitful longstanding diplomatic relations with monarchs, notably the Spartokids in the Bosporos and Evagoras of Salamis, utilizing well-placed Athenian citizens, and manipulating the institutions of Greek interstate discourse.

The commonality of Hellenic culture ensured that Greek states did not interact without restraint,[121] but rather in an interstate society founded on diplomatic institutions.[122] While there was never a codified international law,[123] there were what Thucydides (1.41.1) called 'the conventions of the Greeks' (οἱ Ἑλλήνων νόμοι).[124] While not enforceable,[125] these universal *nomoi* constituted Aristotle's 'natural law' (δίκαιον

[117] Braund (2002:104, 107).
[118] Connor (1977:102), Raaflaub (1984), *cf.* Kallet (2003:119).
[119] Braund (2002:103-4).
[120] Cawkwell (1981:54), Todd (1993:329), Engen (2010:10).
[121] Adcock (1924:93), Grant (1965:262).
[122] Low (2007:35-6); *cf.* Mosley (1973:1).
[123] Ostwald (1986:119), Low (2007:84).
[124] Sheets (1994:51-2).
[125] Given the principle of *par in parem non habet imperium* (van Schaack, 2012; *cf. UN Charter* art. 2 para. 1), even modern international law lacks compulsory judiciary or coercive institutions: it remains up

φυσικόν: *Nik.Eth.* 1134b18-19), which, in his view, underwrote positive law.[126] In the Hellenic context, natural law was expressed positively in the treaties (σπονδαί) and agreements (συνθήκαι) between states, or by decrees imposed by hegemons on subject-cities.[127] Outside of this semi-legal framework, the characteristic institution of Greek interstate relations was proxeny,[128] which, alongside the honours and concessions awarded to foreign citizens in exchange for benefactions to the state, governed the *polis*' relationships with alien individuals.

In monarchies, however, states and individuals might be conflated. Especially in an Egyptian context (§5.1.4), personal relationships, between the monarch or their confidantes and foreign individuals, through ties of kinship, marriage, and friendship, became essential diplomatic tools.[129] It has conclusively been demonstrated that networks focused on the Isokratean school laid the foundations for Atheno-Bosporan elite relations.[130] Similarly, this same group was central to Athens' relationship with Evagoras of Salamis. Nikokles, Evagoras' son and successor, was the subject of three Isokratean speeches, including the eulogy for Evagoras (Isok. 19), for which Isokrates was handsomely rewarded ([Plut.] *Vit.X.Or.* 838a). Other elite Athenians had close links with Evagoras: Andokides was intimately connected with the Teukrid Dynasty (Andok. 2.20-1), and when Konon feared the response of the Athenians following Aigospotami, it was to Evagoras he fled (Xen. *Hell.* 2.1.28-9; Isok. 5.62, 9.52; Diod. 13.106.6).[131] Konon's son,

to the discretion of sovereign states to follow, interpret and punish breaches of international law, since to do so is usually in their best interests (Wight, 1978:108-9).

[126] Burns (1998:147-8).

[127] Low (2007:84-6), noting that Athenians considered interstate treaties decrees (ψήφισματα) of the people.

[128] Mack (2015:4).

[129] More recently, cousins Tsar Nicholas II and Kaiser Wilhelm II engaged in the final peace overtures (the so-called Willy-Nicky Correspondence) between the Russian and German Empires even as they descended into war (Buchanan, 1923:200-4; *cf.* Beck, 1914:189).

[130] Moreno (2007a:177 Table 4, 197).

[131] *cf.* Mitchell (1997:68).

Timotheos, was a leading light of the Isokratean school ([Plut.] *Vit.X.Or.* 837c),[132] and a primary point of contact between Athens and the Teukrids.

These personal connections had concrete diplomatic consequences. Konon leveraged his friendship with Evagoras to convince him to promote Athenian interests to Persia (Isok. 9.53-7, 67-88; Paus. 1.3.2; Diod. 14.39-41).[133] Evagoras had provided most of the troops for Konon's campaigns, including at Knidos (Isok. 9.56), and was thus honoured with a statue alongside Konon's (Isok. 9.57; Paus. 1.3.2), along with a decree (*IG* II^2 20 [= R&O 11]).[134] Evagoras' 'Athenophilia' was enhanced by his supposed Teukrid descent (Isok. 9.14; Paus. 1.3.1),[135] his celebration of Hellenism (Isok. 9.49-50), and even the supposed etymological connection between his kingdom and the Salamis where Athens scored her most famous victory (Isok. 9.14; *cf.* Hdt. 8.83-96). The Spartokids, meanwhile, responded to Athens' honours with priority loading for Athens-bound merchantmen and an exemption from the one-thirtieth export-tax (Dem. 20.30-3), instigated during Leukon's reign (389BC-348BC), or perhaps earlier.[136] These measures were valuable: accepting a wholesale figure of three drachms per *medimnos* of grain, and Demosthenes' figure of 400,000 *medimnoi* imported annually from the Bosporos (20.31-2), it was perhaps worth some 40,000 drachms yearly.[137] The scale of these pro-Athenian benefactions was reflected in the extravagance of the honours Athens gave in return: the recurring gift[138] of a gold crown at the Great Panathenaia (*IG* II^2 212.20-4),[139] the size and decoration of the stele itself,[140] and the stele's unusual home in the Piraeus. These, and Athens' provision of

[132] *cf.* Moreno (2007a:177 Table 4).
[133] Ruzicka (2012:45).
[134] Lewis and Stroud (1979). Rhodes and Osborne (2003:52) use the mention of Konon in line 27 to explicitly link the decree with the statue, while Lewis and Stroud (1979:187) suggest two separate honours for Evagoras.
[135] Lewis and Stroud (1979:190).
[136] Demir (1999:3-4), Engen (2010:285); though, *cf.* Burstein (1993:81-3).
[137] Rhodes and Osborne (2003:323); Dem. 20.32 equates this to a gift of 13,000 *medimnoi*.
[138] Indicated by the present tense: Rhodes and Osborne (2003:322).
[139] *cf.* Lambert (2006:116).
[140] Lawton (1995:61-2, 98-9).

ὑπηρέσιαι (59-65),[141] demonstrate extensive investment in the Atheno-Bosporan relationship.[142]

In the cases of both Evagoras (Isok. 9.54; *IG* I^3 113)[143] and the Bosporan co-regents Spartokos II and Pairisades I (plus their brother Apollonios; Dem. 20.32),[144] the Athenians bestowed their greatest honour: naturalized citizenship.[145] Awards of citizenship repositioned foreign monarchs within the context of Athenian democracy, legitimizing their relationships to elite Athenians, deftly circumventing the accusation (levelled at Demosthenes: Aischin. 3.17-3) of over-familiarity with foreign potentates. Through careful avoidance of Bosporan titles (King and *archon*), for example, Androtion, proposer of the Spartokid honours (*IG* II^2 212), was able to reward royal benefactions without subordinating the Athenian state. Honours for monarchs were not unusual – of the twenty-seven extant Attic decrees honouring otherwise-attested foreigners for trade-related services, nine celebrated kings[146] – the majority of which (at least six) were naturalized citizens, or, in the case of Archelaos I of Macedon, *proxenoi* (*IG* I^3 117). Phrased differently, Athenians related to monarchs by equalizing their status with other Athenians, and obligating them to the state.[147] In practice, however, such obligations were nullified by exemptions (ἀτέλεια) from the onerous duties of citizenship[148]: ironically, these same (very rare)[149] exemptions were enjoyed by the descendants of the Tyrannicides (Isai. 5.47; Dem. 20.18, 127-30; *IG* I^3 131.1-9).[150]

[141] Now agreed to be the skilled crew of a warship, rather than rowers: Rhodes and Osborne (2003:325).
[142] Rostovtzeff (1922:69).
[143] Osborne (1972), Engen (2010:149).
[144] Osborne (1983:43-4).
[145] *cf.* Engen (2010:49), Deene (2011:160). On the restrictions of Athenian citizenship, *cf.* Sinclair (2010:25).
[146] Engen (2010:114).
[147] *cf.* Low (2007:46).
[148] Woolmer (2016:79-80); *cf.* Henry (1983:241), Engen (2010:187).
[149] Mack (2015:41).
[150] Shear (2012:38, n.51), Woolmer (2016:80).

5.1.4 | *Interaction in Action: Egyptian Diplomacy*[151]

Athens' interactions with monarchs reveal twin paranoias: that Athenian citizens might become beholden to foreign powers, and that Athens' international status might be compromised. This latter concern was also central in Egyptian diplomacy.[152] The belief in the universality of Pharaoh's power (§5.1.2),[153] and the isolation imposed on Egypt by deserts, the Mediterranean, and the Cataracts of the Nile,[154] placed her monarch atop an international hierarchy of rulers. Historically, this was largely unproblematic:[155] most of Egypt's foreign relations were asymmetrical, pitting Pharaoh's empire against the city-states and petty kingdoms of the Levant, Mycenaean Greece, and Northern and Sub-Saharan Africa.[156] Minnows confronting a whale, it was usually in their rulers' interest to flatter and defer rather than resist Egyptian superiority. Greater difficulties occurred when Pharaohs came into contact with rulers whose perception of their power rivalled Egypt's.

For Egyptians, and Near Easterners more generally,[157] diplomacy was, at least superficially, conducted through private communications between monarchs.[158] All extant Egyptian diplomatic communications, spanning eight centuries, are written in Akkadian,[159] or (from *c.*600BC) its successor-language, Aramaic.[160] While the language-choice implicitly accepted the limits of Egypt's power outside her borders, the wording of the letters carefully avoids Pharaoh losing face, even disguising power asymmetries. Kings refer to

[151] Much of the evidence for this sub-section is problematically early: only one diplomatic communication from our period (*cf.* Ginsberg, 1948) is known to me, so we must instead rely on the Amarna diplomatic archive (Moran, 1992). On New Kingdom diplomacy as a model for our period, *cf.* Lloyd (2007:36).
[152] Avruch (2000).
[153] *cf.* Wilkinson and Doyle (2017:80).
[154] Ruzicka (2012:14-15).
[155] *cf.* Wilkinson and Doyle (2017:83).
[156] Moran (1992:xvi), Wilkinson and Doyle (2017:87-8).
[157] *cf.* Moran (1992:xxv).
[158] Wilkinson and Doyle (2017:84).
[159] Mandell (2015:2-3), Wilkinson and Doyle (2017:85).
[160] *cf.* Chul-hyun (2004:7-8); e.g., Ginsberg (1948), Bright (1949).

each other in familial terms:[161] those hoping for parity with Pharaoh might call him 'brother' (אַח), while the more obeisant may use 'father' (אַבָּא).[162] Reflecting the restoration of Egypt's Levantine interests (§5.2.2), a letter addressed to (probably) Necho II from Adon, King of Ashkelon,[163] is more subordinate still, calling him 'Lord of Kingdoms' (מרא מלכן),[164] while placing himself as Necho's 'servant' (עבדך; *cf. EA* 55.1-3, 64.1-7).[165] Most importantly, no distinction was made between the interstate and the interpersonal: the earlier parity treaty between Ramses II and Ḫattušili III declares 'I am in brotherhood with him, and I am in peace with him forever' (*iw.i snn.kwi irm.f iw.i ḥtp.kwi irm.f r nḥḥ*: *ARE* III 373).[166] For Pharaoh, like Louis XIV, '*l'état, c'est moi*'.[167]

Even in relationships of near-parity, Pharaohs eked out every face-saving advantage possible. Dynastic intermarriage, for example, was invariably unidirectional;[168] Egyptian princesses were only married off during acute crises.[169] Another non-reciprocal traffic existed in princes, to be raised (and Egyptianized) in Pharaoh's court.[170] While generally characterized by reciprocity, relationships between parity states often involved subtle advantage-seeking. When, centuries before our period, Tushratta of Mitanni requested golden statues, and Akhenaten short-changed him with plated wood, he even complained to the Pharaoh's mother (*EA* 26).[171] While diplomatic snubs risked Pharaoh's

[161] Liverani (2000:18-19).
[162] Liverani (2000:18), Lloyd (2007:37), Wilkinson and Doyle (2017:83).
[163] Perhaps subjected by Psamtik I: Peels (2013:313).
[164] This translation (Ginsberg, 1948:25-6; Bright, 1949:47-8) is uncertain, with 'Lord of Kings' also suggested (Fitzmyer, 1965:44-5). Ginsberg's (1948:25, n.5) proposal that this poorly translates the Egyptian 'King of the Two Lands' (*nb t3wy*) is less suited to the international context than 'Lord of All Lands' (*nb n ḫ3swt nbt*).
[165] On the etiquette of Pharaonic correspondence, *cf.* Tadmor (1979:3), Avruch (2000:159).
[166] Lloyd (2007:38).
[167] *cf.* Westbrook (2000:29). The quote is useful, but apocryphal: Rowen (1992:185).
[168] Moran (1992:xvii), Wilkinson and Doyle (2017:90).
[169] Wilkinson (2010:404).
[170] Hostage-taking is a well-attested practice, but few examples exist: Wilkinson and Doyle (2017:91).
[171] Egypt's great wealth provoked many complaints of miserly gifts, e.g., *EA* 7.63-72, 3.13-22, 20.46-59 (Liverani, 2000:24-5; Avruch, 2000:161).

prestige (*cf. EA* 11.16-22), or even interruption of relations (*EA* 8.30-3),[172] they might express displeasure, and shield relative status.

This brief survey reveals several hurdles to Athenian-Egyptian diplomacy. Egypt's independence from *c.*665BC coincided with fundamental political changes at Athens. Shortly beforehand (683/2BC), the decennial archonship gave way to the annual three-archon system. As a result, Athens lacked an individual state representative whose sister Pharaoh could marry,[173] whose sons could be educated in Memphis, or with whom reciprocal gift-exchange could be established. Whereas Ahmose II concluded 'friendship and alliance' (φιλότητά τε καὶ συμμαχίην: Hdt. 2.181.1) with Kyrene,[174] cemented through marriage, and Saïte Pharaohs participated in *xenia* (§3.4.2),[175] these relationships were impossible with the Athenian polity. More problematically still, Greek states were outsiders to Cuneiform diplomatic culture.[176] While stelae in the closely-related Punic language exist from fourth- and third-century BC Athens (*BMInscr.* 109; *IG* II^2 8388, 9031, 9033, 9034 [= *IGLouvre* 231], 9035),[177] evidence for Aramaic-speakers in Athens is limited (§2.5). Near Eastern written diplomacy also minimized the role of diplomats. Athenian ambassadors (πρέσβεις) had wide-ranging competences to negotiate with, or present a case to, foreign states (e.g., Thuc. 4.119.3, 5.4.5; Andok. 3.6; Xen. *Hell.* 2.2.17; *IG* II^2 43; Philoch. *FrGrHist.* 328 F149).[178] Persuasion was, therefore, an essential skill.[179] Negotiation

[172] *cf.* Liverani (2000:21).
[173] Additionally, Egyptian polygamy was anathema to Athenian marital customs (Lacey, 1968:218): while an active extra-marital sexual life was accepted of men, multiple cohabitation or marriage was prohibited: Scheidel (2008:6). By the fourth century, Athenians were banned from marrying foreigners: Phillips (2013:139).
[174] The term may be *interpretatio graeca* for the language of brotherhood diplomacy; *cf.* Lloyd (2007:43).
[175] Herman (1987:17, 19), *cf.* Lloyd (2007:44).
[176] *cf.* Mandell (2015:86), Izre'el (2012:182).
[177] Gravestones for Levantines from Sidon or Tyre: Demetriou (2012:221).
[178] *cf.* Mosley (1965:258-9).
[179] *cf.* Mosley (1973:21-2).

with parity powers was historically exceptional for Egypt, whose messengers (*wpwtyw*) and envoys (*ipwtyw*) presented Pharaoh's wishes as *faits accomplis*.[180]

Despite this, the changing geopolitics in the Levant, especially the rise of Persia, ensured the Saïtes departed from Egypt's traditional reluctance to engage in parity treaties,[181] including with Greek states. The new position of 'Confidant of the King in the Aegean Countries' (*mḥ-ib n nsw m ḫ3sw.t ḥ3w-nbw*), held by Admiral Hor (Manchester 3570),[182] probably indicates a recurring part-time ambassadorship,[183] perhaps aimed at ensuring a regular supply of Greek troops. The implication must surely be that Hor was a specialist,[184] who had learned, perhaps from contact with the Greeks under his command, to penetrate Hellenic diplomatic culture. When fourth-century Egypt re-emerged from Persian domination, the importance of Greek allies increased; Achaemenid rule in the Levant largely precluded Egypt's traditional domination of Syria-Palestine (§5.2.2),[185] and forced closer engagement with the Aegean. The Pharaohs of the Twenty-Eighth to Thirtieth Dynasties seem not to have relied on Egyptian diplomats in their relations with Greeks: the alliance between successive Pharaohs and Evagoras was used by Hakor to achieve Chabrias' (unsanctioned) assistance (Diod. 15.29.1-4; Nep. *Chab.* 2.3) and the alliance with Sparta (*FrGrHist.* 115 F103.10),[186] while the names of the ambassadors Djedhor sent to Athens (*IG* II^2 119) belie Lycian or Karian origins.[187]

[180] Lloyd (2007:37-8).
[181] On this reluctance, *cf.* Wilkinson and Doyle (2017:87-8).
[182] Agut-Labordère (2013:991).
[183] This is a more geo-specific version of the generic 'King's messengers to every foreign country' (*wpwtyw nsw r ḫ3st nb*), part-time agents who carried out Pharaoh's commands abroad: Wilkinson and Doyle (2017:84).
[184] On Sears' (2011:1-2) model of 'Thrace-haunters' (θρᾳκοφοῖται).
[185] *cf.* Ruzicka (2012:91). Levantine ports were, in fact, used by Persia as bases of operations against Egypt (e.g., Diod. 15.41.3, Strab. 16.2.25-7; *cf.* Gambash, 2014:275-6).
[186] Ruzicka (2012:96).
[187] Dušanić (1980:14). The lead ambassador's name, Pigres, is exclusively Karian or Lycian (Sundwall, 1913:179-80), He shares a name with Psamtik I's Karian mercenary captain (Polyain. *Strat.* 7.3), likely attested from a stela at Memphis (Brussels E2483; Masson and Yoyotte, 1956:9-10, Niemeier, 2001:17, Williams and Villing, 2006:48), perhaps indicating a familial connection.

5.1.5 | *Resolution: Hellenistic King-Pharaohs*

If the independent fourth-century Pharaohs utilized Greeks in their relationships with *poleis*, they were hardly assimilated into Hellenic diplomatic culture. The two systems became reconciled upon Alexander's conquest and the concomitant introduction of new forms of monarchy. In Egypt's case, this monarchy has been characterized as Janus-like,[188] but a triple-headed god might provide a closer analogy: the Ptolemies[189] self-represented as simultaneously Macedonian (*IG* IX I² 56, XI² 161.B.26-7; Paus. 10.7.8), Greek and Egyptian, appealing to their diverse subjects (§4.4.1).[190] Alexander, and his biographers, pulled off a public relations coup: both among Greeks and Egyptians, he self-portrayed as a liberator from Persian despotism. While the Egyptian hatred of the Persians, who disregarded Egyptian customs (e.g., Hdt. 3.29.1-3), became a literary cliché,[191] Persian rule was probably relatively benign. Many Egyptians collaborated willingly (Mus.Vat. 22690; Naples 1035.8),[192] and the Great Kings invested in Egyptian religious infrastructure (the Apis cult: Louvre IM4133, IM4187;[193] temple building in the Kharga Oasis[194]). Nonetheless, Alexander carefully stage-managed his ascension, accepting Egypt's regal symbols from the final satrap, Mazakes, at Heliopolis (Arr. *Anab.* 3.1.2-3; Curt. 4.7.3-4),[195] Egypt's historic coronation-site,[196] and perhaps being crowned at Memphis,[197] where he sacrificed to Apis (Arr. *Anab.* 3.1.4).[198] He adhered to the Pharaonic tradition of taking five names (the

[188] Koenen (1993:25-7); *cf.* Manning (2010:92).
[189] Alongside Alexanders III and IV and Philip III Arrhidaios: §4.4.1.
[190] Manning (2010:74).
[191] Colburn (2014:6-7), Worthington (2016:32-3).
[192] Ruzicka (2012:177-98), Colburn (2020).
[193] Cambyses donated an exceptional sarcophagus for the Apis (Gunn, 1926:85-6; Posener, 1936:35-6), while the Sarapaion was renovated under Darius (Colburn, 2014:124-5).
[194] Colburn (2014:170).
[195] Ruzicka (2012:206).
[196] Dobrowolska and Dobrowolski (2006:15-16), Ruzicka (2012:206).
[197] While Arrian records ceremonies at Memphis (Arr. *Anab.* 3.1.4), he fails to mention a coronation.
[198] Perhaps deliberately rejecting the precedent of Cambyses: Colburn (2015:171-2).



Fig. 5.3 | Striding statue of Alexander III in Egyptian dress, with Greek features *c.*332-00BC (Frankfurt St.P.565)

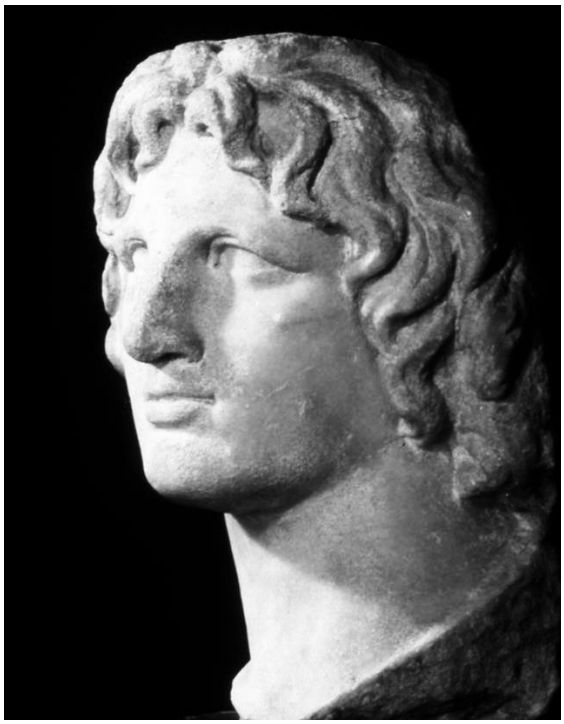


Fig. 5.4 | Portrait bust of Alexander III, with his characteristic curls and benign gaze, second century BC (BM 1872,0515.1)

'titulary', *nḫbt*),[199] casting himself as 'the protector of Egypt' (*mk kmt*; a well-used 'Horus name'),[200] sought the legitimacy of Zeus-Ammon at Siwa (*cf.* §3.3.3), and was represented in Egyptian costume (Frankfurt St.P.565 [fig. 5.3], though with the Grecian curls and facial features imported from his Hellenic portraiture [e.g., BM 1872,0515.1; fig. 5.4]).[201]

The presentation of Hellenistic monarchs as liberators[202] – even from each other – continued after Alexander's death. Even before his coronation, Ptolemy I established himself as restorer of traditional Egyptian religion:[203] just as Alexander returned Greek

[199] Taken on Coronation Day (implying that Alexander was formally crowned), the names were apparently chosen by each Pharaoh, reflecting his political and personal ambitions (Leprohon, 2013:9-12). On the names as a tool of legitimacy, *cf.* Ladynin (2016:259).
[200] Bosch-Puche (2014:101).
[201] This individualistic mix of Egyptian and Greek is characteristic of late-Ptolemaic sculpture (e.g., Cairo CG701, GRAlex 3357, Athens 108), so the date may be revised. On Alexander's Apollo-like image, *cf.* Bieber (1965).
[202] Préaux (1978:194-5) *cf.* the theme of retribution for the Persian Wars: *cf.* Seager (1981:106).
[203] Winnicki (1994:149), Colburn (2015:175).



Fig. 5.5 | Portrait, probably of Nakhtnebef, *c.*379-42BC (BM EA97)

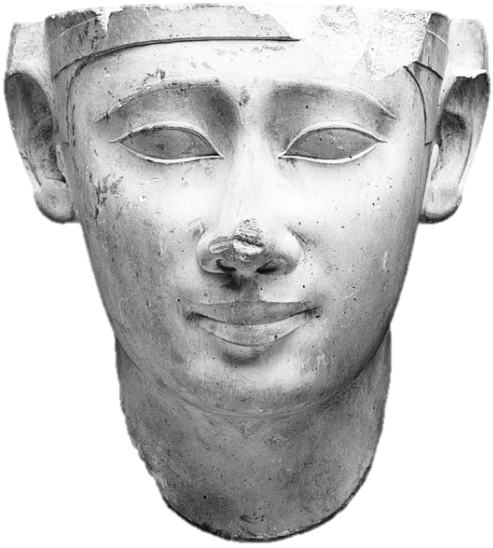


Fig. 5.6 | Early Ptolemaic royal portrait, imitating 30th Dynasty style, *c.*305-283BC (Kansas City 34-141)

temple furniture looted by the Persians, Ptolemy claimed to have restored the temple statues and records (*cf.* Diod. 16.51.2) removed to Persepolis (Cairo CG22182 ll., 16-18), and to have righted the wrongs Xerxes wrought upon the temples of Horus of Pe and the eponymous goddess of Buto (ll. 48-70), replacing the dedications of the little-known Saïte rebel Khababash.[204] In the 'Satrap Stele', Ptolemy's various epithets recall the Pharaohs of the Twelfth Dynasty and New Kingdom,[205] when Egypt's territorial extent was widest. Similarly, Ptolemaic sculpture revived the distinctive style of Egypt's last independent Dynasty:[206] early examples (e.g., Kansas City 34-141 [fig. 5.6]) are virtually indistinguishable from 30th Dynasty prototypes (e.g., BM EA97 [fig. 5.5]),[207] with the same soft chin, thin, sympathetically-arched brows, almond-shaped eyes and benevolent smile

[204] This dynast may have ruled Egypt during a brief interlude in Persian rule (Vasunia, 2001:266), evidenced by a stela (ÄM 2268) recording an invasion of Kush, agreed to reference him (Ruzicka, 2012:199-200).
[205] *cf.* Ockinga (2018:168-87).
[206] Ashton (1999:183-4).
[207] 30th Dynasty art was itself archaizing: Myśliwiec (1988:50, 64, 71).

with drilled dimples.[208] Themes of restoration and liberation also characterized Ptolemaic relations with Rhodes, earning Ptolemy I the appellation 'Saviour' (Σωτήρ: Paus. 1.8.6).[209] Both in Rhodes (Diod. 20.100.3-4) and Egypt, cults of 'Ptolemy the Saviour' were soon established.[210]

Through characterizing Hellenistic Kings as liberators, the instinctive association between monarchy and slavish barbarism was (partially) overcome. Athens accepted the new geopolitical reality in the Mediterranean;[211] with her prominence eclipsed, relations with Egypt strengthened. In 295/4BC, Ptolemy I Soter sent assistance to the Athenians, besieged by Demetrios Poliorketes (Plut. *Demetr.* 33.5). While this expedition failed, Ptolemy's support was instrumental in Athens' eventual freedom (*SEG* 28.60).[212] This interventionist Aegean strategy was supplemented by routine embassies (e.g., *RC* 14, 28, 33; *SEG* 28.1224, 36.1218). Just as before (§3.4.3), Egyptophile elites, such as Kallias of Sphettos (*SEG* 28.60), guided this diplomacy.[213] The patronage of the Ptolemies resulted in the ultimate irony: the statues of the Tyrannicides, originally decreed to stand alone in their corner of the *agora* (*cf. IG* II^2 450, 646),[214] were joined by sculptures of the Ptolemies (Paus. 1.8.6),[215] reflecting an innovation in Hellenic honours prompted by Alexander's dominance of the Greek world.

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[208] The similarities have frequently confounded attribution: e.g., Turin 1399 (Ptolemy I/Nakhthorhebyt: Ashton, 1999:335), BM EA941 (Ptolemy I or II: Ashton, 1999:339; Nakhthorhebyt: Josephson, 1997:30-1), Louvre E8061 (Nakhtnebef-Ptolemy X: Ashton, 1999:363), ÄS 5339 (Nakhtnebef-Ptolemy X: Ashton, 1999:365).

[209] Petrovic (2015:431), Worthington (2016:168-9); though, *cf.* Hazzard (1992). It was perhaps bestowed posthumously (Johnson, 2000:106). The Nesiotic League later used the formulation βασιλεὺς καὶ σωτὴρ for Ptolemy II (*IG* XII 7.506; Grabowski, 2014:25).

[210] Manning (2010:96). On the 'freedom of the Greeks' in Ptolemaic propaganda, *cf.* Grabowski (2008:37-43).

[211] While Athens' Hellenistic decline is perhaps exaggerated (Oliver, 2007:9), already a rhetorical trope for the Romans (Walbank, 1944:10), Athens was uniquely vulnerable in the later fourth century (Oliver, 2007:9).

[212] Habicht (1992:68-9).

[213] Oliver (2007:242-3); *cf.* relations between Posidippos and Kassander (*IG* II^2 641+818; Oliver, 2007:233).

[214] Ma (2013:113), Baltes (2020:368).

[215] Baltes (2020:356).

Under Alexander, the destinies of the Greek *poleis* were for the first time in the hands of a single charismatic individual.[216] His co-opting of Egyptian divine descent[217] at Siwa (§3.3.3),[218] and his unprecedented run of military success, overcame the Greek reluctance to deify individuals.[219] Alexander, whose personal ambitions supposedly extended to deification (Hyp. *InDem.* 31; Plut. *Mor.* 219e; Ael. *Var.Hist.* 2.19), perhaps even achieved cult status while alive.[220] Arrian's report that Athenian and Spartan delegates came 'as though on a sacred embassy to honour a god' (ὡς θεωροὶ δῆθεν ἐς τιμὴν θεοῦ ἀφιγμένοι: Arr. *Anab.* 7.23.2), has prompted much debate, with some proposing that Arrian mocks the over-deferential ambassadors,[221] and others seeing satirization of Alexander's divine pretensions despite his imminent death.[222] Scholars are more credulous regarding the Athenian debate at which Demades proposed Alexander join the Olympians, and was subsequently charged with bribery and fined ten (Ath. *Deip.* 251b) or even a hundred (Ael. *Var.Hist.* 5.12) talents.[223] This rejection of Alexander's cult is not necessarily so; the Greek conception of grades of divinity ensured that a compromise was possible,[224] especially given the increasing secularization of Athenian thought.[225]

The Athenians, therefore, need not accept a living Ptolemy as a 'deity' *sensu stricto*, as they apparently did for Demetrios Poliorketes (Duris *FrGrHist* 76 F13),[226] to afford them

[216] On unity in Alexander's heterogeneous empire, *cf.* Plut. *Alex.* 27.6, [Plut.] *De Alex.* 330c-e; Tarn (1948:400); *contra* Badian (1958), Baldry (1965:126), Thomas (1968).
[217] Egypt was intimately linked with ruler-cult. For Hekataios, Egyptian myths of gods (e.g., Osiris) as earthly rulers proved his distinction between heavenly (οὐράνιος) and terrestrial (ἐπίγειος) deities (*FrGrHist.* 264 F25; *cf.* Henrichs, 1984:148).
[218] Hogarth (1915:57-9), Bosworth (1988:278-9), Worthington (2004:278).
[219] Fishwick (1993:8-9). Fraser (1972:213) suggests that Alexander hastened a pre-existing trend.
[220] Robinson (1943:297-8), Hamilton (1973:138-9), Worthington (2004:274), *contra* Hogarth (1887:317). Philip's statue had been carried in procession alongside the Olympians, and some (e.g., Worthington, 2004:274-6) see this as prefiguring Alexander's claims to divinity.
[221] Balsdon (1950:385).
[222] Hamilton (1973:139); *cf.* Fishwick (1993:9-10).
[223] Hogarth (1887:324), Balsdon (1950:383), Hamilton (1973:138-9), Lane-Fox (1973:452).
[224] Greek religion comprised Olympians, chthonic gods, daimons (*cf.* Gasparro, 2015), and heroes, (Ekroth, 2015:383-5) existing along a human-divine spectrum: *cf.* Mikalson (2005:87).
[225] Winiarczyk (2016:69-71); on the agnostic approach of the Sophists, *cf.* Henrichs (1984:140-1).
[226] The hymn sung on Demetrios' return to Athens nonetheless identifies him as a 'visible' god, versus those who are 'far away, or do not have ears, or do not exist' (ἀλλοὶ μὲν ἢ μακρὰν γαρ ἀπέχουσιν θεοὶ ἢ

'divine' honours rewarding their benefactions. Statues near the Tyrannicides, suggesting divine status,[227] were only the beginning: the consummation came under Ptolemy III Euergetes, when the *Ptolemaia*, the festival honouring Ptolemy I and Berenike I, was instituted at Athens (*SEG* 25.157.9-12),[228] a new tribe (*Ptolemais*; Paus. 1.5.5) and deme (*Berenikidai*; *cf.* Steph. Byz., *s.v.* Βερενικίδαι) were founded, and a cult of Ptolemy III and Berenike II established (*cf. IG* II² 4676).[229] Despite her democratic credentials, these fulsome honours incited Polybian (5.106.7-8) disapproval of Athens' over-familiarity with monarchs.[230] Divine honours trod a balancing act, ensuring continuity of the euergetistic, agonistic, celebratory and proleptic diplomatic purpose of state honours,[231] while preventing monarchs from appearing subordinate to the *demos* (or, indeed, other honorands). Athens thereby secured support, grain, and goodwill from the Ptolemies, while the latter could use Athens to prosecute a proxy war against Macedon.[232]

5.2 | Conflict, Security, and the 'Middle Territory'

Ancient 'trade agreements' constituted a mutual arrangement to resolve the insecurity of the 'middle territory' between states.[233] While ancient historians rightly object to notions of 'economic imperialism',[234] in that the opening of new markets was unlikely to directly motivate military action, ancient trade would have been impossible without security interventions.[235] Indeed, the provision of what Primitivist-Substantivists

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οὐκ ἔχουσιν ὧτα ἢ οὐκ εἰσὶν ἢ οὐ προσέχουσιν ἡμῖν οὐδὲ ἕν: Duris *FrGrHist* 76 F13; *cf*. Chaniotis, 2003:431-2).

[227] *cf.* Mikalson (1998:171).

[228] Mikalson (1998:179). Regional Ptolemaia also existed at Alexandria (Grabowski, 2014:28), Delos (Bruneau, 1970:523-5), Kos (*RC* 21, 28), Kyrene and Thera (Fraser, 1972:233).

[229] Grabowski (2014:33-4).

[230] Habicht (1992:74, n.39).

[231] Petrovic (2015:432-3). On the purpose of honours, *cf.* Rawlings (2007:112), Engen (2010:10), Miller (2016:386, 420).

[232] Grainger (2017:85-6).

[233] Polanyi (1963:30); *cf.* Bresson (2016a:302).

[234] Hasebroek (1933:vii, 102-3, 135).

[235] *cf.* Warburton (2000:96).

call 'necessities'[236] features strongly in modern reconstructions of Athenian foreign policy: given the role of the popular assembly in determining that policy,[237] the food supply's primacy in Athenian strategic thinking was particularly exaggerated (*cf.* [Arist.] *Ath.Pol.* 43.4).[238] Resultantly, the 'middle territory' between Egypt and Athens, comprising parts of North Africa, the Levant, Cyprus and the Aegean islands, became an area of intense interest for successive Athenian assemblies and Egyptian Pharaohs.

Saïte foreign policy is usually considered to have followed traditional concerns: as in Egypt's heyday, a bifocal strategy sought to extend Egyptian control to the Levant and Nubia.[239] But this long-held outlook, expressed through artistic depictions of light-skinned Syrians and dark-skinned Nubians as Egypt's stereotypical enemies (e.g., Cairo JE61467),[240] only partially explains seventh-century Egyptian actions. While the Saïtes indeed resumed overseas campaigning and tribute collection from Levantine city-states (*P.Berlin* 30221.61-5; §5.2.2),[241] punitive expeditions against the Nubians (M&L 7; *ARE* IV 989-94; Hdt. 2.161.1; [Aristeas] §13),[242] who made regular incursions into Upper Egypt,[243] and trade with the sub-Saharan kingdom of Punt (*cf.* Hdt. 4.42.2-4),[244] Egypt's actions

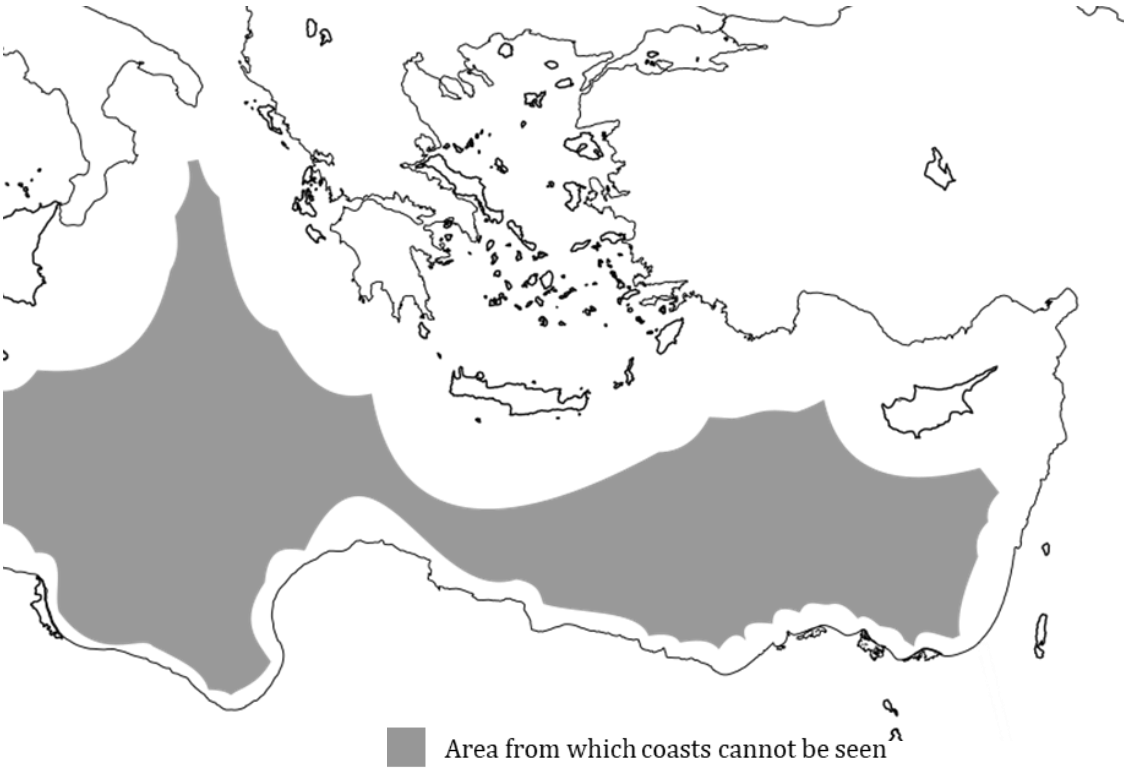
[236] e.g., Meiggs (1972:93-5), Garnsey (1988:120), Harding (1995:107-8); *cf.* Hasebroek (1933:104, 128), Finley (1973:157). Primitivist-Substantivists never satisfactorily defined 'necessity'. Engen's (2010:76-7) circular definition of necessity as warranting state involvement, results in anomalies like Athens' control of Kean ruddle export (R&O 40; Sergidis, 2012:24). Variously, grain (Polanyi, 1957a:78; Finley, 1970:16, 1985b:139; Austin and Vidal-Naquet,1977:115-16; Krotschek, 2006:6; Kallet, 2007:83; Bissa, 2009:105, 153), timber (Michell, 1940:223-4; Finley, 1970:16; Bissa, 2009:24), slaves (Finley, 1985b:139), metals (Polanyi, 1957a:78; Finley, 1985b:139), pottery (Finley, 1985b:126) and oil (Polanyi, 1957a:78) have been considered necessities. But necessity is culturally constructed (Gough, 1994:27-8); for Aristotle, anything 'useful' (χρήσιμος) to *polis* or household (*Pol.* 1256b29-30). Since he considers the state's purpose as provision of 'the good life' (τὸ εὖ ζῆν: 1252b30, 1280b40; *cf.* Plat. *Resp.* 373a), this definition goes beyond biological or strategic necessity.
[237] Hansen (1991:151-2).
[238] Whitby (1998:113); *cf.* Hansen (1991:125).
[239] Kuhrt (1996:641), Agut-Labordère (2013:696-7); *cf.* Lloyd (1977:143), Tadmor (1979:4). Generally, on the Saïte Period as a renaissance, *cf.* Wilson (2010:241-2, 253).
[240] Wachsmann (1987:8), Wilkinson (1992:19), Cooney (2011:57); the grouping often also includes Libyans (Met.Mus. 35.1.1-3, 33.8.8).
[241] Schipper (2011:269); *cf.* Bright (1949:49).
[242] Lloyd (1977:143), Kuhrt (1996:642).
[243] Kitchen (1986:399), Agut-Labordère (2013:967-8, 980).
[244] Petrie (1888:107), Lloyd (1977:144), Philips (1997:437-8).

sometimes went further and sometimes less far than New Kingdom imperialism. Egypt's historic isolation was mollified;[245] she engaged with a network of alliances, including Greek *poleis*; she failed (or chose not to) resume the hegemony she had previously enjoyed in the Levant (§5.2.2), but conquered Cyprus for the first time (§5.2.3).[246] Saïte eyes looked beyond the Levant, to Greece.

Athens' gaze also periodically turned Egyptwards, though after the Saïte renaissance. In the chaos following the death of Xerxes (Diod. 11.71.3),[247] Irethor, a petty Delta dynast,[248] killed the Satrap (Hdt. 3.12.6, 7.7.1), and rapidly freed most of Egypt (*cf.* Thuc. 1.104.2), evidenced by the appearance of his regnal years on documents even in the distant Kharga Oasis (*O.Manawir* 5446),[249] and the lack of dated Persian documents from the first four years of Artaxerxes I's reign.[250] When his progress was halted, or reversed, Irethor turned to Athens, who diverted troops from her Cypriot expedition (§5.2.3), itself perhaps co-ordinated with Irethor's revolt. Despite the ensuing disaster,[251] Athenian interest in the 'middle territory' persisted into the fourth century, until Alexander's hegemony switched the balance of power. We previously demonstrated (§5.1.5) that Ptolemaic interest in the 'middle territory' stretched right into the Aegean, through control of the Nesiotic League, and particular interest in Rhodes (§5.2.4), along the Anatolian coast, and even into Attika itself.

[245] Hicks (1962:92), Pfeiffer (2010:15); *cf.* Cook (1937:232).
[246] Agut-Labordère (2013:985-6).
[247] Meiggs (1972:93), Kuhrt (1996:671), Kahn (2008a:424).
[248] Irethor may, in fact, have descended from the Saïte line (Perdu, 2010:152; §3.4.2).
[249] Kahn (2008a:430-1). Kharga is a remote desert oasis 620km from Saïs.
[250] i.e., between *ArP.* 16 (2nd January 464BC, five months after Xerxes' death) and a graffito dated 16th December 461BC: Kahn (2008a:428).
[251] The disaster's scale is debated: the consequences that followed the Sicilian disaster are not evident (Westlake, 1950:210; Robinson, 1999:137; *contra* Meiggs, 1972:109). Many scholars prefer Ktesias' assertion (*Pers.* 36) that only forty vessels were sent (Libourel, 1971:606), or that Thucydides' 160 ships went, but most were withdrawn (Westlake, 1950:210).

Map 5.1 | Visibility of the Coast from the Sea in the Eastern Mediterranean, up to 150km



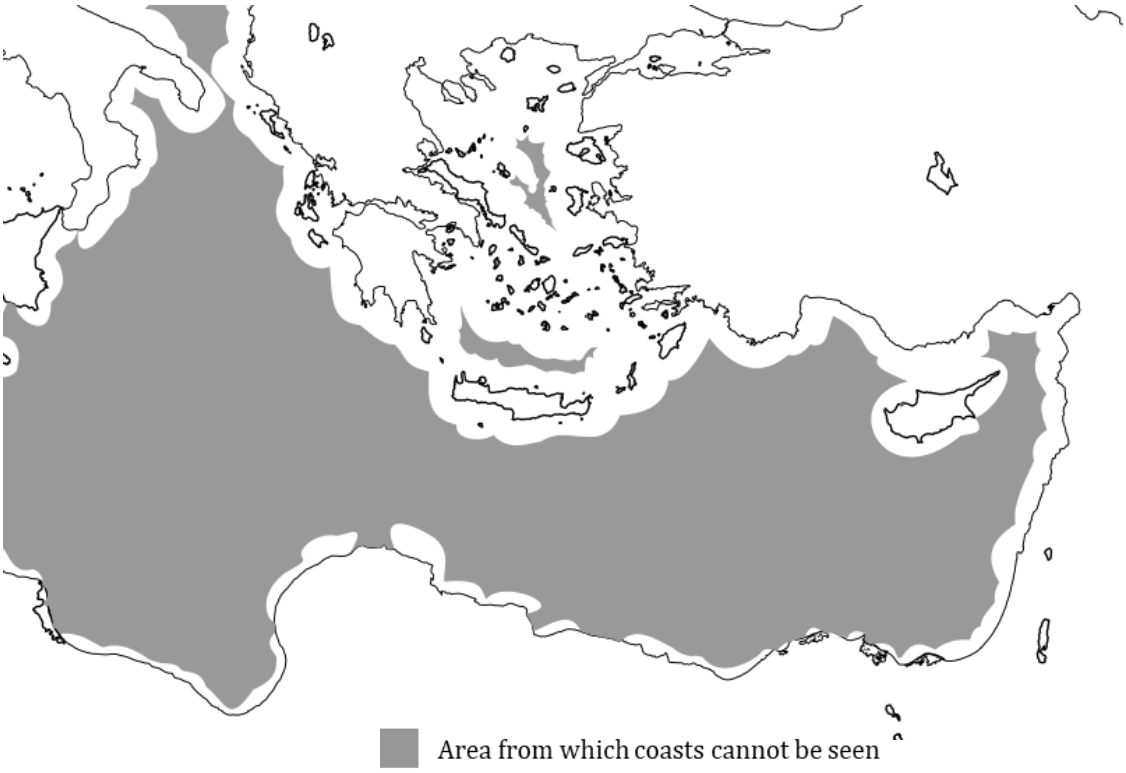
Not to Scale **Source:** after Arnaud (2005:30-1).

5.2.1 | *Navigation: Defining the 'Middle Territory'*

Our picture of the Egypt-Aegean routes has emphasized the inherent risks of ancient seafaring and identified the role of coastal sanctuaries as centres of specialized religion, refuges from adverse conditions and navigational aids (§3.3.1). Their significance reflects the firm preference of ancient sailors to operate within sight of land:[252] while, later, Plutarch (*Arat.* 12.1-2) maintained that the quickest route from Egypt to the Peloponnese was across open water,[253] he makes clear that this was exceptional. At *c.*380km from the Libyan coast to Kythera, the usual staging-post for Egypt-Peloponnese traffic (Thuc. 4.53.3), the journey would take nearly four days, including overnight sailing far from any

[252] Plumpe (1942:39), Horden and Purcell (2000:126).
[253] Davis (2001:65).

Map 5.2 | Visibility of the Coast from the Sea in the Eastern Mediterranean, up to 50km



Not to Scale **Source:** after Čučković (2018).

port,[254] risking strong winds and high waves (Plut. *Arat.* 12.2). Hugging the coast was not mere timidity;[255] a millennium later, despite conquering the Atlantic, sailors still preferred coastal sailing within the Mediterranean,[256] besides which, the dangers of coastal topography, fog and winds remained.[257] The picture is, therefore, more granular than is sometimes implied. In the Adriatic, for example, the risks of coastal sailing outweighed the relatively short (100km) journey across its mouth,[258] while Plutarch's anecdote (*Arat.* 12.1-2) reminds us that foolhardy captains might privilege speed over safety.

[254] Based on the modelling of *ORBIS*. The route of the *Isis* (Map 3.1), *via* Cyprus, only requires one night's sailing out of sight of land, though this journey also ran into difficulties (Luc. *Nav.* 7-10; Casson, 1950:43).
[255] *cf.* Beresford (2013:184).
[256] Braudel (1995:103-6).
[257] Rougé (1981:18-19), Morton (2001:146-7).
[258] Morton (2001:147-8).



Fig. 5.7 | Merchant vessel from a black-figured *kylix,* depicting the squat mast characteristic of Greek artistic representations, *c.*520-500BC (BM 1867,0508.963)

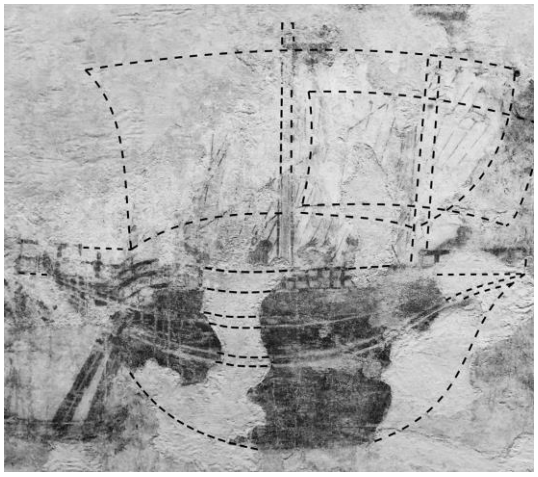


Fig. 5.8 | Merchant vessel from the Etruscan *tomba della nave,* Lazio, 5th century BC (restoration after Petrarulo, 2012:116, fig. 1).

Coastal sailing need not entail 'moving crab-wise from rock to rock',[259] but rather sailing *within sight* of land, close enough to aid navigation and provide emergency refuge.[260] The same map (Map 5.1) regularly appears in works on ancient navigation, showing the visibility of coastlines from the Mediterranean.[261] This map is, however, problematic. For a 1.70m human[262] at sea-level, with 20/20 vision, in ideal atmospheric conditions and with no refraction of light, the visible horizon is 4.65km away;[263] objects taller than sea-level appear above the horizon, and their visibility at distance increases with the observer's height. At sea, the best observation point was atop the mast; crows' nests and rope ladders are attested for ancient vessels,[264] though their usefulness was limited: smaller ships lowered their mast (ἱστός) into a cradle (ἱστοδόκη) when not in use (e.g., on Florence 4209; *cf.* Hom. *Od*. 2.424-5),[265] limiting their stability as a platform,

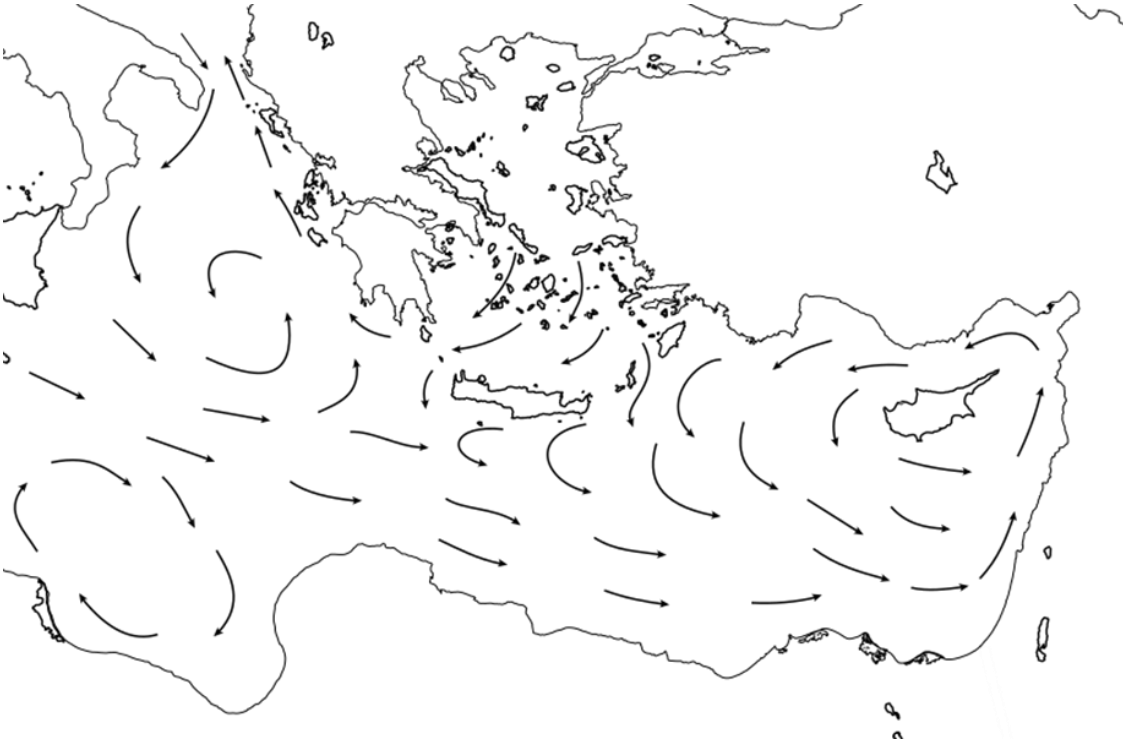
[259] Braudel's (1995:103) characteristically belletristic formulation.
[260] Starr (1989:21), Morton (2001:145).
[261] Schüle (1970:450, fig. 1), Chapman (1990:262, fig. 59), Horden and Purcell (2000:127 map 9), Arnaud (2005:30-1), Beresford (2013:341 fig. 4.2), Tartaron (2013:109, fig. 4.9). The map's origins are unclear, but it seems to derive from Henkel (1901:pl. 21).
[262] Examination of ancient remains reveals that male heights averaged 1.64m-1.69m, with Greeks and Romans among the shortest: Habicht *et al.* (2015:520, Table 1).
[263] $d \approx 3.57\sqrt{h}$, where d = distance to observed horizon, and h = height of observer: Young (2003).
[264] Arnaud (2005:29).
[265] Katzev (1970:14), Casson (1971:47, 59-60), Katzev and Katzev (1989:172).

and they were comparatively short. The reconstructed *Kyrenia II* has a 10.50m mast,[266] though insufficient in diameter to support a lookout,[267] while depictions of merchant vessels show masts of half the ship's hull-length (figs. 5.7 and 5.8). Even with a 22.50m mast, half the length of the largest attested contemporary merchantmen,[268] the visible horizon is only 16.93km away, while Mt Etna, the Mediterranean's highest point, could thus be seen some 200km away.[269] It is on this basis that Map 5.1 is calibrated. But these calculations are based on impossible, perfect conditions: variations in atmospheric pressure, fog, heat haze and the density of airborne particles, significantly reduce maximum visibility.[270] Etna's greatest visibility comes on clear February days,[271] outside of the ancient sailing season; even then, February's monthly Average Visibility does not exceed 65km, exceeding 100km on only eight days annually.[272] When the sand-laden scirocco blows, visibility is significantly poorer, even under clear skies (*cf.* Strab. *Geog.* 6.2.8).[273] As a result, coastal sailing, under usual conditions, required closer proximity (Map 5.2). But even at a greater distance, both maps reveal that only one Egypt-Aegean route had an unbroken line of sight: that running long the Levantine coast to Cyprus.[274]

This route was, on the return at least, aided by the Mediterranean's anti-clockwise currents (Map 5.3). Today, these currents are negligible,[275] rarely exceeding 0.5kn. But,

[266] Katzev and Katzev (1989:173), Tzalas (2018:240).
[267] 36.00cm-10.00cm: Katzev and Katzev (1989:173)
[268] Sidebotham (2011:196); the *Isis* may have been 55.00m in length: Luc. *Nav.* 5-6.
[269] $d \approx 3.57(\sqrt{h_B} + \sqrt{h_L})$, where d = distance between observer and object, h_B = height of observer, h_L = height of observed object: Young (2003); Mauro and Durastante (2020:7) place the distance at 206km. Mt Etna is 3,340m tall: Neri *et al.* (2008:4), Mauro and Durastante (2020:7).
[270] We must also account for the fact that only half of adults enjoy unaided binocular acuity of 20/20 or better (CDC, 1964:4); prevalent under-treated eye-disease would reduce this figure for antiquity.
[271] *cf.* Leith-Adams (1847:240).
[272] Mauro and Durastante (2020:12, fig.4). The maximum recorded visibility, on one day in February 2017, was 150km (2020:11, fig. 3). Modern studies must account for increased pollution since antiquity – one study suggests that visibility deteriorated at 2.8km per decade in Athens from 1961-2013 (Founda *et al.*, 2016:11219).
[273] Mauro and Durastante (2020:5, figs. B1-2 and C1-2).
[274] Davis (2001:26).
[275] In that they affect speed rather than force changes of direction: Arnaud (2005:23).

Map 5.3 | Predominant Mediterranean Surface Currents, June to August

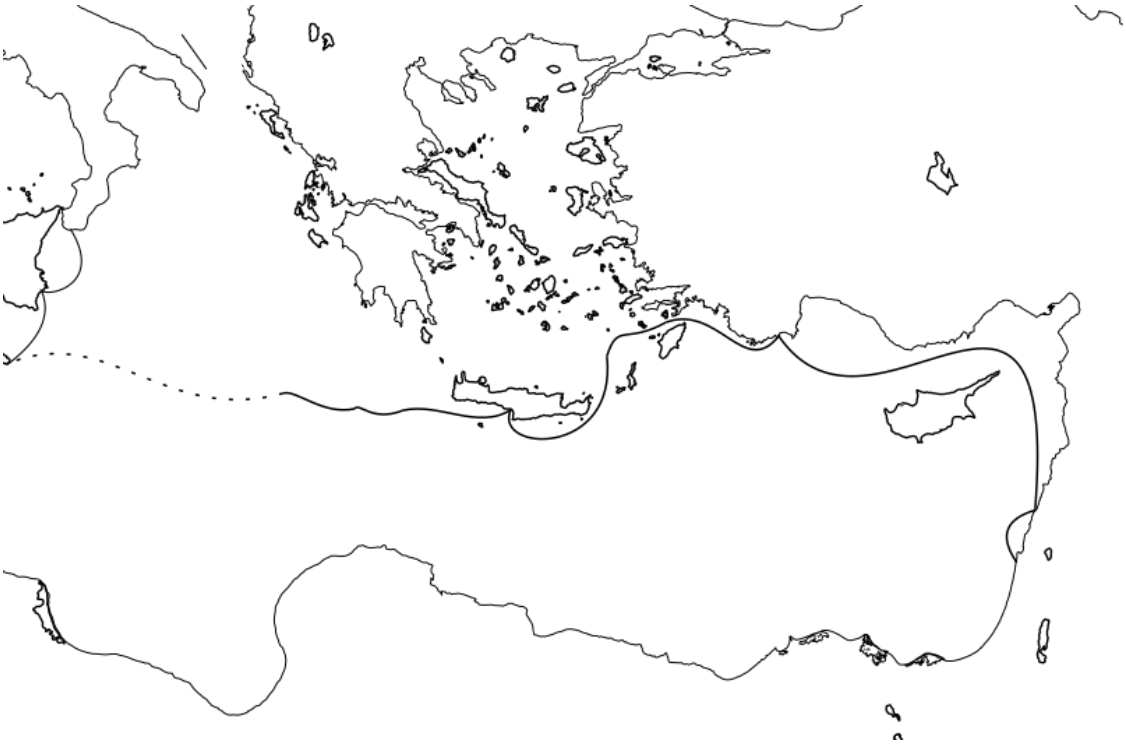


Not to Scale **Source:** after UKHO (2005:19, chart 1.139.2).

before the Aswan Dams neutered the Nile's outflow (§1.2.1), currents off Egypt could reach 3.2kn in spring and early summer,[276] an effect compounded by the complimentary wind-direction.[277] The alternative route, from the Aegean to Kyrene, and thence east to Egypt, is unlikely to have been preferred. While the currents supported the Egyptwards journey, they were as weak in antiquity as they are today (0.25-0.5kn).[278] The route required losing sight of land and hugging the treacherous North African coast, [279] replete with hidden sandbanks and low-lying reefs.[280] The dissimilarity of the Lakonian pottery finds of Kyrene and Egypt[281] suggest that regular contact between the two began in the later sixth century (§5.2.6). It is overwhelmingly likely, then, that the route of the *Isis* (Map 3.1) and by Paul

[276] Davis (2001:11).
[277] *cf.* Arnaud (2005:25), UKHO (2005:17).
[278] On the constancy of conditions in the Mediterranean since antiquity, *cf.* Morton (2001:6).
[279] As Map 5.2 demonstrates, the low-lying African coast has limited visibility from sea.
[280] Potts (2019:37); *cf.* Rauh (2003:22),
[281] Especially the strong showing of the Boreads Painter at Naukratis: Venit (1985:393).

Map 5.4 | The Voyage of Paul the Apostle to Italy, AD60



Not to Scale **Source:** after Sanders (2020).

the Apostle (*Acts* 27:2-28:14; Map 5.4), following the Levantine coast and hooking around Cyprus,[282] before entering the Aegean *via* Rhodes, was the predominant Atheno-Egyptian transhipment route.[283] A clear 'middle territory' for Atheno-Egyptian trade, within which we might trace diplomatic and military convergence and co-operation, suggests itself: the Levant, Cyprus, Rhodes, and the Aegean islands.

There were various motives for intervention in this 'middle territory'. The most commonly adduced is 'defensive imperialism', precluding successively the Babylonians,[284] rival Egyptian claimants,[285] Persians,[286] Antigonids and Seleukids,[287] from accessing

[282] Davis (2001:35). The *Isis* intended to cross the open sea to Cyprus (Casson, 1950:43-4; Arnaud, 2005:22), perhaps reflecting Roman seafarers' increasing confidence on the well-used Alexandria-Aegean route.
[283] Austin (1970:28).
[284] Lipschitz (2005:26), Ruzicka (2012:9-12).
[285] *cf.* Stylianou (1989:396), Lloyd (1993:240).
[286] Ruzicka (2012:17).
[287] Préaux (1978:337), Erskine (2013:84).

strategic bases from which to attack Egypt or the Aegean. Equally, control of Cyprus, the Levant or Rhodes was an essential precursor to superiority in the Eastern Mediterranean (*cf.* Polyb. 5.34.6-7):[288] given that a trireme's effective range was at most *c.*200km,[289] anchorages in all three were desirable. Finally, Cyprus and the Levant were sources of cedarwood,[290] scarce in Egypt, and highly prized for ship-building and ritual purposes.[291] Yet these interpretations fail to satisfactorily explain the degree of shared interest, and indeed co-operative behaviour, evident between Greek states (predominantly Athens) and Egypt, recurring over nearly five centuries.

5.2.2 | *The Levant*

Historically, the Levant formed Egypt's 'area of primary interaction',[292] her core diplomatic region and main target for expansion. But Saïte interventions in the Levant did not merely resurrect past policy. From their headquarters at Gaza,[293] and the garrison-towns at Beit She'an[294] and Jaffa,[295] New Kingdom Egyptian governors[296] oversaw a network of vassal city-states, whose rulers were carefully Egyptianized (in funerary practices: compare Jerusalem 71.10.211, 82.2.818, Philadelphia 29-103-790, with Boston 88.1041, Philadelphia E217; religious syncretism: Jerusalem S-982, 1997-3294, Or.Inst.

[288] Cyprus: G. Cohen (1995:35), Horden and Purcell (2000:393), Erskine (2013:84); Rhodes: Gabrielsen (2013:69).
[289] Xenophon (*Anab.* 6.4.2) mentions an exceptional voyage of 236km in 24 hours, a speed of *c.*8 knots (Krivec, 2016:199-200), double the top speed of the reconstructed trireme *Olympias* (Morrison *et al.*, 2000:263).
[290] Lipschitz (2005:26), G. Cohen (1995:35).
[291] Creasman (2013:152-3).
[292] A term borrowed from network theory: *cf.* Mack (2015:151).
[293] Eḥituv (1978:94-5), Kuhrt (1996:389-90), Spalinger (2017:100).
[294] Mazar (2009). Evidence of substantial Egyptian administrative buildings (Jerusalem I-9695, Philadelphia 32-15-270), and of resident Egyptian officials (e.g., Philadelphia 29-107-951; *cf.* Gilboa, 2013:628), alongside a life-sized statue of Ramses III (Jerusalem S-886; Higginbotham, 1999:225), demonstrate Beit She'an's importance.
[295] Burke *et al.* (2017:87-90).
[296] Oren (1984b) identified 'governor's residences' across the Levant, indicating a network of Egyptian administrators. Conversely, Panitz-Cohen (2013:550) suggests they belonged to Egyptianized locals. Unlike in Nubia, Egypt never appointed a viceroy in the Levant: Higginbotham (1996:157-8).

2132;[297] and education: §5.1.4).[298] Regular military expeditions contested the area with regional 'Great Powers',[299] driving as far as the Euphrates. But important differences are evident in Saïte Egypt's Levantine strategy. Geography and culture rendered Egypt peripheral within the Assyrian Empire, only weakly bound to its control.[300] It is unsurprising, then, that she was first to sever the tributary relationship during the Empire's rapid decline.[301] But rather than taking advantage of Assyria's collapse to expand eastwards, the long-standing relations between the Saïtes and their former Assyrian overlords[302] evolved into an alliance which ceded Egypt's Levantine claims established under the preceding Kushite Dynasty (*ARAB* II 770; Isaiah 36:5-6 [= 2 *Kings* 18:20-1]).[303] Assyrian decline from *c.*701BC encouraged Delta dynasts to seek independence, through negotiation with the Nubian Pharaoh Taharqa (*ARAB* II 773),[304] and led Assyria's King, Aššurbanipal, to rely on nominally loyal kinglets, including Psamtik I's father Necho I (*ARAB* II 773-4, 844), to maintain order.[305] This gave the Saïtes the breathing-space to expel the Nubians from Upper Egypt; following Necho I's death, Psamtik returned from exile in Assyria (Hdt. 2.152.1), supported by Levantine (Cairo JE36949),[306] Lydian (*ARAB* II 785),[307] Karian and Greek (Hdt. 2.152.5; Diod. 1.66.12) troops, and completed Egypt's reunification. The Assyrians did not attempt to restore their dominance over Egypt (*ARAB* II 785); in fact, the cessation of tribute seems not to have soured relations between Psamtik and Sennacherib.[308]

[297] Cornelius (2017:211-14).
[298] Generally, *cf.* Higginbotham (2000:15-16), Steel (2018).
[299] Tadmor (1979:3).
[300] Elat (1978:20).
[301] *cf.* Kuhrt, (1996:540).
[302] Spalinger (1976:133).
[303] *cf.* Revere (1957:58), Schipper (2011:270-1), Zamazalová (2011:297-8), Kahn (2014).
[304] Sullivan (1996:181).
[305] Spalinger (1976:133), Sullivan (1996:181-2).
[306] de Meulenaere (1965:30-1), Spalinger (1976:139).
[307] Luraghi (2006:35).
[308] Sullivan (1981:136). Lipschitz (2005:20-1) proposes that the Saïtes were installed by the Assyrians.

Psamtik allied with the Assyrians, repelling the Babylonian-Median forces at the Euphrates (BM 21901 *obv.* 10-11),[309] and the Skythians at Ashkelon (Hdt. 1.105.1). He also made treaties with the city-states along the Levantine coast vacated by Assyria (Jer. 2; Ezek. 17:15)[310] and perhaps re-installed Egyptian governors (Isaiah 30:4),[311] Psamtik's Syrian campaign was clearly protracted (*cf.* Hdt. 2.157.1), given the unrest his absence engendered (Diod. 1.67.3-7; *cf.* Hdt. 2.30.4-5).[312] His successor, Necho II, expended considerable efforts aiding the Assyrians. After King Sînšariškun lost Aššur (BM 21901 *obv.* 16-23) and Nineveh (24-8),[313] the Empire's historic centres of gravity,[314] Necho sponsored Aššuruballit II's coronation, installing him at Harran in an attempt to revive Assyrian fortunes,[315] defeating King Josiah of Judah on his way northwards (2 *Kings* 23:29, 2 *Chronicles* 35:20-5; Jos. *AJ.* 10.5.1),[316] It was only after the Babylonians sacked Harran (BM 21901 *obv.* 61-9), dissolving the Assyrian Empire, that Necho retook Gaza (Hdt. 2.159.2), Egypt's *de facto* regional headquarters,[317] and advanced as far as Karchemish before suffering a crushing defeat (Jer. 46:3-12; BM 22047 *obv.* 24-6).[318] Babylonia's advance reduced Egypt's military options in the Levant,[319] forcing Psamtik II and Wahibre to focus aggressive diplomacy along a thin coastal strip.[320] Psamtik judiciously maintained peace with Nebuchadnezzar,[321] while forging alliances with Levantine kings (Jer. 9:25-6; *P.Bib.Nat.* 215)[322] and completing a pilgrimage to the Egyptian temple at Byblos (*P.Ryl.Dem.*

[309] Wiseman (1956:55), Spalinger (1978:49), Lipschitz (2005:17).
[310] *cf.* Bassir (2018:181-2).
[311] Spalinger (1978:50), Ruzicka (2012:9).
[312] Spalinger (1978:51).
[313] Lipschitz (2005:18), Schipper (2011:272).
[314] Radner (2018:135).
[315] *cf.* Redford (1992:447), Lipschitz (2005:19).
[316] Spalinger (1978:51), Sullivan (1981:11).
[317] *cf.* Spalinger (1978:19), Ruzicka (2012:9-10).
[318] Lipschitz (2005:32-4), Schipper (2011:272); *cf.* Niemeier (2001:19-20). A Greek shield (BM 1922,0511.386) and cartouches of Psamtik I (BM 1922,0511.320) and Necho II (BM 116222-7), may be connected to the Egyptian defence of Karchemish in 605BC (Woolley, 1921:79).
[319] Kuhrt (1996:643), Perdu (2010:145).
[320] Revere (1957:42), Ruzicka (2012:10).
[321] Kitchen (1986:407), Kahn (2008b:139-40),
[322] Perdu (2010:146). The Aramaic letter to Necho II (§5.1.4) reveals less concern with city-state politics: Ginsberg (1948:25-6). Psamtik probably prosecuted proxy wars against Babylonia: Perdu (2010:146).

9).[323] Saïte Egypt failed, then, to resume vassalage over the Levant: instead of taking advantage of Assyria's decline to impose themselves on the region, the Saïtes instead tried to prop up the collapsing empire,[324] When that failed, they were content to covertly support Phoenician city-states and the Kingdom of Judah. Egyptian influence persisted along the Levantine coast even after Persia conquered both: elite Sidonians, for example, preferred Egyptian-made (Istanbul 793, 800; Louvre AO4806) and Egyptianizing (BM 1864,1128.1.b; Istanbul 798, 799) sarcophagi well into the fifth century.[325] This measured Levantine strategy implies that, far from restoring their hegemony, Saïte Pharaohs were reluctant to overstretch; their main concern was to prevent instability along the coast.

Greeks were also interested in the Levant throughout this early period. From the ninth century, Ionian pirates regularly sacked Syro-Palestinian cities, provoking Assyrian wrath (*ARAB* II 1680, 92, 99, 194-5).[326] We can surmise the presence of Greeks, Karians and Cypriots in the armies of Assyria (*cf.* BM 123053),[327] Babylonia (*SAA* 16.136;[328] Alk. Fr. 48 and 350 L.-P.; Strab, 13.2.3)[329] and the Phoenician city-states (e.g., Ashdod: *ARAB* II 62),[330] and permanent Greek populations at Al Mina[331] and, eventually, other Levantine cities.[332] Pottery finds demonstrate the strong overlap between Saïte and Greek presence.[333] Athenian interest in the Levant was a later phenomenon; as her lack of early involvement in Naukratis suggests (§5.3.1), Athens' entire Eastern Mediterranean strategy was conceived dilatorily. Alongside her interventions in Cyprus (§5.2.3), Athens expanded

[323] Kitchen (1986:407), Kahn (2008b:148).
[324] Revere (1957:42).
[325] Dixon (2013:179-85).
[326] Parker (2000:75), Luraghi (2006:30-2), Heller (2015:332-3).
[327] Luraghi (2006:36-8), Heller (2015:333).
[328] If Addiqritušu is an Assyrian rendering of Antikritos or Adakrytos: Heller (2015:333).
[329] Kaplan (2002:235); Luraghi (2006:23).
[330] Olmstead (1928:218), Neimeier (2001:16).
[331] Neimeier (2001:14). It was founded in either the ninth (du Plat Taylor, 1959:91; Boardman, 1982:758; Braun, 1982:9) or eighth centuries BC (Woolley, 1938:16; Boardman, 1999:145; Fantalkin, 2006:202).
[332] Heller (2015:332).
[333] *cf.* Schipper (2011:276, fig.3).

her influence to the useful staging-posts of Lykia and Karia,[334] going so far as to include various coastal Anatolian cities among her allies (Thuc. 2.9.4). Lykians and Karians apparently paid regular tribute from 445-40BC (*ATL* III.33-4), having sporadically contributed before.[335] Athenian interests perhaps even extended as far as the Palestinian city of Doros (*cf.* Krateros *FrGrHist.* 342 F1).[336]

5.2.3 | *Cyprus*

When, in 460BC, the Athenian admiral Charitimides was dispatched to assist Irethor's anti-Persian rebellion, the Delian League was already engaged in Cyprus (Thuc. 1.104.2). While the Athenians needed little inducement to meddle with Persian territories,[337] the sheer scale of the expedition cannot be sufficiently explained by petty aggression.[338] Collusion with Irethor provides a more satisfactory explanation. The Egyptian expedition was extremely large and well outside of Athens' normal sphere of influence. While recent scholarship has tended away from uncritical acceptance of Thucydides estimate (250 ships: Thuc. 1.104.2 with 110.4),[339] giving more credence to the forty ships adduced by Ktesias (*Pers.* 36),[340] a compromise consensus accepts that the entire force described by Thucydides set out for Egypt, but that 160 ships were withdrawn soon after.[341] Even the lower estimate represents *c.*8,000 men,[342] rising to 50,000 at Thucydides' figure. By comparison, the Sicilian expedition, Athens' largest overseas

[334] Keen (1993:153).
[335] Eddy (1973:248).
[336] Meiggs (1972:102), Rhodes (2006:43).
[337] de Ste Croix (1972:312), Meiggs (1972:95), Fine (1983:352).
[338] Wallace (1936:258).
[339] It has been argued that such losses would have crippled the League (Athens was chronically short of rowers at the best of times: Casson, 1991:112), damaging its capacity to undertake subsequent military (e.g., Thuc. 1.105.1-2; *IG* I^3 1147): Libourel (1971:607), Holladay (1989:178), Robinson (1999:136); *cf.* Westlake (1950:210), Robinson (1999:137); *contra* Meiggs (1972:109).
[340] Westlake (1950:210), Libourel (1971:606).
[341] Westlake (1950:210).
[342] Based on the uncertain (Jordan, 2000:83) figure of 170 oarsmen with *c.* 30 marines.

campaign, involved 134 triremes and a similar number of supply ships (Thuc. 6.43.1), while the evidence of ship-sheds in Piraeus suggests a fourth-century fleet numbering 400 vessels.[343] A similarly large 200-ship expedition, under Kimon, was sent to Cyprus *c.*451BC, following the truce with the Spartans (Thuc. 1.112.1-2). Tellingly, this expedition, too, was interrupted, with 60 ships sent to aid the Egyptian rebel, Amenirdsu, (1.112.3).

A third, later, Cypriot expedition, aiding Evagoras of Salamis *c.*390BC, also bore an Egyptian dimension. A triangular alliance between Athens, Salamis and Egypt is attested from 389/8BC (Ar. *Pl.* 178; *cf.* Diod. 15.3.4, 8),[344] and was probably negotiated earlier. At the time of this expedition, Egypt was threatened with Persian attack (Isok. 4.140-1),[345] and so it is plausible that Evagoras, though recently defeated by Kition (Diod. 14.98.1-4),[346] pushed forward his plans for revolt to divert Persian forces, securing Athenian assistance to compensate for his recent losses (Lys. 19.21). Twice might be a coincidence, but in a broader historical perspective, Athenian expeditions to Cyprus are hard to untangle from events in Egypt. Another, earlier, campaign in Cyprus (*c.*479BC: Thuc. 1.94.2) cannot be explicitly connected to Egypt in our sources, but came shortly after the 486/5BC Egyptian revolt (Hdt. 7.1.3), when Persian control was weak. We know that Delta rulers co-ordinated with Athens even when not in open revolt (consider the grain-gift of Psamtik, 445/4BC: Philoch. *FrGrHist.* 328 F119, Plut. *Per.* 37), and so this expedition was perhaps co-ordinated with actual or abortive Egyptian insurrection.

This shared Atheno-Egyptian interest in Cyprus, maintained over centuries, developed previous Saïte policy. Both Wahibre (Diod. 1.68.1) and Ahmose II (Hdt. 2.182.3;

[343] Casson (1991:112); *cf.* also the epigraphic evidence, recording 417 ships in 325/4BC: *IG* II^2 1629.783-812; Gabrielsen (2014:39, fig.2)
[344] Ruzicka (2012:80).
[345] The date is contentious: it is usually (e.g., Dandamaev, 1989:297; Shrimpton, 1991:2-7) thought to follow the King's Peace, after Diod. 14.110.3. Isok. 4, however, makes 390/89BC more plausible: Ruzicka (2012:66, 249 n.1), Mallet (1979:91-2).
[346] *cf.* Tuplin (1996:61), Ruzicka (2012:91).

Diod. 1.68.6) invaded the island, with Ahmose succeeding.[347] Unfortunately, the conquest is absent from our limited Egyptian sources, and some have questioned its historicity.[348] A relief depicting Ahmose II (Nicosia CS2378)[349] and a unique Cypro-Archaic sculpture of a Nubian woman (Princeton R9913)[350] are the only potential archaeological remnants of the Egyptian administration; Cypriot troops in the armies of Wahibre (Aswan 19)[351] and Ahmose II (*ANET* 308) may offer another indication.[352] Egyptian symbols of power deeply impacted Cypriot notions of Kingship:[353] Cypriot sculptors thereafter depicted their monarchs wearing the Pharaonic double crown (e.g., Gandur FGA-ARCH-GR-0125; Met.Mus. 74.51.2472, 74.51.2254, 74.51.2603),[354] and their elites in Egyptian dress (Met.Mus. 74.51.2467, 74.51.2471; Nicosia 1934/III-16/1). Similar effects are evident in Cypriot religion; besides ram-headed deities reminiscent of Amun (§3.3.3), Cypriot sculptors also produced figures of Hathor (Limassol AM1555; Louvre AM93), Thoth (Met.Mus. 74.51.2562) and Horus (Met.Mus. 74.51.2516). Whether this resulted from Egyptian conquest or transmission via Phoenician models[355] remains debated, though the affinity between Cypriot output and Egyptian exemplars supports direct contact.

Active Egyptian campaigning in Cyprus resumed in the fourth century, when Hakor sent a fifty-trireme fleet to support Evagoras (Theopomp. *FrGrHist.* 115 F103; Diod.

[347] Leahy (1988:193), Perdu (2010:147). Herodotos' assertion that Ahmose II was the first to extract tribute from Cyprus ignores the Assyrian conquest (*ARAB* II 80, Lloyd, 1993:241, Reyes, 1994:60, Satraki, 2013:126; *cf.* Dunbabin, 1957:28, Hadijoannou, 1983:152, Stylianou, 1989:382-95).
[348] *cf.* Leahy (1988:195), Reyes (1994:78), Iacovu (2013:809).
[349] Reyes (1994:83).
[350] Serwint (2020:122), suggesting that it depicts the wife of an Egyptian administrator. Herodotos reports (7.90.1) that 'Ethiopians' contributed to the Cypriot naval contingent raised by Xerxes; these were perhaps descended from Nubians involved in the Egyptian administration: Gjerstad (1948:467).
[351] Edel (1978:19); *contra* Leahy (1988:193-4, 196).
[352] Reyes (1994:76).
[353] Flourentzos (2009).
[354] Satraki (2013:133).
[355] Karageorghis (2002:195). The Cypriot population in Naukratis (Jenkins, 2001:168; Villing, 2006:39-40; Villing and Schlotzhauer, 2006:7) offers an alternative route of transmission: Reyes (1994:82). Certainly, Egyptian influence in Cypriot art predated Ahmose II (e.g., Nicosia 4844; *cf.* Flourentzos, 2009:67).

15.2.4).[356] But it was left for the Ptolemies to reconquer the island. Among Ptolemy I's earliest foreign actions were campaigns along the Levantine coast and treaties with the Cypriot kings (Arr. *FrGrHist.* 156 F10.6).[357] By 315BC, Ptolemy had colluded with Nikokreon of Salamis to seize the island,[358] leaving his brother Menelaos as *de facto* regent (Diod. 19.62.3-5). The scale of Ptolemaic intervention in Cyprus overmatched the Athenian: Ptolemy's 306BC expedition (Diod. 20.49.6) may have totalled 400 ships,[359] and, even before Ptolemy assumed absolute control upon Nikokreon's death,[360] the island was permanently garrisoned. Once incorporated into the Ptolemaic realm, the Cypriot city-kingdoms were dissolved, and the entire island was Hellenized, displacing pre-existing Phoenician and Eteocypriot linguistic and ethnic groups,[361] and cementing Ptolemaic control for another 240 years.

5.2.4 | *Rhodes, and the Aegean Islands*

The Rhodian connection to Egypt was as strong as the Cypriot.[362] Herodotos listed 'Rhodes' (Ῥόδος) among the founding-*poleis* of Naukratis (2.178.2; §5.3.1), even though, before synoecism in 408BC (Diod. 13.75.1; Strab. 14.2.9-11),[363] the island was divided between city-states. All can be archaeologically connected to Egypt: a scarab of Psamtik I among elite grave goods (BM 1861,1111.13), and an Egyptian statue dedicated (in Greek) to Athena (Rhodes 14341), link Kamiros to Egypt;[364] Ialysians were present among

[356] Lloyd (1972:272-3).
[357] Thompson and Buraselis (2013:4).
[358] Papantoniou (2013:179).
[359] Perhaps 210 warships, and 200 supply-ships: Thompson and Buraselis (2013:6). Diodorus (20.49.2) gives a figure of 140 warships and 200 transports, mirrored by Polyainos (*Strat.* 4.7.7), while Plut. (*Dem.* 16.1) counts 150. Arguing for the lower figures, *cf.* Billows (1990:153).
[360] Papantoniou (2013:179).
[361] Iacovu (2013:815-16).
[362] For pre-Saïte Egypto-Rhodian relations, *cf.* Kousoulis (2011).
[363] Berthold (1980:34-5).
[364] Syropoulos (2007:88), Kourou (2004:12-17; 2015:248-9). The dedicator, Smyrdes, is also evidenced from an Egyptian statue from Mt. Atabyros (Rhodes E7020/Γ2649).

Psamtik II's mercenary force in Nubia (M&L 7),[365] and inlays survive from a shrine Necho II dedicated to Athena Ialysia (Rhodes 7683, 9799);[366] while Lindos appointed a *proxenos* at Naukratis in the fifth century (*I.Lindos* 16 app.),[367] and Ahmose II dedicated to their patron Apollo (Hdt. 2.182.1; *cf. I.Lindos* 2 C.36-55).[368] These *poleis* became important centres for *Aegyptiaca*, producing faience objects both in Egyptian (e.g. hedgehog aryballoi: Manchester 37058; Bes aryballoi: Vienna V.1950; 'new-year flasks': BM 1861,0425.29; situlae: Philadelphia 29.71.189) and Greek style (Vienna IV.1626; §2.4.1).[369] Finally, the strength of the relationship is attested by the small Rhodian settlement of Vroulia.[370] Despite this city's brief florescence,[371] the distinctive Vroulian 'bird bowls' are exceptionally well-represented at Naukratis (e.g. BM 1888,0601.652a; Cairo CG26154; §5.3.1).[372]

The strategic importance of Rhodes on the Athens-Egypt grain-route ([Dem.] 56.3) was underlined by Athens' fourth-century military interest in the island.[373] Before the Lakonophile oligarchy was toppled in a democratic revolution (*Hell.Oxy.* 10.1-3), Rhodes hosted a significant Spartan naval presence (Isok. 4.142; *Hell.Oxy.* 9.2-3; Diod. 14.79.4-5).[374] Having been expelled, the Spartans sent Peisander to recapture it (Diod. 14.83.5), and the Persian fleet, commanded by Pharnabazus and Konon, defeated him (14.83.6-7),[375] probably ensuring Rhodes' entry into the anti-Spartan coalition whose 'ΣΥΝ' coins (e.g., in

[365] Syropoulos (2007:88), Kourou (2015:249-50), Iancu (2016:20).
[366] Kousoulis and Morenz (2007:185-7); for other dedications by Necho in Greece, *cf.* Hdt. 2.159.3.
[367] Roebuck (1959:216), Austin (1970:26, 31), Figueira (1993:318-22), Pébarthe (2005), Gabrielsen (2013:66).
[368] Möller (2000:37-8).
[369] Boardman (1999:127), Möller (2000:83).
[370] Whether Vroulia was a *polis*-proper is unknown: Nielsen and Gabrielsen (2004:1198).
[371] Morris (1992:174).
[372] Price (1924:185), Cook and Dupont (1998:26). Vroulia's wealth relied on Egyptian trade: Morris (1992:193).
[373] Seager (1966:172).
[374] Berthold (1980:35).
[375] March (1997:268).

CH 9.378) appear around this date.[376] During this engagement, we find our first solid evidence of Egyptian grain-ships in the Aegean, captured by Konon *en route* to Sparta (*Hell.Oxy.* 10.3; Diod. 14.79.7).[377] When, in 391/0BC, exiled Rhodian oligarchs again appealed for Spartan assistance (Xen. *Hell.* 4.8.20),[378] the Athenians despatched Thrasyboulos to reinforce the democrats (4.8.25). Xenophon's narrative (*Hell.* 4.8.22-6) makes clear that Thrasyboulos' expedition was closely linked to the Cypriot expedition of *c.*390BC (§5.2.3).[379] Athens' commitment to Rhodes left her with few ships and little money to offer Evagoras (Lys. 19.21-2), and the Cypriot expedition was further depleted by Spartan interference (Xen. *Hell.* 4.8.24; Diod. 14.94.3).[380] Yet Thrasyboulos abandoned Rhodes (and, indeed, Cyprus), instead securing the Hellespont (4.8.25-6). While much scholarship sees opportunist or imperialist motives for this move,[381] the common denominator between both the Rhodian-Cypriot theatre and the Hellespont is the grain supply.[382] It seems plausible that Thrasyboulos, spurred by the reversals in Cyprus and with the Spartan Teleutias prowling menacingly in the seas north of Rhodes, sought the resumption of Euxine grain imports.

Rhodes was central to the Ptolemies' Aegean strategy. While the *Alexander Romance* states that Rhodes was placed under Ptolemy I's protection immediately in 323BC

[376] Berthold (1980:38), Ashton (2001:80-1); *cf.* Cawkwell (1963:152), linking the coins with this alliance, *contra* Cook (1961:67-72).
[377] Berthold (1980:37), Moreno (2007a:341).
[378] Berthold (1980:38). Given the *nauarch* Ekdikos left immediately after his appointment, the expedition can be dated to summer 391BC: David (1984:277, n.36).
[379] This chronology is contested. Isokrates (9.64) reported, as did Diodorus (15.9.2), that Evagoras' war lasted ten years. His implication in the *Panegyrikos* that the war was ongoing in 380BC (from the speech's conventional date, six years after the King's Peace: 4.141; though *cf.* Tuplin, 1983:181), provides a *terminus post quem* of 390BC. Decadal wars are suspicious, given the Trojan War exemplar (*cf.* Thuc. 1.11; Cawkwell, 1976:274), but if this expedition is the one in Lysias 19 (*cf.* Tuplin, 1983:172; Edwards, 1999:118; Howan, 2011; *contra* Stylianou, 1988:464-9), then the 'four or five years' (τέτταρσιν ἢ πέντε ἔτεσι: 19.28-9) between Knidos and the expedition corroborates a date of 390BC.
[380] Dillon (1987:158), Stylianou (1988:469).
[381] Cawkwell (1976), Strauss (1986:153). Sears (2013:98) similarly sees a financial motive, controlling Hellespontine traffic and exacting tribute.
[382] *cf.* Burke (1990:6).

([Call.] 3.30-3), this is certainly later interpolation;[383] the Rhodians were the first Greeks to expel the Macedonians after Alexander's demise (Diod. 18.8.1) and, through judicious neutrality during the Wars of the *Diadochoi*, became prosperous and widely courted by the Successors (20.81.1-2). Free from distractions, Rhodes effectively policed the seas,[384] ending the endemic piracy endured since Athens' naval decline (20.81.3; Strab. 14.2.5).[385] Especially during the summer sailing-season, piracy severely hindered Graeco-Egyptian trade,[386] which had grown sufficiently for Diodorus to claim that Rhodes' income was dependent on Egypt (20.81.4).[387] Though the diversity of pirates precluded a coherent anti-pirate strategy,[388] Ptolemaic and Rhodian interest in securing Egypto-Aegean trade promoted the Alexandria-Rhodes sea-lane to the umbilical route for the Greek food-supply.[389] Throughout the Hellenistic Period, Rhodian 'guard-ships' (φυλακίδας: Diod. 20.93.5) provided escorts along this route,[390] while the Athenian (*cf. IG* II^2 1629.25-6)[391] and Ptolemaic (e.g., *IG* XII.3 1291) fleets[392] undertook periodic anti-pirate expeditions.

Rhodes' strategic and commercial centrality was mirrored across the Aegean islands. Crete, Delos and Samos were particular centres of Egyptian influence;[393] the Samian Heraion housed the largest array of Egyptian dedications in the Greek world,[394] including by Ahmose II (Hdt. 2.182.1).[395] The strength of Egyptian influence is evident also

[383] Hauben (1977:312), Bosworth (2000:208), Oliver (2018:125-6).
[384] Hauben (1977:318), de Souza (2002:6), Gabrielsen (2013:74).
[385] Thucydides (1.5.3, 13.5) implies that piracy was suppressed in his own time (de Souza, 1999:27), but the decline of Athenian hegemony in the fourth century saw its resurgence (*cf.* Andok. 1.138; Isok. 4.115; [Dem.] 52.5, 53.6; Xen. *Hell.* 2.1.30; Michell, 1940:308-9, Austin, 1994:559-60; Hind, 1994:481; Bresson, 2016a:303-4).
[386] Lewis (2019:87) notes that pirate galleys were ill-suited to winter sailing, though they often risked it: Scholten (2000:150).
[387] Hauben (1977:319-20).
[388] Criscuolo (2013:171), Lewis (2019:81-2). Indeed, the Ptolemies colluded with pirates: Criscuolo (2013:162); *cf.* Paus. 1.7.3.
[389] Casson (1954:169).
[390] Gabrielsen (2013:76).
[391] *cf.* Plumpe (1942:42), Gabrielsen (2015:189).
[392] Though de Souza (1999:54) emphasizes the inconsistencies in Ptolemaic anti-pirate policy.
[393] Murray (1993:229).
[394] Snodgrass (1980:140), Osborne (2009:87).
[395] Möller (2000:37-8).

in Samos' Egyptianizing sarcophagi,[396] and local production of Egyptianizing bronzes (e.g., sphinxes: Berlin Sa.16.Br; recumbent lions: Berlin Sa.32a-c.Br, *cf.* Vathy 1149/1150 [fig. 6.14]). The closeness of the alliance between Ahmose II and the Samian tyrant Polykrates is well-attested, and was probably central to the supply of Greek troops in Egypt.[397] Samos' strategic importance was recognized also by Athens: after Aigospotamoi, the Samians were the only allies to stick by the Athenians, who in 405BC rewarded them with a grant of citizenship (*IG* II^2 1);[398] Athens later sent 2,000 *kleruchs* to the island in 365/4BC (*IG* II^2 1609.88-9), 361/0BC (Aisch. 1.53) and 352/1BC (Philoch. *FrGrHist.* 328 F154; Dem. 15.9; Diod. 18.18.9).[399]

The Ptolemies' Aegean strategy culminated in the institution of the Nesiotic League. While most scholars place the League's foundation *c.*314/13BC,[400] under Antigonos I Monophthalmos, the first secure evidence for the League comes after 287BC, when Ptolemaic control was secured, and the Islanders instituted the *Ptolemaieia* (*IG* XII.7 506; *cf. IG* XI.4 1123-4).[401] Antigonid control of the Cyclades before this time does not require the League's operation.[402] Sponsorship of the League[403] enabled the Ptolemies to scale back their naval presence Aegean to outposts at Thera (*IG* XII.3 320, 327, 466),[404] Samos (Polyb. 5.35.11),[405] Keos,[406] and Crete (*OGIS* 102).[407] While short-lived,[408] the strategy of

[396] Boehlau (1898:15), Kurtz and Boardman (1971:176, 268), Villing and Schlotzhauer (2006:8). Klazomenian ceramic sarcophagi (e.g., Berlin 30030), based on Egyptian prototypes, were also abundant on Samos (Ulusoy, 2010:72-3).
[397] Wallinga (1991:180).
[398] Cargill (1983:322-3). The grant of citizenship was loosely framed: Davies (1978:107).
[399] Garnsey (1988:145), Moreno (2009:213).
[400] Merker (1970:141), Billows (1990:220).
[401] Merker (1970:143), Meadows (2013:27-8), Constantakopoulou (2017:36-7).
[402] Meadows (2013:26), *contra* Billows (1990:221).
[403] Constantakopoulou (2017:32) cautions against over-emphasizing the agency of patrons against the Islanders themselves.
[404] Bagnall (1976:123-5), Shear (1978:17, n.30), Meadows (2013:35), Constantakopoulou (2017:47-8, n.90).
[405] Bagnall (1976:80-2).
[406] Constantakopoulou (2017:53).
[407] Bagnall (1976:117), Shear (1978:17, n.30).
[408] Ptolemaic control of the Nesiotic League did not outlast the defeats at Kos, Ephesos and Andros; Rhodes then took on leadership: Reger (1994b:41-3).

patronizing Leagues (Nesiotic, Chrysaoric, and Lykian)[409] constituted soft-power imperialism, securing the influx of Greek colonists required to govern Egypt,[410] while using only a fraction of the financial or manpower commitment of garrisoning the Aegean.

5.3 | Administered 'Ports-of-Trade'

The danger of the 'middle territory' could only be ameliorated by military vigilance and diplomatic interventions from both trade-partners. But while convoys and embassies might protect against pirates and foreign powers, trading states still needed protection from one another. Merchants were often indistinguishable from pirates, and – without easily-accessible legal redress – their traditional methods of 'self-help' (notably σύλη: Dem. 35.13, 51.13; Lys. 30.22; Arist. *Oik.* 1347b23)[411] could be violent and destabilizing.[412] Traders, too, needed protection: the coastal regions where they operated were often barely under the hinterland state's control.[413] *Emporiai* were loci for cross-cultural interaction, whose chimerism was viewed suspiciously by culturally conservative ancient states.[414] The solution was the 'port-of-trade', a centre for administered exchange on the margins of controlled territory.[415] Guaranteeing the safety of both hosts and foreigners,[416] 'ports-of-trade' are usually considered concessions from the hinterland empire,[417] neutrality devices straddling the interface of opposing systems.[418] While the model 'port-of-trade' derives from the Primitivist-Substantivist view,[419] for our purposes, the concept provides a useful

[409] Meadows (2013:34).
[410] *cf.* Spyridakis (1970:69).
[411] Michell (1940:227), Cojocaru (2009:361), Engen (2010:183), Arnaud (2011:64), Woolmer (2016:76).
[412] Naukratite ships are known to have fallen foul of such confiscations: Dem. 24.11.
[413] Revere (1957:38); *cf.* Hall (2007:246).
[414] Polanyi (1963:30); *cf.* Hasebroek (1933:117).
[415] Ponasik (1977:195), Hall (2007:246).
[416] Möller (2000:20).
[417] Polanyi (1963:38).
[418] Polanyi (1963:30), Möller (2000:20).
[419] *cf.* especially the definitions adopted by Ponasik (1977:195-6).

heuristic for examining trade across cultural boundaries, without detracting from our emphasis on the diversity of Graeco-Egyptian economic and cultural interactions.

For the Egyptians, a 'neutrality device' was doubly necessary. Egypt's core was well-protected from foreign threats, surrounded by desert and sea. Resultantly, the Egyptians conceptualized their country as a walled city; the entryways through her natural frontiers were termed 'gates' (*rw.t*),[420] which, starting from the Middle Kingdom (*c.*2055-1650BC) had dedicated officials. The 'overseer of the gateway' (*imy-r3 rwy.t*: BM EA27574),[421] 'overseer of the gate of the foreign countries' (*imy-r3 ꜥ3 ḫ3s.wt*: BM EA111, UCL UC14634),[422] 'overseer of the gate of the southern foreign countries' (*imy-r3 ꜥ3.w ḫ3sw.t rsyw.t r*: Louvre A90),[423] 'overseer of the gate of the northern foreign countries' (*imy-r3 ꜥ3.wy m ḫ3s.wt mḥr.w*: Cairo CG895),[424] and 'scribe of the gate' (*s3b sḫ3.w rw.t*: e.g. BM EA28232), apparently had administrative and customs functions at these entry-points.[425] For Graeco-Egyptian trade, the most important gateways were the port-towns of Naukratis and Herakleion-Thonis, the former considered the prototypical 'port-of-trade',[426] probably under the ultimate jurisdiction of the 'overseer of the gate of the foreign countries of the Great Green [= Mediterranean]' (*imy-r3 ꜥ3 ḫ3s.wt w3ḏ-wr*: Hermitage 2962; §5.3.1).[427] For the Athenians, meanwhile, Piraeus, the most significant Mediterranean *emporion* before Alexandria,[428] separated international trade from the city, insulating the *polis* from the

[420] Agut-Labordère (2013:1002).
[421] el-Khadragy (2007:109-10), Grajetzki (2013:220-1).
[422] Gauthier (1922:87),
[423] Kaplan (2003:12), Bassir (2016:74).
[424] Agut-Labordère (2013:1005). Ahmose, who held this title, is probably the same as in M&L 7: Lefebvre (1925:55-6).
[425] Kaplan (2015:405), Bassir (2016:85-6).
[426] Möller (2000:4, 5); *cf.* Daniels (2015:299-300). This characterization has been challenged: Demetriou (2012:151-2), Daniels (2015:303-5).
[427] Posener (1947:120, 130-1), Agut-Labordère (2013:1005-6), Bassir (2017). Tresson (1931:131-2) translated another iteration of this title (Varille) as 'governor of the entryways [of Egypt] by land and sea,' listed separately by Kaplan (2015:405) and Bassir (2016:86); the latter pluralizes the word 'gate' (*cf.* Lichtheim, 1992:91-2).
[428] Strauss (1989:48).

corrupting effect of foreign influence (§5.3.3)[429] lampooned by commentators on the Piraeus.[430]

5.3.1 | *Naukratis*

The literary evidence is equivocal regarding the date of Naukratis' foundation. Polycharmos of Naukratis' date in the 23rd Olympiad (*c.*688-685BC; *FrGrHist.* 640 F1) is certainly too early,[431] while Herodotos' (2.178.1) emphasis on Ahmose II probably better reflects that Pharaoh's legendary philhellenism than access to privileged information.[432] Diodorus (1.66.8-10) and Strabo (17.1.18) concur that Naukratis was founded in Psamtik I's reign. Despite Diodorus' importance as a repository for otherwise-lost Greek historiography,[433] opinion of his Egyptian testimony has been generally poor.[434] Strabo's account has also been attacked as inconsistent: his statement that Naukratis was founded during the reign of the Persian Kyaxares discounts neither Psamtik I nor II as his Psammetichos,[435] and Strabo probably tapped into a Hellenistic tradition when he claimed Miletos as Naukratis' founder.[436] His assertion, however, that Naukratis was contemporary with one Irethor need not militate against his veracity as sometimes claimed.[437] Irethor was a common Egyptian name; he may mean Irethor of Athribis, a near-contemporary of Psamtik I whose mythologized exploits were popular themes in Late Period literature,[438] rather than the later anti-Persian rebel (§5.2.2).

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[429] Demetriou (2012:190).
[430] *cf.* von Reden (1995b:25).
[431] Petrie (1886:4), Gardner (1888:34), Braun (1982:38), Jenkins (2001:163-4); Sullivan (1996:177) is more credulous.
[432] Cook (1937:235), Roebuck (1959:214), Möller (2000:192).
[433] Sacks (1990:3).
[434] Africa (1963:254); *cf.* Pfeiffer (2010:16).
[435] Sullivan (1981:9); most scholars presume the former: Sullivan (1996:178), Möller (2000:186).
[436] Austin (1970:27), Sullivan (1996:186), Drijvers (1999:16-17, 20-1), Demetriou (2012:113); though, the role of Miletos may have been underrated by modern scholarship due to mis-assignment of Milesian pottery as Rhodian: Schlotzhauer (2006:133); *cf.* Austin (1970:27).
[437] Drijvers (1999:18).
[438] *cf.* Ryholt (2010:715).

The most commonly accepted reconstruction places it under Psamtik I, accounting for Herodotos' assertion that Ahmose II 'gave the Greeks who came to Egypt the city of Naukratis' (τοῖσι ἀπικνευμένοισι ἐς Αἴγυπτον ἔδωκε Ναύκρατιν πόλιν ἐνοικῆσαι: 2.178.1) as misreporting a reorganization of the *emporion* under Ahmose II, accompanying the foundation of the Hellenion.[439] The dating of Naukratis is complicated by the lack of a secure stratigraphy for the site, given the flooding of the original excavations and disturbance by *sebakhin*;[440] the resulting contention, and a re-reading of the Archaeo-Cypriot sculpture chronology,[441] has invited recent attempts to rehabilitate Herodotos' account.[442] Nevertheless, the distribution of Greek black-figured pottery supports a date within Psamtik's reign.[443] The Vroulian Bird-Bowls (§5.2.4),[444] whose developmental chronology is securely defined, provide the best evidence, with Naukratite finds fitting into the second (675-40BC; e.g. BM 1924,1201.882) or third (650-15BC; e.g. BM 1886,0401.1273) developmental stages.[445] This, alongside the output of the Nettos Painter (*fl. c.*625-600BC; e.g. BM B102.3, GRAlex. 19866),[446] other seventh- and early sixth-century Attic vases (BM 1886,0401.1171; Oxford G128.113; Cambridge NA200),[447] and Chian Wild Goat pottery (*c.*620-10BC; e.g., BM 1924,01201.117), suggests that Naukratis was contemporaneous with Old Smyrna (destroyed *c.*613BC)[448] and Vroulia (*c.*650-560BC;

[439] Petrie (1885:202), Gardner (1888:72), Smith (1927:534-5), Roebuck (1959:214), Coulson and Leonard (1979:153; 1982:361), Sullivan (1981:12, 178), Snodgrass (1983:145), Drijvers (1999:20), Höckmann and Möller (2006:13), Villing and Schlotzhauer (2006:5), Hall (2007:244), Moyer (2011a:56), Demetriou (2012:111-2).
[440] Hogarth *et al.* (1905:105), James (2003:243).
[441] James (2003:250), *contra* Thomas (2015b:3-4); on the Cypriot sculpture of Naukratis, *cf.* Jenkins (2001).
[442] James (2003). *cf.* Hogarth *et al.* (1899:50), Cook (1937:232-3).
[443] James' (2003:239) attack on the pottery chronology is not widely accepted.
[444] Price (1924:184-5), Cook (1960:140).
[445] *cf.* Cook and Dupont (1998:26). One tightly dated design, where the waterbird decorative frieze does not rest on a solid band (*c.*620-600BC; e.g., BM 1888,0601.652a), is abundant at Naukratis: Price (1924:185).
[446] Venit (1984:141-2; 1988:85-6).
[447] *cf.* Venit (1984:141-4), Osborne (1996:34).
[448] Cook (1937:230; 1960:264); *cf.* Boardman (1999:121).

§5.2.4).[449] The prevailing explanation of a foundation under Psamtik and refoundation under Ahmose remains, therefore, the most plausible.

THE HELLENION, AND THE GREEK ADMINISTRATION

Naukratis has memorably been called the 'Hong Kong'[450] or 'Shanghai'[451] of the Ancient Mediterranean. The Eurocentricity of this perspective is clear: as treaty-ports exacted from the Chinese following Britain's victory in the Opium Wars,[452] they mirror Herodotos' narrative, in which the opening up of Egyptian trade resulted from the indispensability of the Greeks to Ahmose II's military ambitions. This, however, unjustly minimizes Egyptian agency. A better, though less evocative, parallel, is Nagasaki:[453] during Tokugawa Japan's 'closed country' (*Sakoku*, 鎖国) policy, Portuguese and Dutch merchants were only permitted to operate on Dejima, an artificial island in Nagasaki harbour, to facilitate the mutually-beneficial trading relationship (propagated by a pro-European *daimyō*) while isolating westernizing influences.[454] Similarly, Naukratis was neither a concession won from the Egyptians,[455] nor an imposition on the Greeks,[456] but a negotiated solution to a mutual problem, as reflected in the dual nature of the administration.

While the site of Naukratis was perhaps virgin,[457] an Egyptian settlement, Pi-Emroye, stood to the south of the Greek town.[458] How far these populations were separated

[449] Price (1924:184), Sullivan (1996:187); *cf.* Price (1924:181), Kuhrt (1996:641), Jenkins (2001:163).
[450] Hanrahan (1961:52), Krämer (2016:89).
[451] Braun (1982:38).
[452] Hoe and Roebuck (1999:203), Darwin (2007:271).
[453] This comparison originated with Vittmann (2003:214).
[454] Blanco (2017:232-4).
[455] As per Cook (1937:235), Möller (2000:192).
[456] As per Petrie (1886:7).
[457] Hogarth *et al.* (1899:45), though *cf.* Hogarth *et al.* (1905:107), proposing a pre-existing Egyptian settlement.
[458] Hogarth *et al.* (1905:107), Austin (1970:28), James (2003:244); Möller (2000:117) minimizes the separation.

is uncertain. It is unclear, for example, when the prohibition on Greek-Egyptian intermarriage known from Roman Naukratis (*W.Chr.* 27 *vso.* 16-26) was instigated,[459] or where Greek jurisdiction stopped and Egyptian began. At the heart of the Greek administration stood the *prostatai* of the *emporion* (προστάτας τοῦ ἐμπορίου: Hdt. 2.178.3), a title which reveals little about their origin or function. Elsewhere, in Herodotos, προστάτης simply means 'leader' (1.127.1, 5.23.2), commonly describing Persian rulers, but for Thucydides (3.75.2, 82.1, 4.46.4, 66.3) the term is specifically democratic, οἱ τοῦ δήμου προστάται.[460] Herodotos' report that the *prostatai* were 'supplied' (παρέχουσαι: 2.178.3) by the nine founder-states of the main panhellenic sanctuary, the Hellenion, however, precludes democratic selection.[461] Similarly, it is unclear what Herodotos means by ἐμπόριον. While he (2.179.1) and others (Harpokration *s.v.* Ναυκραρικά) use it to refer to Naukratis as a whole, it could equally refer just to the trading facilities.[462] On this basis, it has been argued that the *prostatai* only had jurisdiction over the trading-post and the activities of Greeks therein.[463] No evidence survives of Naukratis' commercial quarter:[464] each founding-state probably had a separate area,[465] controlled by officials from sanctuaries besides the Hellenion.[466] It is impossible to reconstruct the powers of these authorities; they are usually compared to the 'supervisors' (ἐπιμεληταί) of the Piraeus, with limited police functions[467] separate from the administration of the non-trading settlers.[468]

[459] This law is commonly adduced in studies of pre-Hellenistic Naukratis (Roebuck, 1959:216; Austin, 1970:28; Kaplan, 2003:19), given the limited epigraphic and archaeological evidence from Naukratis (Roebuck, 1950:242-3). It should be noted, however, that intermarriage rarely leaves any trace.
[460] *cf.* LSJ *s.v.* προστάτης.
[461] *cf.* Hasebroek (1933:65), Murray (1993:231).
[462] Lloyd (1993:226-7), Hansen (2006:4), Bresson (2016a:306).
[463] Roebuck (1959:215), Möller (2000:193-4).
[464] Roebuck (1959:215), Coulson and Leonard (1982:363).
[465] Roebuck (1959:212), Boardman (1999:130).
[466] *cf.* Roebuck (1959:217), Möller (2000:194).
[467] Hasebroek (1933:65), Roebuck (1959:212-13), Demetriou (2012:123).
[468] Pfeiffer (2010:16).

The supreme expression of panhellenism in an alien environment,[469] the Hellenion was both a statement of religious identity and the organizational focus of the *emporion* in the absence of the usual institutions of the Greek *polis*.[470] Only from the fourth century do we see expressions of Naukratite citizenship,[471] and the establishment of characteristic *polis* institutions: the council,[472] *palaistra*,[473] a *prytaneion* (Athen. *Deip.* 149d-50b),[474] and perhaps coinage (§4.3.3, fig. 4.6).[475] The Hellenion itself probably functioned as the *agora*, since no such structure has been found at Naukratis.[476] The ancient references to Naukratis as a *polis* have invited a range of responses. Some, unconvinced by the precision of the distinction, propose that Naukratis was merely an *emporion* until Alexandria superseded it as a commercial hub;[477] others propose that the terminology of the *polis* was applied carefully, and that Herodotos' mixing of terms indicates that Naukratis had always operated as both an *emporion* and *polis*.[478] The *polis-emporion* dichotomy is, in its more severe guise, a modern distraction;[479] what is most important for our purposes is that no evidence exists for a separate Greek civil administration of Naukratis.

THE 'GREAT TEMENOS' AND THE EGYPTIAN ADMINISTRATION

Whatever the exact jurisdiction of the *prostatai*, we should remember that Naukratis was an Egyptian city: the *emporion* is sited not on the Pelusiac branch of the Nile, the most convenient for Greek sailors, but the westernmost Canopic branch, close to the capital at

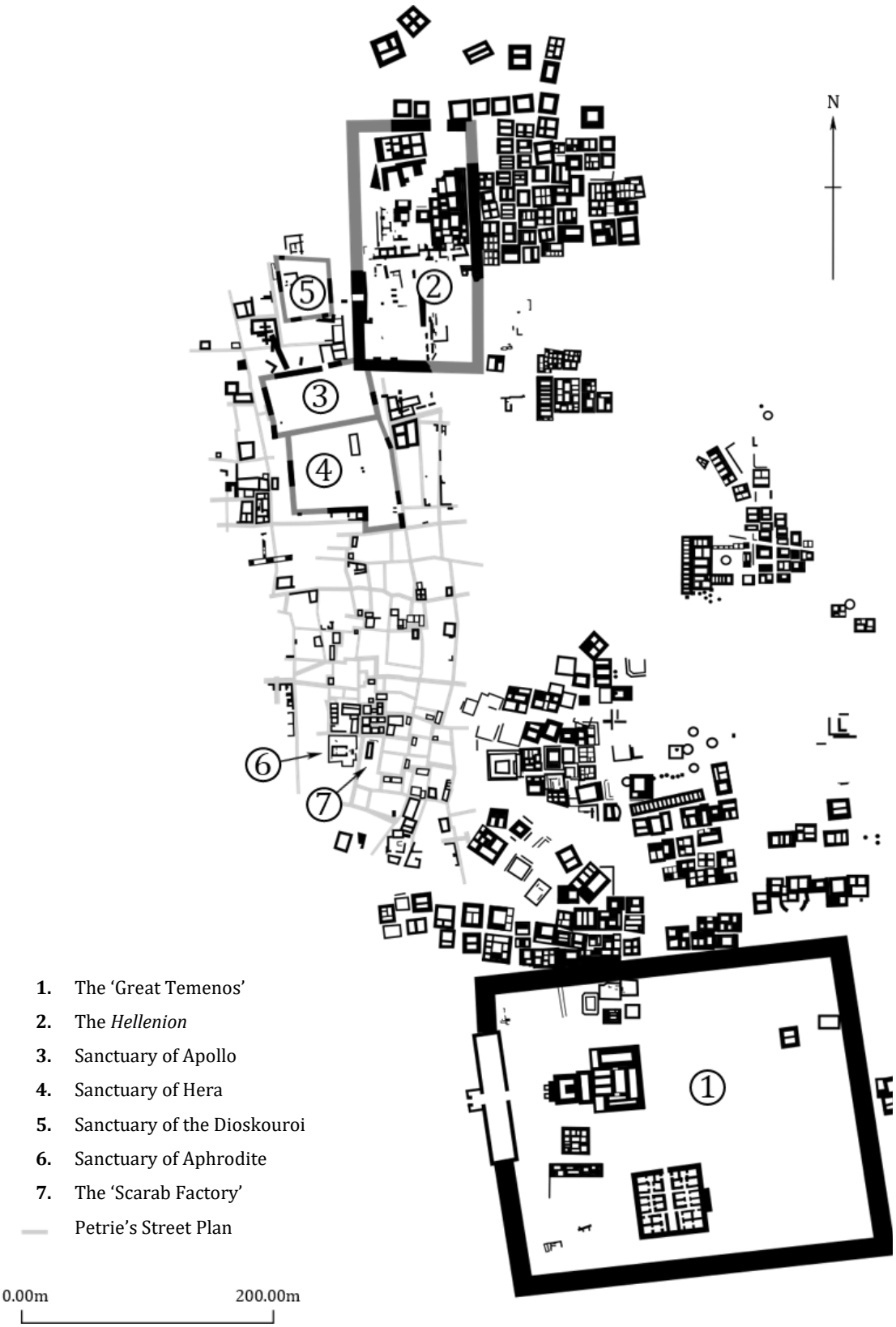
[469] Roebuck (1950:242-3), Hall (1997:50), Höckmann and Möller (2006:18), Villing and Schlotzhauer (2006:8), Mitchell (2007:56-7), Migeotte (2009:64); *cf.* Malkin (2003:59).
[470] Petrie (1886:35), Murray (1993:231), Horden and Purcell (2000:435).
[471] Austin (1970:29); *cf.* Möller (2000:200).
[472] Höckmann and Möller (2006:19).
[473] Petrie (1886:35). This identification is unclear: Petrie had, in his zeal to find Greek institutions in the city, previously misidentified other structures as an *agora* or *palaistra*: Petrie (1885:203).
[474] Höckmann and Möller (2006:18).
[475] Sullivan (1996:177).
[476] Petrie (1886:35); *cf.* Möller (2000:118).
[477] Bresson (1980:316-7), Möller (2000:184-5, 188), Hall (2007:245).
[478] Austin (1970:30-1), Malkin (1987:130), Hansen (1997:92; 2006:17).
[479] A view shared with Demetriou (2012:118).

Saïs.[480] Naukratis' inhabitants were reminded of Egyptian power by the 'Great Temenos', a massive structure, covering some 0.06km^2,[481] which dominated the southern half of the town (Plan. 5.1). Previously, this was misinterpreted as a fort, designed to overawe and police the potentially dangerous Greek settlers.[482] Subsequent investigation instead determined that this was the enclosure for the Temple of Amun, Lord of Batet.[483] Early attempts to associate this enclosure with the Saïte Period on the evidence of brick sizes[484] have been challenged;[485] the extant structure is entirely Ptolemaic. Better evidence comes from the floorplan, which indicates that the Ptolemies reused the foundations of a pre-existing Saïte temple similar to those at Karnak and Tanis,[486] embellished with a 100m pylon constructed by Ptolemy II.[487] Like the Hellenion, the Temple of Amun would serve both religious and administrative functions: Egyptian religious institutions were judicial centres (§5.5.1), tax-collection hubs, and tools for projecting Pharaonic power. It is no coincidence that Nakhtnebef's taxation decree (Cairo JE34002) was set up in the Great Temenos.[488]

Only one Egyptian official is known from Saïte Naukratis. Ahmose-sa-Neith, 'overseer of the gateway' (*imy-r3 rwy.t*),[489] appears on a clay seal-impression (BM EA27574),[490] apparently used to secure a document or goods. We know more about the post of 'overseer of the gate of the foreign countries of the Great Green' (*imy-r3 ꜥ3 ḫ3s.wt*

[480] Austin (1970:28).
[481] According to the measurements of Petrie (1886:23-4).
[482] Hogarth *et al.* (1899:43), Austin (1970:28); *cf.* Wilson (2010:243), Spencer (2011:32).
[483] Yoyotte (1983:129-36), James (2003:343-4). Finds from Naukratis and elsewhere attest to a flourishing cult: Florence 12290, Vienna ÄS4; von Bomhard (2012:6); *cf.* dedications to 'Theban Zeus' (Ζεύς Θηβαῖος; BM 1886,1005.22, Muhs, 1994:100).
[484] Petrie (1886:26).
[485] Muhs (1994:103-4); on the perils of dating from brick-size, *cf.* Spencer (1979:147-8).
[486] Muhs (1994:111), Spencer (2011:37).
[487] von Bomhard (2012:6).
[488] Hogarth *et al.* (1905:122), von Bomhard (2012:7); *cf.* Leonard (1997:13).
[489] The alternative title 'overseer of the antechamber' has also been proposed, on a variant reading of '*rwy.t*', connecting this official with the palace rather than the customs administration: Perraud (2007:1499).
[490] Petrie (1886:100). On Ahmose-sa-Neith, *cf.* Louvre E25390+25475, de Meulenaere (1964:29).

Plan 5.1 | Naukratis



Approx. Scale: 1:4750

Sources: after Petrie (1886:pl. xl-xlii), Coulson (1996:3 fig.3), Thomas (2019:177 fig.1).

w3ḏ-wr). The first holder of this title was Nesuhor (Hermitage 2962), a high-ranking official whose career under Psamtik II and Wahibre, is well-attested.[491] While his activities in this office are little-known, the biography detailing his activities on the southern border (Louvre A90 [= *ARE* IV.994]) is more informative.[492] There, as 'overseer of the gate of the southern foreign countries', he commanded the foreign border-protection troops and controlled cross-border traffic.[493] Similarly, Wahibre (BM EA111), an 'overseer of the gates of the foreign countries', held military titles.[494] Whether foreign troops were stationed at Naukratis remains contentious; Karian pottery (BM 1888,0601.653, 1921,1201.37), given Karia's martial reputation, remains the best evidence in favour.[495] It has been suggested based on an administrative document (*P.Berlin* 13165) that Wahibre's successor may have organized military escorts for trade caravans.[496] Both Nesuhor and Nakhthorheb (BM EA1646; Louvre A94; Varille), another official overseeing the northern frontier, held general high-priestly titles,[497] though none connected with the cult of Amun, Lord of Batet. It has been suggested that this official had ultimate responsibility for Naukratis,[498] though Cairo JE34002 indicates that, for tax-collection at least, Naukratis was administered jointly with Herakleion-Thonis (§5.3.2).[499] It is not until the Ptolemaic Period that we find an Egyptian official specifically assigned to Naukratis: Horemheb, product of mixed Greek-Egyptian parentage, is attested from a colossal archaizing Egyptian-styled statue (Cairo CG1230) as 'mayor' of Naukratis.[500]

[491] Ziegler (1994), Agut-Labordère (2013:1003-4), Bassir (2017, 2018).
[492] Bassir (2018).
[493] Agut-Labordère (2013:1003).
[494] Gauthier (1922:85-8).
[495] Williams and Villing (2006:47-8).
[496] Agut-Labordère (2013:1003-4).
[497] Tresson (1931:131-2).
[498] Vittmann (2003:220); *cf.* Gauthier (1922:87), Tresson (1931:132), Pfeiffer (2010:17).
[499] Erman and Wilcken (1900:131), Gunn (1943), Austin (1970:27).
[500] Smith (1927:538).

5.3.2 | *Herakleion-Thonis*

Despite Herodotos' assertion that Naukratis was the only port where trade with Greece was permitted (2.179.1), imported East Greek amphorae demonstrate a strong Hellenic presence at Herakleion-Thonis from the Saïte Period onwards. While some have opposed the notion that Herakleion-Thonis operated as a trading port from its inception,[501] scholars mostly agree that it was the primary customs-post and entry-port of Egypt from before the Persian conquest (*cf.* Diod. 1.19.4),[502] with a foundation-plaque of Psamtik I (MMAlex. SCA1392) providing a *terminus ante quem* for the site. The name of Ahmose II is particularly associated with Herakleion-Thonis, appearing on a plaque (MMAlex. SCA1310) and bronze pyramidion (MMAlex. SCA1575) from the foundations of the Temple of Khonsu-Thoth.[503] Dedicated to the god as a gatekeeper,[504] this temple evidences the city's maritime and Mediterranean outlook during the Saïte Period: *interpretatio graeca* rendered Khonsu as Herakles,[505] the most significant figure in Mediterranean maritime religion, with his shrines (including his Phoenician equivalent, Melqart) commonest among specialized seafaring sanctuaries (§3.3.1).[506] The amalgamated Khonsu-Thoth became associated with the administration of justice,[507] with his sanctuary a potential location for the arbitration of disputes between traders (§5.5.1). It was at Herakleion-Thonis that the tithe for Neith was collected (*cf.* NMAlex. 285,SCA277), and probably also the tariffs recorded on the Ahiqar Palimpsest (P&Y C3.7).[508]

[501] Pfeiffer (2010:17).
[502] Goddio (2011:125), von Bomhard (2015:106-7).
[503] Masson-Berghoff and Villing (2016:47, 70-1), Robinson and Goddio (2019:438-9). For the temple, *cf.* Goddio (2015:26-8).
[504] *cf.* Goddio (2015:26), von Bomhard (2017:42-4).
[505] Masson-Berghoff and Goddio (2016:79-80), Robinson and Goddio (2019:426). It is from this association that the Greek name Herakleion was derived: von Bomhard (2012:ix).
[506] Malkin (2011:8).
[507] Boylan (1922:206), Robinson and Goddio (2019:438).
[508] Yardeni (1994), Horden and Purcell (2000:149).

5.3.3 | *Piraeus*

Whether the trade that went through Piraeus was 'administered' in the Polanyian sense, as proposed for Naukratis or Herakleion-Thonis,[509] as an interface between Athenians and Egyptians, it served a similar function.[510] It was, after all, in Piraeus that the Athenians ceded land for sanctuaries of Zeus-Ammon and Isis (§3.3.3), in a way unusual for the pre-Hellenistic *asty*.[511] This defined area enabled control of trade for customs and food-security purposes; as Aristotle emphasized, the most essential officials for a well-ordered city were those of the markets (*Pol.* 1312b4-18).[512] It was illegal, for example, to trade outside of the boundary-stones (*IG* II² 887a-b) of the *emporion*,[513] and Demosthenes' disapproval emphasizes that to unload goods in the 'thieves harbour' (φωρῶν λιμένα)[514] was an extremely serious offence (35.28). Piraeus thus provided a bottleneck at the entry-point of the *polis*, where taxes could be collected. An entrance-tax was probably levied (*cf.* Ar. *Av.* 187-93),[515] funding the sanctuaries at Sounion (*IG* I³ 8), Phaleron (*IG* I³ 130) and of the Dioskouroi (*IG* I³ 133),[516] immunity from which was perhaps granted by the privilege of εἴσπλουν καὶ ἔκπλουν.[517] This bottleneck also enabled close supervision of grain imports, already of exaggerated political importance. Occasionally, extraordinary sessions of the *boule* occurred in Piraeus to discuss the grain trade (e.g., *IG* I³ 61.53-4);[518] from before the third century BC, Piraeus had its own *bouleuterion* for transacting such business (*IG* II² 1035).[519] Not only did Piraeus have its parallel *polis* infrastructure, but also duplicate

[509] Möller (2000:42) argues that it was not.
[510] von Reden (1995b:32-3).
[511] *cf.* Walker (1979).
[512] Migeotte (2009:144).
[513] Hill (1932:257), Garland (1987:83, 225), Demetriou (2012:192).
[514] Garland (1987:150), Bresson (2016a:306).
[515] Bresson (2016a:287).
[516] Lewis (1960:193).
[517] Bresson (2016a:288); alternatively, it may refer to protection or pilots: Mack (2015:128).
[518] Garland (1987:82), Demetriou (2012:193); *cf.* Isager and Hansen (1975:28).
[519] Demetriou (2012:193), who points out that the inscription's mention of the 'old *bouleuterion*' (ἀρχαῖον βουλευτήριον) implies that it was no longer in use by that time.

officials. Most interesting to us are the 'grain guardians' (σιτοφύλακες),[520] known especially from a speech of Lysias (22.8; *cf.* [Arist.] *Ath.Pol.* 51.3; §5.5.2). There were originally ten of these officials, five each for the *asty* and Piraeus (similarly to the ἀγορανόμοι: [Arist.] *Ath.Pol.* 51.1), but by the 320s BC, their numbers increased to thirty-five, fifteen in Piraeus.[521] It was their job to record the origin and volume of imported grain (Dem. 20.32), as well as to deal with breaches of the law (though, perhaps only up to a value of ten drachms),[522] and to enforce the regulations surrounding the distribution, re-export and price of grain.[523]

5.4 | Contracts and the Laws of Commerce

We have already demonstrated the importance of overcoming informational asymmetries for successful economic transactions (§4.1.6): in other words, transactions depend on trust that both participants will uphold their side of the negotiated agreement. This risk is perhaps the most serious transaction cost,[524] and is especially acute across cultural barriers, where friction between social values reduces the chance of transaction success (§4.1).[525] Compatible moralities disincentivized non-compliance,[526] by imposing social consequences on unilateral defection.[527] Where such consequences were insufficient, self-help practices filled the void,[528] though these are damaging for social cohesion.[529] Instead, the state monopolizes the enforcement of norms and punishes the breaking of

[520] Brown (2008:66-7), Bresson (2016a:314).
[521] Todd (1993:320-1).
[522] Bresson (2016a:248).
[523] Oliver (2007:26), Bresson (2016a:314); §5.5.2.
[524] Oye (1986:4-5), North (1990:62-3), Muhs (2015:80); on the theory of transaction costs, *cf.* Coase (1960), North (1990:27-30), Williamson (2005), Manning (2015:101).
[525] Steenkamp and Geyskens (2011), Petrakis and Valsamis (2013).
[526] Attributing cost-benefit analysis to crime is not uncontroversial: *cf.* Ehrlich (1996:47), Meares (2002:407).
[527] Macaulay (1963:62-3), North (1990:61), Kandori (1992:63).
[528] *cf.* for Athens, Todd (1993:94), for Ptolemaic Egypt, Bauschatz (2013:162).
[529] North (1990:38-9).

contracts.[530] While the Egyptians had an exceptionally long history of producing written agreements, signed in the presence of witnesses, documenting property transfers and loans, contracts do not appear in Greece until the fifth century BC.[531] While operating within different legal traditions, these contract formulae mitigated the informational and trust asymmetries across the cultural divide.

5.4.1 | *Contracts and Enforcement in Egypt*

Egypt was, for the most part, ruled by decree from Pharaoh's Palace (§5.1.2),[532] and by the on-the-spot decisions of local officials. Resultantly, no written law-code exists from Pharaonic times,[533] and there was perhaps no attempt to create one until the Persian Period,[534] when Darius wrote to his satrap commanding him to consult those with access to Egypt's written and oral institutional memory to gather together 'the earlier law of Egypt' (*p3 hp* [*n*] *km*[*.t*] *n* [*t3*] *ḥ3.t*: *P.Bib.Nat.* 215.6-16; *cf.* Diod. 1.75.6).[535] The implication is that without this new law-code, it would have been impossible or inconvenient to access the Egyptian legal corpus. Despite this omission,[536] Egypt had a well-developed legal infrastructure, applying the law evenly.[537] Darius' desire to codify Egyptian law fitted into a pattern of increasing ease of access to Egyptian justice.[538] We have already charted the

[530] Stigler (1970:526), Platteau (1994b:754).
[531] The earliest proto-contracts from the Hellenic World are those from Korkyra (Calligas, 1971:86) and Pech-Maho (Chadwick, 1990:165-6); *cf.* Brown (2008:157-8). For the view that these documents are not actually contracts, *cf.* Austin and Vidal-Naquet (1977:155, n.21), Lejeune and Pouilloux (1988:531-2), Reed (2003:41).
[532] VerSteeg (2002:5), Westbrook (2003:26), Manning (2010:167, 169-70); *cf.* Taylor (1980:66-7), Manning (2003b:826).
[533] Erman (1971:141), Theodorides (1971:290), Manning (2010:167).
[534] Some Egyptologists believe, on minimal evidence, that a unified law-code was created as early as the twelfth dynasty (*c.*2000BC): e.g., Hayes (1955:51-2), Taylor (1980:61), VerSteeg (2002:17).
[535] Manning (2003b:821), Agut-Labordère (2009); this aimed to ease Persian administration: Frei (1995:4-5).
[536] Manning (2012:111-12) demonstrates the artificiality of modern notions of law in 'despotic' Eastern monarchies; the absence of a written law code dismisses the importance of institutional memory in transmitting law. Egyptians actively chose to privilege orality before the Saïte Period: Muhs (2015:82).
[537] Theodorides (1971:320), Manning (2012:112).
[538] Muhs (2015:81).

evolution of Egyptian language away from the complex Abnormal Hieratic script to the semi-alphabetic Demotic (§2.2.1), a change spearheaded in the legal sphere.[539] In part, this reflects the increasing prominence of documents as evidence in court.[540]

An important difference between ancient and modern contracts was their evidential function. Egyptian contracts were *ex post* records of verbal agreements;[541] the verbal contract was the official version of the agreement, with the written transcript available as evidence for any resultant disputes.[542] It was the later inclusion of witnesses that rendered contracts a powerful legal instrument in their own right. Under the earlier, Hieratic, system, some literate witnesses appended their own transcripts of the agreement for verification.[543] In Demotic contracts, between ten and sixteen witnesses signed.[544] To modern eyes, this might put the veracity of the transcript beyond doubt. In the Egyptian case, however, the number of witnesses resulted from the privileging of oral testimony: by appending their names, the witnesses did not verify the terms of the agreement so much as agree to give oral testimony should the case come to trial.[545] The large numbers increased the chance that enough witnesses might appear before a court in that eventuality. Nonetheless, the inclusion of third-party verification went some way towards secularizing legal processes, enabling private individuals to conclude agreements outside of pre-existing relationships.[546]

[539] Ray (1994:53), Manning (1995:237; 2003b:820).
[540] Muhs (2015:81-2, 89).
[541] Pierce (1972:83-4), Manning (2015:105-6). Demotic contracts are introduced with the word *ḏd*, 'to say/speak': Manning (1995:253; 2003b:843, n.124), Muhs (2015:92), Massa (2018:61). Similarly, the Egyptian for 'to litigate', *mdw ḥr.m*, literally translates as 'to speak about something': Lippert (2012b:6).
[542] Manning (2003b:843).
[543] Muhs (2015:89).
[544] Manning (1995:241); sixteen appears to have been the norm from the Ptolemaic Period: Manning (2015:110-15).
[545] *cf.* Muhs (2015:83).
[546] *cf.* Polanyi (1957a:70), Muhs (2015:90).

While near-universal in Abnormal Hieratic contracts,[547] oaths sworn 'as Amun lives, and as Pharaoh lives' (ʿnḫ imn ʿnḫ pr-ʿ3) only appear in earlier Demotic contracts (e.g., *P.Ryl.* 1 and 2).[548] In the New Kingdom, oaths often included liability to punishments for breaking them, typically a hundred lashes (e.g., *O.Cairo* CG25556.7-9, *P.Cairo* JE65739.17, *O.Nash* 2 rto. 11-17) or imprisonment (e.g., *P.BM* EA10053 vso. 2.18);[549] by the Saïte Period, the oaths stood alone, reducing the potential for violent self-help. Nonetheless, oaths were taken seriously, and throughout our period could be used as evidence in court testimony, recorded from the Ptolemaic Period[550] on ostraca deposited at the gates of the temple,[551] which maintained an important judicial role. The continuation of this Demotic contractual system, alongside the Greek, is a notable feature of the Ptolemaic state.[552] This does not mean, however, that Demotic contracts did not evolve under the Ptolemies; while scribal practice was conservative, innovations occurred in the ceding of future property claims, and in the translation of Greek legal phraseology into Demotic (e.g., the right of εἴσοδος καὶ ἔξοδος becomes *mtim n ʿḳ pri*: *P.BM* 10616).[553] Perhaps most significantly, the Egyptians adopted the Greek practice of depositing contracts with a third party (*cf.* §5.4.2), called a 'trustee' (ʿ*rbt*), equivalent to the Greek συγγραφοφύλαξ (*cf. OGIS* 120);[554] this took the responsibility for enforcement away from the contracting parties, the second of which safeguarded the document in Saïte practice.[555] Similarly, the Ptolemaic addition of archival dockets to contracts[556] reflects both pre-Demotic record-keeping and imported Greek archival practice,[557] further securing the contract's integrity.

[547] Taylor (1980:69).
[548] Massa (2018:61).
[549] *cf.* Taylor (1980:69), Massa (2018:53-5).
[550] The earliest such temple oath, *O.Tempeleide* 220 dates from *c.*224BC: Hue-Arcé (2019:123, n.3).
[551] *cf.* Lippert (2012a:10).
[552] Manning (2015:103-4).
[553] Manning (2015:107), *cf.* Glanville (1932:160). On the right of access, *cf.* Allam (2011).
[554] Lippert (2008:151), Depauw (2015:73), Manning (2015:108).
[555] Muhs (2015:91).
[556] Pierce (1972:179).
[557] Manning (2015:109-10).

5.4.2 | *Contracts and Enforcement in Athens*

Just as in Egypt, Athenian written 'contracts' (συγγραφαὶ) were evidentiary, deriving potency from the witness-statements presented in court (*cf.* Dem. 34.26-7),[558] rather than being legally binding themselves.[559] But while συγγραφαὶ were not 'proper' contracts, their effect was similar: it is hard to imagine that an Athenian jury, if presented with a contract that had been signed, witnessed and deposited for safekeeping with a συγγραφοφύλαξ ([Dem.] 34.6, 56.15) or a bank (Dem. 34.6, 56.15; *IG* II² 174.4-6), [560] would consider the agreement anything less than binding, except in cases of tampering or ambiguous phrasing ([Dem.] 35.27).[561] The reception of documents in Athenian courts was significantly better than in Pharaonic Egypt: in the special commercial courts (δίκαι ἐμπορικαὶ; §5.5.2), documentary evidence entitled plaintiffs to an expedited procedure,[562] while still relying on the oral (or, from *c.*380BC, written)[563] testimony (μαρτυρία) of witnesses. Contracts could even cede the right to seek legal protection, asserting the supremacy of the agreement's terms over contradictory statute (Dem. 35.39).[564] Oaths played a less prominent role, only invoked in informal (or illegal) agreements (*cf.* Dem. 48).[565] Instead, moral reinforcement for came from the community: *polis* cohesion demanded that its citizens upheld agreements[566] and delivered justice,[567] with community pressure brought to bear on those who fell short.

[558] Cohen (1992:178), Todd (1993:267-8, 336).
[559] Todd (1990:32-3; 1993:268), Cohen (2003:93-4). There was no such cause as 'breach of contract': Todd (1993:266), Brown (2008:36). Contractual disputes were thus assimilated to theft (Cohen, 1992:39 n.40).
[560] Cohen (1992:22-3, 135-6).
[561] Cohen (2003:95).
[562] Todd (1990:33, n.23), Cohen (2003:93-4).
[563] Todd (1993:336).
[564] Todd (1993:268), Brown (2008:110), Karayiannis and Hatzis (2012:636).
[565] Brown (2008:230).
[566] Karayiannis and Hatzis (2012:623, 626).
[567] Low (2007:170).

5.5 | Dispute Arbitration

The primary advantage of a robust contractual system is the avoidance and expediting of disputes. Since ancient contracts did not create legal relations, they were most useful for the latter. In the ancient world, however, access to legal redress was usually a prerogative of a community's members;[568] the judicial settlement of disputes between non-compatriots required special procedures. Nonetheless, states were incentivized to accommodate legal redress from foreigners to both reduce the destabilizing effects of self-help (*cf.* Herakl. fr. 1.14-16),[569] and encourage merchants to visit their ports (*cf.* Xen. *Por.* 3.3; Isok. 2.22).[570] The economic advantages of efficient, robust, independent and accessible justice have long been recognized,[571] though neither Athens nor Egypt met this test by modern standards. Despite retroactive attempts to frame Athens (especially in the fourth century BC) as the first 'Rule-of-Law State',[572] practical application of the law was at best inconsistent, with laws framed in apparently deliberately ambiguous terms.[573] While there is a long tradition of dismissing the jurisprudence of the 'despotic' states of the Ancient Near East, on the basis that they were overly subject to the whims of their rulers (*cf.* Hdt. 3.80.5),[574] we have also seen that the Athenian *demos*, sovereign whether it sat in assembly or jury (§5.5.2), could be as mercurial as any monarch, especially regarding the emotive subject of the grain trade.[575]

[568] Finley (1973:161).
[569] Bresson (2016a:317-18).
[570] *cf.* Woolmer (2016:68).
[571] Chen and Deakin (2014:2), Hayo and Voigt (2014), Bove and Leandro (2017).
[572] Harris (2006b), Fleck and Hanssen (2019:445).
[573] Moreno (2007a:216-17).
[574] Harris (2006a:6), Manning (2012:111-12).
[575] *cf.* the severity of punishments associated with breaches of grain-related laws: death, in the case of traders on Athenian-financed ships who unloaded their grain elsewhere: Garnsey (1988:139-40).

5.5.1 | *Arbitration and Justice in Egypt*

As protector of *mꜣꜥt* and ultimate executive authority, Pharaoh was Egypt's 'fount of justice'. In practice, however, his involvement with the law was extremely limited:[576] while appeals to Pharaoh's personal intervention were common throughout Egyptian history (e.g., *P.Ryl.* 9),[577] and particularly well-attested in the Ptolemaic Period, the *de facto* highest courts of Egypt were the 'Great *Kenbet*' courts (*ḳnbt ꜥꜣt*), headed by the Viziers of Upper and Lower Egypt respectively (*cf. ARE* III.60).[578] The Great *Kenbet*s' main purpose was to try cases involving high officials or the possibility of capital punishment,[579] along with appeals from the lower *Kenbet* courts, convened irregularly at the village and city level.[580] These lower *Kenbet*-courts comprised at least three local notables (*ARE* III.65),[581] probably with fluid membership, convened as complaints (*smy*) were brought.[582] Their procedure was more fluid than the Great *Kenbets*',[583] emphasizing social cohesion (*cf.* Diod. 1.75.2): the judges' reputation conferred legitimacy and brought social pressure to bear on litigants, and if the resolution was unsatisfactory to either side, the case could be re-examined several times.[584] Two avenues of appeal were available: either to the Great *Kenbet*, or to the oracle of the local god (e.g., *P.Brooklyn* 16.205; Oxford 1894.107a[585]),[586] whose will was expressed through the 'nodding' (*hnn*) or 'receding' (*nꜥy nḥꜣ=f*) of the cult-

[576] *cf.* Allam (1991:110).
[577] Manning (2012:116).
[578] Burton (1972:219), Lippert (2012b:4), Muhs (2015:83). Irregular tribunals with special powers might be convened by Pharaoh to charge particularly heinous or sacrilegious crimes, e.g., the assassination of Ramses III (*P.Turin* 1875): Burton (1972:219).
[579] van den Boorn (1988:315-17), Allam (1991:110), Lippert (2012b:4).
[580] Burton (1972:219), Muhs (2015:82-3).
[581] Lippert (2012b:4-5); for the status of members, *cf.* Lourie (1931:62-3). Panels of up to fourteen are attested: Allam (1991:110).
[582] Allam (1991:110), Lippert (2012b:5-6). Records from the 'Worker's Village' at Deir el-Medina indicate that complaints were frequently written: *P.Turin* 188, *P.BM* 10055; Lippert (2012b:6); *cf.* Diod. 1.75.6.
[583] The procedure of the Great *Kenbet* was more fixed, including time limits on certain cases, and being bound by existing decrees: *ARE* II.667-8; *cf.* Lippert (2012b:5).
[584] Muhs (2015:83); in the lawsuit of Mes, the Great *Kenbet* heard the same case five times.
[585] Gardiner (1933).
[586] Brier and Hobbs (1999:67), Muhs (2015:84-5).

image,[587] manipulated by priests. Following a decision, particularly one with multi-generational consequences, a record of the case was sometimes publicly displayed by the victor on a stela, or even in their tomb biography.[588] Court procedure was largely oral;[589] documentary evidence (*mtrww*) might substantiate the plaintiff's claims,[590] but the main procedure involved the interrogation (*šny*) of witnesses, or even first-hand investigation (*smtr*) by the judges (*P.Berlin* P.10496, *P.BM* 10221 col. 7.11)[591] or scribe, the only semi-professional present at the tribunal.[592] Torture, or 'investigation by beating' (*smtr m ḳnḳn*), was reserved for tomb-robbery or treason trials.[593] Finally, a judgement (*wpy*) was reached, declaring that 'X is right, and Y is wrong' (*mꜣʿty* X ʿ*ḏꜣ* Y), or sentencing the defendant.[594] Both the witnesses and the defendant spoke under oath, and were thereby bound by 'metaphysical agency'[595] to speak truthfully and abide by the judgement.[596]

The Saïtes radically reformed this system: the two tiers of *Kenbet* courts disappear from our sources, replaced by the temple-based 'Houses of Judgement' (ʿ*.wy.w n wpy*), manned by semi-specialized judges (*wp.w* or *wpty.w*).[597] The new system avoided the convoluted process of the *Kenbet*-courts, which could theoretically recycle the same cases indefinitely with contradictory decisions,[598] and reduced the role of oracles in the dispensing of justice.[599] The semi-professional boards of judges suggest that precedent

[587] Muhs (2015:84); Lippert (2012b:7) considers this a linguistic rather than substantive change.
[588] *cf.* Allam (1989:103-4).
[589] Westbrook (2003:12-13).
[590] Lourie (1931:62); *cf. P.Gurob* 2.1-2.
[591] Lippert (2012b:5-6).
[592] Allam (1991:112-13). At least in Deir el-Medina, the scribe also maintained an archive of court decisions; precedent was probably referred to at least where the same case came before the court multiple times.
[593] *cf.* Wilson (1948:135).
[594] Lippert (2012b:4).
[595] Assmann (1992b:162); *cf.* Wilson (1948:154-5).
[596] McDowell (1990:36), Lippert (2012b:6).
[597] Allam (1991:115-17), Muhs (2015:93). Lippert (2012b:7) considers the change purely linguistic.
[598] Muhs (2015:83).
[599] *P.Brooklyn* 47.218.3 is the only Saïte oracular document, and deals with a dispute among: Lippert (2012b:8). Herodotos' tale (2.174.1) of Ahmose II's wayward youth implies that oracular judgements continued to settle informal disputes.

played a greater role in trial decisions,[600] and certainly more consistent application of the law, within individual courts, whether or not that was reflected across the whole of Egypt.[601] This increased professionalism[602] reduced the costs of time and uncertainty inherent in Egyptian litigation. Of course, it is unlikely that many Greek traders ever saw an Egyptian court: at Naukratis, the *prostatai* of the *emporion* probably held a judicial function, circumventing the 'Choice of Law' problem that would have otherwise faced them.[603] The Egyptian temples of Naukratis (§5.3.1) and Herakleion-Thonis (§5.3.2), however, suggest a parallel legal procedure: Greek traders probably self-regulated their exchanges, with resident Greeks acting as middlemen between them and the Egyptians. This latter set of transactions, or disputes unable to be settled by the *prostatai*, were probably governed by Egyptian officials. It was probably in courts associated with the Hellenion that the interests of Greek traders were represented by *proxenoi*, including (from the mid-fourth century BC) those representing Athens (*IG* II^3 294). This being said, there is no evidence that the Greek communities in Egypt, in Memphis or at the oases (§2.3.2), were subject to anything other than Egyptian justice.

Ptolemaic jurisprudence has received considerably more attention, and so it will suffice here to emphasize that Ptolemaic practice again consummates the reforms begun by the Saïtes.[604] The Demotic legal tradition, anchored in the temples, continued alongside the newly-imported Greek system.[605] By far the largest number of Demotic legal documents comes from the Ptolemaic Period, but many fewer than survive in Greek:[606]

[600] The Great *Kenbet* had always utilized precedent, and kept a record of their judgements: Shupak (1992:10).
[601] Theodorides (1971:320) makes an optimistic case for the coherent application of law.
[602] Eyre (2004:93).
[603] On Choice of Law, *cf.* Zaphiriou (1978), Hook (2016:1-2). English and Swiss law are most commonly used in international contracts, even those unconnected to either country, given their reliable jurisprudence, business friendliness and long history (Cuniberti, 2014).
[604] *cf.* Manning (2010:170).
[605] Manning (2010:177-8); *cf.* Allam (2008).
[606] Bagnall (2009a:xviii), Manning (2015:106).

even minor village disputes, historically resolved by local *Kenbet*-courts or through self-help, were referred to Greek officials, reflecting a shift from arbitration to adjudication.[607] Where Egyptian procedures were used, the Ptolemaic state officials (*ʒysws*, εἰσαγωγεύς) supervised the courts.[608] Informal procedures of self-help and oracular consultation probably continued to an unknowable extent among native Egyptians.[609] When concluding an agreement in Egypt, one could therefore opt for informal solemnization and enforcement, or the Greek or Demotic legal traditions.[610] What informed this decision remains unclear,[611] but ethnicity was not the determining factor.[612] To Athenians arriving in Alexandria, however, the existence of familiar legal procedures,[613] underwritten by a strong central administration, provided the reassurance of swift and reliable justice.

5.5.2 | *Athenian Justice and the* δίκαι ἐμπορικαὶ

Access to justice was a fiercely guarded privilege among the citizens of Greek *poleis*.[614] Given the cosmopolitan nature of Greek trade, however, this position was untenable. *Proxenoi*, who might act as *prostatai* for the citizens of their granting state in legal proceedings,[615] and the bilateral interstate agreements (σύμβολα) which opened litigation to citizens from either state, ensured certain merchants might bring suits arising from commercial activity ([Arist.] *Ath.Pol.* 59.6),[616] but the volume and diversity of trade entering Athens required more robust procedures. This challenge was met, from 350BC,

[607] Manning (2010:168).
[608] Allam (2008), Hayden (2018:148).
[609] Manning (2010:182).
[610] Manning (2015:108).
[611] Manning (2010:177-8). Hayden (2018:148) rightly suggests that decisions were influenced by the perceived favourability of the Demotic or Greek law codes or local judges.
[612] Pestman (1985:267), Manning (2010:178), Hayden (2018:148).
[613] The use of Greek law in Egypt was likely an amalgam of practices: Manning (2014:19), Hayden (2018:147).
[614] Cohen (1973:59-60), Finley (1985a:161), Woolmer (2016:82).
[615] Mack (2015:74-5).
[616] Finley (1985a:161), Todd (1993:333-4), Reed (2003:44-5), Moreno (2007a:288), Bresson (2016a:321); de Ste Croix (1961:95) rightly points out that such cases need not be commercial in nature.

through the 'commercial courts' (δίκαι ἐμπορικαὶ).[617] These courts considerably reduced the transaction costs imposed by Athenian justice: they operated supranationally,[618] required (and therefore encouraged) the near-universal use of written contracts among traders ([Dem.] 33.36; *cf.* 32.2),[619] were frequent and perhaps lasted no longer than a month (*cf. IG* I^3 41),[620] and possibly occurred only outside of the sailing season,[621] though this relies on a dubious emendation of [Dem.] 33.23.[622]

The Athenian state offered another important advantage to *emporoi* and *naukleroi*, which predated the δίκαι ἐμπορικαὶ. From the mid-fifth century BC, a special board of officials, the ναυτοδίκαι, dealt with cases involving foreigners (*cf.* Lys. 17.5; *IG* I^3 41.90-1), especially traders.[623] This annual office, and the public availability of Athenian decrees – displayed on stelae and available for consultation in the *Metrōon* – ensured the consistent application of commercial law. Yet, Athenian judicial procedure could be fickle, especially concerning the grain supply. The famous case against the 'graindealers' (σιτοπώλαι), known from a speech of Lysias (22), demonstrates the extraordinary use of a special procedure, εἰσαγγελία, with abnormally harsh punishments in a case where the grain supply was in question. It deals with the impeachment of an unspecified number of grain-dealers on the ambiguous charge of 'accumulation by purchase' (συμπρίασθαι/ συνωνεῖσθαι) of over 50 *phormoi* of grain (22.5-6).[624] The Greek leaves it open to interpretation whether the law forbids hoarding[625] or the formation of a monopsony (*cf.*

[617] The first mention of the procedure comes in *c.*347/6BC: Dem. 21.176; Reed (2003:89).
[618] Cohen (1973:8), Austin and Vidal-Naquet (1977:147), Karayiannis and Hatzis (2012:634).
[619] Cohen (1973:121; 1992:163), Brown (2008:113).
[620] Finley (1985a:62), Reed (2003:44-5). Cohen (1973:21, 23-36) and Todd (1993:335) interpret this differently, proposing that cases were brought on a specified date monthly.
[621] Todd (1993:335), Harrison (1971:86), Isager and Hansen (1975:85), though, *cf.* Cohen (1973:42-3), Bresson (2016a:323).
[622] Proposed by Paoli (1933:175-86).
[623] Woolmer (2008:43).
[624] Figueira (1986:152); Todd (2000:238).
[625] *cf.* Seager (1966:156); Edwards (1999:149).

the connotations of the verb at Hdt. 1.7.3).[626] An attractive suggestion is that Lysias wrote deliberately ambiguously, obfuscating between the relatively harmless crime of small-scale hoarding, and the damaging, but legal, establishment of a cartel.[627]

Further, the law itself was perhaps intentionally ambiguous,[628] so that the *demos* might arbitrarily control the grain supply. The *sitopolai*, as metics, were outsiders on whom it was incumbent to prove their loyalty to the polis.[629] Therefore, they were easy scapegoats in times of crisis,[630] hence our speaker's exaggerated concern to avoid sykophancy (Lys. 22.1-4) despite his flagrant anti-metic rhetoric (22.14-16, 22).[631] The σιτοπώλαι were originally impeached before the council, which threatened summary execution (22.2). Usually, the council only heard cases concerning magistrates ([Arist.] *Ath.Pol.* 45.2),[632] and was unable to decide or inflict a penalty (M&L 118.135-9);[633] certainly the speaker gives the impression that the *boule*'s sentence of summary execution set a dangerous precedent (Lys. 22.2), even though the *boule* may have been legally empowered to execute metics.[634] Given the highly public nature of the *boule* and the courts, this trial – although nominally obeying judicial procedure[635] – expressed the moral outrage of the Athenian *demos* in the context of food shortages (Xen. *Hell.* 5.1.29).[636]

5.6 | Conclusions

The state's main purpose in the ancient economy was to secure traders both

[626] Figueira (1986:152).
[627] Seager (1966:176) and Dunham (2008:501), though, see Todd (1993:319).
[628] Moreno (2007a:216-17).
[629] Seager (1966:182).
[630] *ibid*:180; Edwards (1999:117); Todd (1993:320).
[631] Todd (1993:320; 2000:239).
[632] Edwards (1999:144).
[633] Edwards and Usher (1985:260).
[634] *cf.* Todd (1993:316 n.2) and Edwards (1999:148).
[635] *cf.* Todd (2013:50).
[636] Edwards and Usher (1985:262-3).

from external threats and from the potentially destabilizing reliance on self-help in disputes. To fulfil these functions, both Athenians and Egyptians militarily intervened in the middle ground, and engaged in intense diplomacy, which required the overcoming of enormous conceptual gaps imposed by the contradictory political philosophies of Egypt's theocratic monarchy and Athens' radical democracy. A further state intervention, the collection of tax revenues, remains outside the scope of a thesis on non-tariff trade barriers – though it is well to note that Egypt, before and after Alexander's conquest, imposed prohibitively high tariffs on foreign trade. Once again, we witness a slow coming together across centuries: the interventionist foreign policy of the Saïtes in the seventh and sixth centuries matched by that of Athens in the fifth and fourth; the foundation of Naukratis and Herakleion-Thonis; the gradual shift in Athenian perceptions of monarchy; and the improvement of the efficiency and efficacy of legal procedures both, including for foreigners, both in Egypt and Athens.

CHAPTER 6
Conclusion: Atheno-Egyptian Trade in Historical and Spatial Context

Trade is usually considered – both for the Ancient Mediterranean,[1] and more globally[2] – the primary interface for peaceable contact. Resultantly, historians are used to considering cultural contact a by-product of trading interactions. This thesis, however, demonstrates the complexity of the dynamic interrelationship between culture and trade. Culture – those human institutions distinctive to a particular society – is revealed to have been a significant barrier to the Atheno-Egyptian grain trade, outweighing the year-round accessibility of the trading route and the significant economic incentives directing Athenian attention towards Egypt. The long-term difficulties in overcoming this barrier – the product of fundamental dissimilarity in language, religion, political organization, diplomatic approach, value-systems and modes of thinking – explains the paradox of Athenian reliance on the Euxine, which we identified (Chapter 1), while circumventing the unsatisfactory Primitivist-Substantivist explanation that the ancients were incapable of economic thinking. Instead, our study reveals both the severity of cultural trade barriers, and the tentative steps taken to mitigate it.

Starting under the Saïte kings, whose military and strategic objectives oriented their gaze northwards towards potential Greek allies, including Athens (Diod. 1.67.8-9). We have seen how their Delta heritage ensured widespread use of the Demotic script, closer to alphabetic Greek characters (§2.2.1), and how Greek immigration – the 'foreign legion' of Greek troops (§2.3.1, §4.2.1), the Hellenomemphites, and the traders at Naukratis

[1] e.g., Renfrew (1969), Moreno (2007a:vi), Demetriou (2012:230), Kristiansen and Suchowska-Ducke (2015).
[2] e.g., Boulding (2000:104), Yao (2008:11), Bisin and Verdier (2011), Halevi (2014), Raikhan *et al.* (2014).

and Herakleion-Thonis (§2.3.2) – led to a substantial population of Greek-Egyptian bilinguals, mirrored by an Egyptian diaspora focused on the Aegean, especially Athens. These expatriates spread Egyptian cults across the Mediterranean (§3.3.3). These cultural interactions gained momentum, growing in intensity across the fourth century BC in particular (*cf.* Chart 1.6). During this pivotal century, Egypt introduced coined money (§4.2.1), psychologically and economically transitioning to a 'Hellenistic economy'. Simultaneously, Egypt-interested individuals among Athens' elite – Lykourgos III and IV, Chabrias, Isokrates, Plato, Demetrios of Phaleron – increased in prominence (§3.4.3); the resulting diplomatic convergence helped secure the 'middle territory' (§5.2), and increased foreign access to state justice (§5.4). It is correct, then, to suggest that Alexander's conquest cinched ties established over four centuries,[3] rather than a sudden and liminal departure point in Egyptian history.[4] It is inappropriate, however, to consider the Hellenistic Period the crescendo of Egypt's 'Greek millennium':[5] the Atheno-Egyptian relationship was more dynamic and mutual than that. The Athenians intervened militarily in Egypt not to exert dominance, but to aid native calls for independence. Their cultural convergence operated similarly: their grant of *enktesis* for sanctuaries of Zeus-Ammon and Isis, Athens' significant Egyptian expatriate population (many of whom we have met: Amasis [?], Hermaios I and II, Paapis, Psammis, Saitis, Melas, Athenogenes and Hekateonos), and the mollification of Athenian views of monarchy (§5.1.1), reveal a significant movement to bridge the cultural gap from both directions.

Despite a persistent view of Egypt's inherent 'uniqueness', even in the Hellenistic Period,[6] the Atheno-Egyptian relationship did not exist in isolation. Admittedly, Egypt

[3] Manning (2010:27-8), McKechnie (2018:27).
[4] *cf.* Préaux (1939:50, 570), who sees Egypt transitioning into a 'Greek state'. and the tendency to begin histories of this period with Alexander (e.g., Worthington, 2016). Préaux later (1978:380) recognized the Eurocentricity of this view; *cf.* Bagnall (1997).
[5] The formulation of Manning (2010:27-8).
[6] e.g., Billows (1995:146); *cf.* McGing (2019).

maintained her traditional legal, social, religious and administrative structures despite Graeco-Macedonian domination. The Greek model of urbanization also met with limited success in Egypt, in Alexandria, Naukratis and Ptolemais; the main engine of Ptolemaic Hellenization was the countryside, in the *chora* of the Fayyum and Upper Egypt.[7] But we have also demonstrated the bifocal outlook of the Ptolemaic King-Pharaohs (§5.1.5), who bridged both the parallel cultures of their own kingdom, and Graeco-Egyptian divide. Through conquest (particularly of Cyprus and Kyrene), the establishment of thalassocracy, active diplomacy, and the royal grain monopoly, the Ptolemies projected Egyptian power throughout the Mediterranean. These King-Pharaohs made Egypt's millennia-old power structures comprehensible to Greek decision-makers, inviting Athenians – especially Timotheos, and Demetrios of Phaleron – to help reshape Egypt into a Hellenistic kingdom. Athens thereby cemented a special role in the future of the Ptolemaic state, even as Alexandria eclipsed her as the centre of the Hellenistic universe.

This thesis, then, has told the story of Graeco-Egyptian cultural convergence and its most important ramification, the integration of Egypt into a broader Hellenic economy. While this story's ending vindicates the three centuries of largely unwitting efforts to break down the Cultural Economic Distance between Athens and Egypt, the absence of a sophisticated theory of trade meant that neither side recognized the fundamental barrier culture posed to fulfilling the economic potential of their relationship, and to strategize accordingly. The steps identified throughout this thesis were pragmatic solutions to individual problems, part of wider political or social decisions (e.g., the Demotic script, introduced partially to 'Northernize' the Egyptian administration), or general trade-promotion or revenue-creation measures.[8] Without an overall strategy for overcoming their Cultural Economic Distance, Atheno-Egyptian trade suffered unduly from their

[7] *cf.* Clarysse and Thompson (2006:342-3).
[8] The latter is considered the primary motive of the Ptolemaic state: Manning (2010:155, 163).

mutual resistance to outside influence, precluding the most satisfactory economic outcome, according to Neo-Classical economic thinking.

6.1 | The Cultural Distance to Egypt and the Euxine: a Comparison

Our thesis began with a question: despite Egypt's considerable economic advantages, why was she not Athens' primary source of grain? At this point, we must examine the corollary: what was it about the Black Sea that mitigated its ecological and navigational disadvantages sufficiently that Athens came to rely so heavily on Euxine grain? Cultural Economic Distance helps to explain this phenomenon, too. But while culture remained a substantial barrier to trade with Egypt before Alexander, Athens more easily overcame the Cultural Distance to their primary Euxine grain source, the semi-Skythian Bosporan Kingdom. Egypt had no monopoly on exoticism in the Athenian mind: for many, the archetypal 'Other' was found to the north, among the Skythians. Their rugged nomadism directly contradicted the Hellenic urban ideal (*cf.* Hdt. 4.46.2-3; Plat. *Resp.* 435e-6a),[9] so that Greek authors identified fewer Hellenic attributes among them than even the Egyptians (e.g., Hdt. 2.50.1, 64.1-2).

Yet, while the Cultural Distance between Athenians and Skythians was greater at the beginning, Greek interpretations of Skythia and Egypt show remarkable parallels. Apparently violent xenophobia among the Skythians (*cf.* Hdt. 4.80.5), characterized by tales of cannibalism (Ephoros *FrGrHist.* 70 F42 [*apud.* Strab. 7.3.9]; Strab. 4.5.4) and human sacrifice (specifically of Greeks: Eur. *IT*. 30-40), finds parallels in the myth of the Pharaoh Busiris[10] (§5.1.2) and Heorodotos' emphasis on Egyptian resistance to foreigners (2.79.1,

[9] *cf.* Moreno (2007a:148), Bravo (2009:23).
[10] Hicks (1962:103).

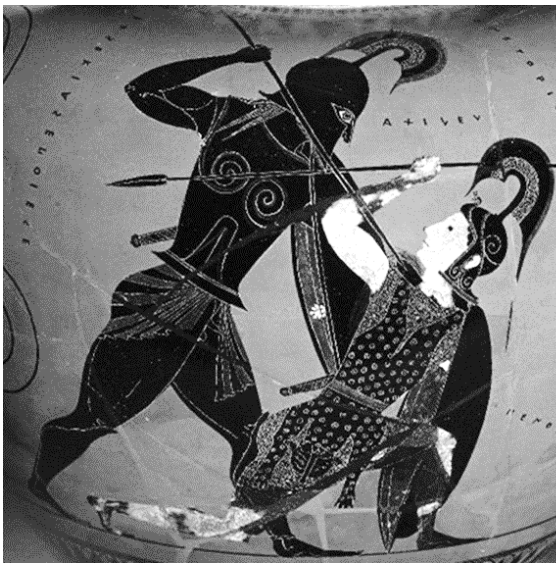


Fig. 6.1 | Achilles and the Amazon Penthesilea (in Greek dress), a detail of an Attic Black-Figured amphora of *c.*530-525BC (BM 1836,0224.127)



Fig. 6.2 | An Amazon (in Skythian dress) fights a griffin, a detail of a Kerch-style Red-Figured pelike *c.*325-200BC (Hermitage П.1874-50)

79.1, 91.1; *cf.* Gen. 43:32). In Herodotos, comparisons between Skythians and Egyptians were taken further. Both lived in extreme environments, defined by the two largest and most peculiar rivers (the Nile and Danube; 2.33.2), bisecting Europe and Africa along a west-east course[11] equidistant from his homeland in Asia Minor (2.34.1-2), extremes of climate (cold and wet in Skythia [4.28.1-3, 31.1], hot and dry in Egypt [2.26.1, 27.1]), and extreme aversion to Greek customs (2.91.1, 4.76.1).[12] But here the similarities end. Whereas Herodotos' Egyptians possess great antiquity (2.2.1, 5; which they are careful to record: 2.142.1), and are wealthy (e.g., 3.91.2-3; *cf.* §1.3), inventive (2.4.1-2, 4.180.4), rich in cultural wonders (2.35.1), and wise (e.g., 2.2.1-5), his Skythians are young (4.5.1), nomadic (4.46.3; *cf.* Plat. *Resp.* 435e-6a), immoderate (*cf.* Anakr. 3.43, Plat. *Leg.* 637d-e, Ath.

[11] Hartog (1988:15).

[12] Herodotos' phrasing is nearly identical: 'The Egyptians shun using Greek customs, and, generally speaking, the customs of other peoples as well' (ἑλληνικοῖσι δὲ νομαίοισι φεύγουσι χρᾶσθαι, τὸ δὲ σύμπαν εἰπεῖν, μηδ᾽ ἄλλων μηδαμὰ μηδαμῶν ἀνθρώπων νομαίοισι: 2.91.1), compared with 'but as regards foreign customs, the Skythians, like others, very much shun the practices of any other country, and particularly of Hellas' (ξεινικοῖσι δὲ νομαίοισι καὶ οὗτοι φεύγουσι αἰνῶς χρᾶσθαι, μήτε τεῶν ἄλλων, Ἑλληνικοῖσι δὲ καὶ ἥκιστα: 4.76.1)

11.499-500),[13] and lack material culture (4.82.1),[14] virility (1.105.4) and repute (4.46.1). Beyond Herodotos, the Skythians became the paradigmatic 'Other' in Athenian artistic representations; Amazons, mythology's prototypical anti-Greeks, gained Skythian dress by the fourth century BC (compare, e.g., BM 1836,0224.127 [fig. 6.1] with Hermitage П.1874-50 [fig. 6.2]).[15]

But these images result in an exaggeratedly 'foreign' perception of the Black Sea. Athenian decorated pottery (and perhaps Herodotos' *Histories* itself)[16] was designed for *symposia*, where exoticism served a tightly-defined aesthetic and social function.[17] These considerations attenuate the otherwise pronounced contradiction with the idealized Skythians of Homer (*Il.* 13.5-6) and Ephoros (*FrGrHist.* 70 F42 [*apud.* Strab. 7.3.9]).[18] But, regardless of this multifocal Greek view of the Euxine, Skythians remained further from the Hellenic ideal even than Egyptians.[19] We must ask, then, how Athens was able to exploit Euxine grain a century before she began exploiting Egypt's surplus. The answer lies, in part, in the rapidity with which the Atheno-Euxine cultural mitigation was reached.

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6.1.1 | *Mitigating Atheno-Euxine Cultural Distance*

While Graeco-Egyptian contact began during the Bronze Age,[20] Greeks did not penetrate the Euxine until at least the eighth century.[21] Here, the relationship was different; a patchwork of colonial foundations, starting with Borysthenes (Berezan;

[13] *cf.* LSJ *sv.* Σκυθίζω
[14] Hartog (1988:3). Herodotos was not ignorant, however, of the kurgans of the Skythian nobility: 4.71.5 *cf.* Rostovtzeff (1922:44), Hartog (1988:4).
[15] *cf*. Skinner (2012:74).
[16] Grethlein (2010:151) *contra* Johnson (1994).
[17] Lissarrague (1990a:111; 1990b:90-1), Osborne (2007:38), Skinner (2012:70), Porucznik (2013:711).
[18] Bäbler (2005:118), Moreno (2007a:194-5, 201); *cf.* Athenian views of Thracians: Sears (2013:141, 143, 148).
[19] *cf.* Moreno (2007a:148), Bravo (2009:23).
[20] Valbelle (1990), Warren (2000), O'Connor (2003), Panagiotopoulos (2005), Phillips (2008).
[21] Graham (1971).

647/6BC), exporting Greek culture and implanting mostly Milesian settlers. Other foundations were later still, with Pantikapaion, capital of the Bosporos, founded *c.*575BC (Strab. 7.4.4).[22] Disconnected from the Hellenic core by the hazardous Turkish Straits (§1.4.2),[23] the Euxine was geographically (*cf.* Strab. 1.2.10)[24] and culturally distinct from the Aegean. Isolated, these Greek outposts succumbed to Skythian pressure; hybrid Graeco-Skythian cultures emerged across the north-west Euxine, characterized by a multi-ethnic ruling elite,[25] a developed material culture,[26] and ostensibly Greek political institutions.[27] Skythian nobles, originating from various North Pontic tribal traditions (*cf.* Hdt. 4.17.1-26.2),[28] comprising Iranian, Thracian and Central Asian elements,[29] and linked to 'Kurgan cultures' as far north as Siberia,[30] became enamoured with the Homeric tradition (Dio Chrys. *Or.* 36.7, 9-10) and Greek cultural trappings, which unified the nobility across an ethnically diverse population.[31]

τὸ Ἑλληνικὸν AND THE BOSPORAN ELITE

The most articulate expression of the hybridized Graeco-Skythian culture is found in their funerary traditions. Bosporan nobles were buried in Skythian burial mounds (kurgans),[32] but with architectural developments derived from Mycenaean *tholos*-tombs,[33] thought by contemporary Greeks to house Homeric heroes. Comparison with Anatolian

[22] Müller (2010:23).
[23] Labaree (1957), Morton (2001:211).
[24] West (2003:157).
[25] Especially in the Bosporan Kingdom: Rostovtzeff (1922:67), Saprykin (2006:278).
[26] Skinner (2012:160-6, 174-5), Osborne (2008:334), Petersen (2010:73), Moreno (2007a:esp. 180-208).
[27] e.g., the *polis* (Tsetskhladze, 1997), Olbian democracy (Vinogradov and Kryžickij, 1995: 136).
[28] Heinen (2001:5), Mayor *et al.* (2014:449).
[29] *cf.* Minns (1913:36), Rostovtzeff (1922:67-8), Tsetskhladze (1998), Sears (2013:7); *cf.* Byklova (2005:131), Muratov (2015:589).
[30] e.g., the Pazyryk culture: Grousset (1970:18-19); *cf.* Gardiner-Garden (1986:192).
[31] Petersen (2010:33); though Maslennikov (2001:253) and Muratov (2015:591) emphasise the paucity of evidence on Bosporan ethnicity.
[32] Minns (1913:194), Tsetskhladze (1998:61, 66), Vnukov (2001:164-5), Alekseyev (2005:46-7), Moreno (2007a:152), Parzinger (2017); though, *cf.* Rostovtzeff (1922:76).
[33] Minns (1913:194), Rostovtzeff (1922:74), Tsetskhladze (1998:63, 77); *cf.* Gajdukevich (1949:245-53).

tombs suggests the involvement of Ionian architects.[34] Hybridization was also expressed by grave goods; one tomb contained a candelabra modelled on a Greek athlete (Hermitage ГКН.-91) alongside Skythian horse-bridles (ГКН.-106) accompanying Skythian-style horse sacrifices.[35] Similarly, the famed Solokha comb (Дн.1913-1/1), depicts a Skythian warrior-class well-used to Greek weapons and armour.[36] Attic and Ionian metalworkers even revived the outmoded[37] 'rich-style' jewellery for the Skythian market, [38] depicting themes tailored to the local audience.[39] Athenian potters also created the Kerch Style of pottery,[40] replete with griffins, Arimasps, Amazons and horses designed to appeal to a Skythian audience, and presented in a gaudy, polychrome style[41] reflecting the Euxine's sculptural and textile traditions (compare Hermitage 1684-169 and Met.Mus. 06.1021.179). The pottery shapes, *kraters* and *pelikai*,[42] reflect not just Greek aesthetics,[43] but also participation in the *symposion*,[44] the characteristic social institution of the Hellenic elite. From the Spartokid Dynasty onwards, Greek sympotics co-existed with the subversive pre=Hellenic Skythian drinking culture, characterized by unmixed wine (Plut. *Leg.* 637d-e; *contra* Hdt. 4.66.1), martial competitiveness (Hdt. 4.66.1),[45] metallic vessels (Hdt. 4.10.1), and drinking horns (Hermitage Дн.1863-1/374a). [46] By Leukon's reign, the Bosporans had even built the first decorated *andron* in the Euxine region. [47]

[34] Tsetskhladze (1998:77).
[35] Podossinov (2002:24), Meyer (2013:310-11).
[36] Alekseyev (2005:51), Moreno (2007a:204-5); *cf.* Mielczarek (1999:43).
[37] *cf.* Saverkina (2001:2).
[38] MacDonald (1987:58), Bouzek (1989:255), Heinen (2001:7), Treister (2005:56, 61).
[39] MacDonald (1987:56-7, 63), Hind (1994:482).
[40] Boardman (1989:7).
[41] Cook (1972:185), Boardman (1989:191, 193); *cf.* Hdt. 4.111.1-2, Hind (1994:482), MacDonald (1987:13-14).
[42] Boardman (1989:190-1).
[43] *cf.* Morgan (2004:28-9).
[44] Bouzek (1989:257); *cf.* Luke (1994:24), Morgan (2004:229).
[45] Hobden (2013:83-5).
[46] Vlassova (2001:72-5). Greeks used *rhyta*, horn-shaped funnels through which wine might be drunk in particular sympotic contexts, rather than true drinking-horns: Vlassova (2001:72).
[47] Tsetskhladze (1997:49), Tolstikov (2002:51).

The Bosporans placed special emphasis on Homeric, rather than fourth-century, ideals. The heroic past was recalled on Skythian *gorytoi* (Hermitage Дн.1863-1/435),[48] through the Pontic love of the *Iliad* (Dio. Chrys. *Or.* 36.7, 9-10),[49] the regional worship of Achilles,[50] and the self-presentation of Bosporan Kings (compare Athens NM1471 [fig. 6.3] with Hom. *Il.* 7.452-3; Dio. Chrys. *Or.* 17).[51] Homeric ideals of Greekness found parallels in Isokrates (12.72-90; *cf.* 3.37),[52] who was himself interested in the Bosporos (15.224, 17.31-2).[53] This ideological convergence between the Bosporan aristocracy and a faction of upper-class Athenians formed a highly interconnected group,[54] sharing an interest in the success of the grain trade (*cf.* §3.4.3).

Comprehending Bosporan Power-Structures

The best-known attestation of the Atheno-Bosporan relationship is the inscription (*IG* II^2 212) honouring the Spartokos II and Pairisades I, Bosporan co-regents,[55] alongside their brother Apollonios, immediately following their father, Leukon's, death (347/6BC). This inscription extends the honours awarded to several generations of the Spartokid Dynasty, likely prompted by an embassy (ll. 49-53) which confirmed the newly-enthroned co-regents' continuation of Leukon's pro-Athenian grain policy (ll. 13-17).[56] This inscription is an early explicit example of Athenian honours awarded to foreign potentates directly for the provision of grain (ll. 13-17; *cf.* ll. 20-4). Despite their Thraco-Skythian

[48] Though, *cf.* Moreno (2007a:199-200) for a more nuanced interpretation.
[49] Skinner (2012:174-5).
[50] Braund (2007:52); Achilles may have been an elite patron: Rusyaeva (2007:97-8).
[51] Lawton (1995:98), Moreno (2007a:264-9).
[52] Balot (2014:163-6); *cf.* Moreno (2007b:81).
[53] Moreno (2007a:175).
[54] For a detailed examination of this group, *cf.* Moreno (2007a:174-80, esp. 77 Table 4; 2007b). On elite connectivity in the Greek world in general, *cf.* Sears (2013).
[55] The brothers' co-rule was brief, from 349/8BC-343/2BC (*cf.* Werner, 1955:412-44; Osborne, 1983:41-4).
[56] On 'proleptic' honours such, see Deene (2012:172-3). The inscription reveals the brothers' past relationship with Athens, in the form of a gift (l. 9) and an loan (ll. 53.9) made to the *polis* (*cf.* Deene, 2012:174).



Fig. 6.3 | Detail of the relief from *IG* II² 212, showing Spartokos and Pairisades seated with Apollonios (?) standing, all in Greek dress, 347/6BC (Athens NM1471)



Fig. 6.4 | Mid-fourth century statue of a Bosporan King (?) from Pantikapaion (Hermitage П.1800-1)

heritage,[57] the Spartokids self-represent in the Hellenic style. They dedicate in perpetuity gold crowns to the Great Panathenaia (ll. 36-7), and are portrayed as Homeric-style Kings, seated on thrones and wearing *himatiai* in the accompanying relief (Athens NM1471 fig. 6.3,).[58] The images mirror a contemporary statue from Pantikapaion (Hermitage П.1800-1, fig. 6.4) which probably depicts a Spartokid. The most puzzling aspect of the inscription is the addition of the third brother, Apollonios, in a rider to the inscription (ll. 1-2, 67-8, added before it was carved). Apollonios is absent from Diodorus' account (16.52.10), and the Bosporan epigraphic evidence. His name is thoroughly Greek, unlike the Thraco-Skythian names of his brothers.[59] This mysterious figure may plausibly have been a Greek adopted into the dynasty, or the son of one of Leukon's lesser wives. Unfortunately, too little is known about Spartokid succession to draw any firm conclusions.

[57] Rostovtzeff (1922:67).
[58] *cf.* Lawton (1995:98-9).
[59] Rostovtzeff (1922:67).

The Spartokids were not straightforwardly monarchs of the Bosporos, but rather king-*archons* (e.g., *IoSPE* I² 6-12; *cf.* Dem. 20.29), simultaneously monarchs over the subject Skythian tribes, but *archons* of their Greek *poleis*,[60] which numbered around thirty by the end of the fourth century BC.[61] The title *archon* is otherwise unknown both in the Northern Euxine and Miletos, the *metropolis* of Pantikapaion.[62] Given Athenian disesteem of monarchs (§5.1.1), this must represent a deliberate attempt to court Athenian democratic approval. The personal relationship between the Spartokids and Athens entailed careful negotiation of diplomatic sensibilities. Demosthenes, for example, had been accused of over-familiarity with the Bosporan monarchy, given that his maternal grandfather, Gylon, had allegedly been rewarded by the Bosporans after betraying the city of Nymphaion to the Spartokid Satyros (Aisch. 3.171-2).[63] Gylon's Skythian wife meant that his grandson was taunted as a 'barbarian with Greek manners' (βάρβαρος ἐλληνίζων: Aisch. 3.172). To circumvent this accusation, Androtion, the proposer of the decree *IG* II² 212 emphasizes that the Spartokids were naturalized Athenian citizens (by inheritance from Leukon: Dem. 20.30),[64] and avoids using either of their Bosporan titles. Of course, citizenship entailed obligations, which as monarchs, the Spartokids were loath to fulfil. The grant of ἀτέλεια to the Spartokids (Dem. 20.33), absolved them of these obligations, ensuring they were not subordinated to the Athenian state,[65] enabling them to participate fully in the Athenian honours system.

The Spartokids' Greek-style diplomacy included the award of proxenies.[66] Of the twenty-five fourth-century proxeny decrees extant from the Euxine, thirteen are from

[60] On the development of the titulature in epigraphy, *cf.* Rostovtzeff (1922:71), Gardiner-Garden (1986:207-8), Saprykin (2006:278). Recent discoveries suggest that the Greek-barbarian division was not clear-cut: Moreno (2007a:173-4).
[61] Müller (2010:24).
[62] *cf.* Sherk (1992:235-6), Gorman (2001:97).
[63] On the Gylon's role at Nymphaion, *cf.* Moreno (2007a:174-5).
[64] Osborne (1983:43-4).
[65] *cf.* Hasebroek (1933:113-14), Engen (2010:284).
[66] *cf.* Mack (2015:4).

Pantikapaion,[67] with three more from the Bosporan cities of Gorgippa[68] and Phanagoria.[69] Bosporan proxeny especially benefitted merchants: the honours almost universally included the mysterious right to 'sail in and sail out [of the port]' (εἴσπλουν καὶ ἔκπλουν),[70] 'inviolability' (ἀσυλία), 'exemption from all taxes' (ἀτέλειαν πάντων χρημάτων), and the also mysterious right to be 'without a treaty' (ἀσπονδία).[71] But despite the adoption of the traditional Greek formulaic honours, the physical attributes of Bosporan decrees are specific to the locale. Athenian proxeny was recorded on large, freestanding marble stelae up to 3.00m tall and 0.26m thick[72] (usually with rough backs),[73] crowned with either a flat top, pediment or relief.[74] They were decorated to various degrees, reflecting their competitive nature;[75] it was in the Athenian state's interest to encourage 'euergetic agonism' (§4.1.5) through producing increasingly prestigious monuments.[76] In contrast, Bosporan proxeny inscriptions display remarkable uniformity, differing little from the most complete example, *CIRB* 1: small rectangular plaques, with a header, a border around the main text, and non-*stoichedon* lettering of between 0.012m and 0.016m in height. One example (S-K I) was believed to be *stoichedon*, but this observation derives from dubious field-drawings of the now-lost fragment.[77] This uniformity was a product of the centralized Spartokid monarchy, which removed the need for democratic agonism. All of the Pantikapaian decrees were found on Mount Mithridates,[78] the acropolis of the Bosporan

[67] S&F; V,T&S-K I, III, IV; *CIRB* 1, 2, 3, 4, 5; S-K III.
[68] *CIRB* Add. 4.
[69] Yaylenko I and II.
[70] Both traditional interpretations – that it grants immunity from harbour duties (Bresson, 2016a:288), or protection for those entering or leaving a port (Mack, 2105:128) –seem unsatisfactory, since these privileges are covered by the concurrent awards of ἀσυλία and ἀτέλεια.
[71] This has been interpreted as a guarantee of neutrality (Bresson, 2016a:288-9). Given a broader interpretation of σπονδή as any agreement sealed by a drink-offering (LSJ *s.v.* σπονδή), it may mean the right to operate without a contract.
[72] e.g., *IG* II^3 1 411; Lambert (2006:118).
[73] Lambrechts (1958:26), Hagemajer-Allen (2003:277-8), Lambert (2006:117-8).
[74] Lambert (2006:118).
[75] *cf.* Mack (2015:91).
[76] *cf.* Miller (2016:386, 420).
[77] Shelov-Kovedyayev (1985:58).
[78] Struve (1965) commentary to *CIRB* 1-5, pp. 13-18.

capital, a number of them on the 'western plateau',[79] which housed the Spartokid palace.[80] The plaques are thin, often with traces of mortar on the back,[81] indicating that they were displayed on the walls of the temple of Apollo Prostates, and later of the palace itself. Such adaptations exemplify the compromise at the heart of the Spartokid monarchy.

Language Contact in the Bosporos and Athens

Skythian tribes spoke several mutually incomprehensible dialects; Herodotos records seven between Olbia and Central Asia (4.24.1), while the polyglot Pontic King Mithridates VI Eupator learned twenty-two languages in order to communicate with his diverse subject peoples (Plin. *NH.* 7.24). An Old Iranian language, Skythian lacked its own script;[82] where writing was required, Skythians borrowed the letters of others, hence the only probable Skythian-language inscriptions use the Hittite[83] Old Turkic (or Kharoṣṭhī, or Old Iranian)[84] and Caucasian[85] scripts. Hence, securely identifying Skythian-language inscriptions is extremely difficult: the voluminous graffiti of the Bosporan Kingdom consists mostly of individual Greek letters[86] which could therefore be fragments of either Greek or Skythian words. Yet, we can infer from Herodotos' 'Skythian etymologies' (4.27.1, 48.2, 59.2, 110.1) that the language remained widespread.

[79] Saprykin and Fedoseyev (2011:95-101).
[80] Treister (2002:156-7); *cf.* Tsetskhladze (1997:49).
[81] Treister (2002:157).
[82] Rostovtzeff (1922:167).
[83] Harmatta (1990:124).
[84] Astana KYMTK1-1844. Old Turkic: Ünal (2019:173); Kharoṣṭhī: Harmatta (1994:411-12); Old Iranian: Xuršudjan (2011).
[85] Harmatta (1994:411-12).
[86] *cf.* Emets and Zubarev (2000), Maslennikov (2005:161); the only extant full-length North Pontic graffiti are purely Greek: Vinogradov and Kryžickij (1995:6), Okhotnikov (2001:103), Müller (2010:49).

But despite the potentially high incidence of Skythian-speakers in the Bosporos, Greek remained a legal and sacral acrolect.[87] Unlike in Phrygia, where Greek inscriptions are adulterated by non-standard usages influenced by native language,[88] 'Bosporan Greek' remained closely linked to the Ionian dialect, and mirrors Aegean linguistic developments;[89] Bosporan decrees were, therefore, intelligible to most Hellenic traders. Despite the Skythian faction elevated by the Spartokid coup, a letter sent by a Gorgippan landowner in the mid-fourth century[90] and the Greek labels on bowls found in Skytho-Bosporan tombs[91] demonstrate the Hellenoglossia of the elite,[92] facilitating the elite interaction which underlined Atheno-Bosporan connectivity. The use of Greek as an 'official language' even extended to the wholly Skythian tribes on the Kingdom's periphery, as evidenced on Sindic coinage.[93]

Skythian may have been spoken fairly regularly in Athens; a number of Skythians were resident in Athens (mostly as slaves [*IG* I^3 421.42], but also elites like Sopaios' son: §3.2),[94] providing a potential base of translators and language teachers.[95] Two known Attic vase-painters were named 'Skythes',[96] and in-depth study of the 'nonsense inscriptions' on Attic vases has revealed that some (e.g., Malibu 86.AE.130; Met.Mus. 24.97.104) share sound-patterns with Caucasian languages, suggesting that these vase-painters retained their native language.[97] This seems to have been the

[87] *cf.* Kahane and Kahane (1979:183-4).
[88] Hemer (1987:69), though *cf.* Porter (2000:195).
[89] Gibson (1999:19); Bosporan Greek became 'barbarized' in the Hellenistic period: *cf.* Rostovtzeff (1922:652), Gajdukevich (1949:370), Gibson (1999:18-19).
[90] Vinogradov (1998:232-4, 241).
[91] Alekseyev (2005:48), Treister (2005:62).
[92] This position is supported by elite onomastics (Minns, 1913:37-8; Müller. 2010:40); though, onomastics is a poor measure of ethno-linguistic acculturation (Kryzhitskiy, 2005:126-7).
[93] Gardiner-Garden (1986:194), Hind (1994:494), Müller (2010:31).
[94] *cf.* Bäbler (2005:117-20), Tsetskhladze (2008:311, 313).
[95] *cf.* Sears (2013:31).
[96] Mayor *et al.* 2014:453).
[97] *ibid*:447.

norm: even slaves long resident in Athens could recognise their home compatriots by language alone (Xen. *Anab.* 4.8.4-7),[98] while, stereotypically at least, Skythians resident in Athens possessed only imperfect Greek:[99] the Greek of Aristophanes' Skythian archers (e.g., *Thesm.* 1001-7) is especially replete with errors.[100] The number of Skythian-speakers in Athens, therefore, probably far-outnumbered the number of Egyptians.

6.1.2 | *Cultural Receptivity and the Ease of Assimilation*

This regrettably brief survey reveals the rapidity with which an Atheno-Bosporan cultural *détente* was achieved. When Spartokos I, who founded his eponymous dynasty, usurped the short-lived Greek Archaianaktid kings, he took over a ready-made Greek state. Pantikapaion was a long-established Greek *polis*; when the Spartokids expanded their kingdom, they incorporated other pre-existing *poleis*, at Nymphaion, Theodosia, Phanagoria, Kimmerikon, Gorgippia, Neapolis, Chersonessos and Tanais. In a strategy prefiguring that of Alexander and the Ptolemies, Spartokos entered a cultural dialogue with his subjects. Just as the Ptolemies were 'King-Pharaohs' (§5.1.), the Spartokids became 'King-Archons'; both monarchies participated in the religious practices of their subjects, and made significant investments in religious infrastructure; and both positioned themselves as bridges between conquerors and conquered.

The comparative ease with which Atheno-Bosporan cultural distance was bridged was, largely, a function of the unique history of the Skythians. Theirs was a past influenced both by historic Iranian roots[101] – reflected in their love for toreutics (Iranian-style silver

[98] Tsetskhladze (2008:310).
[99] Hall (1989:40), Bäbler (2005:121), Bravo (2009:29).
[100] Hall (1989:40), Bravo (2009:28).
[101] Minns (1913:36), Rostovtzeff (1922:67-8), Tsetskhladze (1998).

gilt, e.g., Hermitage 1913.1/40, К-О.97; and horizontal fluting, e.g., Hermitage Si.1727.1/71), use of Achaemenid-style drinking vessels (compare Hermitage К-О.104 with BM 1897,1231.178), and shared iconography (e.g., the lion-griffin: Oxford 1885.491, BM 1897,1231.23) – and by the steppe cultures to the north (compare the griffins on BM 1897,1231.116 and Met.Mus. 06.1021.179, with Pazyryk exemplars: Hermitage 1684-169). These heterogeneous origins combine with their nomadic nature: thanks to this, alongside geological constraints, Skythians lacked permanent stone architecture (excepting burial kurgans); their material culture was, other than the toreutics in which they were exceptionally skilled and productive, dominated by lightweight, portable and perishable goods; and they favoured smaller tribal units, promoting linguistic and social diversity.

Historically, the subsequent Spartokid adoption of Greek culture has been presented as a unidirectional application of Hellenic culture to an ostensibly receptive Skythian society.[102] But this position is invalid:[103] first, it is guilty of a concerning Cultural Darwinism,[104] taking for granted the superiority of Greek culture;[105] second, it misunderstands the power balance in the Kimmerian Bosporos. It was Spartokos' Skythians who were the victors, not the Greeks. It is therefore equally inappropriate to apply the Marxian[106] and Postcolonial concept of 'Colonial Mentality', in which the subjugation of colonized peoples internalizes feelings of cultural inferiority.[107] In fact, Skythians influenced Greek products targeting their market. Beyond the Kerch-style vases

[102] e.g., Minns (1913), Rostovtzeff (1922), Rempel (2004:13-25).
[103] Eloquent attempts to dismantle this Hellenocentricity may be found in Condurachi (1980), Archibald (2004:12), Petersen (2010, esp. 34-5).
[104] For a critical history of the idea, *cf.* Godfrey-Smith (2012) and Buskes (2013). A more pragmatic Darwinist approach to cultural transition, based on the competing demands of conformity, novelty, prestige and success can be found in Creanza *et al.* (2017).
[105] As the Greeks themselves did: Tuplin (1999:47).
[106] *cf.* Fanon (1961).
[107] Nunning (2015).

discussed above, Skytho-Achaemenid style[108] rhytons (e.g., BM 1873,0820.271) and drinking-horns (e.g., Prague NH-HM10.1407, Hermitage S.72) were produced in Greek workshops,[109] alongside extravagant 'rich-style' jewellery (e.g., Hermitage K-O.7, Oxford AN1885.468; §6.1.1). Euxines celebrated those aspects of Greek culture that appealed to them, separately from contemporary Hellenic practice. Hence, Dio Chrysostom's romanticized portrait of the bearded, Homer-loving Olbians,[110] whose aesthetic spoke to a nostalgia among Aegeans for their own bucolic and heroic origins. 'Hellenization', then, was entered into willingly by Skythian elites who adopted those elements of Hellenic culture which were useful to them.

These same considerations should inform our examination of Graeco-Egyptian cultural interaction, and their failure to bridge their cultural gap. The cultural interactions between so-called 'complex' societies, like Egyptian and Greek, have historically presented a scholarly challenge.[111] Both had a long history of interaction, with particularly vibrant relations in the Bronze Age; indeed, the debt of Hellenic culture to Egyptian prototypes is well-known. Few dissent that Greek *kouroi* were derived somehow from Egyptian statuary (§6.2.1),[112] nor that the Doric Order took inspiration from Egyptian stone architecture.[113] Similarly, modern efforts to trace the Greek alphabetic script, via Phoenician, to Egyptian

[108] It is difficult to separate Skythian influence from Achaemenid; but the examples discussed here largely originate in – and were created for – a Euxine context, and feature iconography with peculiar Skythian significance (e.g., griffins and horses).
[109] Marazov (1978:142-3), Ebbinghaus (1999).
[110] Bäbler (2007).
[111] Miller (1997:246).
[112] *cf.* Diodorus on the Samian *kouros* of Apollo: 'and they say that this statue is for the most part fairly similar to those of Egypt' (εἶναι δ' αὐτὸ λέγουσι κατὰ τὸ πλεῖστον παρεμφερὲς τοῖς Αἰγυπτίοις: 1.98.9). Based on visual similarity, the Egyptian origins of *kouroi* were first proposed in the nineteenth century (Collingnon, 1892:118-19), and has been strongly held ever since (Carpenter, 1960:6-14; Anthes, 1963; Levin, 1964:13-28; Ridgway, 1966:68-70). Statistical analysis of proportions between *kouroi* and 26th Dynasty Egyptian statuary in Guralnick (1978, esp. 470-1; 1985, esp. 409) seemed to confirm this theory. This has established a new shibboleth (e.g., Hurwit, 2007:274, Pedley, 2007:148, Osborne, 2009:209-11) only rarely challenged in recent decades (e.g., Murray, 1993:236; Boardman, 2006:19-24; Carter and Steinberg, 2010). *cf.* Bianchi (2005). Hurwit's (1985:194) view comes closest to my own, that *kouroi* were artistic responses to Egyptian models, rather than imitations or adoptions.
[113] First proposed by Marquand (1890); *cf.* Murray (1993:236), Jenkins (2006:16-17).

hieroglyphs should be taken seriously,[114] as should Herodotos' assertions of an Egyptian origin for Greek religion. We have seen the interoperability between Greek and Egyptian religion, enabled by their common 'religious language' (§3.3.2). But as the Bronze Age ended in Greece, both societies developed resistance to outside cultural influence, expressed through extreme conservatism and self-referentiality.[115]

But it is not enough to insist that Egyptians and Greeks simply constructed parallel cultural monoliths, impervious to outside interference. Indeed, this thesis has demonstrated a consistent cultural dialogue between the two. But the comparison with Athens' successful cultural *détente* with the Bosporos suggests an explanation. Scholars have attempted to demonstrate that cultural receptiveness is a function a perceived 'need' for 'cultural renewal or enrichment'.[116] This overstates the point, in language reinforcing notions of cultural superiority, but may be reformulated in less severe terms. Rather than 'need', then, we shall talk of 'utility'. The Thraco-Skythian Spartokids, we have seen, found themselves suddenly in political control of a region pre-inhabited by Greek settlers, in established *poleis*. In seeking a cultural settlement which allowed them to govern these peoples effectively, the Bosporan elite found uses for Greek cultural influences. They adopted those social, political, cultural and economic ideas useful for this purpose while retaining their Skythian identity. Egyptians, with their long-established social structures, millennia of stone architecture, city organization, political ideologies, art and language which suited their unique requirements, saw little to take from Greeks. Similarly, at this late stage in their development, Greeks were less receptive to Egyptian ideas than in previous centuries. Without understanding the hindrance to the grain trade that this cultural imperviousness posed, there was no motivation to sufficiently bridge this gap.

[114] McCarter (1975:57), Healey (1990:211-13), Darnell *et al.* (2005).
[115] Greek: *cf.* Vlassopoulos (2013:164-70), who makes a good case for the limits of Greek monoculturalism, developed in this thesis; Egyptian: Assmann (2011:147-174).
[116] The phrasing of Miller (1997:247). *cf.* Elayi (1988:146).

6.2 | Egypto-Lakonian Cultural Distance: Further Comparison

Unreceptiveness to Egyptian culture was uneven across the Aegean: our view has been Athenocentric, partly due to the balance of the evidence, and partly due to the particular economic advantages of Atheno-Egyptian trade for both parties (§1.5). But in identifying the absence of this trade before the Hellenistic Period, it may be protested that another important shipping route mentioned in our Classical sources – between Egypt and Sparta[117] – is missing from our analysis. Thucydides tells us that the Spartans were especially interested in Kythera since 'it was the landing place for merchantmen from Egypt and Libya' (ἦν γὰρ αὐτοῖς τῶν τε ἀπ᾽ Αἰγύπτου καὶ Λιβύης ὁλκάδων προσβολή: Thuc. 4.53.3).[118] Grain is not mentioned as the commodity, and despite assumptions of likelihood,[119] its presence cannot be guaranteed. What is clear is that sufficient Egyptian and Libyan ships stopped at Kythera for it to achieve strategic prominence: the Spartans populated it with *perioikoi*, garrisoned it, and sent an official, the 'Judge of Kythera' (κυθηροδίκης: Thuc. 4.53.2), on an annual basis.[120] Given the island's simultaneous importance as a base for anti-pirate expeditions (Thuc. 4.53.3), Sparta's interest reflects a concern for the security of the year-round route to North Africa. The evidence is limited, but given the paucity of evidence for Spartan history,[121] these whispers echo loudly.

Unlike Athens, Sparta's early conquests established a large, contiguous territory, incorporating Lakonia and Messenia (Thuc. 1.101.2; Paus. 4.4.1-7.10).[122] Sparta thereby

[117] Cartledge (1987:322), Seager (1994:104).
[118] Morton (2001:170), Lazenby (2004:83). On Kythera and Sparta, *cf.* Malkin (1994:81-2).
[119] Hasebroek (1933:146)., Michell (1940:264), Moreno (2007a:341).
[120] MacDowell (1986:30), who sees it as a non-military post. Lazenby (2004:83) argues that the holder exercised executive authority over the island. The title is not attested epigraphically in the Classical Era (Hornblower, 1996:215), but fourth-century inscriptions name a military governor, Menander (*IG* V 937). The two positions are sometimes equated (e.g., Malkin, 1994:82).
[121] Murray (1993:159). See Ollier's (1933) *mirage spartiate*.
[122] Murray (1993:163). On Pausanias' narrative, *cf.* Luraghi (2008:68-9). For the 'social revolution' precipitated by the conquest of Messenia, Finley (1975:161).

enjoyed an estimated 1,350km^2 of fertile agricultural land (*cf.* Hdt. 1.66.2),[123] divided into *kleroi* assigned to each Spartiate,[124] and worked by the servile helot population on behalf of their hoplite masters.[125] Sparta's food-supply was dominated by a system of in-kind taxes:[126] the contributions to the communal messes (συσσίτια).[127] Traditionally, each Spartiate contributed 1.5 Attic *medimnoi* of barley (41.21kg),[128] along with wine, cheese, figs and an ὀψώνιον, a financial contribution which etymology implies was originally for the purchase of fish.[129] As the complexion of the Spartan state changed, this payment may have provided a mechanism through which imported grain entered the food matrix.

Evidence exists for imported grain at Sparta, even before the loss of Messenia following the Battle of Leuktra (Diod. 15.66.6).[130] Particularly relevant is the 396BC gift of 500,000 *medimnoi* of grain (16,480 tonnes of wheat, or 13,735 tonnes of barley) from Nefaarud I, first Pharaoh of the Twenty-Ninth Dynasty (Diod. 14.79.4). Diodorus tells us that this gift was *in lieu* of military assistance: it was a condition of an alliance, probably to ease the burden of war (given the helots away on military service), rather than to plug a persistent deficit. Shipments from Egypt to Sparta, then, probably brought a variety of goods: grain, certainly, but also the natron, papyrus, and perfumes for which Egypt was famed, and Egyptian elite goods for which the Spartans had a particular *penchant*. While

[123] Hodkinson (2000:382-5), Hall (2007:203), Bresson (2016a:145)
[124] Dickins (1912:23), Michell (1952:36-7). While *kleruchies* were common among Greek colonies, it is unique on the Greek mainland (Murray, 1993:164).
[125] Helots operated, at least to some extent, independently of their masters. They owned property, including boats (Thuc. 4.26.6-7), and probably their instruments of cultivation (Cartledge, 1979:164); in fact, following Plutarch (*Kleo.* 23.1), a few might have grown wealthy (*cf.* Africa, 1968:4, *contra* MacDowell, 1986:34). They handed over a specified (limited) portion of their produce to their masters (Plut. *Mor.* 239d-e, *Lyk*. 8.3-8, 24.2), and the arrangement is therefore analogous to the share-cropping systems of Egypt and the Bosporos.
[126] The characterization of these contributions as a tax originates with Aristotle (*Pol.* 1272a13-17).
[127] *cf.* Figueira (1984).
[128] Plutarch confirms this figure (*Lyk.* 12.3), accepting a 1:1.5 ratio for Attic to Lakonian *medimnoi* (*cf.* Figueira, 1984:89, n.5).
[129] *cf. LSJ s.v.* ὀψωνέω.
[130] Buckley (2010:222).

the well-established case for Spartan exceptionality is perhaps overstated,[131] it nonetheless appears that Sparta was consistently and persistently open to Egyptian cultural contact in a way unparalleled in Athens and elsewhere.

6.2.1 | *Egypt and Lakonic Material Culture*

The Egypto-Spartan relationship is emphasized by a notable affinity in material culture. Besides the ram-headed deities from the region (§3.3.3), which, whether representatives of Zeus-Ammon or Apollo Karneios, recall Egyptian exemplars in their style and composition, we may add funerary stelae from Chrysapha (e.g., Sparta 550), Amyklai (e.g., Sparta 6230/1) and elsewhere in Lakonia, dating from the Late Archaic to Hellenistic Periods. The oldest such stela, the 'Chrysapha Relief' (Berlin Sk.731; fig. 6.5), is typical. The funerary iconography (a snake, pomegranate, *kylix,* veil, lotus-flower, hen and egg, and a dog) is thoroughly Greek.[132] Various artistic innovations are Greek, too – the depth of the relief, the figure turned to face onlookers, the benign 'Archaic Smile' and braided hair, the bulging eyes of early Laconic sculpture – but the composition uncannily resembles Egyptian funerary offering scenes (e.g., Met.Mus. 30.4.79; fig. 6.6).[133] The presence of the deceased's wife, the lion-footed chair,[134] the comparative size of the deceased and the dedicant (erased in the Egyptian example), the expression of perspective through overlapping figures, and even the proportions of the figures, demonstrate ongoing engagement with Egyptian artistic forms.

Similarly, we must consider the 'Arkesilaos Cup' (Cab.Med. de Ridder 189; fig. 6.7),

[131] Hodkinson (2009).
[132] Guralnick (1974:175).
[133] Blümel (1940:12), Panofsky (1964:20), Guralnick (1974:175-88), Boardman (1978:165; 1999:147); Skuse (2018:227) cautions that there is 'little evidence for direct copying'.
[134] Boardman (1999:147).



Fig. 6.5 | The Chrysapha Relief, a funerary stela displaying Egyptian design elements, *c.*540BC (Berlin Sk.731)



Fig. 6.6 | Facsimile of the offering scene from the Tomb of Rekhmire (TT100), *c.*1479-25BC (Met.Mus. 30.4.79)

a *kylix* decorated by a Spartan artist (the 'Arkesilaos Painter').[135] The style is again unmistakably Greek, but the subject Egyptian-influenced.[136] Unusually for Greek vase-painting,[137] it depicts a living political figure, Arkesilaos II of Kyrene,[138] supervising the weighing of goods, perhaps the silphium[139] in which the Battiads had established a monopoly.[140] As in the Chrysapha Relief, the sizing of the figures, determined by contextual status, is directly drawn from Egyptian art.[141] Arkesilaos is depicted under a canopy, enthroned[142] and with a crown and staff, perhaps in deliberate imitation of Osirian iconography (*cf.* fig. 6.13).[143] The whole composition mimics the 'Weighing of the Heart' vignette from the Egyptian *Book of the Dead* (e.g., BM EA10558/18; fig. 6.8).[144] The

[135] Wachter (2001:160); see Skuse (2018) with references.
[136] Boardman (1999:149), Schaus (2006:176).
[137] Miller (2006:109), Schaus (2006:177), Mei (2013:29-30).
[138] This attribution is not certain, with the earlier Arkesilaos I (599-83BC) also proposed (Simon *et al.*, 1981:59).
[139] Chamoux (1953:262), White (1984:28), Murray (1993:123), Mitchell (2000:89-97), Gönster (2015:169-84).
[140] Called the '*silphion* of Battos' as late as Aristophanes' *Ploutos* (925 with *schol.*; *cf.* Mitchell, 2000:89).
[141] Skuse (2018:227).
[142] The 'throne' is a folding stool (Skuse, 2018:230), unlike the substantial thrones of Egyptian art.
[143] Schaus (2006:176-7). Skuse (2018:228-9), however, sees no parallel: the individual elements are found elsewhere in exoticizing Lakonian pottery, and may simply indicate 'foreignness'.
[144] Schaus (2006:176-7). Boardman (1999:149) rejects a comparison with 'Weighing of the Heart' scenes, instead comparing it with secular weighing scenes found in tomb contexts (e.g., Neferronpet [TT178], or Nebamun and Ipuki [TT181, fig. 4.2); *cf.* Guralnick (1974:177).

weighmen use an equal-armed balance, similar to Egyptian prototypes (§4.1.4) but not unknown from Greek contexts[145] (e.g., Met.Mus. 47.11.5 [fig. 6.9], Vienna 1105). But its decoration is unique among Greek balances (fig. 6.10): finials crown each arm, flared like lotus-heads, and collared with metal bands, exactly like Egyptian prototypes (e,g, BM EA9901; fig. 6.11).[146] The figures are arranged as in the Egyptian vignette: the character labelled 'ΣΛΙΦΟΜΑΧΟΣ'[147] points at the balance-point, much as Anubis (or, occasionally, Horus: BM EA10558/18, Turin 1799) tends the balance in Egyptian prototypes.[148] The tondo is replete with exotic animals, associated with Africa – Libya and Egypt equally – but the seated primate atop the balance[149] must reference the baboon-god Thoth,[150] who guided measurements and was a common decoration for Egyptian balances. We see a similarly close affinity with Egyptian funerary iconography in another pair of Lakonian cups, one from Sparta itself (Louvre E668 [fig. 6.12]),[151] depicting Zeus seated on a square throne with a step for his feet, and bound in a tight garment. This composition invites comparison with the mummiform Osiris, who presides enthroned over funerary scenes (fig. 6.13).

Similar Egyptian influences are evident in Lakonian sculpture in-the-round. Eumnastos' Lion (Vathy 1149/50; fig. 6.15), originally part of a larger bronze vessel, was manufactured in Sparta around 550BC, and dedicated by the Spartan Eumnastos[152] at the

[145] Skuse (2018:130).
[146] *cf.* Bresson (2000:93-4), arguing that these embellishments were functionally redundant by the Late Period (*cf.* Glanville, 1936:23-35), and so reflect an archaizing trend in Egyptian art. Skuse's (2018:230) sceptical approach minimizes the difference between Egyptian and Greek examples (without accounting for the Egyptianizing decoration). He recognizes however, the unusual arrangement of strings dangling from the centre of the balance, suggesting they are a misinterpretation of the plumb-bob found in Egyptian models (§4.1.4).
[147] The identity of this figure is unknown; a link to silphium seems likely, either through metathesis of the lambda and iota (Neumann, 1979:90) or a copying error (Wachter, 2001:161-2; Gönster, 2015:175).
[148] Skuse (2018:231).
[149] *ibid*:223.
[150] Bresson (2000:92). This is the only confirmed representation of a baboon in Greek art: Skuse (2018:231).
[151] The other was from Kyrene: Guralnick (1974:178).
[152] On Eumnastos himself, *cf.* Cartledge (1982:256), Hodkinson (2000:294).



Fig. 6.7 | The 'Arkesilaos Cup': the weighing scene, likely derived from Egyptian prototypes, *c.*565-50BC (Cab.Med. de Ridder 189)

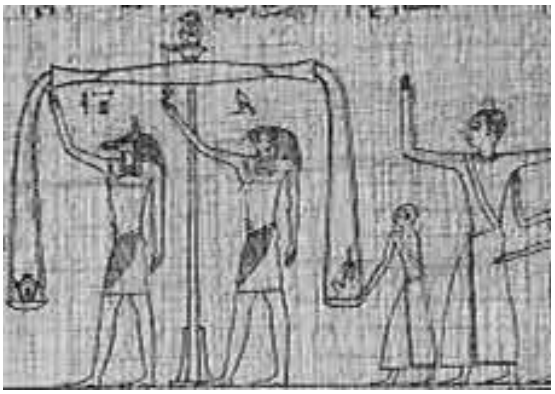


Fig. 6.8 | The Weighing of the Heart, from the *Book of the Dead* of Ankhwahibre *c.*550-25BC (BM EA10558/18)



Fig. 6.9 | Detail of the balance-arm from a black-figured amphora of Taleides, *c.*540-30BC (Met.Mus. 47.11.5)



Fig. 6.10 | Detail of the balance-arm, from the 'Arkesilas Cup', *c.*565-50BC (Cab.Med. de Ridder 189)

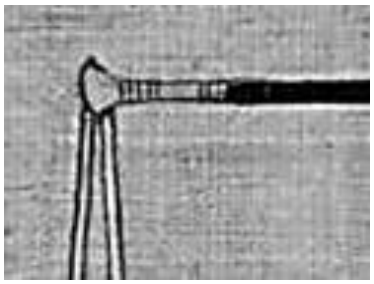


Fig. 6.11 | Detail of the balance from the 'Weighing of the Heart' vignette, in the *Book of the Dead* of Hunefer, *c.*1300BC (BM EA9901/3)



Fig. 6.12 | Zeus in a tight-fitting garment: a detail of a *kylix* attributed to the Naukratis Painter, *c.*560BC (Louvre E668)

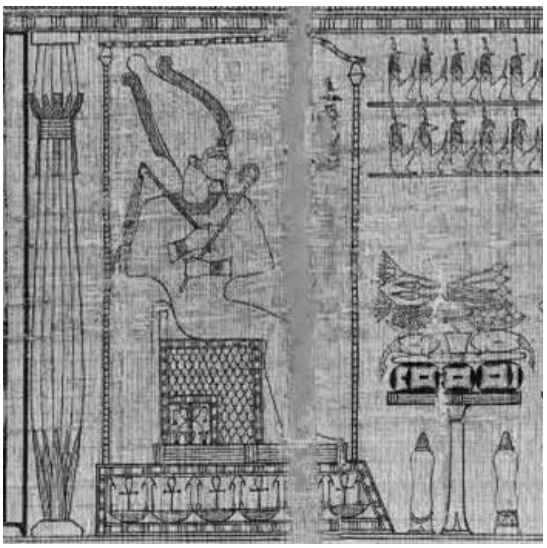


Fig. 6.13 | Osiris, enthroned and mummiform, in the *Book of the Dead* of Ankhwahibre, *c.*550-25BC (BM EA10558/18)



Fig. 6.14 | Eumnastos' Lion, a recumbent protome from a bronze vessel, *c.*550BC (Vathy 1149/50)



Fig. 6.15 | Perachora Lion, *c.*550BC (Boston 97.289)



Fig. 6.16 | The Sphinx of Taharqa, *c.*680BC (BM EA1770)

Samian Heraion[153] (a centre for Egyptianizing dedications; §2.4.1). The figure is unlike usual Greek lion sculptures, characterized by pointed, almost canine, features, short manes, thinness to the point of emaciation, and a seated pose, often with their head turned to one side (e.g., Boston 97.289; fig. 6.15).[154] Contrastingly, Eumnastos' lion is stocky,[155] with a short body, a round feline face staring straight ahead (fig. 6.17), a splayed, round mane, and reclines with its tail curled around and front paws outstretched. The features recall the robust-looking lions of Egyptian art,[156] sometimes with a comparable rounded mane (e.g., Oxford AN1896-1908.E.189, fig. 6.18), and the pose is the protective guise of the Egyptian sphinx (e.g., BM EA1770; fig. 6.16).[157] While recumbent lions are known from Greek sculpture, famously from Didyma (BM 1859,1226.11-12, Malibu 57.AA.11), they remain Greek in style.

[153] Gabelman (1965:69-71), Dunst (1972:140-4), Snodgrass (1980:133), Cartledge (2001:179-80), Osborne (2009:263).
[154] Karo (1911:258), Rambo (1918:25-6). Vermeule (1972:51) even suggests that dogs were used as models (*cf.* Bliquez, 1975).
[155] The fuller form was popular in the Kushite Period (e.g., Brooklyn 60.74; fig. 6.16).
[156] Boardman (1999:144-7)
[157] Other lion-poses do exist in Egyptian art. Rarely, as in Oxford AN1896-1908.E.189, they are seated, and occasionally they relax naturalistically on their sides, with forepaws crossed and head raised (BM EA2).



Fig. 6.17 | Detail of the face of Eumnastos' Lion, *c.*550BC (Vathy 1149/50)



Fig. 6.18 | Detail of the face of a ceramic lion from Hierankopolis, *c.*2325-175BC (Oxford AN1896-1908.E.189)

While Greeks had for centuries engaged with Egyptian art (§6.1.2), the Spartans remained close to Egyptian prototypes remarkably late. While Egyptian-influenced *kouroi* and monumental stone architecture arrived early in Athens, this influence waned across the sixth century BC. While early *kouroi* were programmatic and stylized, and proportionally closer to Egyptian prototypes (compare, e.g., Aswan 6755 [fig. 6.19] with Met.Mus. 32.11.1 [fig. 6.20]), later examples (Munich 168 [fig. 6.21], contemporaneous with the 'Arkesilaos Cup', and Athens NM3938 [fig. 6.22]) display innovations differentiating them from Egyptian models:[158] pronated forearms, unclenched fists, spherical heads, relaxed shoulders, naturalistic hair, the upper lip overhanging the lower, and realistic muscularity suggesting balance and movement (the beginnings of *contrapposto*).[159] These innovations, partly resulting from closer study of anatomy,[160] but

[158] Guralnick (1978:468-9), Hurwit (1985:191).

[159] Based on the progress in anatomical depiction, Richter (1960) divides *kouroi* into seven groups, from *c.*615BC to *c.*480BC. The progress was not uniform, with the 'Melos Group' considered regressive, thanks to reduced muscle definition and a return to programmatic representations (1960:90). However, even in this group, the form was less 'Egyptian', with pronated forearms, relaxed shoulders, and a greater 'naturalism' (Richter, 1960:93; Whitley, 2001:217; Carter and Steinberg, 2010:116) in the rendering of faces.

[160] Guralnick (1978:469). Ridgway (1966:70) stresses a 'tension' between Greek naturalism and Egyptian artificialism.



Fig. 6.19 | Striding statue of Horemakhet, *c.*690-53BC (Aswan 6755)

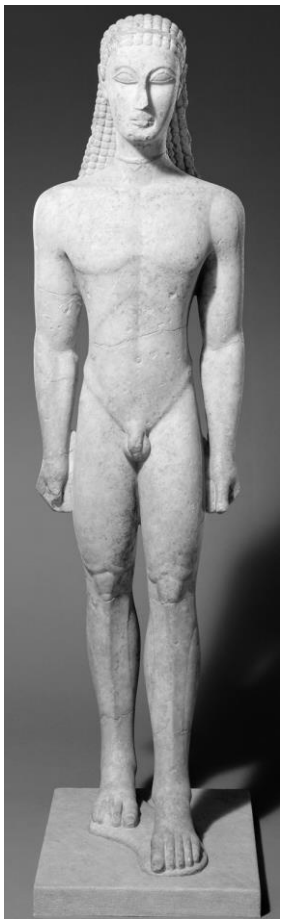


Fig. 6.20 | The 'New York *Kouros*,' *c.*590-80BC (Met.Mus. 32.11.1)

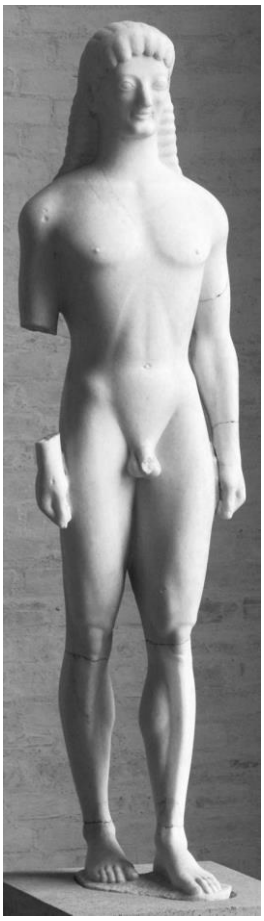


Fig. 6.21 | The 'Tenea *Kouros*,' *c.*560BC (Munich 168)



Fig. 6.22 | The 'Aristodikos *Kouros*,' *c.*500-490BC (Athens NM3938)

made possible by the choice of bronze as an artistic medium (e.g., the 'Piraeus Apollo', Piraeus МП4645), evolved Egyptian influences into an innovative new Greek form. The Spartans rejected many of these developments, remaining closer to Egyptian models. Whether Lakonian artists travelled to Egypt,[161] or were exposed to Egyptian prototypes at home, this engagement with Egyptian visual culture suggests intense transcultural exchange in other areas.

[161] As per Coudin (2009:161), Skuse (2018:241-2).

6.2.2 | *Spartans and Egyptians*

Right from the earliest Greek mythological tradition, Spartans have been connected with Egypt. It was there that Menelaos, stranded, 'collected much livelihood and gold' (πολὺν βίοτον καὶ χρυσὸν ἀγείρων: Hom. *Od.* 3.301), but, while this interaction was extended (seven years),[162] it was hardly peaceable. If Menalaos' sojourn fossilizes a memory of hostile beginnings, things had apparel improved by the time Lykourgos travelled there, before he reformed the Lakedaimonian Constitution (Diod. 1.98.1; Plut. *Lyk.* 4). But while his Athenian counterpart, Solon, only borrowed the idea of censuses from Egypt (Hdt. 2.177.2; if anything at all: [Arist.] *Ath.Pol.* 11.1), Lykourgos supposedly returned with a new model for the Spartan state, separating the banausic from the martial occupations (Plut. *Lyk.* 4; *cf.* Hdt. 2.167.1-2). In short, the Spartans claimed[163] that their defining feature was essentially Egyptian. We may briefly note, too, modern attempts to derive the etymologies of Spartan toponyms from Egyptian: Doric Σπάρτα from *sp3t* (nome or region),[164] and the mountain-range Ταΰγετος from *t3(w) ỉgrt*, 'land of the necropolis', the latter syllable accompanied by the determinative hieroglyph for 'mountain' (Gardiner N25).[165]

These connections persisted into our period. The relationships between prominent Egyptians and Archaic Greek Dynasts – the *xenia* between Ahmose II and Polykrates of

[162] On the narrative function of this interlude, *cf.* Powell (1970:421).
[163] At least later: the first mention of Lykourgos in Egypt comes from Diodorus; Herodotos withholds judgement on whether Spartan social structures originated in Egypt (2.167.1), indicating that the tradition existed by his time.
[164] Bernal (2006:513-15). This etymology, Bernal's linked etymology for 'Sardis', is easily challenged: the Old Persian for Sardis was, Bernal correctly notes (2006:514), *spada* or *sparda*. While a derivation from *sp3t* is possible here, it is closer to the Old Persian word *spada*, ('army': Shabazi, 1985:491; Dandamaev, 1989:111, n.2; Charles, 2011:114; Fink, 2014:16). The traditional etymology for Σπάρτα is from the Indo-European **sper*, 'sow' (*cf.* Greek σπείρω), conflating with the Σπαρτοί ('sown-warriors') fought by Jason (Steph.Byz. *s.v.* Σπάρτη; *cf.* Malkin, 1994:102-3) and followed by Sacks and Murray (1995:231), Kennell (2010:4). Bernal counters, re-routing the etymology from the Afroasiatic **pr* with a causative **s*- (2006:513-14).
[165] Bernal (2006:519). The word is attested in Homer (*Od.* 6.101), and is of uncertain etymology.

Samos (Hdt. 3.39.2, 43.2, 4.154.4),[166] or Gorgos, brother of Periander, whose son was named Psammetichos (*FrGrHist.* 90 F59)[167] – probably extended to Sparta, too. Herodotos tells us of a spectacular linen corslet, described at length, sent from Ahmose II to Sparta, but intercepted by Samian pirates (3.47.1-3).[168] Unlike the near-identical corslet dedicated at Lindos on Rhodes (Hdt. 3.47.3; Plin. *HN*. 19.2), Herodotos does not specify this gift as a religious donation (§3.3.2). In this context, we must imagine either that the gift was intended for public display, or, if monarchical ancient states were extensions of the household of its king, a gift for 'the Lakedaimonians' represented by one of their monarchs, perhaps indicates another *xenia*-relationship.[169] Certainly, the relationship between Ahmose II and leading Spartans was close, following the conclusion of a Quadruple Alliance against Cyrus (*cf.* Hdt. 1.70.1 with 77.1-2).[170]

Kyrene, Sparta's 'granddaughter' colony in Libya, had a peculiarly close relationship with both Egypt and Sparta, as well as with the Ammonians of Siwa, from where the cult of Zeus-Ammon emanated (§3.3.3). It has been (convincingly, in my view) argued that the name Libys,[171] borne by a prominent Spartan *navarch* (Xen. *Hell.* 2.4.28) indicates a hereditary *xenia* between his family and the Siwan chief.[172] Certainly, Siwa represents a triple point of contact between Sparta, Egypt and Kyrene; the Ammonians owed obeisance to the Egyptian Pharaoh, but were equally as geographically proximate with the Kyreneans, whose hand is detected in the architecture of their Acropolis (§3.3.3), and who were regular visitors to the Oracle (Hdt. 2.32.1). In this connection, we may note

[166] Braun (1982:52), Herman (1987:17, 60, 71).
[167] Herman (1987:19-20).
[168] *cf.* Blösel (2018:252-3).
[169] Möller (2000:37). Even if the corslet was not intended for an individual Spartan, the concept of *xenia* crept over into that of *summachia*, alliance, as when the Spartans (as a whole) pledge to be ξεινίης πέρι καὶ συμμαχίης with Kroisos (Hdt. 1.69.3; *cf.* the expectation that even pre-existing hostilities would be superseded by *xenia*: Herman, 1987:2-3),
[170] Braun (1982:51-2), Balcer (1994:249).
[171] The name is most common in the Islands and Peloponnese: *LGPN s.v.* Λίβυς.
[172] Malkin (1990), Hodkinson (2000:337-40). Herman (1987:21) lists Libys as King of Kyrene.

Lysander's peculiar devotion to Ammon,[173] who supposedly visited him in his sleep during the siege of Aphytis, whence Lysander imposed his cult on the Aphytians (Plut. *Lys.* 20.5; §3.3.3). Lysander subsequently travelled to Siwa (Diod. 14.13.5-7; Plut. *Lys.* 25.3), meeting with his probable *xenos*, the Ammonian King (Diod. 14.13.6).

We may thus postulate an unbroken chain of *xenia* between Sparta and the Egyptians/Ammonians from the proto-historic period to after Lysander's death, with the relationship between Agesilaos and the pharaohs Djedhor and Nakhthorhebyt (§3.4.3). Agesilaos' service under Djedhor (Xen. *Ages.* 2.28; Plut. *Ages.* 36.3; Diod. 15.92.2), and his subsequent defection to the rebel-prince Nakhthorhebyt (Plut. *Ages.* 37.4-5), was allegedly damaging to his reputation (Plut. *Ages.* 36.1). The obligation and affinity Agesilaos felt for Egypt, though apparently not for Djedhor personally (37.4), represents the consummation of extensive Sparto-Egyptian intercultural engagement, a symptom of the same processes which enabled the regular trans-shipment of goods from Egypt to Sparta. While this trade never achieved the prominence of Hellenistic Egypt's grain exports, Egypt's relationship with Sparta provides a useful counterbalance to the analysis provided above, and demonstrates a possible alternative cultural strategy to that adopted by Athens.

6.3 | Future Directions

This thesis has demonstrated the conundrum of Athenian reliance on Black Sea grain, and proposed a new model through which to interpret her apparent pre-Hellenistic economic ambivalence towards Egypt. At the same time, it has explored the role of cultural convergence, not only in reducing harmful trade frictions, but also in dragging Egypt from the Aegean's economic and political periphery into the heart of the Hellenistic World. In doing so, it has proposed a more theoretically sophisticated interpretation of the Ancient

[173] Parke (1967:220), Pritchett (1979:27-8), Petridou (2015:138), Dillon (2017:335).

Mediterranean economy, derived from New Institutionalism. But alone, this thesis is insufficient to prove the robustness of such approaches. The natural reluctance of ancient historians to theorize,[174] for fear of compromising the evidential integrity of their conclusions, has meant that the insights of NIE and Economic Sociology – developed in the 1980s[175] – have been slow to penetrate our discipline.[176] It is only through repeating our approach, for a wide variety of case studies across the Ancient Mediterranean, that its validity can be confirmed. Our brief examination of Atheno-Bosporan Cultural Economic Distance above (§6.1.1) indicates the potential of such an approach;[177] similarly, economic relations with Sicily, the Levant, Southern Italy, Libya, and the Persian Empire offer worthwhile alternatives.

Similarly, the transition between the 'Classical' and 'Hellenistic' economies, if such labels are even valid,[178] demands further exploration. The historical emphasis on the distinctiveness of the 'Hellenistic Economy', is largely due to its incompatibility with the Finleyist interpretation of the Ancient Economy. Finley himself rejected the inclusion of the Hellenistic economies in his conceptualization based not on concerns of periodization, but on their apparently 'Oriental' features,[179] an unhelpful label which not only maps diverse Hellenistic economic structures onto pre-existing Near Eastern models, but also reductively conflates the diverse economic systems of the non-European world.[180] This

[174] On this reluctance, *cf.* Finley (1985b:61), and in defence of careful use of theory in history, *cf.* Marwick (1989:142-51), Morley (1999:79-84), and above, §1.5.
[175] Granovetter (1985:482, 504), Yeung (2003:449), Bourdieu (2005:75), Swedberg (2006:939), Morley (2007:xiii, 9), Migeotte (2009:3), Engen (2010:7, 10, 29). Our model owes a particular debt to a sub-discipline of NIE, the New Economic Geography (NEG): Martin (2000:77, 79), Yeung (2003:442, 444-5; 2005:38-9), Venables (2006:739).
[176] We must, however, recognize the efforts of Morris (2002:10), Bresson (2016a:19-30), Harris and Lewis (2016:30).
[177] I have taken my own first steps in this direction above, and through a related MA Thesis (Cooper, 2016).
[178] *cf.* Archibald and Davies (2011).
[179] Finley (1985a:183).
[180] Davies (2001:12-13).

artificial distinction between Mediterranean and 'Oriental' economies[181] is still early in its process of dismantlement.[182] These two boundaries – of periodization and geography – must be breached for Egypt to be properly integrated within reconstructions of the Ancient Economy.

The most valuable evidence for the Atheno-Egyptian economic relationship in this study has often been archaeological. While the literary and sub-literary references to Egypt – in the classical authors, but also epigraphy and papyri – have been subject of extensive individual studies, it is through the distribution of Greek finds in Egypt, especially before the Ptolemaic Period and outside of Naukratis,[183] and of Egyptian exports in Greece[184] that best illustrates the state of their relationship. While sites like Herakleion-Thonis continue to contribute a bewildering array of finds, daily improving our understanding, a synthesis is required to place these in their broader context. Similarly, while surveys of both the Archaic[185] and Ptolemaic[186] evidence – literary and archaeological – exist, there remains no similarly authoritative account for the Classical Era. This is partly a problem of the evidence. Egyptologists have somewhat reluctantly undertaken studies of this (from their perspective) *basse époque*[187] thanks to the shift in our sources: while earlier periods benefit from a large array of Egyptian materials, which may be supplemented by a study of e.g., Herodotos, Diodorus and Manetho, for the Saïte Dynasty, the archaeology begins to dry up, largely thanks to the reorienting of political focus away from the Nile Valley to the

[181] Finley (1985a:28-9); *cf.* Polanyi (1957a:64).
[182] *cf.* Morris and Manning (2005a:132, 149, 2005b:1-2, 21), Bissa (2009:16). Davies (2001) provides a good overview of progress in this area.
[183] A number of excellent studies of Naukratis exist: Bowden (1996), Möller (2000), James (2003), Villing and Schotzhauer (2006, along with the various studies which emerged from their British Museum project).
[184] The only comprehensive study in this vein, Skon-Jedele (1994), only covers up to the sixth century BC.
[185] e.g., Cook (1937), Dunbabin (1957), Anthes (1963), Austin (1970), Sullivan (1981), Braun (1982), Boardman (1999), Kaplan (2003), Haider (2004), Fantalkin (2006), Syropoulos (2007), Perdu (2010), Moyer (2011a), Agut-Labordère (2013), and above *passim*.
[186] e.g., Fraser (1972), Bowman (1986), Hölbl (2001), Stanwick (2002), Manning (2010).
[187] Considered *basse* in terms both of date and cultural achievement: Ray (1996:27).

Delta, where conditions of preservation are poorer. While we have identified and utilized a rich Egyptian archaeological evidence-base in this thesis, and spectacular finds from the period continue to emerge,[188] this is the period where the evidence for Egyptian history becomes predominantly Greek. But Egypt has been peripheral to the interests of Hellenists. While this thesis makes a modest contribution, larger-scale collaboration between Egyptologists and Hellenists is needed to produce a comprehensive history recognizing both perspectives.

6.4 | Epilogue

A recent paper has argued for the rehabilitation of the name 'Herodotos' into an oft-emended passage of Athenaios (*Deip.* 14.620d);[189] if correct, then the comic actor Hegesias gave a dramatic reading of Herodotos' *Histories*, or sections thereof – his Egyptian excursus seems the obvious choice – to an audience in Alexandria, perhaps during the third century BC.[190] The choice of subject-matter would then be pointed, differentiating the self-professedly Greek Alexandrians from the native underclass surrounding them, reminding them of the historical progression which led to Hellenic domination in Egypt. But it is doubtful that Hegesias' audience would have recognized unironically Herodotos' depiction of an irredeemably exotic and topsy-turvy land, for they were the beneficiaries of four centuries of mitigation of the cultural distance between Egyptians and Hellenes.

It was this process – revealed in this thesis to have been incremental, uneven and even partly unwitting[191] – which released Egyptian grain to contribute to the food-needs of Athens and the Aegean, and eventually to become the essential staple of Rome and

[188] *cf.* the still-unpublished colossal statue of Psamtik I (BBC, 2017; Youssef, 2017; Betrò, 2018; §5.1).
[189] Matijašić (2019). *cf.* Nagy (1996:158), Hornblower (2006b:306).
[190] If Hegesias' co-performer Hermophantos is the one mentioned in *IG* II-III^2 2325.231 holds: Matijašić (2019:86).
[191] *cf.* Marwick (1989:170).

Constantinople.[192] It created the conditions which permitted Ptolemaic exploitation of Egypt's natural wealth, propelling this dynasty of King-Pharaohs into an unparalleled position at the heart of Mediterranean political life, and to sustain this position until their defeat at Actium in 30BC. The cultural and economic assimilation of Egypt and the Hellenic world, achieved through the process described in this thesis, had broad implications for the political, social and economic history of the Mediterranean region. It was this realignment of the Mediterranean centre of gravity that propelled the fortunes of Rhodes,[193] and pivoted the Greek-speaking world away from Athens.

[192] On Egypt's role in Roman food supply, see Erdkamp (2013, esp. 270), §1.3; though *cf.* Garnsey (1988:255): 'Egypt was a significant but never the main contributor of grain to Rome'.
[193] Migeotte (2009:132-3), Gabrielsen (2013).

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Archaeological Catalogue, with Abbreviations for Museum Collections

Agora | *Agora Museum,* Athens

Agora P126228
Attic black-figured *alabastron*, attr. the Amasis Painter
*c.*560BC
Athens, Greece
Pottery, Pigment
H. 9.20cm | Diam. 4.70cm

ÄM | *Ägyptisches Museum und Papyrussammlung,* Berlin

ÄM 2268
Stela of Nastsasen, Pharaoh of Kush, recording an invasion by Khababash (?)
*c.*335-330BC
Dongola, Sudan
Grey-Green Granite
H. 1.72m | W. 1.27m | D. 0.18m

ÄM 2458
Osiris statuette with dedication in Greek by Zenes, son of Theodotos
Late Fifth Century BC
Saqqara, Egypt
Bronze
H. 27.70cm | W. 6.60cm | D. 15.60cm

ÄM 17700
Block-statue of Esnaisut, 'High Official' under Psamtik I
*c.*664-610BC
Edfu, Egypt
Granite
H. — | W. — | D. —

Ann Arbor | *Kelsey Museum of Archaeology* (*University of Michigan*), Ann Arbor MI

Ann Arbor 1984.01.0137
Imitation Athenian tetradrachm, obv. head of Athena, rev. owl and olive Sprig
*c.*400BC
Mangyrious, Egypt
Silver
Diam. — | Wt. —

ANS | *American Numismatic Society,* New York NY

ANS 1944.100.10355
Aphytian coin, obv. Head of Zeus-Ammon, rev. *kantharos*
*c.*450-400BC
Afytos, Greece
Bronze
Diam. — | Wt. 5.84g

ANS 1944.100.10356
Aphytian coin, obv. head of Zeus-Ammon, rev. two eagles and a pine tree
*c.*450-400BC
Afytos, Greece
Bronze
Diam. — | Wt. 4.03g

ANS 1944.100.10360
Aphytian coin, obv. head of Zeus-Ammon, rev. Eagle
*c.*450-400BC
Afytos, Greece
Bronze
Diam. — | Wt. 7.85g

ANS 1944.100.24995
Athenian chalkous, obv. head of Athena, rev. two owls within wreath
*c.*322-307BC
Athens, Greece
Bronze
Diam. — | Wt. 2.49g

ANS 1944.100.42712
Kyzikan stater, obv. the Tyrannicides, tuna fish (*T. thynnus*), rev. incuse square
c.550-475BC
Kyzikos, Greece
Electrum
Diam. — | Wt. 15.91g

ANS 1944.100.43379
Pitanian coin, obv. head of Zeus-Ammon, rev. pentalpha
Early Fourth Century BC
Çandarlı, Turkey
Bronze
Diam. 17mm | Wt. 2.67g

ANS 1944.100.43380
Pitanian coin, obv. head of Zeus-Ammon, rev. pentalpha
Early Fourth Century BC
Çandarlı, Turkey
Bronze
Diam. 11mm | Wt. 1.17g

ANS 1944.100.43381
Pitanian coin, obv. head of Zeus-Ammon, rev. pentalpha
Early Fourth Century BC
Çandarlı, Turkey
Bronze
Diam. 7mm | Wt. 0.86g

ANS 1944.100.43382
Pitanian coin, obv. Zeus-Ammon, rev. serpent coiled around *omphalos*
Early Fourth Century BC
Çandarlı, Turkey
Bronze
Diam. 17mm | Wt. 2.55g

ANS 1944.100.44043
Thymbran coin, obv. head of Zeus-Ammon, rev. star
c.350BC
Hisarlık, Turkey
Bronze
Diam. — | Wt. 5.61g

ANS 1944.100.54099
Mallian coin, obv. Zeus-Ammon, rev. *gorgoneion*
Fourth Century BC
Kızıltahta, Turkey
Silver
Diam. — | Wt. 0.70g

ANS 1944.100.62652
Imitation Athenian obol (?), obv. head of Athena, rev. owl and *w3ḫ*-hieroglyph
post-350BC (?)
Israel-Palestine (?)
Silver
Diam. — | Wt. 0.54g

ANS 1944.100.75458
Imitation Athenian 'obol' of Naukratis, obv. head of Athena, rev. owl with inscr. ΝΑΥ
*c.*400-320BC
Egypt (?)
Silver
Diam. 9mm | Wt. 0.64g

ANS 1944.100.75462
Imitation Athenian tetradrachm, obv. head of Athena, rev. owl, inscr. סויך
c.340-333BC
Egypt
Silver
Diam. 26mm | Wt. 16.70g

ANS 1944.100.75464
Fractional coin of Sabakes, obv. lion under sun, rev. archer, inscr. סויך
c.340-333BC
Mit-Rahina, Egypt (?)
Bronze
Diam. 7mm | Wt. 1.18g

ANS 1944.100.75465
Fractional coin of Mazakes, obv. satrapal head, inscr. סזרך, rev. Sidonian galley
c.333-320BC
Provenance Unknown
Bronze
Diam. 13mm | Wt. 1.39g

ANS 1944.100.83604
Athenian *kollybos*, corrosion obscuring design
c.400-300BC
Athens, Greece
Bronze
Diam. — | Wt. 0.28g

ANS 1947.98.326
Tetradrachm, obv. Alexander, rev. Zeus, Egyptian mintmark
*c.*332-320BC
Mit Rahina, Egypt
Silver
Diam. 27mm | Wt. 17.24g

ANS 1947.98.327
Tetradrachm, obv. Alexander, rev. Zeus, Egyptian mintmark
*c.*332-320BC
Mit Rahina, Egypt
Silver
Diam. 28mm | Wt. 17.04g

ANS 1947.98.328
Tetradrachm, obv. Alexander, rev. Zeus, Egyptian mintmark
*c.*332-320BC
Mit Rahina, Egypt
Silver
Diam. 28mm | Wt. 17.22g

ANS 1947.98.329
Tetradrachm, obv. Alexander, rev. Zeus, Egyptian mintmark
*c.*332-320BC
Mit Rahina, Egypt
Silver
Diam. 25mm | Wt. 17.21g

ANS 1961.154.40
Coin of C. Ummidius Quadratus (?), obv. Tyche, rev. Ram Leaping
c. AD54-68
Antioch, Syria
Bronze
Diam. — | Wt. 6.03g

ANS 1963.268.72
Stater of Nakhthorhebyt, obv. rearing stallion, rev. *nfr nb* hieroglyphs
c.359-343BC
Egypt
Gold
Diam. 19mm | Wt. 8.43g

ANS 1965.139.1
Coin of Nakhthorhebyt (?), obv. head of Athena, rev. *nfr-nb*. between Two Eagles,
c.400-350BC
Egypt (?)
Silver
Diam. 7mm | Wt. 5.00g

ANS 1969.157.16
1/16 Shekel of Mazaios, Sidon, obv. Sidonian galley, rev. lion hunt
c.450-350BC
Saida, Lebanon
Silver
Diam. 11mm | Wt. 0.75g

ANS 1977.158.112
Mnaieon, obv. Ptolemy II and Arsinoë II, inscr. ΑΔΕΛΦΩΝ, rev. Ptolemy I and Berenike I, inscr. ΘΕΩΝ
c.282-272BC
Alexandria, Egypt
Gold
Diam. 29mm | Wt. 27.81g

ANS 1979.116.1
Samian Half-Stater obv. Potnia Theron carrying winged animals, rev. incuse rectangles
c.540-525BC
Samos, Greece
Lead
Diam. — | Wt. 5.34g

ANS 1997.9.178
Mnaieon, obv. Ptolemy IV with trident, aegis and radiate crown, rev. radiate cornucopia, inscr. ΠΤΟΛΕΜΑΙΟΥ ΒΑΣΙΛΕΩΣ
219-217BC
Alexandria, Egypt
Gold
Diam. 26mm | Wt. 27.75g

ANS 1997.9.69
Stater, obv. Ptolemy I, rev. Alexander in an Elephant Chariot, inscr. ΠΤΟΛΕΜΑΙΟΥ ΒΑΣΙΛΕΩΣ
*c.*305-282BC
Alexandria, Egypt
Gold
Diam. 17mm | Wt. 7.12g

ANS 2008.15.39
Imitation Athenian tetradrachm of Artaxerxes III, with inscr. *3rtḫššš pr-ʿ3*
c.358-338BC
Mit Rahina, Egypt
Silver
Diam. 24mm | Wt. 16.76g

ANS 2008.15.40
Imitation Athenian tetradrachm of Artaxerxes III, with inscr. *3rtḫššš pr-ʿ3*
c.358-338BC
Mit Rahina, Egypt
Silver
Diam. 23mm | Wt. 16.96g

ANS 2008.15.41
Imitation Athenian tetradrachm of Artaxerxes III, with inscr. *3rtḫššš pr-ʿ3*
c.358-338BC
Mit Rahina, Egypt
Silver
Diam. 22mm | Wt. 16.50g

ANS 2010.56.1
Coin of Antioch (?), obv. Ram Leaping, rev. Scales, misattr. to Nakhthorhebyt
Second Century AD (?)
Syria (?)
Bronze
Diam. 14mm | Wt. 2.59g

ÄS | *Ägyptische Sammlung,* Munich

ÄS 5339
Portrait of a Pharaoh, perhaps Nakhtnebef
c.379-387BC
Provenance Unknown
Gypsum
H. 28.10cm | W. 24.00cm |
D. —

Astana | *National Museum of the Republic of Kazakhstan,* Astana (Nur-Sultan)

Astana KYMTK1-1844
Skythian Silver Bowl, inscribed in Unknown Script
Fourth Century BC
Issyk, Kazakhstan
Silver
H. 2.20cm | Diam. 7.70cm

Aswan | *International Museum of Nubia,* Aswan

Aswan 19
The Elephantine Stela of Ahmose II
*c.*567BC
Elephantine, Egypt
White Limestone
H. 1.75m | W. 0.95m | Th. —

Aswan 6755
Striding Statue of Horemakhet
*c.*690-653BC
Luxor, Egypt
Red Granite
H. 0.66m | W. — | D. —

Athens | *National Archaeological Museum,* Athens

Athens 108
Fragmentary portrait of Ptolemy VI in Egyptian costume
*c.*176-145BC
Aegina, Greece
Granite
H. 62.50cm | W. 37.50cm | D. 35.00cm

Athens 9683
Red-Figured *pelike* depicting Herakles and Busiris, attr. the Pan Painter
*c.*470BC
Thespies, Greece
Pottery, Pigment
H. — | Diam. —

Athens NM1441
Red-figured *pelike*, depicting a youth and a *hetaira*
*c.*430BC
Kamiros, Greece
Pottery, Pigment
H. 20.00cm | Diam. —

Athens NM1471
Stela honouring Spartokos II, Pairisades I and Apollonios
347/6BC
Athens, Greece
White Marble
H. 2.17m | W. 0.62m | Th. 0.17m

Athens NM3938
The 'Aristodikos *Kouros*'
*c.*500-490BC
Attika, Greece
Pentelic Marble
H. 1.95m | W. 0.53m | D. 0.72m

Athens NM26746
Black-figured *krater* depicting warriors, attr. Exekias
*c.*530BC
Farsala, Greece
Pottery, Pigment
H. — | Diam. —

Baia | *Museo Archeologico del Campi Flagri,* Baia

Baia 174.479
Cast from the face of Aristogeiton, after Antenor
Roman
Baia, Italy
Plaster, Bone
H. 21.60cm | W. 10.60cm | D. —

Baltimore | *Walters Art Museum,* Baltimore MD

Baltimore 48.2126
***Aryballos* in the form of a Helmeted Head**
Early 6th Century BC
Rhodes, Greece
Pottery
H. 16.80cm | W. 5.10cm | D. 6.80cm

Baltimore 48.2863
***Aryballos* shaped like a Hedgehog**
6th to 5th Century BC
Egypt
Faience, Pigment
H. 6.20cm | W. 7.50cm | D. 4.80cm

Baltimore 54.970
Statuette of a Woman, with Greek and Egyptian Features
6th Century BC
Turkey
Bronze
H. 13.80cm | W. 3.60cm | D. 2.10cm

Basel | *Antikenmuseum und Sammlung Ludwig,* Basel

Basel BS485
Red-Figured *chous* depicting athletes and a slave, attr. the Achilles Painter
*c.*440BC
Athens, Greece
Pottery
H. — | Diam. —

Berlin | *Antikensammlung,* Berlin

Berlin 30030
'Klazomenian-style' chest sarcophagus
*c.*525-500BC
Urla, Turkey
Pottery, Pigment
H. 1.95m | W. 0.75m | D. —

Berlin F2159
Attic red-figured amphora, attr. Andokides
*c.*525BC
Vulci, Italy
Pottery, Pigment
H. 66.70cm | Diam. 37.24cm

Berlin F2345
Attic red-figured *kylix* depicting Herakles and Busiris
*c.*475-425BC
Vulci, Italy
Pottery, Pigment
H. 10.50cm | Diam. 28.00cm

Berlin Sa.16.Br
Recumbent Egyptianizing shinx
*c.*550-525BC
Samos, Greece
Bronze
H. — | W. — | L. 17.30cm

Berlin Sa.32a.Br
Recumbent Egyptianizing lion
Seventh Century BC
Samos, Greece
Bronze
H. — | W. — | L. 6.30cm

Berlin Sa.32b.Br
Recumbent Egyptianizing lion
Seventh Century BC
Samos, Greece
Bronze
H. — | W. — | L. 6.70m

Berlin Sa.32c.Br
Recumbent Egyptianizing lion
Seventh Century BC
Samos, Greece
Bronze
H. — | W. — | L. 6.30cm

Berlin Sk.731
The Chrysapha Relief funerary stela
*c.*540BC
Chrysapha, Greece
White Marble
H. 87.00cm | W. 65.00cm | D. 13.00cm

BM | *British Museum,* London

BM 116222
Document seal with the cartouche of Necho II
*c.*610-605BC
Karkamış, Turkey
Clay
H. 2.38cm | W. 1.42cm | D. —

BM 116223
Document seal with the cartouche of Necho II
*c.*610-605BC
Karkamış, Turkey
Clay
H. 0.23cm | W. 0.14cm | D. —

BM 116224
Document seal with the cartouche of Necho II
*c.*610-605BC
Karkamış, Turkey
Clay
H. 2.40cm | W. 1.50cm | D. —

BM 116225
Document seal with the cartouche of Necho II
*c.*610-605BC
Karkamış, Turkey
Clay
H. 2.45cm | W. 1.50cm | D. —

BM 116226
Document seal with the cartouche of Necho II
*c.*610-605BC
Karkamış, Turkey
Clay
H. 1.35cm | W. 1.30cm | D. —

BM 116227
Document seal with the cartouche of Necho II
*c.*610-605BC
Karkamış, Turkey
Clay
H. 1.00cm| W. 1.30cm | D. —

BM 123053
Fragmentary bowl, depicting Assyrians alongside hoplites
*c.*750-600BC
Amathus, Cyprus
Silver
Diam. 19.50cm | H. —

BM 1839,1224.174
Karian Coin, obv. Zeus-Ammon, rev. a dolphin and trident
*c.*350-300BC
Turkey
Copper Alloy
Diam. 10mm | Wt. 0.91g

BM 1841,B.2179
Tenean Coin, obv. laureate head of Zeus-Ammon, rev. grapes
*c.*400-301BC
Tenos, Greece
Copper Alloy
Diam. 16mm | Wt. 2.50g

BM 1859,1226.11
Statue of recumbent lion
*c.*600BC
Didim, Turkey
White Marble
H. 0.77m | W. — | D. 2.11m

BM 1859,1226.12
Statue of recumbent lion
*c.*600BC
Didim, Turkey
White Marble
H. 1.29m | W. — | D. 2.04m

BM 1861,0425.29
Inscribed New-Year flask, dep. Hathor
Sixth Century BC
Kamiros, Greece
Faience
H. 19.30cm | Diam. 15.70cm

BM 1861,1024.26
Statuette of ram-headed god (Ammon?)
*c.*600-550BC
Lardos, Cyprus
Limestone
H. 10.90cm | W. — | D. —

BM 1861,1111.13
Scarab inscribed for Psamtik I or Wahibre
*c.*664-525BC
Kamiros, Greece
Steatite
H. 4.00cm | W. 2.85cm | D. 1.55cm

BM 1864,1128.1.b
Egyptianizing Sidonian sarcophagus
*c.*500-475BC
Saïda, Lebanon
Marble
H. 2.28m | W. 0.82m | D. 0.41m

BM 1865,1201.3469
Tenean Coin, obv. laureate head of Zeus-Ammon, rev. Grapes
*c.*400-301BC
Tenos, Greece
Copper Alloy
Diam. 15mm | Wt. 3.66g

BM 1865,0508.940
Siana Cup, dep. warriors, attr. the C. Painter
*c.*575-555BC
Nola, Italy
Pottery, Pigment
H. 13.30cm | Diam. 24.10cm

BM 1870,1102.18
Salaminian stater, obv. reclining ram, rev. ankh
*c.*538-510BC
Dhali, Cyprus
Silver
Diam. 22mm | Wt. 11.10g

BM 1870,1102.19
Salaminian stater, obv. reclining ram, rev. ankh
*c.*538-510BC
Dhali, Cyprus
Silver
Diam. 21mm | Wt. 10.92g

BM 1870,1102.20
Salaminian stater, obv. reclining ram, rev. ankh
*c.*538-510BC (?)
Dhali, Cyprus
Silver
Diam. 22mm | Wt. 10.91g

BM 1870,1102.21
Salaminian stater, obv. reclining ram, rev. ankh
*c.*538-510BC (?)
Dhali, Cyprus
Silver
Diam. 21mm | Wt. 10.93g

BM 1870,1102.22
Salaminian stater, obv. reclining ram, rev. ankh
*c.*538-510BC (?)
Dhali, Cyprus
Silver
Diam. 23mm | Wt. 10.53g

BM 1870,1102.23
Salaminian stater, obv. reclining ram, rev. ankh
*c.*480-460BC
Dhali, Cyprus
Silver
Diam. 24mm | Wt. 11.03g

BM 1870,1102.24
Salaminian stater, obv. reclining ram, rev. ankh
*c.*538-510BC (?)
Dhali, Cyprus
Silver
Diam. 22mm | Wt. 10.98g

BM 1870,1102.25
Salaminian stater, obv. reclining ram, rev. ankh
*c.*538-510BC (?)
Dhali, Cyprus
Silver
Diam. 18mm | Wt. 3.99g

BM 1870,1102.26
Salaminian stater, obv. reclining ram, rev. ankh
*c.*538-510BC (?)
Dhali, Cyprus
Silver
Diam. 21mm | Wt. 11.12g

BM 1870,1102.27
Salaminian stater, obv. reclining ram, rev. ankh
*c.*500-480BC
Dhali, Cyprus
Silver
Diam. 23mm | Wt. 11.54g

BM 1870,1102.28
Salaminian stater, obv. reclining ram, rev. ankh
*c.*525-500BC (?)
Dhali, Cyprus
Silver
Diam. 21mm | Wt. 11.56g

BM 1886,0401.1171
Attic black-figured *olpe* sherd, attr. the Gorgon Painter
*c.*600-5800BC
Kom Ge'if, Egypt
Pottery, Pigment
H. 6.90cm | W. 6.90cm | Th. 0.40cm

BM 1886,0401.1273
Incurving sherd of a Vroulian Bird Bowl
*c.*640-620BC
Kom Ge'if, Egypt
Pottery, Pigment
H. 3.60cm | W. 5.30cm | Th. 0.40cm

BM 1886,0401.1706
Stamp seal with Aramaic inscription
Fifth Century BC
Kom Ge'if, Egypt
Copper Alloy
H. 7.62cm | W. 3.60cm | Th, 0.50cm

BM 1886,0401.738
Attic black-figured *olpe* sherd dep. a sphinx, attr. the Gorgon Painter
*c.*610-600BC
Kom Ge'if, Egypt
Pottery
H. 12.90cm | W. 12.50cm | Th. 0.40cm

BM 1886,1005.22
Statue base dedicated to Theban Zeus
Fourth Century BC
Kom Ge'if, Egypt
Pentelic Marble
H. 8.90cm | W. 41.90cm | D. 24.15cm

BM 1888,0601.31
***Kourotrophos* statue, likely Isis and Horus**
*c.*550BC
Kom Ge'if, Egypt
Limestone
H. 11.90cm | W. 7.50cm | D. 5.10cm

BM 1888,0601.652a
Fragment of Vroulian Bird Bowl
*c.*620-600BC
Kom Ge'if, Egypt
Pottery, Pigment
H. 4.80cm | W. 6.50cm | D. 0.57cm

BM 1888,0601.653
Body sherd of a Karian *skyphos*
*c.*600BC
Kom Ge'if, Egypt
Pottery, Pigment
H. 5.05cm | W. 7.10cm | Th. —

BM 1888,0601.82
Ovoid seal, dep. winged figure
*c.*600-480BC
Kom Ge'if, Egypt
Obsidian
H. 1.60cm | W. 1.10cm | Th. 0.75cm

BM 1889,0418.1
The Macmillan *Aryballos*
*c.*640BC
Boeotia, Greece (?)
Pottery, Pigment
H. 6.90cm | Diam. 3.90cm

BM 1897,1231.116
Armlet dep. griffins, 'Oxus Treasure'
Fifth to Fourth Century BC
Takht-I Kuwad, Tajikistan
Gold
H. 12.30cm | Diam. 11.57cm

BM 1897,1231.178
Achaemenid *rhyton* with griffin protome
Fifth Century BC
Altintepe, Turkey
Silver, Gold
H. 23.00cm | Diam. 14.50cm

BM 1897,1231.23
Plaque ornament (a*igrette?*) dep. griffin
Fifth or Fourth Century BC
Takht-I Kuwad, Tajikistan
Gold
H. 6.15cm | W. —

BM 1898,0225.1
Statuette of Apis, dedicated by Sokydes
*c.*500-450BC
Nile Delta, Egypt
Bronze
H. 10.00cm | W. 2.90cm | L. 8.90cm

BM 1902,103.71
Salaminian stater, obv. reclining ram, rev. ankh
*c.*480-450BC
Dhali, Cyprus
Silver
Diam. 22mm | Wt. 10.85g

BM 1912,1013.24
Salaminian stater, obv. reclining ram, rev. ankh
*c.*525-500BC
Findspot Unknown
Silver
Diam. 19mm | Wt. 8.88g

BM 1912,1013.25
Salaminian *diobol*, obv. reclining ram, rev. ankh
*c.*480-450BC
Dhali, Cyprus
Silver
Diam. 14mm | Wt. 1.39g

BM 1914,0103.12
Athenian tetradrachm, obv. head of Athena, rev. owl, with test cuts
*c.*450-406BC
Cilicia, Turkey
Silver
Diam. — | Wt. 17.14g

BM 1919,0820.1
Thracian tetradrachm obv Alexander III as Ammon, rev. Athena
*c.*305-281BC
Lâpseki, Turkey
Silver
Diam. 25mm | Wt. 17.25g

BM 1920,422.8
Salaminian *obol*, obv. ram's head, rev. ankh
*c.*480-450BC
Findspot Unknown
Silver
Diam. 11mm | Wt. 0.94g

BM 1921,0710.2
Attic red-figured *hydria*, with incised price on base
*c.*460-440BC
Athens, Greece
Pottery, Pigment
H. 41.00cm | Diam. —

BM 1922,0511.320
Seal bearing the cartouche of Psamtik I
*c.*664-610BC
Karkamış, Turkey
Clay
H. 3.10cm | Diam. 0.51cm | Th. 0.24cm

BM 1922,0511.386
Fragmentary round Ionian shield
Seventh Century BC
Karkamış, Turkey
Copper
Diam. 63.50cm | Th. —

BM 1923,0212.628
Roasting spit, perhaps currency
*c.*700-600BC
Sparta, Greece
Iron
L. 29.70cm | Diam. —

BM 1923,0212.629
Roasting spit, perhaps currency
*c.*700-600BC
Sparta, Greece
Iron
L. 18.80cm | Diam. —

BM 1923,0212.630
Roasting spit, perhaps currency
*c.*700-600BC
Sparta, Greece
Iron
L. 21.40cm | Diam. —

BM 1923,0212.631
Roasting spit, perhaps currency
*c.*700-600BC
Sparta, Greece
Iron
L. 15.30cm | Diam. —

BM 1923,0212.632
Roasting spit, perhaps currency
*c.*700-600BC
Sparta, Greece
Iron
L. 10.00cm | Diam. —

BM 1923,1105.17
Salamninian *hemiobol*, obv. ram's head, rev. ankh
*c.*460-450BC
Findspot Unknown
Silver
Diam. 8mm | Wt. 0.41g

BM 1924,1201.37
Shoulder sherd of Karian amphora
*c.*650-550BC
Kom Ge'if, Egypt
Pottery, Pigment
H. 10.00cm | W. 4.30cm | Th, —

BM 1924,1201.882
Incurving sherd of Vroulian bird bowl
*c.*640-610BC
Kom Ge'if, Egypt
Pottery, Pigment
H. 4.50cm | W. 3.40cm | Th. 0.35cm

BM 1925,0105.38
Salaminian *tetrobol*, obv. lion, horse, ram and star, rev. ankh
*c.*361-351BC
Famagusta, Cyprus
Copper Alloy
Diam. 16mm | Wt. 3.61g

BM 1925,0507.6
Lykian *obol*, obv. helmeted female head, rev. Zeus-Ammon
*c.*410BC
Findspot Unknown
Silver
Diam. 15mm | Wt. 2.05g

BM 1925,0808.1
Stater of Djedhor, obv. head of Athena, rev. papyrus frond, TAΩ
*c.*362-360BC
Mit Rahina, Egypt
Gold
Diam. 15mm | Wt. 8.27g

BM 1925,105.22
Salaminian stater, obv. reclining ram, rev. ankh
*c.*480-460BC
Famagusta, Cyprus
Silver
Diam. 20mm | Wt. 10.98g

BM 1925,105.23
Salaminian *tetrobol*, obv. reclining ram, rev. ankh
*c.*525-500BC
Famagusta, Cyprus
Silver
Diam. 15mm | Wt. 3.58g

BM 1925,105.24
Salaminian *diobol*, obv. reclining ram, rev. ankh
*c.*480-460BC
Famagusta, Cyprus
Silver
Diam. 12mm | Wt. 1.62g

BM 1925,105.25
Salaminian *diobol*, obv. reclining ram, rev. ankh
*c.*480-460BC
Famagusta, Cyprus
Silver
Diam. 11mm | Wt. 1.79g

BM 1925,105.26
Salaminian *obol*, obv. ram's head, rev. ankh
*c.*460-450BC
Findspot Unknown
Silver
Diam. 9mm | Wt. 0.78g

BM 1925,105.27
Salaminian *tetrobol,* obv. reclining ram, rev. ankh
*c.*460-450BC
Famagusta, Cyprus
Silver
Diam. 15mm | Wt. 3.45g

BM 1925,105.28
Salaminian *tetrobol,* obv. reclining ram, rev. ankh
*c.*460-450BC
Famagusta, Cyprus
Silver
Diam. 15mm | Wt. 3.24g

BM 1925,105.29
Salaminian *tetrobol,* obv. reclining ram, rev. ankh
*c.*460-450BC
Famagusta, Cyprus
Silver
Diam. 16mm | Wt. 3.32g

BM 1925,105.26
Salaminian *obol*, obv. ram's head, rev. ankh
*c.*460-450BC
Famagusta, Cyprus
Silver
Diam. 10mm | Wt. 0.89g

BM 1925,105.26
Salaminian *obol*, obv. ram's head, rev. ankh
*c.*460-450BC
Famagusta, Cyprus
Silver
Diam. 9mm | Wt. 0.80g

BM 1928,1105.1
Emporian *trietartemorion*, obv. Pegasus, Rev. Persephone, hole
*c.*218BC
Gerona, Spain
Silver
Diam. — | Wt. 0.51g

BM 1936,1116.1
Enthroned figure of ram-headed god (Ammon?)
*c.*600-550BC
Cyprus
Limestone
H. 10.50cm | W. 7.20cm | D, 5.05cm

BM 1953,1013.1
Imitation Athenian tetradrachm, inscr. *ꜣrṯḫššš pr-ꜥꜣ* ('Artaxerxes, Pharaoh')
*c.*358-338BC
Egypt (?)
Silver
Diam. — | Wt. 15.49g

BM 1954,1006.1
Stater of Nakhthorhebyt, obv. stallion, rev. nfr nb
*c.*359-343BC
Egypt
Gold
Diam. — | Wt. 8.17g

BM 1959,0710.19
Necklace with coin pendant of Antiochos II
*c.*300-200BC
Thessaly, Greece
Gold, Garnet
L. — | Wt. —

BM 1979,0101.737
Lykian *tetrobol*, obv. Zeus Ammon, rev. triskeles
*c.*460-420BC
Findspot Unknown
Silver
Diam. 14mm | Wt. 2.57g

BM 1985,1114.3
Issan stater, obv. Zeus with eagle, rev. Ahura Mazda, bilingual inscr.
*c.*387-380BC
Findspot Unknown
Silver
Diam. ~17mm | Wt. 10.50g

BM 1987,0649.508
Ptolemaic tetradrachm, obv. Alexander III in elephant skin, rev. Athena Alkedemos
*c.*323-283BC
Egypt
silver
Diam. — | Wt. 15.62g

BM 1990,0121.1
Imitation Athenian tetradrachm, inscr. *ꜣrṯḫššš pr-ꜥꜣ* ('Artaxerxes, Pharaoh')
*c.*358-338BC
Mit Rahina, Egypt
Silver
Diam. — | Wt. 16.91g

BM 2001,1201.7790
Ptolemaic *hemiobol*, obv. Zeus-Ammon, rev. eagle
*c.*285-265BC
Acre, Israel
Bronze
Diam. 18mm | Wt. 3.65g

BM 2001,1201.7791
Alexandrian *obol*, obv. Zeus-Ammon, rev. eagle
*c.*285-265BC
Nile Delta, Egypt
Bronze
Diam. ~22mm | Wt. 6.03g

BM 2001,1201.7792
Alexandrian *hemiobol*, obv. Zeus-Ammon, rev. eagle
*c.*285-265BC
Nile Delta, Egypt
Bronze
Diam. ~18mm | Wt. 2.99g

BM 2001,1201.7793
Alexandrian *hemiobol*, obv. Zeus-Ammon, rev. Eagle
*c.*180-145BC
Nile Delta, Egypt
Silver
Diam. ~15mm | Wt. 2.55g

BM 21901
Babylonian Chronicle, Years 10-17 of Naboplassar
*c.*550-400BC
Iraq
Clay
H. 13.65cm | W. 7.14cm | D. —

BM 22047
Babylonian Chronicle, Year 17 of Naboplassar to Year 1 of Nebuchadnezzar
*c.*550-400BC
Iraq
Clay
H. 4.60cm | W. 5.39cm | D. —

BM 91026
The Rassam Cylinder
643BC
Kouyunjik, Iraq
Clay
H. 48.89cm | Diam. 20.32cm

BM B102.3
Fragmentary attic black-figured *olpe*, attr. the Nettos Painter
*c.*610-600BC
Kom Ge'if, Egypt
Pottery, Pigment
H. 12.90cm | Diam. 12.50cm

BM B605
Attic black-figured Panathenaic amphora, dep. Tyrannicides, attr. the Kuban Painter
*c.*425-400BC
Tocra, Libya
Pottery, Pigment
H. 73.66cm | Diam. —

BM B639
Attic black-figured *lekythos*, dep. the weighing of souls
*c.*490-480BC
Capua, Italy
Pottery, Pigment
H. 14.60cm | Diam. —

BM BNK.G.950
Ephesian stater, obv. stag, inscr. ΦΑΝΕΟΣ ΕΜΙ ΣΗΜΑ, rev. incuse squares
*c.*625-560BC (?)
Bodrum, Turkey
Electrum
Diam. 22mm | Wt. 14.03g

BM E38
Attic red-figured *kylix*, dep, Herakles and Busiris, attr. Epiktetos
*c.*510BC
Vulci, Italy
Pottery, Pigment
H. 12.70cm | Diam. 33.02cm

BM EA10470/3
The Papyrus of Ani
*c.*1250BC
Luxor, Egypt
Papyrus, Pigment
L. 67.00cm | W. 42.00cm

BM EA10558/18
Judgement vignette from the *Book of the Dead* of Ankhwahibre
*c.*550-525BC
Egypt
Papyrus, Pigment
L. — | W. —

BM EA15171
Blue-glazed shabti of *ỉr.t-ḥr-r.r=w*, with back-pillar and plinth
Ptolemaic Period
Egypt
Faience
H. 9.40cm | W. 3.49cm | D. 2.63cm

BM EA1641
Fragmentary Egyptian-style statue of Ptolemy I as Pharaoh
*c.*305-283BC
Egypt
Black Basalt
H. 64.00cm | W. 66.00cm | D. 34.00cm

BM EA1770
Sphinx of the Pharaoh Taharqa
*c.*680BC
Kawa, Sudan
Granite
H. 40.60cm | W. — | L. 73.00cm

BM EA2
Prudhoe Lion
*c.*1691-1351BC
Jebel Barkal, Sudan
Red Granite
H. 1.17m | W. 0.93m | L. 2.16m

BM EA20745
Mummy with mask, of ir.t-Hr-r.r=w, Priest of Min
26th Dynasty
Akhmim, Egypt
Human Remains, Linen, Cartonnage, Gold
H. 166.50cm | W. 38.50cm

BM EA24
The Rosetta Stone
196BC
El Rashid, Egypt
Pink-Grey Graniodorute
H. 1.12m | W. 0.76m | Th. 0.24m

BM EA27574
Seal Impression of the 'Overseer of the Portal' Ahmose-sa-Neith
*c.*570-526BC
Kom Ge'if, Egypt
Clay
H. 3.55cm | W. 3.15cm | Th. —

BM EA28232
Scarab of Renseneb Senusret, 'Scribe of the Gate'
Middle Kingdom
El Balyana, Egypt
Steatite
L. 2.30cm | W. 1.70cm | Th. —

BM EA498
The Shabako Stone
710BC
Mit Rahina, Egypt
Black Granite
H. 0.95m | W. 1.37m | D. 0.20m

BM EA57271
Anthropoid coffin of *ir.t-ḥr-r.rw*
Late Period
Egypt
Painted Wood
L 122.00cm | W. — | D. —

BM EA60006
Statuette of Amun-Ra, striding with staff
*c.*664-525BC
Karnak, Egypt
Silver, Gold
H. 24.00cm | W. 6.00cm | L. 8.50cm

BM EA67235
Egyptian-style stela with a Karian inscription
Sixth Century BC
Saqqara, Egypt
Limestone
H. 63.00cm | W. 31.00cm | Th. 10.00cm

BM EA6771
Mummified Apis (?) Bull
Late Period
Thebes, Egypt
Bovine Tissue, Linen, Reeds, Pigment
H. 47.50cm | W. — | L. 50.50cm

BM EA812
Stela of Panmennefer, depicting ram-headed Amun-Ra enthroned
*c.*1292-1077BC
Deir el-Medina, Egypt
Limestone
H. 31.50cm | W. 21.50cm | Th. 7.00cm

BM EA938
Fragment of *klepsydra*, dep. Philip Arrhidaios as Pharaoh
*c.*323-316BC
Tell el-Yahudiya, Egypt
Basalt
H. 34.00cm | W. 30.00cm | D. 7.00cm

BM EA964
Fragmentary column with cartouche of Wahibre
26TH Dynasty
El Rashid, Egypt
Basalt
H. 1.04m | Diam. 0.35m

BM EA97
Fragmentary statue of Ahmose II or Nakhtnebef
30th Dynasty (?)
Egypt
Geywacke
H. 39.00cm | W. 30.00cm | D. 31.00cm

BM EA9901/3
Judgement vignette from the *Book of the Dead* of Hunefer
*c.*1292-1189BC
Egypt
Papyrus, Pigment
H. 40.00cm | W. 87.50cm

BM G.652
Athenian *fourrée* tetradrachm, obv. Athena, rev. owl
*c.*406BC
Athens, Greece
Silver, Bronze
Diam. — | Wt. 12.50g

BM G.793
Coin, obv. satrapal head, rev. archer, inscr. סויך (SWYK) or סזרך (MZDK)
*c.*340-332BC
Gaza, Palestinian Territories
Bronze
Diam. — | Wt. 1.07g

Bologna | *Museo Civico Archeologico,* Bologna

Bologna 174
Attic red-figured *stamnos* dep. Herakles and Busiris, attr. Altamura Painter
*c.*47-425BC
Bologna, Italy
Pottery, Pigment
H. — | Diam. —

Bologna G9-PU19
Attic black-figured amphora signed Nikosthenes
*c.*540-510BC
Cerveteri, Italy
Pottery, Pigment
H. 32.00cm | Diam. —

Boston | *Museum of Fine Arts,* Boston MA

Boston 01.5551
Mytilenean ⅙ stater, obv. ram's head, rev. Herakles
*c.*500-480BC
Lesbos, Greece
Electrum
Diam. 10mm | Wt. 2.53g

Boston 01.7426
Case for balance and pans
*c.*1550-1295BC
Abydos, Egypt
Wood
L. 33.50cm | W. 2.60cm | D. —

Boston 04.1274
Kyzikan stater, obv. Zeus-Ammon, tuna fish (*T. thynnus*), rev. incuse square
*c.*460-400BC
Erdek, Turkey
Electrum
Diam. 18mm | Wt. 16.08g

Boston 01.1276
Kyzikan stater, obv. Zeus-Ammon, tuna fish (*T. thynnus*), rev. incuse square
*c.*400-330BC
Erdek, Turkey
Electrum
Diam. 21mm | Wt. 15.90g

Boston 04.1456
Mytilenean ⅙ stater, obv. Zeus-Ammon, rev. female with *stephane*
*c.*400-350BC
Lesbos, Greece
Electrum
Diam. 10mm | Wt. 2.53g

Boston 30.50
Daric of Darius I or Xerxes I, obv. Great King hunting, rev. incuse ground
*c.*490-480BC
Sardis, Turkey
Gold
Diam. 16mm | Wt. 8.30g

Boston 30.834b
Sarcophagus lid of General Kheppera
c. 570-526BC
Giza, Egypt
Greywacke
H. 2.26m | W. 1.08m | D. 0.76m

Boston 59.715
Head of Zeus-Ammon, likely from a herm, after Pheidias
AD120-150
Rome
Pentelic Marble
H. 31.00cm | W. — | D. —

Boston 66.49
Pitanian coin, obv. Zeus-Ammon, rev. pentagram
Fourth Century BC
Çandarlı, Turkey
Bronze
Diam. 18mm | Wt. 3.33g

Boston 75.11a
Fragment of the barque-shrine of Philip Arrhidaios
*c.*332-316BC
Karnak, Egypt
Red Granite
H. — | W. — | D. —

Boston 75.11b
Fragment of the barque-shrine of Philip Arrhidaios
*c.*332-316BC
Karnak, Egypt
Red Granite
H. — | W. — | D. —

Boston 75.11c
Fragment of the barque-shrine of Philip Arrhidaios
*c.*332-316BC
Karnak, Egypt
Red Granite
H. — | W. — | D. —

Boston 75.11d
Fragment of the barque-shrine of Philip Arrhidaios
*c.*332-316BC
Karnak, Egypt
Red Granite
H. — | W. — | D. —

Boston 88.1041
Face from an anthropoid coffin
*c.*1292-1075BC
Tell el-Yahudiya, Egypt
Pottery
H. — | W. 53.00cm | D. —

Boston 97.289
The Perachora Lion
*c.*570-550BC
Loutraki, Greece
Limestone
H. 95.30cm | W. 58.00cm | D. 38.00cm

Boston 99.489
Hermes *kriophoros* statuette
*c.*500-490BC
Findspot Unknown
Bronze
H. 25.00cm | W. — | D. —

Braunschweig | *Herzog Anton Ulrich Museum,* Braunschweig

Braunschweig Aeg.S.20
Kneeling Philip Arrhidaios as Pharaoh
*c.*323-317BC
Egypt
Red Granite
H. 59.40cm | W. 22.20cm | D. 28.00cm

Brooklyn | *Brooklyn Museum,* New York NY

Brooklyn 07.442
Funerary stela of Irethoreru
*c.*775-653BC
Egypt
Black Syenite
H. 50.80cm | W. 35.50cm | Th. 14.50cm

Brooklyn 37.1354E
False door tomb-marker of Exekestos
*c.*570-520BC
Mit Rahina, Egypt
Limestone
H. 30.30cm | W. 24.00cm | Th, 7.50cm

Brooklyn 7.938E
Isis nursing the infant Horus
*c.*664-525BC
Saqqara, Egypt
Slate
H. 19.10cm | W. 4.10cm | D. 10.80cm

Brooklyn 60.74
Head of a Kushite ruler
*c.*716-702BC
Egypt
Green Schist
H. 7.00cm | W. 5.30cm | D. 6.50cm

Brooklyn 71.139
Statue of elite Egyptian in Persian costume
*c.*343-332BC
Egypt
Grey Granite
H. 79.00cm | W. 44.50cm | D. 28.30cm

Brooklyn 73.25
Finial depicting Isis as Mother of Apis
*c.*670-332BC
Mit Rahina, Egypt
Bronze
H. 11.50cm | W. 7.00cm | D. 8.50cm

Brussels | *Musées royaux d'Art et d'Histoire,* Brussels

Brussels E2483
Karian-inscribed grave stela of Pigres
*c.*568BC
Mit Rahina, Egypt
Limestone
H. 33.00cm | W. 29.50cm | Th. 5.00cm

Cab.Med. | *Cabinet des Medailles* (*Bibliothèque nationale de France*), Paris

Cab.Med. 1973.1.190
Imitation Athenian tetradrachm of Mazakes, obv. head of Athena, rev. owl, inscr. סזרך 'MZDK'
*c.*333-332BC
Mit Rahina, Egypt
Silver
Diam. — | Wt. 16.65g

Cab.Med. 41757441
Drachm of Ptolemy I, obv. Alexander with elephant scalp, rev. Athena Alkedemos
312/11BC
Alexandria, Egypt
Silver
Diam. — | Wt. 3.67g

Cab.Med. de Ridder 189
Lakonian black-figured *kylix*, dep. Arkesilaos II, attr. the Arkesilas Painter
*c.*565-560BC
Vulci, Italy
Pottery, Pigment
H. 20.00cm | Diam. 29.00cm

Cab.Med. Y12809
Stater of Nakhthorhebyt, obv. stallion, rev. *nfr nb*
*c.*359-343BC
Egypt
Gold
Diam. — | Wt. 8.14g

Cab,Med. Y28449
Coin of Sabakes (?), obv. satrapal head, rev. archer, inscr. סויר SWYK (?)
*c.*340-332BC
Provenance Unknown
Bronze
Diam. — | Wt. 0.98g

Cahn | *Herbert Cahn Collection,* Basel

Cahn HC1775
Fragmentary Black-Figured Amphora with Cartouche of Wahibre
c.580-560BC
Karnak, Egypt
Pottery, Pigment
H. 26.40cm | Diam. 33.00cm

Cairo | *Egyptian Museum,* Cairo

Cairo CG701
Colossal sculpture of Ptolemy V in Egyptian costume
*c.*196-181BC
Luxor, Egypt
Red Granite
H. 2.80m | W. — |
D. —

Cairo CG895
Lower part of a kneeling statue of Ahmose Nefibre-Nakht
*c.*600-570BC
Saft el-Hina. Egypt
Greywacke
H. 37.00cm | W. — |
D. —

Cairo CG1230
Colossal statue of Horemheb, 'Mayor' of Naukratis
Ptolemaic
Kom Ge'if, Egypt
Grey Granite
H. 3.60m | W. — |
D. —

Cairo CG4925
Funerary barge of Senusret III
*c.*1893BC
Dashur, Egypt
Cedarwood
H. 0.85m | L. 10.20m |
W. 2.24m

Cairo CG4926
Funerary barge of Senusret III
c.1893BC
Dashur, Egypt
Cedarwood
H. 0.74m | L. 9.90m |
W. 2.28m

Cairo CG22182
The Satrap Stela of Ptolemy I
311BC
Kafr el-Sheikh, Egypt
Grey Granite
H. 1.85m | W. 1.18m |
Th. —

Cairo CG26154
Fragmentary Vroulian Bird Bowl, inscr. ΑΠΟΛΛΩΝΟΣ ΕΜΙ
*c.*650-615BC
Kom Ge'if, Egypt
Pottery, Pigment
H. 15.00cm | Diam.
14.00cm

Cairo CG31489
Pair of balances with pans
New Kingdom
Egypt
Wood with Bronze
Beam: L. 27.70cm | Diam.
0.90cm
Pans: Diam. 6.00cm

Cairo CG50048
Stele bearing the Raphia Decree
217BC
Tell el-Maskhuta, Egypt
White Limestone
H. 63.00cm | W. 61.00cm |
D. 16.00cm

Cairo JE31566
Sarcophagus of General Padismatawy
26th Dynasty
Horbeit, Egypt
Grey Schist
H. — | L. 2.46m | W. 1.30m

Cairo JE34002
The Naukratis Stela of Nakhtnebef
380BC
Kom Ge'if, Egypt
Black Graniodorite
H. 1.98m | W. 0.87m |
Th, 0.37m

Cairo CG36949
Block-statuette of General Djedptahiufankh
*c.*664-610BC
Luxor, Egypt
Grey-Green Schist
H. 44.00cm | W. — |
D. —

Cairo JE37888
Stele recording the sale of farmland
*c.*656BC
Karnak, Egypt
Sandstone
H. 41.00cm | W. — |
Th. —

Cairo JE41332
Stele of Hor-Wedjau
25th Dynasty
Abydos, Egypt
Limestone
H. 1.14m | W. 0.45m
Th. —

Cairo JE42787
Stele recording the purchase of a house from Thenti by Serefka
5th or 6th Dynasty
Giza, Egypt
Limestone
H. 50.00cm | W. 20.00cm
|
D. —

Cairo JE60672
Funerary mask of Pharaoh Tutankhamun
c.1352BC
Valley of the Kings, Egypt
Gold, Glass Paste, Precious Stones
H. 54.00cm | W. 39.30cm |
D. 49.00cm

Cairo JE61467
Casket, dep. Tutankhamun trampling enemies
c.1325BC
Valley of the Kings, Egypt
Wood, Pigment
H. 44.00cm | W. 61.00cm |
D. 43.00cm

Cairo JE61999
Tutankhamun's handheld fan
*c.*1370-1352BC
Valley of the Kings, Egypt
Ivory, Gold, Pigment, Ostrich Feathers
H. 34.00cm | W. 48.00cm

Cairo JE62000
Fan of Tutankhamun
*c.*1370-1352BC
Valley of the Kings, Egypt
Ebony, Gold, Ostrich Feathers, Ivory, Glass, Precious Stones
H. 1.24m | W. 0.20m

Cairo JE62000
Fan of Tutankhamun
*c.*1370-1352BC
Valley of the Kings, Egypt
Ebony, Gold, Ostrich Feathers, Ivory,
H. 1.24m | W. 0.18m

Cairo JE66285
Stele of Shoshenq (later, Pharaoh)
Before 943BC
Abydos, Egypt
Red Granite
H. 1.50m | W. 1.52m |
Th. —

Cairo JE72154
Anthropoid coffin of Shoshenq II with falcon's head
*c.*883BC
Tanis, Egypt
Silver
H. — | L. — | W. —

Cairo JE72171
Pectoral of Shoshenq I, dep. Ra's solar barque and Isis attending
c.943-922BC
Tanis, Egypt
Gold, Lapis Lazuli, Glass Paste
H. 37.50cm | W. 19.00cm |
Th. 1.20cm

Cairo JE85912
Inner anthropoid coffin of Psabikhanu I
c.1001BC
Sa el-Hagar, Egypt
Silver, Gold, Coloured Glass
H. — | L. 1.85m | W. —

Cairo JE85913
Funerary mask of Psabikhanu I
*c.*1001BC
Tanis, Egypt
Gold, Silver, Quartzite
H. 45.00cm | W. 8.00cm
D. —

Cairo JE86063
Funerary mask of Pharaoh Amenemope
*c.*1001-984BC
Tanis, Egypt
Gold, Cartonnage
H. — | W. — | D. —

Cairo JE98410
Stater of Nakhthorhebyt, obv. stallion, rev. *nfr nb*
*c.*359-343BC
Egypt
Gold
Diam. — | Wt. 8.94g

Cambridge | *Museum of Classical Archaeology,* Cambridge

Cambridge NA200
Black-figured amphora sherd
c.600BC
Kom Ge'if, Egypt
Pottery, Pigment
H. 5.80cm | W. 7.00cm
Th. 0.40cm

Chicago | *Art Institute of Chicago,* Chicago IL

Chicago 1922.4924
Tetradrachm of Lysimachos, obv. Alexander III as Zeus-Ammon, rev. Athena
c.297-281BC
Selçuk, Turkey
Silver
Diam. 3.10cm | Wt. 16.78g

Cincinnati | *Cincinnati Art Museum,* Cincinnati OH

Cincinnati 1959.1
Attic black-figured amphora dep. Herakles and Busiris, attr. the Swing Painter
c.540BC
Athens, Greece
Pottery, Pigment
H. 48.50cm |
Diam. 31.00cm

Copenhagen | *Nationalmuseet,* Copenhagen

Copenhagen KP1426.10
Stater, obv. Zeus-Ammon, rev. Hermes wearing a *clamys* (mint unknown)
c.500-450BC
Cyprus
Silver
Diam. 21mm | Wt. 10.06g

Detroit | *Detroit Institute of Arts Museum,* Detroit MI

Detroit 71.292.B
Tomb-chapel wall of Mery-Nesut
c.2565-2420BC
Giza, Egypt
Limestone
H. 1.88m | W. 3.09m | D. 0.27m

Dresden | *Staatliche Kunstsammlungen* (*Albertinum*), Dresden

Dresden 321
Attic red-figured column *krater*, dep. women bathing, attr. Louvre Centauromachy Painter
c.475-425BC
Capua, Italy
Pottery, Pigment
H. 34.80cm | Diam. 28.80cm

Edinburgh | *National Museums of Scotland,* Edinburgh

Edinburgh A.1948.486
Statue fragment of Ahmose Pen-Nekhbet
c.1550-1525BC
el-Kab, Egypt
Graniodorite
H. 55.88cm | W. 24.22cm | D. 36.13cm

Fitzwilliam | *Fitzwilliam Museum,* Cambridge

Fitzwilliam CM.107.1958
Stater of Nakhthorhebyt, obv. stallion, rev. *nfr nb*
*c.*359-343BC
Egypt
Gold
Diam. — | Wt. 8.32g

Fitzwilliam E.1.1971
Karian Funerary Stele
Sixth Century BC
Saqqara, Egypt
Limestone
H. — | W. — | D. —

Florence | *Museo Archeologico Nazionale di Firenze,* Florence

Florence 12290
Fragmentary *klepsydra*
Ptolemaic (?)
Saqqara, Egypt
Granite
H. — | Diam. —

Florence 4209
The François Vase, attr. Ergotimos and Kleitias
*c.*570-560BC
Chiusi, Italy
Pottery, Pigment
H. 66.00cm | Diam. 57.00cm

FMNH | *Field Museum of Natural History,* Chicago IL

FMNH 31760
Funerary barge of Senusret III
c.1839BC
Dashur, Egypt
Cedarwood
H. — | L. — | W. —

Frankfurt | *Liebieghaus Skulpturensammlung,* Frankfurt-am-Main

Frankfurt St.P.565
Striding sculpture of Alexander III as Pharaoh
c.332-300BC
Egypt
Pink Granite
H. 1.62m | L. — | W. —

Gandur | *Fondation Gandur pour l'Art,* Geneva

Gandur FGA-ARCH-EG-0162
Fragment of a Temple Relief with Nomen and Praenomen of Alexander III
*c.*332-300BC
el-Ashmunein, Egypt
Limestone, Pigment
H. 41.50cm | W. 70.40cm | D. 5.50cm

Gandur FGA-ARCH-EG-0363
Stater of Nakhthorhebyt, obv. Stallion, rev. *nfr nb*
*c.*359-343BC
Egypt
Gold
Diam. 17mm | Wt. 8.23g

Gandur FGA-ARCH-GR-0125
Head of a Cypriot Prince in Pharaonic Costume
End of Sixth Century BC
Cyprus
Limestone
H. 37.00cm | W. 20.00cm | D. 26.00cm

GRAlex. | *Graeco-Roman Museum,* Alexandria

GRAlex. 3357
Fragmentary Portrait of Ptolemy VI in Egyptian Costume
*c.*176-145BC
Abu Qir, Egypt
Grey Granite
H. 61.00cm | W. — | D. —

GRAlex. 19866
Attic black-figured sherd dep. sphinx, attr. the Nettos Painter
*c.*625-600BC
Kom Ge'if, Egypt
Pottery, Pigment
H. 3.60cm | W. 7.20cm | D. 0.90cm

Grand Rapids | *Grand Rapids Public Museum,* Grand Rapids MI

Grand Rapids 1999.1.137
Seal scarab with the ram of Amun in a plumed headdress
c.129-1188BC
Egypt
Steatite
L. 1.91cm | W. 1.42cm | D. 1.01cm

Gytheio | *Archaeological Museum of Gytheio,* Gytheio

Gytheio 130
Ram-headed herm
Archaic Period
Gytheio, Greece
Marble
H. — | W. — | D. —

Harvard | *Harvard Art Museums,* Cambridge MA

Harvard 1.1965.1624
Athenian emergency stater, obv. head of Athena, rev. owl and olive sprig
406BC
Greece
Gold
Diam. 17mm | Wt. 8.58g

Harvard 1972.120
Athenian tetradrachm, obv. gorgoneion, rev. lion's head
*c.*525-520BC
Athens, Greece
Silver
Diam. 2.20cm | Wt. 16.72g

Hermitage | *State Hermitage Museum,* St Petersburg

Hermitage 1684-169
Pazyryk finial of a stag in a griffin's beak
Fifth Century BC
Ukok, Russia
Wood, Leather
H. 23.00cm | W. — | D. —

Hermitage 1913.1/40
Achaemenid-style Skythian lion hunt bowl
*c.*525-475BC
Velikaya Znamenka, Ukraine
Silver, Gold
H. — | Diam. —

Hermitage 2962
Theophorus statue of Nesuhor Psamtik-Menkhib
*c.*589-570BC
Sa el-Hagar, Egypt
Green Slate
H. 31.00cm | W. — | D. —

Hermitage S.72
Achaemenid-style *rhyton* with horse protome
Third Century BC
Turkey
Silver, Gold
H. 18.70cm | Diam. —

Hermitage Си.1727.1/71
Achaemenid-style Skythian bowl
Fifth Century BC
Siberia, Russia
Gold
H. 10.20cm | Diam. 16.00cm

Hermitage ГКН.-106
Griffin's head decoration from a horse bridle
*c.*600-550BC
Kerch, Ukraine
Bronze
L. 9.10cm | W. — | Th. —

Hermitage ГКН.-91
Ionian candelabrum with ephebic figure
*c.*550BC
Kerch, Ukraine
Bronze
H. 1.16m | W. —

Hermitage Дн.1863-1/374a
Clothing plaque dep. Skythian drinking horn
Fourth Century BC
Nikopol, Ukraine
Gold
H. 3.50cm | W. —

Hermitage Дн.1863-1/435
Overlay from a *gorytos*, dep. the life of Achilles
Fourth Century BC
Nikopol, Ukraine
Gold
H. 27.30cm | W. 46.80cm | D. —

Hermitage Дн.1913-1/1
The Solokha Comb
*c.*525-475BC
Velikaya Znamenka, Ukraine
Gold
H. 21.60cm | W. 10.20cm | Th. —

Hermitage К-О.104
Achaemenid style *rhyton* with ram protome
Fourth Century BC
Kerch, Ukraine
Silver
H. 14.00cm | Diam. 9.30cm

Hermitage К-О.7
Rich-style earring with a boat-shaped pendant
*c.*350BC
Kerch, Ukraine
Gold, Enamel
H. 9.10cm | W. 2.80cm

Hermitage К-О.97
Achaemenid-style bowl dep. lion hunt
Fourth Century BC
Kerch, Ukraine
Silver, Gold
H. 10.60cm | Diam. 10.20cm

Hermitage ОН-А-Аз-1417
Stater of Nakhthorhebyt, obv. stallion, rev. *nfr nb*
*c.*359-343BC
Damanhur, Egypt
Gold
Diam. 18mm | Wt. 8.54g

Hermitage ОН-А-Аэ-1214
Kyzikan stater, obv. Zeus-Ammon, tuna fish (*T. thynnus*), rev. incuse square
*c.*450-500BC
Erdek, Turkey
Electrum
Diam. 19mm | Wt. 15.95g

Hermitage П.1800-1
Statue, poss. of a Bosporan monarch
Fourth Century BC
Kerch, Ukraine
Marble
H. — | W. — | D. —

Hildesheim | *Roemer-und-Pelizaeus-Museum,* Hildesheim

Hildesheim F27
Stater of Nakhthorhebyt, obv. stallion, rev. *nfr nb*
*c.*359-343BC
Egypt
Gold
Diam. 17mm | Wt. 8.29g

Istanbul | *Archaeological Museum,* Istanbul

Istanbul 793
Egyptian-made sarcophagus, inscr. in Phoenician
*c.*500-475BC
Saïda, Lebanon
Amphibolite
H. 1.43m | L. 2.60m | W. 1.39m

Istanbul 798
Egyptianizing sarcophagus of a woman
*c.*500-475BC
Saïda, Lebanon
Marble
H. 0.79m | L. 2.22m | W. 0.58m

Istanbul 799
Egyptianizing sarcophagus of a man
*c.*500-475BC
Saïda, Lebanon
Marble
H. 0.79m | L. 2.22m | W. 0.58m

Istanbul 800
Egyptian-made sarcophagus, inscr. in Phoenician
*c.*500-475BC
Saïda, Lebanon
Amphibolite
H. 1.50m | L. 2.60m | W. 1.20m

Istanbul 7501
Athenian red-figured *pelike*, dep. an oriental monarch (?)
*c.*450-400BC
Theangela, Turkey
Pottery, Pigment
H. — | Diam. —

Jerusalem | *Israel Museum,* Jerusalem

Jerusalem 1997-3294
Statue of the Canaanite storm god in Egyptian dress and pose
*c.*1600-1200BC
Tel Hazor, Israel
Bronze
H. 15.00cm | W. 5.50cm | D. 5.00cm

Jerusalem 71.00438
Ring-shaped ingot
New Kingdom
Egypt
Gold
Diam. — | Wt. 24.03g

Jerusalem 71.10.211
Anthropoid Egyptianizing coffin
*c.*1300-1200BC
Deir al-Balah, State of Palestine
Pottery
H. — | L. 1.96m | W. 0.75m

Jerusalem 76.01452
Stater of Nakhthorhebyt, obv. stallion, rev. *nfr nb*
*c.*359-343BC
Egypt
Gold
Diam. 17mm | Wt. 8.36g

Jerusalem 82.2.818
Anthropoid Egyptianizing coffin
*c.*1300-1200BC
Deir al-Balah, State of Palestine
Pottery
H. — | L. 2.00m | W. 0.79m

Jerusalem I-9695
Door lintel inscribed with the name of Ramses III
*c.*1186-1155BC
Beit She'an, Israel
Limestone
H. 0.61m| W. 1.47m | D. —

Jerusalem S-886
Life-sized statue of Ramses III
*c.*1185-1153BC
Beit She'an, Israel
Basalt
H. 1.55m | W. 0.50m | D. —

Jerusalem S-982
Hieroglyphic stela of the Canaanite god Mekal
Thirteenth Century BC
Beit She'an, Israel
Limestone
H. 27.80cm | W. 19.80cm | D. —

Kansas City | *Nelson-Atkins Museum of Art,* Kansas City MO

Kansas City 34-141
Portrait of a Ptolemaic king, likely Ptolemy I
*c.*305-283BC
Egypt
Gypsum
H. 24.13cm | W. 21.59cm | D. 17.78cm

Kassel | *Wilhelmshöhe Palace Museum,* Kassel

Kassel Sk.113
Bust of Zeus-Ammon
c. AD30-50
Rome
Marble
H. 30.00cm | W. 28.50cm | D. 22.50cm

Lausanne | *Musée cantonal d'Archéologie et d'Histoire,* Lausanne

Lausanne 4727
Egypto-Karian mortuary stela dep. a trireme
*c.*568BC
Mit Rahina, Egypt
Limestone
H. 59.00cm | W. 35.50cm | D. —

Lausanne ACM2769
Stater of Nakhthorhebyt, obv. stallion, rev. *nfr nb*
*c.*359-343BC
Egypt
Gold
Diam. — | Wt. 8.31g

Leiden | *Rijksmuseum van Oudeheden,* Leiden

Leiden AM 4-a
Sarcophagus of Wahibre-Emachet
26th Dynasty
Giza, Egypt
Basalt
H. 1.05m | L. 2.30m | W. 0.94m

Limassol | *Archaeological Museum of the Limassol District,* Lemesos

Limassol AM1555
Hathoric Column Capital
*c.*500BC
Amathus, Cyprus
Limestone
H. 1.21m | W. — | D. —

Liverpool | *World Museum,* Liverpool

Liverpool 53.72d
Coffin of Padiamun
*c.*747-656BC
Western Luxor, Egypt
Sycamore Wood, Plaster, Pigment
H. 0.81m | L. 2.20m | W. 0.45m

Liverpool M11997
Finger-ring, bezel inscr. 'Anatef, Priest of Ptah'
*c.*664-323BC
Egypt
Aurian Silver
Diam. 25mm | Bezel 12mm

Liverpool M11999
Finger-ring, bezel with figure of Amun
*c.*664-323BC
Egypt
Aurian Silver
Diam. 18mm | Bezel 4mm

Louvre | *Musée du Louvre,* Paris

Louvre A90
Theophorous Statue of Nesihor Psamtik-Menkhib
*c.*589-570BC
Elephantine, Egypt
Basalt
H. 1.03m | W. 0.37m | D, 0.51cm

Louvre AM93
Hathoric column capital
Fifth Century BC
Cyprus
Limestone
H. 1.33m | W. 0.74m | D. 0.37m

Louvre AO4806
Sarcophagus of Eshmunazor II, King of Sidon
*c.*500-475BC
Saïda, Lebanon
Amphibolite
H. 1.19m | L. 2.56m | D. 1.25m

Louvre Br4235
Head of Zeus-Ammon from a Situla
Sixth Century BC
Dodoni, Greece
Bronze
H. 8.00cm | W. — | D. —

Louvre C286
Stele with the Hymn of Imenmes
c.1550-1295BC
Egypt
Limestone
H. 1.06m | W. 0.62, | D. —

Louvre C297
Donation stela of Padikhonsu
*c.*657BC
Horbeit (?), Egypt
Limestone
H. — | W. — | D. —

Louvre C49
Statue-base of Ahmose Pen-Nekhbet
*c.*1550-1525BC
el-Kab, Egypt
White Limestone
H. 50.00cm | W. 30.00cm | D. —

Louvre CA1679
Attic red-figured sherd, dep. women celebrating the *Adonia*
*c.*430-420BC
Italy
Pottery, Pigment
H. 19.00cm | W. 15.50cm | Th. —

Louvre E25390+25475
Kneeling statue of Ahmose-sa-Neith
*c.*525BC
Sa el-Hagar, Egypt
Greywacke
H. 43.50cm | W. — | D. —

Louvre E27431
Bimetallic statuette of a Pharaoh offering Ma'at
New Kingdom
Egypt
Silver, Gold
H. 19.50cm | L. — | W. —

Louvre E668
Lakonian black-figured *kylix* dep. Zeus and an eagle, attr. the Naukratis Painter
560BC
Sparta, Greece
Pottery, Pigment
H. 12.70cm | Diam. 18.20cm

Louvre E8061
Portrait of Nakhtnebef or Ptolemy X, wearing *Khepresh* Crown
*c.*379-87BC
Egypt
Basalt
H. 6.50cm | W. 5.00cm | D, 6.50cm

Louvre F123
Attic black-figured *kylix*, signed Nikosthenes
*c.*520-510BC
Vulci, Italy
Pottery, Pigment
H. 11.00cm | Diam. 28.00cm

Louvre F203
Attic white-figured amphora, dep. women bathing, attr. the Andokides Painter
*c.*525-520BC
Athens, Greece
Pottery, Pigment
H. 40.50cm | Diam. 25.20cm

Louvre IM2620
Stela of Ankh-Khonsu
*c.*644BC
Saqqara, Egypt
Limestone
H. — | W. — | D. —

Louvre IM2789
Apis stela donated by Pa-Di
644BC
Saqqara, Egypt
Limestone
H. — | W. — | D. —

Louvre IM4133
Stele dep. Cambyses before the Apis Bull
543BC
Saqqara, Egypt
Limestone
H. 66.00cm | W. 44.00cm | Th. 9.00cm

Louvre IM4187
Apis-stela of Darius I
518BC
Saqqara, Egypt
Limestone
H. 80.00cm | W. 44.00cm | Th. 10.00cm

Louvre MNB1143
***Aryballos* modelled as a helmeted head, with cartouche of Wahibre**
*c.*575-550BC
Findspot Unknown
Pottery
H. 6.50cm | Diam. 4.70cm

Louvre N390
Life-sized statue of the Apis Bull
*c.*379-361BC
Saqqara, Egypt
Limestone, Pigment
H. 1.26m | W. — | L. 1.76m

Louvre N391
Six sphinxes from the *dromos* of the Memphite Serapeion
Fourth Century BC
Saqqara, Egypt
Limestone
H. (max.) 0.74m | L. (max.) 1.30m | W. (max.) 0.43m

Louvre N406
Burial stela of the Apis, Year 23 of Ahmose II
574BC
Saqqara, Egypt
Limestone
H. 1.07m | W. 0.64m | Th. 0.35m

Louvre NIII.2402
Round *aryballos* with cartouches of Wahibre
Sixth Century BC
Kamiros, Rhodes
Faience
H. 5.20cm | Diam. 4.70cm

Madison | *Chazen Museum of Art* (*University of Wisconsin*), Madison WI

Madison 1979.219
Athenian tetradrachm, obv. Athena, rev. owl, with test cut
*c.*410BC
Athens, Greece
Silver
Diam. 24mm | Wt. 16.70g

Malibu | *J. Paul Getty Museum,* Malibu CA

Malibu 57.AA.11
Funerary sculpture of prowling lion
*c.*350BC
Attika, Greece
Pentelic Marble
H. 36.70cm | L. 92.10cm | W. 20.30cm

Malibu 74.AA.12
The 'Elgin Throne' Theatre Seat
*c.*300-200BC
Athens, Greece
Pentelic Marble
H. 81.50cm | W, 70.00cm | D. 66.00cm

Malibu 79.NB.33
Athenian tetradrachm, obv. Athena, rev. owl, with test cut
*c.*505-490BC
Athens, Greece
Silver
Diam. 2.40cm | Wt. 16.90cm

Malibu 86.AE.130
Attic black-figured *olpe*, dep. Amazons, attr. the Leagros Group
*c.*520-510BC
Athens, Greece
Pottery, Pigment
H. 23.20cm | Diam. 13.00cm

Malibu 86.AE.298
Attic red-figured *kylix*, dep. athletes with *aryballoi*, attr. the Ambrosios Painter
*c.*510BC
Findspot Unknown
Pottery, Pigment
H. 6.50cm | Diam. 18.90cm

Manchester | *Manchester Museum* (*University of Manchester*), Manchester

Manchester 3570
Naophorous statue of the Admiral Hor
*c.*595-589BC
Tell el-Yahudiya, Egypt
Quartzite
H. — | W. — | D. —

Manchester 37058
***Aryballos* modelled as a hedgehog**
Sixth Century BC
Rhodes, Greece
Faience
H. — | Diam. —

Met.Mus. | *Metropolitan Museum of Art,* New York NY

Met.Mus. 06.1021.179
Attic Kerch-style *pelike* dep. arimasps and griffins
*c.*375-350BC
Greece
Pottery, Pigment
H. 28.00cm | Diam. —

Met.Mus. 07.228-33
Statue of Padiamunrenebwaset, son of ir.t-Hr-r.r=w
Fourth Century BC
Luxor, Egypt
Green Schist
H. 22.50cm | W. 10.40cm | D. 12.20cm

Met.Mus. 10.130.556
Scarab dep. Amun-Ra as a ram, with plumed headdress
*c.*1295-1070BC
Egypt
Steatite
H. 1.90cm | W. 1.40cm | D. —

Met.Mus. 17.194.2279
***Aryballos* with cartouche of Wahibre**
*c.*589-570BC
Egypt
Faience
H. 4.50cm | Diam. —

Met.Mus. 17.194.2281
***Aryballos* with Egyptian patterning**
c.550-500BC
Egypt
Faience
H. 6.30cm | Diam. —

Met.Mus. 1989.281.16
Ingot with Hittite hieroglyphs
Thirteenth Century BC
Turkey
Silver
L. 7.80cm | W. 8.99cm | D. —

Met.Mus. 2012.22
Head of Zeus-Ammon, after Pheidias
AD120-160
Rome, Italy
Pentelic Marble
H. 48.20cm | W. — | D. —

Met.Mus. 21.2.65
Part of a statuette base inscr. in Greek and Egyptian
Sixth Century BC
Egypt
Copper Alloy
H. 4.50cm | W. 9.60cm | D. 3.00cm

Met.Mus. 24.97.104
Attic red-figured *kylix*, dep. a *phylax*-play, attr. the Dolon Painter
*c.*400-390BC
Basiicata, Italy
Pottery, Pigment
H. 30.60cm | Diam. 31.80cm

Met.Mus. 30.4.103
Facsimile of goldsmith's workshop scene, from the tomb of Nebamun and Ipuki
AD1930
Norman de Garis Davis
Tempera on Paper
H. 0.50m | W. 1.59m | Scale 1:1

Met.Mus. 30.4.79
Facsimile of offering scene, from the tomb of Rekhmire
AD1928
Charles K. Wilkinson
Tempera on Paper
H. 57.50cm | W. 87.50cm | Scale 1:4

Met.Mus. 30.8.109
Bull's-head weight
*c.*1550-1295BC
Egypt
Bronze or Copper Alloy
H. — | W. — | Wt. —

Met.Mus. 30.8.93
Statuette of a royal(?) woman, with cartouches of Necho II
*c.*610-595BC
Egypt
Silver
H. 23.60cm | W. 5.60cm | D. 5.40cm

Met.Mus. 32.11.1
The 'New York *Kouros*'
c.590-580BC
Athens, Greece
Naxian Marble
H. 1.94m | W. 0.51m | D. 0.63m

Met.Mus. 33.8.8
Facsimile of Amenhotep III and Tiye, trampling Egypt's enemies
AD1931
Nina de Garis Davis
Tempera on Paper
H. 0.71m | W. 1.03m | Scale 1:2

Met.Mus. 35.1.1
Tile from the step of a dais, dep. Syrian captive
c.1279-1213BC
Qantir, Egypt
Faience
H. 9.00cm | W. 19.00cm | D. 7.50cm

Met.Mus. 35.1.2
Tile from the step of a dais, dep. Libyan captive
c.1279-1213BC
Qantir, Egypt
Faience
H. 11.00cm | W. 16.00cm | D. 7.50cm

Met.Mus. 35.1.3
Tile from the step of a dais, dep. Nubian captive
c.1279-1213BC
Qantir, Egypt
Faience
H. 14.50cm | W. 17.50cm | D. 7.50cm

Met.Mus. 41.162.74
***Aryballos* shaped as a helmeted head**
*c.*600-575BC
Rhodes, Greece
Pottery
H. 7.01 | Diam. —

Met.Mus. 41.162.86
Attic red-figured column krater, dep. *erastes* and *eromenos*, attr. the Pig Painter
*c.*475-465BC
Athens, Greece
Pottery, Pigment
H. 41.30cm | Diam. 40.50cm

Met.Mus. 47.11.5
Attic black-figured amphora dep. market weighmen, attr. the Taleides Painter
*c.*540-530BC
Athens, Greece
Pottery, Pigment
H. 29.50cm | Diam. —

Met.Mus. 52.11.4
Attic red-figured *kylix* dep. *erastes* and *eromenos*, attr. Douris
c.480-470BC
Athens, Greece
Pottery, Pigment
H 11.10cm | Diam. —

Met.Mus. 63.11.6
Attic bilingual amphora, signed Andokides
c.530BC
Findspot Unknown
Pottery, Pigment
H. 57.50cm | Diam. —

Met.Mus. 66.99.133
Fragmentary relief with the cartouche of Alexander III
c.332-323BC
Egypt
White Limestone
H. 17.50cm | W. 10.60cm | D. 4.60cm

Met.Mus. 68.139.2
2 *dbn* bull's head weight
c.1550-1391BC
Egypt
Bronze or Copper Alloy
H. 3.10cm | W. 4.30cm | D. — | Wt. 181.22g

Met.Mus. 69.24.11
Median ingot
Seventh Century BC
Tepe Nush-I Jan, Iraq
Silver
H. 2.20cm | W. 9.20cm | D. 0.90cm

Met.Mus. 74.51.2467
Male votive figure in Egyptian dress, inscr. for Timagoras
Sixth Century BC
Cyprus
Limestone
H. 1.36m | W. — | D. —

Met.Mus. 74.51.2471
Male votive figure in Egyptian dress
Sixth Century BC
Cyprus
Limestone
H. 1.04m | W. 0.48m | D. 0.25m

Met.Mus. 74.51.2472
Statue of a Cypriot monarch in costume of a Pharaoh
Sixth Century BC
Cyprus
Limestone
H. 1.30m | W. — | D. —

Met.Mus. 74.51.2516
Statuette of a deity with falcon head, perhaps Horus
Sixth Century BC
Cyprus
Limestone
H. 40.00cm | W. 19.10cm | D. 11.40cm

Met.Mus. 74.51.2560
Statuette of seated ram-headed deity, perhaps Zeus-Ammon
Sixth Century BC
Cyprus
Limestone
H. 9.50cm | W. 4.40cm | D, 4.40cm

Met.Mus. 74.51.2561
Statuette of a seated ram-headed deity, perhaps Zeus Amon
Sixth Century BC
Cyprus
Limestone
H. 8.30cm | W. 7.60cm | D. 4.40cm

Met.Mus. 74.51.2562
***Naiskos* in Egyptian style with a figure of Thoth**
Sixth Century BC
Cyprus
Limestone
H. 11.40cm | W. 7.90cm | D. 4.30cm

Met.Mus. 74.51.2574
Figure of Cypriot monarch wearing Egyptian Double Crown
Sixth Century BC
Cyprus
Limestone
H. 44.50cm | W. 21.30cm | D. 8.60cm

Met.Mus. 74.51.2603
Figure of Cypriot monarch depicted as Pharaoh
Sixth Century BC
Cyprus
Limestone
H. 59.00cm | W. 22.90cm | D, 13.70cm

Met.Mus. 86.1.90
***Aryballos* in the shape of a hedgehog**
Sixth Century BC
Egypt
Faience
H. 5.10cm | W. — | D. —

MMAlex. | *Maritime Museum,* Alexandria

MMAlex. SCA975
Emblem of Anubis/Wepwawet
Fourth Century BC
Herakleion-Thonis, Egypt
Bronze
H. 18.00cm | W. — | D. —

MMAlex. SCA997
Emblem of Horus
Fourth Century BC
Herakleion-Thonis, Egypt
Bronze
H. 6.90cm | W. — | Th. —

MMAlex. SCA1305
Pharaoh wearing *Khepresh* Crown
*c.*664-380BC
Herakleion-Thonis, Egypt
Bronze
H. 21.00cm | W. 5.50cm | D. 5.80cm

MMAlex. SCA1310
Foundation plaque of Ahmose II from the Temple of Khonsu
*c.*570-526BC
Herakleion-Thonis, Egypt
Bronze
H. 10.00cm | W. 8.50cm | Th. —

MMAlex. SCA1392
Plaque with the Horus Name of Psamtik I
*c.*664-610BC
Herakleion-Thonis, Egypt
Bronze
H. 11.00cm | W. 7.00cm | Th. —

MMAlex. SCA1575
Votive Pyramidion of Ahmose II
*c.*570-526BC
Herakleion-Thonis, Egypt
Bronze
H. 13.00cm | W. 8.50cm | D. —

Munich | *Staatliche Antikensammlung,* Munich

Munich 168
Tenea *Kouros*
*c.*560-550BC
Tenea, Greece
Marble
H. 1.53m | W. 0.43m | D. 038m

Munich 8729
Attic black-figured *kylix* signed by Exekias
*c.*530BC
Athens, Greece
Pottery, Pigment
H. 12.80cm | Diam. —

Münzkab. | *Münzkabinet der Staatlichen Museen zu Berlin,* Berlin

Münzkab. 18203010
Stater of Nakhthorhebyt, obv. stallion, rev. *nfr nb*
*c.*359-343BC
Egypt
Gold
Diam. 18mm | Wt. 8.15g

Münzkab. 18203059
Tetradrachm of Ptolemy I, obv. Alexander III in elephant skin, rev. Athena
312-311BC
Alexandria, Egypt
Silver
Diam. 29mm | Wt. 17.25g

Münzkab. 18203259
Athenian didrachm, obv. triskeles, rev. incuse square
*c.*550-520BC
Athens, Greece
Silver
Diam. 19mm | Wt. 8.11g

Mus.Vat. | *Musei Vaticani,* Vatican City

Mus.Vat. 2300
Colossal statue of Neilos, attended by *pecheis*, after Hellenistic prototype
AD98-138
Naples, Italy
Travertine Marble
H. ~2.00m | L. ~3.00m | W. —

Mus.Vat. 22690
Naophorous statue of Udjahorresnet, Admiral and Priest of Neith
*c.*519BC
Sa el-Hagar, Egypt
Basalt
H. 58.00cm | W. 12.50cm | D. 27.50cm

Naples | *Museo Archeologico Nazionale di Napoli,* Naples

Naples 1035
Stela of Somtutefnakht, from Hermopolis, Egypt
*c.*320BC
Pompeii, Italy
White Limestone
H. 1.05m | W. 0.44m | Th. —

Naples 6009
Statue of Harmodios, after Kritios and Nesiotes
Second Century BC
Lazio, Italy
Marble
H. — | W. — | D. —

Naples 6010
Statue of Aristogeiton, after Kritios and Nesiotes
Second Century BC
Lazio, Italy
Marble
H. — | W. — | D. —

Newcastle | *Great North Museum* (*Hancock*), Newcastle-Upon-Tyne

Newcastle 199
Red-figured *oinoche*, with price markings
*c.*420-410BC
Findspot Unknown
Pottery, Pigment
H. 20.70cm | Diam. —

Nicosia | *Cyprus Museum,* Nicosia

Nicosia 1934/III-16/1
Male votive statue in Egyptian dress
*c.*550BC
Kazaphani, Cyprus
Limestone
H. 40.00cm | W. — | D. —

Nicosia 4844
Fragmentary Egyptian-style figurine
Seventh Century BC
Kathari, Cyprus
Faience
H. 4.90cm | W. — | D. —

Nicosia CS2378
Relief of Ahmose II (?) wearing Double Crown
Sixth Century BC
Cyprus
Limestone
H. — | W. — | D. —

Nicosia KMRR253.T49/16
Votive roasting spit, dedicated by Opheltes
Eleventh Century BC
Palaeopaphos, Cyprus
Bronze
L. — | Diam. —

NMAlex. | *National Archaeological Museum,* Alexandria

NMAlex. 285,SCA277
Stela bearing the Naukratis Decree
380BC
Herakleion-Thonis, Egypt
Black Graniodorite
H. 1.99m | W. 0.88m | D. 0.33m

Norwich | *Norwich Castle Museum,* Norwich

Norwich 1921.37.22
Stela of Djed-Hor
End of the Late Period
Asassif, Egypt (?)
Wood, Pigment
H. 36.50cm | W. 22.00cm | Th. 4.00cm

Norwich 1921.37.4
Stela of Hor-Akhty
Early Ptolemaic Period
Findspot Unknown
Wood, Pigment
H. 30.00cm | W. 19.00cm | Th. 3.00cm

Or.Inst. | *Oriental Institute Museum* (*University of Chicago*), Chicago IL

Or.Inst. 2132
Canaanite Deity in an Egyptian-style crown and pose
*c.*1200-500BC
Tell Megiddo, Israel
Bronze, Gold
H. 2.55cm | W. 0.60cm | D. 1.08cm

Oxford | *Ashmolean Museum* (*University of Oxford*), Oxford

Oxford 1885.491
Scaraboid stamp seal dep. griffin
Late Fifth Century BC
Kerch, Ukraine
Chalcedony
H. 27.00cm | W. 2.00cm | D. —

Oxford 1894.107a
The 'Larger Dakhla Stela'
*c.*947BC
el-Dakhla, Egypt
Limestone
H. 93.98cm | W. 66.04cm | Th. —

Oxford 1924.264
Attic black-figured amphora sherd, dep. procession of Dionysos
*c.*550BC
Athens, Greece
Pottery, Pigment
H. — | W. — | Th. —

Oxford 1931.553
Criosphinx protecting Pharaoh Taharqa between his forelegs
*c.*680BC
Kawa Oasis, Sudan
Granitic Gneiss
H. 0.95m | L. 1.56m | W. 0.55m

Oxford 1944.35
***Aryballos* with cartouche of Wahibre**
*c.*665BC
Lipari, Italy
Faience
H. — | Diam. —

Oxford 1947.295
Sarcophagus lid of Ptahhotep, Steward of the Treasury
*c.*500BC
Giza, Egypt
Greywacke
L. 2.13m | W. 79.63m | D. —

Oxford 1991.18
'Osiris Brick' for growing grain in tomb
*c.*950-350BC
Luxor, Egypt
Pottery
H. 24.90cm | W. 12.40cm | D. 6.10cm

Oxford AN1885.468
Pair of boat-shaped Rich-Style earrings
Fifth Century BC
Kerch, Ukraine
Gold
H. 6.00cm | W. —

Oxford AN1895.153, 155-6
Coffin of Djed-djehuty-iuef-ankh
*c.*770-712BC
Deir el-Bahri, Egypt
Sycamore Wood, Plaster, Paint
H. — | L. 2.16m | W. —

Oxford 1896-1908.E.189
Hierakonpolis Lion
*c.*2325-2175BC
el-Kōm el-Aḥmar, Egypt
Pottery, Glaze
H. — | W. — | D. —

Oxford G128.13
Attic black-figured fragment dep. a lion and deer
*c.*625-575BC
Kom Ge'if, Egypt
Pottery, Pigment
H. 9.00cm | W. 12.50cm | Th. 3.20cm

Oxford G270
Attic red-figured *stamnos* dep. Herakles and Busiris
*c.*500-450BC
Vulci, Italy
Pottery, Pigment
H. 36.50cm | Diam. —

Oxford HCR23791
Imitation Alexander III tetradrachm, obv. Alexander as Herakles, rev. Zeus enthroned
*c.*336-323BC
Mit Rahina, Egypt
Silver
Diam. 27mm | Wt. 16.44g

Oxford HCR23792
Imitation Alexander III tetradrachm, obv. Alexander as Herakles, rev. Zeus enthroned
*c.*336-323BC
Mit Rahina, Egypt
Silver
Diam. 27mm | Wt. 17.24g

Palermo | *Museo Archeologico Regionale,* Palermo

Palermo 1986
Attic black-figured *kylix* dep. Busiris, attr. the Heidelberg Painter
*c.*575-525BC
Selinute, Italy
Pottery, Pigment
H. — | Diam. —

Palermo | *Museo Archeologico Regionale,* Palermo

Pamukkale 3162
Block statue dedicated by Pedon
Early Sixth Century BC
Büyük Menderes River, Turkey
Basalt
H. 21.00cm | W. 17.00cm | D. 17.00cm

Philadelphia | *Penn Museum* (*University of Pennsylvania*), Philadelphia PN

Philadelphia 29.103.790
Face of an anthropoid Egyptianizing coffin
*c.*1300-1200BC
Beit She'an, Israel
Pottery
H. 68.00cm | W. 58.00cm | D, —

Philadelphia 29.107.951
Stela of Amun-em-Apt, Overseer of the Granaries
c.1276-1213BC
Beit She'an, Israel
Basalt
H. — | W. — | Th. —

Philadelphia 29.71.189
Rhodian black-figured *situla* dep. spearman and bulls
*c.*550BC
Mit Rahina, Egypt
Pottery, Pigment
H. 49.80cm | Diam. 26.00cm

Philadelphia 19.71.190
Greek white-ground potsherd
Sixth Century BC
Mit Rahina, Egypt
Pottery, Pigment
H. — | W. — | Th. —

Philadelphia 32.15.170
Inscribed Egyptian-style lintel
c.1200-1000BC
Beit She'an, Israel
Limestone, Pigment
H. — | W. — | D. —

Philadelphia E217
Part of anthropoid coffin
*c.*1292-1075BC
Tell el-Yehudiya, Egypt
Pottery
H. 43.00cm | W. 40.00cm | D. 12.00cm

Philadelphia E16025
Fragmentary stelaphorous statue
*c.*664-525BC
Giza, Egypt
Limestone
H. 42.00cm | W. 21.95cm | D. 30.77cm

Philadelphia MS3442
Attic black-figured amphora dep. Trojan War scene, attr. Exekias
*c.*540-530BC
Orevieto, Italy
Pottery, Pigment
H. 58.60cm | Diam. 37.50cm

Philadelphia MS5399
Attic red-figured amphora, signed Menon
*c,*525-520BC
Vulci, Italy
Pottery, Pigment
H. 61.60cm | Diam. 39.00cm

Piraeus | *Piraeus Archaeological Museum,* Athens

Piraeus ΜΠ4645
The 'Piraeus Apollo'
*c.*530-520BC
Piraeus, Greece
Bronze
H. 1.92m | W. — | D. —

Prague | *Národní Muzeum,* Prague

Prague NH-HM10.1407
***Rhyton* with horse protome**
Fourth Century BC
Bulgaria
Silver, Gold
H. — | Diam. —

Princeton | *Princeton Cyprus Expedition Registry* (*Princeton University*), Princeton NJ

Princeton R9913
Female head with Nubian features
Late Sixth Century BC
Poli Chrysochous, Cyprus
Pottery, Pigment
H. 24.05cm | W. 16.50cm | D. —

RCT | *Royal Collection Trust,* London

RCT 31700
St Edward's Crown, attr. Sir Robert Viner
AD1661
London, United Kingdom
Gold, Silver, Platinum, Enamel, Precious Stones, Velvet, Ermine
H. 30.20cm | Diam. 24.00cm

Rhodes | *Archaeological Museum of Rhodes,* Rhodes

Rhodes 7683
Inlay dep. the Horus Name of Necho II
*c.*610-595BC
Ialysos, Greece
Faience
H. 7.40cm | W. 1.65cm | Th. —

Rhodes 9799
Inlay dep. the Golden Horus Name of Necho II
*c.*610-595BC
Ialysos, Greece
Faience
H. 2.50cm | W. 1.00cm | Th. —

Rhodes 14341
Fragmentary Egyptian sculpture inscr. for [Smyr]des
26th Dynasty
Kamiros, Greece
Basalt
H. 14.30cm | W. 10.20cm | D. 5.40cm

Rhodes E7020/Γ2649
Fragmentary Egyptian sculpture inscr, for Smyrdes
26th Dynasty
Mt Atavyros, Greece
Green Granite
H. 22.00cm | W. 20.00cm | D. 10.00cm

Rome | *Museo di Villa Giulia,* Rome

Rome 57.912
Attic red-figured *kylix* dep. Herakles and Busiris, attr. Epiktetos
*c.*525-475BC
Cerveteri, Italy
Pottery, Pigment
H. — | Diam. —

Rome 50599
Attic black-figured *deinos* sherd, signed Exekias
*c.*530BC
Italy
Pottery, Pigment
Restored H. 28.0cm | Diam. 40.50cm

Sci.Mus. | *Science Museum,* London

Sci.Mus. 1921-425/6
Balance beam
*c.*1370-1350BC
Tell el-Amarna, Egypt
Wood
L. 12.70cm | Diam. —

Sci.Mus. 1929-657
Equal arm balance with scale pans
*c.*1370-1350BC
Tell el-Amarna, Egypt
Wood, Bronze
Beam: L. — | Diam. —
Pans: Diam. —

Sparta | *Archaeological Museum of Sparta,* Sparta

Sparta 550
Grave stela dep. seating male, horse, dog
Sixth Century BC
Chrysapha, Greece
Marble
H. — | W. — | Th. —

Sparta 6230/1
Funerary plaque, dep. seated male, snake
Sixth Century BC
Amyklai, Greece
Pottery, Pigment
H. 20.40cm | W. 18.50cm | Th. 1.30cm

St Louis | *St Louis Art Museum,* St Louis MI

St Louis 223:1924
Statue of Nefertem, striding
*c.*664-525BC
Egypt
Silver
H. 24.80cm | W. — | D. —

Stockholm | *Medelhavsmuseet,* Stockholm

Stockholm 1685
Twelve Architectural fragments with Egyptian-style elements
Fifth Century BC
Larissa, Greece
Terracotta, Pigment
H. — | W. — | D. —

Stockholm V294
Squat red-figured *lekythos*, dep. a Persian attended by servants
*c.*450-400BC
Vouni, Cyprus
Pottery, Pigment
H. 16.50cm |
Diam. 10.20cm

Toledo | *Toledo Museum of Art,* Toledo OH

Toledo 1972.55
Attic red-figured *kylix* dep. *heairai* offered coinpurses, attr. Makron
*c.*490-480BC
Athens, Greece
Pottery, Pigment
H. 11.00cm |
Diam. 29.00cm

Turin | *Museo Egizio,* Turin

Turin 1399
Portrait of Nakhthorhebyt or Ptolemy I
*c.*359-282BC
Findspot Unknown
Grey-Green Schist
H. 18.00cm | W. — | D. —

Turin 1799
***Book of the Dead* of Neheins-ra-taui, Priest of Osiris**
*c.*332-330BC
Egypt
Papyrus
H. 0.36m | L. 2.28m

UCL | *Petrie Museum of Egyptian Archaeology* (*University College London*), London

UCL UC14634
Torso of a statue of the official Horudja
*c.*610-595BC
Mit Rahina, Egypt
Basalt
H. 22.50cm | W. — | D. —

UCL UC30035a-b
Rim sherds of the 'Apries Amphora'
Sixth Century BC
Luxor, Egypt
Pottery, Pigment
A: H. 6.20cm | W. 8.50cm
B: H. 5.20cm | W. 6.50cm

UCL UC60872
Seal scarab with the ram of Amun wearing a plumed headdress
Late Period
Egypt
Steatite
L. 2.00cm | W. — | D. —

Varille | *Mathieu Varille Collection,* Lyon

Varille
Naophorous statue of Nakhthorheb
*c.*570-526BC
Egypt
Basalt
H. 38.50cm | W. 12.00cm |
D. —

Vathy | *Archaeological Museum of Samos,* Vathy

Vathy 1149/50
Eumnastos' Lion, a recumbent lion protome
*c.*550BC
Samos, Greece
Bronze
H. 10.00cm | L. 16.00cm |
W. —

Vienna | *Kunsthistorisches Museum,* Vienna

Vienna ÄS4
Sarcophagus of the priest Pa-nehem-isis
Second Century BC
Saqqara, Egypt
Greywacke
L. 2.05m | W. 0.47m |
D. 0.66m

Vienna GR16095
Kyzikan stater, obv. Zeus-Ammon, tuna fish (*T. thynnus*), rev. incuse square
*c.*450-400BC
Findspot Unknown
Electrum
Diam. 19mm | Wt. 16.04g

Vienna GR37707
Stater of Nakhthorhebyt, obv. stallion, rev. *nfr nb*
*c.*359-343BC
Egypt
Gold
Diam. 16mm | Wt. 8.02g

Vienna IV.1626
Rhodian *aryballos* with a cartouche of Wahibre
*c.*585-570BC
Rhodes, Greece
Faience
H. 5.80cm | Diam. 4.20cm

Vienna IV.2166
Attic red-figured column krater dep. female athletes using *aryballoi*
*c.*450BC
Cortona, Italy
Pottery, Pigment
H. 47.50cm |
Diam. 44.50cm

Vienna IV.3576
Attic black-figured *hydria*, dep. Herakles and Busiris, attr. the Busiris Painter
*c.*510BC
Cerveteri, Italy
Pottery, Pigment
H. 45.50cm |
Diam. 39.80cm

Vienna V.1950
***Aryballos* in the form of the Egyptian god Bes**
*c.*580-550BC
Samos, Greece
Faience
H. 6.20cm | Diam. —

Würzburg | *Martin von Wagner Museum* (*University of Würzburg*), Würzburg

Würzburg L482
Attic red-figured *kylix* dep. hare offered as love-token
*c.*480-470BC
Athens, Greece
Pottery, Pigment
H. — | Diam. —

Würzburg L487
Attic red-figured *kylix* dep. *erastes* courting a reluctant *eromenos*
*c.*470BC
Athens, Greece
Pottery, Pigment
H. — | Diam. —

Würzburg L482
Attic red-figured *stamnos* dep. the murder of the tyrant Hipparchos, attr. the Copenhagen Painter
*c.*475-470BC
Athens, Greece
Pottery, Pigment
H. — | Diam. —

Yale | *Yale Art Gallery*
(*Yale University*), New Haven CT

Yale 1913.163
Attic red-figured *kylix* dep. sympotic scene with *hetairai*, attr. the Gales Painter
*c.*520-500BC
Vulci, Italy
Pottery, Pigment
H. 9.20cm | Diam. 22.30cm

Yale 1933.175
Attic red-figured column krater dep. pederastic courtship, attr. the Agrigento Painter
*c.*475-450BC
Taranto, Italy
Pottery, Pigment
H. 39.00cm |
Diam. 31.20cm

Yale 2016.94.7
Kolophonian stater of Philip III or Alexander IV of Macedon, depicting obv. Philip II, rev. chariot drawn by quadrigia
*c.*323-309BC
Çamönü, Turkey
Gold
Diam. 18mm | Wt. 8.60g

Auction Catalogues

CNG 251 (2011) | *Classical Numismatic Group,* eAuction 251
9th March 2011, New York NY

CNG 251 (2011) Lot 179
Coin of either Sabakes or Mazakes, depicting obv. satrapal head, rev. archer, inscr. סויך (SWYK) or סזרך (MZDK)
*c.*340-332BC
Findspot Unknown
Bronze
Diam. 10mm | Wt. 1.34g

CNG Triton VIII (2005) | *Classical Numismatic Group,* Triton VIII Auction
11th-12th January 2005, New York NY

CNG Triton VIII (2005) Lot 570
Coin of Antioch (?) depicting, obv.a ram leaping, rev. scales, misattr. To Nakhthorhebyt
Second Century AD
Syria (?)
Bronze
Diam. 16mm | Wt. 4.24g

CNG Triton XXI (2018) | *Classical Numismatic Group,* Triton XXI Auction
9th–10th January 2018, New York NY

CNG Triton XXI (2018) Lot 472
Phokaian *hekte,* obv. head of Zeus-Ammon, rev. incuse square
*c.*478-387BC
Foça, Turkey
Electrum
Diam. 10mm | Wt. 2.54g

Leu (2017) | *Leu Numismatik,* Web Auction 1
25th June 2017, Winterthur

Leu (2017) Lot 510
Mytilenian *hekte,* obv. head of Zeus-Ammon, rev. incuse square
*c.*412-378BC
Mytilene, Greece
Electrum
Diam. 10mm | Wt. 2.47g

Num.Gen. (2019) | *Numismatica Genevensis,* Auction 12
19th November 2019, Geneva

Num.Gen. (2019) Lot 101
Half-*dbn* ingot with cartouche of Tutankhamun
*c.*1345-1327BC
Lebanon (?)
Silver
H. 42.00cm | W. 20.00cm | D. 7.00cm | Wt. 41.55g