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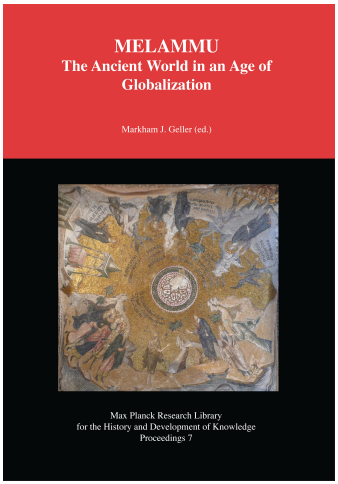

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Introduction to Melammu: Early Globalization

M. J. Geller

The idea of the "first globalization" was chosen as the topic of the sixth Melammu symposium, all of which dealing with Mesopotamia in its broadest geographical and chronological extensions, both actual and metaphorical.[1] The present conference was hosted by the Rector of the New Bulgarian University, Prof. Sergei Ignatov (now Bulgarian Minister of Education), and Prof. Teodor Lekov, head of the Institute of Egyptology of that University, and held in Sofia September 1–3, 2008.[2]

It was the Persian period which was chosen as the key period, since the mid-first millennium BCE witnessed both unification under a single hegemony (Persia) in the Near East and the vast unplanned spread of Greek colonies in the Mediterranean and Black Sea regions, representing contrasting examples of globalization. It was this period which produced great leaps in scientific knowledge, particularly astronomy and mathematical astronomy, geometry, and medicine, accompanied by a general re-evaluation of man's place in the cosmos, and these new approaches to knowledge continued well into the Hellenistic and Roman periods.[3] The momentum of globalization under Persian rule in the Near East increased geometrically under Greco-Roman rule in Western parts of the region, such as Asia Minor, Syria, Palestine and Egypt, although the Parthian empire in Mesopotamia and Iran mostly resisted Hellenization, with some exceptions (for example, Bactria). Let us examine the situation in more detail.

We begin with Mesopotamia, from whence we have the richest documentation of economic and administrative texts from the sixth century BCE, covering the Neo-Babylonian, Persian, and Hellenistic periods, according to the very latest survey of these periods (Jursa 2010). Although everyday business affairs throughout Mesopotamia are recorded in great detail, information relevant to globalization turns out to be rather scarce, in terms of economic activity. The picture which emerges from cuneiform sources is that most trade and commerce was conducted between cities which were immediately neighbors along the great rivers

[1] The idea of Melammu was conceived by Simo Parpola of Helsinki and it continues to influence interdisciplinary approaches to antiquity. Details of previous Melammu volumes is to be found on http://www.aakkl.helsinki.fi/melammu.

[2] The conference theme was originally the suggestion of Florentina Badalanova Geller.

[3] See (Renn 2012).

and canals, with little data from the texts shedding light on more far-reaching exchanges of goods and services which might indicate foreign contacts.[4] The reason for this may be that basic commerce consisted of trade in low-value bulk commodities between cities, such as wool, grain, common agricultural products, and manufactured goods such as textiles (Jursa 2010, 1–61), or even silver, while globalization might have influenced trade in higher value products and services such as *materia medica*, medical expertise, perfumes and exotic spices, and so forth. This pattern of exchange of goods was predominantly stable and largely unaffected by political changes under Persian rule.

Nevertheless, on other levels the Persian Empire did bring large-scale changes to the Near East, occasioned by the extent of the new political unity. The Persian state demanded heavy tribute from its subject peoples, although the information is best documented in Greek sources (Briant 1996, 399ff.). Taxes paid by citizens of Babylonia would probably at first have been comparable to previous regimes, although new tax regimes were introduced under Persian officials and tax offices (Briant 1996, 424–425), and the increasing burden of taxation in the Persian Empire probably had a deleterious effect on economic activity (Jursa 2010, 60). In any case, tribute represented capital flows of wealth between regions and no doubt involved contacts between officials in various regions of the empire.

Since we are unlikely to find much evidence of economic globalization during the Persian period, other areas of investigation may prove more promising, such as comparative law, since contracts and laws are often subject to political changes under new regimes. For example, Aramaic documents from Elephantine in Egypt (Porten and Yardeni 1987) or Afghanistan (Naveh and Shaked 2012) show the official presence of minority communities within this vast empire, united both by official regulations and language, namely Aramaic. The Jewish military colony at Elephantine kept extensive Aramaic records of property transactions within the community (including marriage), as well as correspondence with co-religionists in Judea; their use of Aramaic probably reflects their own vernacular (and not Hebrew), rather than any lingua franca. The Aramaic documents from Elephantine have been analyzed extensively from both contemporary Akkadian and Demotic analogues (Muffs 2003; Botta 2009), and although Akkadian parallels are more convincing (in the present writer's view), these results are significant: they indicate that Aramaic contracts from Elephantine are comparable to both Neo-Babylonian and Demotic contracts, with similar clauses in both languages. One inference to be drawn is that Aramaic contract formulae within the Persian empire were beginning to reflect somewhat standardized practices throughout the Near East, hence an aspect of globalization. Never-

[4] Examples of such documents are discussed in the present volume by Kabalan Moukarzel.

theless, the usual pattern is one of conservatism and traditional practices versus change afforded by new political realities and conditions, and Elephantine papyri reflect both approaches. On one hand, Aramaic contracts generally reflect Neo-Babylonian legal clauses but were probably also influenced by the new legal environment in Egypt in which these documents were found. Globalization, therefore, can partially be attributed to altered circumstances occasioned by demographic changes.

Ptolemaic Egypt, in fact, offers many more opportunities for international contacts, both internally and externally, than does Mesopotamia. The prevalence of Demotic, Greek, and Latin sources in great quantities of papyri makes Egypt a primary source for studies of globalized contacts between cultures, with one additional feature which sets Egypt apart from contemporary Mesopotamia. Egypt was colonized by Greeks after Alexander and later became integrated into the Roman Empire, while Mesopotamia mostly remained beyond the reach of Hellenization and Greek science, in many ways resistant to Western thought. The contrast between Egypt and Mesopotamia was fundamental in this respect, since we are unlikely to find any treasure trove of Greek papyri, "an Oxyrhyncus," in Mesopotamia, since Greek was hardly spoken in the local population. A good example of the difference comes from the Bible itself, which was translated into Greek in Alexandria, but no contemporary Septuaginta is known from the Jewish or Christian community in the Parthian or Sassanian empires, because no one would have read this text.[5] Even closer to home, Babylonia shows no real evidence of a major Syriac-Greek bilingual scholastic centre equivalent to Edessa in Syria, and Jews and Manichaeans in Babylonia were not directly impressed by Greek learning. Globalization had its limits.

Egypt affords the possibility of accurate assessment of relationships between ethnic groups within society based upon their use of languages as reflections of social hierarchies. The evidence is complex, however, since schooling and acquired linguistic expertise (in Greek) often enhanced one's chances of success, although villagers remained predominantly illiterate (Lewis 1983, 82). Major changes in society also took place after the Roman conquest of Egypt, during which time decisions governing Egypt's economy and law courts were entirely dependent upon directives from Rome or its appointed officials, which also lead to conflict between Rome and the Greek-speaking population of Egypt, including

[5] The Septuagint itself is a good example of literary globalization, since Bible stories were suddenly able to circulate throughout the Mediterranean region in Greek translation, and many narratives became popular (Barclay 1996); Moses, for instance, gained a reputation in this period as a wonder-worker and magician, and reactions to biblical narratives in Egypt (although preserved in Greek), such as Manetho, attest to proliferation of biblical accounts; Josephus records the debates in great detail in *Contra Apionem*.

Jews (Lewis 1983, 185–207). The case for globalization in Egypt is abundantly self-evident.

The relatively haphazard spread of Greek colonies also offers many important models for globalization, reflected in widespread commercial ties as well as the eventual spread of Greek language and literature to an astonishing extent.[6]

The significant point about Greek colonies is that prior to the establishment of Alexander's vast empire, they did not reflect any central planning or scheme promulgated by older cities on the Greek mainland. As Irad Malkin explains, the numerous Greek cities that we call, for lack of a better term, "colonies" were founded during the Archaic period as independent entities along the shores of the Mediterranean and the Black Sea. There were a great variety of "mother cities" (that is, home communities recognized as the initiators of settlement), but they rarely had political control over the new settlements. These were largely independent, sovereign entities with ritual ties to the *metropolis* (lit. mother city). In fact, this was not just a Greek but a Mediterranean phenomenon: the Phoenicians had set out to found city-states in the western Mediterranean and North Africa, and the Etruscans, influenced by both the Greeks and the Phoenicians, likewise developed a city-state civilization and maritime activity (Malkin 2004, 347).

The *oikoumene* inhabited by the Greeks was itself multilingual and multinational, and like the Phoenicians, they used their language as a unifying medium for exchange of commodities, manufactured wares, and ideas. Certain features of Greek culture took the world by storm, such as refinements in ancient architecture and the new aesthetic realism of Greek sculpture, which virtually replaced the static figures of Near Eastern art, in addition to the revolutionary artistic qualities of Greek vases; nevertheless, these characteristic features of Greek art were originally inspired by motifs originating in the Near East (Martin 2000, 91).[7] The Greek polis differed from Mesopotamian cities in several key aspects, especially in having an *agora* as the primary public space instead of the city or temple gates, and the scale of Greek temples was relatively small compared with temples in the Near East; there was no Near Eastern counterpart to Greek theatre. Nevertheless, the most important common feature of all these societies was the urban setting itself, which provided the environment for many of the significant intellectual and artistic developments contributing to globalization (Sinclair et al. 2010, 172–183). The city provided the merchants, schools, law courts, governance, and religious institutions which defined these civilizations.

[6]Demographic changes that we see in Greece began taking place in the seventh century BCE, which classical scholars refer to as the "archaic period," despite corresponding to the Neo-Assyrian empire period in Mesopotamia, which is far from being archaic.

[7]It is then interesting to note that Greek art later inspired the art and architecture of Persepolis, see the work of Margaret Cool Root (1985).

The processes of Hellenization in Ptolemaic Egypt after Alexander's conquest is most obvious to see in the area of laws and contracts, and the search for globalization of legal norms renders surprising results. In fact, relatively little changed within Hellenistic law in terms of actual contract law, even in bilingual societies such as Egypt in which both Greek and Demotic contracts proliferated, for some two centuries after the founding of Alexandria.[8] Immediately after Alexander, both Greek and Demotic contracts continued to be used in Egypt as valid legal forms until the second century CE, hence well into the Roman period (Yiftach-Firanko 2009, 542, 555). Prior to this in the early periods of Hellenization, Greeks and Egyptians could resort to separate legal courts to settle disputes, but by the second century BCE the system had broken down and Greek judges appear to have predominated, with Demotic contracts being translated for their benefit (Yiftach-Firanko 2009, 547). Greek officialdom, in the form of the *agoranomos*, played an increasingly important role in regulating economic and legal functions governed by the state, both in Egypt proper and probably in its territories further afield, as in Judea.[9] Although the tendency over time was for Greek documents to be used instead of Demotic contracts, especially after the Romanization of Egypt, this did not mean that Egyptian disappeared, since the Romans introduced a legal concept known as the "law of the Egyptians," recognizing certain ethnic legal norms which still had force in law (Yiftach-Firanko 2009, 550–552). Nevertheless, the pattern appears to be that actual globalization or fusion of legal procedures and contracts resisted diversion from traditional practices for most of Hellenistic Egypt prior to the Roman period, after which Greek contracts eventually replaced Demotic ones; Roman law itself had relatively little impact, except in matters of succession. Hence, the pattern of standardization of contract law shows slow but steady process in the Hellenistic period, but with the most obvious changes occurring during Roman domination of Egypt. This pattern probably reflects similar conditions throughout the Roman Empire, that is, in the Levant as well.

Although narratives and religious motifs can cross borders quite easily, they do not often tell us a great deal about the nature of these exchanges, since reli-

[8] In the 1980s a series of seminars and conference was held at University College London on Hellenistic Law, with the idea of comparing legal contracts from Mesopotamia, Palestine, and Egypt, to chart any innovations introduced through Hellenization. The results were published (Geller and Maehler 1995), providing many examples of legal contracts in Akkadian, Greek, and Demotic, although the volume did not include any summary of results, since the idea was that the collection of discussed materials would stimulate further comparative studies which could point to general conclusions. This hope has not yet been realized.

[9] The Zenon Papyri clearly shows how Egyptians conducted business in Greek with its colony in Judea, with Greek having replaced Aramaic as the language of commerce, and the widespread use of Greek in ancient Palestine was probably the result of being colonized by Egypt in the third century BCE.

gious beliefs and practices and literary tropes can easily reflect shared ideas which can obscure the exact nature of any borrowings. The pioneering works of Cyrus Gordon (1962) and Walter Burkert (1998) made important contributions to the awareness of contacts between societies in the Near East, including Greece, but the actual mode of transmission remains unclear. The nature of exact sciences, on the other hand, is more precise, which makes it much easier to trace the spread of scientific reasoning and results between societies, a process which is well-documented in the Persian period. Here we return again to Mesopotamia and relations between Babylonian and Greek science, which are crucial reflections of globalization in the Persian period.

To begin with the most exact of sciences, mathematics, K.Ṁuroi has recently concluded that the so-called "Pythagorean triples" (solving the area of a trapezoid) was known already in a Babylonian mathematical tablet (Muroi 2010, 155). Similar recognition of the reliance of Greek mathematics upon Babylonian precedents, and especially pre-Pythagorean mathematics in Babylonia, had already been established (Damerow 2001), although it is likely that Babylonians were responsible for practical uses of mathematics among Greeks but had little influence upon more theoretical writings (Asper 2009, 128–129). While the influence of Babylonian astrology on the Greeks has been known since the early days of Assyriology (Boll 1911), the influences of Babylonian science has been recently documented (Rochberg 2010, 1–18); Pliny, for instance, refers to three famous Babylonian *mathematikoi* by name (Rochberg 2010, 8). Francesca Rochberg gives a brief survey of how historians (before Otto Neugebauer) viewed Babylonian science, in which any scientific ideas before the Greeks were considered to represent technology and religion, but not actually science (Rochberg 2004, 15–20); nevertheless, the fundamental contributions of Babylonian astronomy to Indian, Arabic, and Greek astronomy have now been widely accepted, even if often qualified by reservations regarding the level of Babylonian command of theory, compared to Ptolemy and others. What is beyond doubt is the nature of scientific borrowings of precise detailed observations and calculations of celestial phenomena which originated in Babylonia and were then used by their neighbors, hence representing concrete examples of globalized knowledge originating in the Persian Period. As Gerd Graßhoff has recently observed,

> It is now clear that, during the Babylonian period, knowledge was disseminated to all neighboring cultures without undergoing change; its superiority was incontrovertible. (Grasshoff 2010, 47)

Concrete confirmation of such influence has also been recognized in a small group of astronomical papyri from Egypt which are clearly based upon Babylonian calculations (Jones 2009, 350).

As for divination, there is little doubt that divinatory sciences were more highly developed in Mesopotamia than anywhere else in the Near East. There is little evidence of divination in general from Egypt, and although prognoses and oracles were known to the Greek world, there is little evidence from Greece of Babylonian-style divination. Nevertheless, it is the melting pot of the Roman world which alerts us to the spread of knowledge of divination; Rochberg has drawn attention to Cicero's argumentation in his *de Divinatione* as partially reflecting Babylonian thinking (Rochberg 2010, 411), but in fact Cicero, in the late first century BCE, turns out to be surprising well-informed in general on the tenets of various kinds of Babylonian omens, including extispicy. It seems likely that Cicero's own sources and informants, such as Diogenes of Babylon, were responsible for the awareness of Babylonian divinatory practices within Roman intellectual circles, to an extent not yet fully realized in modern scholarship. This pattern may also be repeated within ancient medicine, since prescriptions recorded by Celsus in the first century CE resemble the type of recipe-based medicine best known from Mesopotamia and not as well attested in the Hippocratic corpus.

Finally, Gebhard Selz argues further that Mesopotamian science was globalized precisely because of its empirical approach to knowledge, based upon observation and hermeneutics, and introduced the notion of divinely-inspired higher order of knowledge which lead to revelation and Holy Scripture elsewhere (Selz 2011, 64). The present Melammu volume will present evidence for the Neo-Babylonian and Persian periods as the crucial era for the spread of Mesopotamian technical knowledge, in the form of legal forms and scientific methods, into other societies in the Near East. Although it is important to search for knowledge transfer among the myriad of economic and administrative documentation of this period, we are most likely to find Babylonian technical thinking competing to a certain extent with Greek wisdom, which itself owed much to its Near Eastern antecedents. At the same time, there is no reason to look exclusively to the West for the spread of knowledge, since globalization spread to other regions as well, including Urartu, Persia, and India, as will be presented here. The further afield one ventures, however, the more varied are the results. What has been discussed above are areas of knowledge transfer which are relatively secure, while the purpose of the present volume is to push back the frontiers of globalization. There is much work remaining to be done in this area.

Bibliography

Asper, M. (2009). The Two Cultures of Mathematics in Ancient Greece. In: *The Oxford Handbook of the History of Mathematics*. Ed. by E. Robson and J. Stedall. Oxford: Oxford University Press, 107–132.

Barclay, J.M.G. (1996). *Jews in the Mediterranean Diaspora from Alexander to Trajan (323 BCE–117 CE)*. Edinburgh: T and T Clark Edinburgh.

Boll, C. Bezold & F. (1911). *Reflexe astrologischer Keilinschriften bei griechischen Schriftstellern*. Heidelberg: Winter.

Botta, A. (2009). *The Aramaic and Egyptian Legal Traditions at Elephantine: An Egyptological Approach*. Edinburgh: T and T Clark Edinburgh.

Briant, P. (1996). *Histoire de l'Empire Perse de Cyrus à Alexander*. Paris: Fayard.

Burkert, W. (1998). *The Orientalizing Revolution: Near Eastern Influence on Greek Culture in the Early Archaic Age*. Cambridge: Harvard University Press.

Damerow, P. (2001). Kannten die Babylonier den Satz des Pythagoras? Epistemologische Anmerkung zur Natur der babylonischen Mathematik. In: *Changing View on Ancient Near Eastern Mathematics*. Ed. by J. Hoyrup and P. Damerow. Berlin: Dietrich Reimer Verlag Berlin, 219–310.

Geller, M. and H. Maehler (1995). *Legal Documents of the Hellenistic World*. London: Warburg Institute London.

Gordon, C.H. (1962). *The Common Background of Greek and Hebrew Civilizations*. Ventnor: Ventnor Press.

Grasshoff, G. (2010). Babylonian Meteorological Observations and the Empirical Basis of Ancient Science. In: *The Empirical Dimension of Ancient Near Eastern Studies*. Ed. by G. Selz. Wiener Offene Orientalistik. Vienna: Lit Ver Wi, 33–48.

Jones, A. (2009). Mathematics, Science, and Medicine in the Papyri. In: *The Oxford Handbook of Papyrology*. Ed. by R. Bag. Oxford: Oxford University Press, 338–357.

Jursa, M. (2010). *Aspects of the Economic History of Babylonia in the First Millennium BCE: Economic Geography, Economic Mentalities, Agriculture, the Use of Money and the Problem of Economic Growth*. Ed. by M. Jursa, J. Hackl, B. Jankovic, K. Kleber, E. Payne, C. Waerzeggers, and M. Weszeli. Münster: Ugarit Verlag.

Lewis, N. (1983). *Life in Egypt under Roman Rule*. Oxford: Oxford University Press.

Malkin, I. (2004). Postcolonial Concepts and Ancient Greek Colonization. *Modern Language Quarterly* 64:341–364.

Martin, T.R. (2000). *Ancient Greece, from Perhistoric to Hellenistic Times*. New Haven: Yale University Press.

Muffs, Y. (2003). *Studies in the Aramaic Legal Papyri from Elephantine*. Leiden: Brill.

Muroi, K. (2010). Mathematics Hidden Behind the Practical Formulae of Babylonian Geometry. In: *The Empirical Dimension of Ancient Near Eastern Studies*. Ed. by G. Selz. Vienna: Lit Ver Wien, 149–158.

Naveh, J. and S. Shaked (2012). *Aramaic Document from Ancient Bactria (Fourth Century BCE)*. London: The Khalili Family Trust.

Porten, B. and A. Yardeni (1987). *Textbook of Aramaic Documents from Ancient Egypt*. Winona Lake: Eisenbrauns.

Renn, Jürgen, ed. (2012). *Globalization of Knowledge*. Berlin: Max Planck Institute for The History of Science.

Rochberg, F. (2004). *The Heavenly Writing*. Cambridge: Cambridge University Press.

— (2010). *In the Path of the Moon*. Leiden: Brill.

Root, M.C. (1985). The Parthenon Frieze and the Apadana Reliefs at Persepolis: Reassessing a Programmatic Relationship. *American Journal of Archaeology* 89:103–122.

Selz, G. (2011). Remarks on the Empirical Foundation of Early Mesopotamian Knowledge Acquisition. In: *The Empirical Dimension of Ancient Near Eastern Studies*. Ed. by G. Selz. Vienna: Lit Verlag Wien, 49–70.

Sinclair, P., G. Nordquist, F. Herschend, and C. Isendahl (2010). *The Urban Mind*. Uppsala: Uppsala University.

Yiftach-Firanko, U. (2009). Law in Graeco-Roman Egypt: Hellenization, Fusion, Romanization. In: *The Oxford Handbook of Papyrology*. Ed. by R. Bagnall. Oxford: Oxford University Press, 541–560.