ANCIENT ILLITERACY? [*]

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Beyond Orality and Literacy

Ancient historians today are increasingly uncomfortable with bracketing "classical antiquity" or "the Greco-Roman / Mediterranean world" off from adjacent regions or cultures. Writing systems illustrate very well the costs of this divide: consideration of the Near Eastern material immediately raises doubts about one of our fundamental assumptions, the notion that writing is best understood as a transformation of speech.

Framing the question in terms of an opposition between orality and literacy is an ancient tradition. But the modern discussion began when Goody, Ong and others argued that the impermanence of the spoken word set real limits on the accumulation and storage of knowledge. [1] Writing, they argued, permitted individuals and groups to store and disseminate information across much greater expanses of time and space. Writing meant larger-scale and longer-term enterprises could be planned and managed. It also meant that the advances of one generation were available to the next, whether to be challenged or built up. Writing for Goody in particular allowed humans

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[1] The classic statement was Jack R. Goody and Ian Watt, 'The Consequences of Literacy', *Comparative Studies in Society and History,* 5 (1963). For elaboration see Walter J. Ong, *Orality and Literacy. The Technologising of the Word*, (London: Methuen, 1982); Jack R. Goody, 'Literacy in Traditional Societies'*,* (Cambridge: Cambridge University Press, 1968); Jack R. Goody, *The Domestication of the Savage Mind,* (Cambridge: Cambridge University Press, 1977). See also E.A. Havelock, *The Literate Revolution in Greece and Its Consequences.*, (Princeton N.J.: Princeton University Press, 1982).

to move from the intense, wild but short-term ways of living routed in the present to a more domesticated existence, conscious of its past and planning for its future. The reaction – from anthropologists, classicists and others – was to restate the flexibility and power of oral tradition and oral utterance, and to point out how orality persisted (and persists) alongside writing, their local forms and interelations shaped by much broader social contexts.[2]

Yet the dichotomy literacy/orality has never been wholly satisfactory. For a start there is a fundamental asymmetry between the terms, one immediately revealed by usage. How would we define 'orality levels'? What would be the oral counterpart of being 'literate' or 'illiterate' in a given language? Can one learn or teach a given orality as one can a given literacy? By understanding orality as in some sense the opposite or counterpart of literacy, we tacitly make a claim that literacy is about language. That preconception presumably came easy to scholars who mostly use alphabetic scripts which strive towards phonetic representation of speech, and it came easily because we started from the Greeks. Things might have seemed different if we had started from Near Eastern writing systems.

Christopher Woods in his 2010 catalogue of the exhibition *Visible Language* tackles the definitional question thus

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[2] Brian V. Street, *Literacy in Theory and Practice*, (Cambridge: Cambridge University Press, 1984); Rosalind Thomas, *Literacy and Orality in Ancient Greece*, (Cambridge: Cambridge University Press, 1992). More recently see Janet Watson, (ed.) 'Speaking Volumes. Orality and Literacy in the Greek and Roman World', in *Mnemosyne Supplements,* (Leiden & Boston & Köln: Brill, 2001); Jonathon A. Draper, (ed.) 'Orality, Literacy and Colonialism in Antiquity', in *Semeia Studies,* (Leiden & Boston: Brill, 2004); Anne Mackay, (ed.) 'Orality, Literacy, Memory in the Ancient Greek and Roman World', in *Mnemosyne Supplements,* (Leiden & Boston & Köln: Brill, 2008); Elizabeth Minchin, 'Orality, Literacy and Performance in the Ancient World', in *Orality and Literacy in the Ancient World,* (Leiden & Boston: Brill, 2012).

Broadly defined, writing represents speech. One must be able to recover the spoken word, unambiguously, from a system of visible marks in order for those marks to be considered writing.[3]

Yet Woods immediately recognizes that by this criterion many things we commonly term writing systems fail to qualify. Woods, a Sumerologist, adopts a familiar solution. Hieroglyphic systems, syllabaries and other early writing systems are to be regarded as imperfect early stages, successively replaced by writing systems that deliver phonetic transcription ever more precisely. Alphabetic writing emerges as the most evolved and most efficient system. Yet this account raises major problems. Are we really to imagine that the Bronze Age civilizations of the Near East were all groping their way towards phonetic transcription, yet achieved it so late? And what are we to make of those non-alphabetic systems that remain in use today in China and Japan or the long survival in the west of abjads, scripts like Arabic and Hebrew that have signs for consonants but not vowels? The Eurocentrism of the standard evolutionary account of writing is patent. It evokes an orientalizing notion of progress in the West contrasted with Eastern backwardness. But if advanced economies and complex polities require simple scripts how do we explain the phenomenal achievements of imperial China, easily and repeatedly compared to those of Rome? And how should we explain the enormously long life of systems like cuneiform which survived in use until the first century AD, or Egyptian hieroglyphs were remained in use, alongside hieratic and demotic Egyptian, into the third century AD? One could, conceivably, save the 'imperfectly phonetic' thesis by imagining that some combinations of religious and political authority or prejudice inhibited progress. But

[3] Christopher Woods, 'Visible Language. Inventions of Writing in the Ancient Middle East and Beyond', in *Oriental Institute Museum Publications,* (Chicago: Oriental Institute of the University of Chicago, 2010), (p. 18).

this would enmesh us in another familiar orientalizing fantasy, that the Greeks alone 'escaped' traditional constraints on their unique route towards rationality and modernity. All this seems very implausible. Far better to reconsider our starting point, the notion that writing is essentially a technology that transforms speech.

Writing as a sign system

The world's first writing systems first appeared in the agricultural societies of southern Mesopotamia, and a little later of Egypt, south-west Iran and the Indus Valley.[4] Even if the 'idea' of writing had a single source - something not at all evident given its independent invention elsewhere on the planet in broadly similar social contexts - these early scripts were not related, and their use was highly localized. They were preceded by so called pre- or proto-literate notational systems, and perhaps by token systems used in the Neolithic.[5]. None of those systems were designed to encode speech, and they are best seen as in some ways similar to systems of talleys. This does not mean their use was unsophisticated. The main difference between a system of this kind and the writing systems most of us in western societies employ everyday, is that a good deal of prior knowledge is demanded of the user about conventions and context– what is being counted? what do the sequencing conventions convey? what is the transactional situation of the record? how is time factored into the record? Some context has to be supplied for most kinds of records, even today. A till

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[4] Stephen Houston, (ed.) 'The First Writing. Script Invention as History and Process', (Cambridge: Cambridge University Press, 2004).

[5] Eleanor Robson, 'Numeracy, Literacy, and the State in Early Mesopotamia', in *Literacy and the State in the Ancient Mediterranean,* ed. by Kathryn Lomas, R.D. Whitehouse, and J.B. Wilkins (London: Accordia Research Institute, 2007), pp. 37-50. See also Denise Schmandt-Besserat, *How Writing Came About,* (Austin: University of Texas Press, 1996).. Different reactions to these ideas are presented in in Paul Zimansky, 'Review of before Writing. Volume I: From Counting to Cuneiform by Denise Schmandt-Besserat; Beforewriting. Volume Ii: A Catalogue of near Eastern Tokens by Denise Schmandt-Besserat', *Journal of Field Archaeology,* 20 (1993); John Kelly, 'Writing and the State. China, India, and General Definitions', in *Margins of Writing, Origins of Cultures,* ed. by Seth L. Sanders (Chicago: Oriental Institute of the University of Chicago, 2006), pp. 15-32.

receipt or the label on a food product make little use of phonetic signs, but all are easy to use once we are taught how to interpret the signs, formatting conventions, abbreviations and numbers involved. The same is true of most signs. A cross can indicate a road junction, a religious affiliation or a medical facility. We rarely get confused between these usages. Context – part of the knowledge that users already possess - is essential to all sign use.

If we were looking for the first human uses of graphic sign systems we might look back even further, all the way back to the Upper Paleolithic. Colin Renfrew has elaborated Merlin Donald's notion of external symbolic storage to develop very Goody-like arguments about the cognitive consequences of both art and monument building.[6] Cave art too created a larger virtual community of users, was probably involved in the intergenerational communication of knowledge, and demanded implicit theories of representation and number. A painting of a bison does not mean anything in the abstract, but given context (on the wall of a cave that is difficult to access and in which only artificial light can be used) and user knowledge (whatever initiates were told before they entered the cave system) it clearly acted as a powerful sign. The images in many cave systems use repeated elements organized in groups and sequences, with some signs regularly associated with others, just as in most graphic systems.[7] This sort of argument suggests that if we are looking for a cognitive revolution (along the lines of Ong's idea that writing was as technology that

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[6] Colin Renfrew, 'Mind and Matter. Cognitive Archaeology and External Symbolic Storage', in *Cognition and Material Culture: The Archaeology of Symbolic Storage,* ed. by Colin Renfrew and Chris Scarre (Cambridge: McDonald Institute for Archaeological Research, 1998), pp. 1-6; Colin Renfrew and Chris Scarre, 'Cognition and Material Culture: The Archaeology of Symbolic Storage', in *McDonald Institute Monographs,* (Cambridge: McDonald Institute for Archaeological Research, 1998).

[7] Chris Knight, Camilla Power, and Steven Mithen, 'The Origins of Anthropomorphic Thinking', *Journal of the Royal Anthropological Institute,* 4 (1998); Jacques Cauvin, *Naissance des divinités, Naissance de l'agriculture. La Révolution des symboles au Néolithique,* (Paris: Flammarion Collection Champs Essais, 1994); David Lewis-Williams, *The Mind in the Cave,* (London: Thames and Hudson, 2002).

restructured thought, or Goody's claims about the domestication of the savage mind) we would do better to look around 100-50,000 BP and the emergence of anatomically modern humans rather than at the more recent periods within which states first appeared.

The first widely used writing system was the cuneiform script of what is now southern Iraq. Through its association with Akkadian, the language used by successive Mesopotamian rulers, it spread across west Asia during the third and second millennia BC. Cuneiform was subsequently adopted by a number of other societies, to write a range of other languages – some Semitic (like the language of Ebla), some Indo-European (such as Hittite) and some apparently neither (such as Sumerian and Elamite). The sign system created from combinations of wedge-shaped marks, and the technologies with which it was used, proved very flexible and adaptable. But perhaps we should not begin from its capacity to represent a range of unrelated spoken languages. For Karen Radner and Eleanor Robson cuneiform culture as "essentially, fundamentally numerate".[8] Some appropriations, notably that at Ebla, developed this capacity and added new numerical and metrological signs. Others developed it in the direction of a more phonetic system. Old Assyrian was written in a set of only 70 syllabic characters. Other communities seem to have managed with between 100 and 200 signs. At any one time the script was used for a wide range of purposes in a series of neighbouring societies. These variant usages are very difficult to resolve into a developmental sequence whereby a cumbersome pictographic system evolved by stages into something simpler and more phonetic.

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[8] Karen Radner and Eleanor Robson, (ed.) 'The Oxford Handbook to Cuneiform Culture', (Oxford & New York: Oxford University Press, 2011), (p. 2).

The extent of cuneiform literacy is a matter of controversy among Sumerologists and Assyrologists.[9] It must have varied considerably over its vast chronological and geographical range. But in some periods and places at least the script was used for a wide range of private as well as public functions. During the Old Babylonian period it seems that in some Mesopotamian cities almost every house excavated produces artifacts on which there was cuneiform writing. Legal documents, school texts, letters and literature were widespread, and those able to use them included merchants and private individuals as well as scribes, and women as well as men.[10] These everyday uses co-existed with more the complex documentation generated by divination, astrology, lexicography and mathematics. Domestically, in temples and in palaces a great proportion of what has survived were essentially lists and numbers. We must presume that an overwhelming proportion of ephemeral documentation was similar. Urbanization, the growth of empires, an increased division of labour and social stratification provided some of the contexts for the elaboration of both numeracy and literacy.

Were we to begin from Mesopotamia, we might regard the transcription of speech as simply a supplement to systems of counting, and a supplement that was rarely needed. Robson has pointed out that in cuneiform culture, notational systems were use for numbers long before they were used to encode speech. Well over 95% of cuneiform texts are essentially numerical documents dealing with administrative and commercial subjects. But it has long been recognized, including by Goody, that its

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[9] Niek Veldhuis, 'Levels of Literacy', in *The Oxford Handbook to Cuneiform Culture,* ed. by Karen Radner and Eleanor Robson (Oxford & New York: Oxford University Press, 2011), pp. 68-89; Brigitt Lion, 'Literacy and Gender', in *The Oxford Handbook to Cuneiform Culture,* ed. by Karen Radner and Eleanor Robson (Oxford & New York: Oxford University Press, 2011), pp. 90-112. For a more pessimistic assessment see David Brown, 'Increasingly Redundant. The Growing Obsolescence of the Cuneiform Script in Babylonia from 539 Bc', in *The Disappearance of Writing Systems. Perspectives on Literacy and Communication,* ed. by John Baines, John Bennet, and Stephen Houston (London: Equinox, 2008), pp. 73-101 (p. 79). For a general survey Dominique Charpin, *Lire Et Écrire À Babylone*, (Paris: Presses Universitaires de France, 2008).
[10] Lion. documenting female scribes as well as educated women of elite status.

earliest uses were to create lists and documents that recorded allocations of property, objects and labour. Numeracy, in other words, preceded literacy. Once phonetic elements had been invented, naturally, the medium could be and was adapted to records prayers, poems, songs and literary compositions. But this was a secondary appropriation of a communicative technology invented for (and largely sustained to support) other purposes. Numeracy remained integral to cuneiform culture at all levels right up until its disappearance in the temples of Hellenistic Babylonia.[11]

Cuneiform is not an isolated case. Many of the earliest Bronze Age writing systems consisted mainly of signs for numbers, quantities and measures together with ideograms that identify the objects and persons concerned. The Indus Valley script may come into that category, proto-Elamite certainly does.[12] Why add transcribed words at all? One answer is suggested by the clay tablets on which all surviving Linear B survives. Many of these texts list numbers of things or people, and ideograms can identify relatively clearly the classes of things that are being enumerated, audited or required. What ideograms are less good at doing is identifying *particular* people or places.

When documents circulate only among a small number of people who have been trained in supplying the necessary contextual information, phonetic transcriptions may be unnecessary. Our domestic shopping lists rarely include the names of those who will do the shopping, nor of the specific shops they will visit. A note along the lines of "80 teabags, a packet of cornflakes, milk" will usually do the job, and actually even this punctuation is not necessary so long as those who use it agree on some conventions such as beginning each entry on a new line, or deleting

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[11] Robson.

[12] The Indus Valley 'script' is a case in point. On proto-Elamite see Robert K. Englund, 'Accounting in Proto-Cuneiform', in *The Oxford Handbook to Cuneiform Culture,* ed. by Karen Radner and Eleanor Robson (Oxford & New York: Oxford University Press, 2011), pp. 32-50.

items that have already been purchased. Lists need to add more information in proportion to the number of users and in inverse proportion to their relevant user knowledge. The strength report of the 1st cohort of Tungrians on Vindolanda Tablet 154 mentions only two proper names in its surviving portion, the first to identify the cohort in question by the commander's name, the second to identify one official (Ferox) to whose office at Corbridge a number of troops had been detached. Otherwise the numbers of soldiers and centurions elsewhere, sick or wounded is simply provided in numbers. Presumably those who made and used such records would know how to identify the individuals in each category if needed. For other purposes - an auxiliary diploma conferring citizenship on a veteran and thereby some of his relatives for example – a more precise way of identifying particular people and places was needed. A phonetic sign is not the only way to identify people and places of course. But it is a useful and flexible means of making a list more useful to a wider range of potential users.

There are other advantages in liberating the category "writing systems" from the burden of having to represent spoken utterances. One has already been mentioned, that it allows us to locate cognitive change in a much more plausible evolutionary context and avoids the nonsense of imagining rationality to be confined to those who use something like our own alphabets to store and transmit information. A second advantage relates to the argument that inventions of writing are tightly linked to state formation. [13] Some anthropologists have worried that the Inka do not seem to have had a recording system other than the set of knotted strings called *quipu*, strings

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[13] For example John Gledhill, Barbara Bender, and Møgens Trolle Larsen, 'State and Society. The Emergence and Development of Social Hierarchy and Political Centralization', in *One World Archaeology,* (London & Boston: Unwin Hyman, 1988); Karen Schousboe and Møgens Trolle Larsen, 'Literacy and Society', (Copenhagen: Akademisk Forlag, 1989); Kathryn Lomas, Ruth D. Whitehouse, and John B. Wilkins, 'Literacy and the State in the Ancient Mediterranean', in *Accordia Specialist Studies on the Mediterranean,* ed. by Kathryn Lomas, R.D. Whitehouse, and J.B. Wilkins (London: Accordia Research Institute, 2007).

through which numbers and sequences could be recorded but not speech. Yet if we take numeracy (rather than the encoding of speech) as the central component of early writing systems, the Inka no longer look so unusual. [14] Elizabeth Boone has even argued that symbol systems that do not represent speech – she labels them semasiographic systems – have a number of advantages over those that do. Using the example of Aztec pictography she shows how a system that does not need to be convertible into speech is not obliged to present information in a linear fashion. Classicists are familiar with the speaker's linearization problem that arises from the need to represent two or three dimensional objects or images in a one dimensional sequence of sounds or signs.[15] Pictography (like cartography) is immune to the distortions linearization entails. Boone goes further to argue that with the Scientific Revolution, prose became inadequate as a means of representing some kinds of information and that this inadequacy gave rise to mathematical formulae and other schematic aids. She draws analogies with the notational systems used to record music, choreography and molecular structures.[16] Pictures, not prose, made scientific progress possible.

Literacy as Semiological Competence

What if – instead of fetishing utterance by placing it as the contested centre of the dyad literacy/orality - we thought of writing as just one variety of a much wider set of graphic symbols that also represented numbers, quantities and things, and the

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[14] For suggestive discussions see Luca Zaghetto, 'Iconography and Language. The Missing Link', in *Literacy and the State in the Ancient Mediterranean,* ed. by Kathryn Lomas, R.D. Whitehouse, and J.B. Wilkins (London: Accordia Research Institute, 2007), pp. 171-81; Steve Driscoll, 'Power and Authority in Early Historic Scotland: Pictish Symbol Stones and Other Documents', in *State and Society. The Emergence and Development of Social Hierarchy and Political Centralization,* ed. by John Gledhill, Barbara Bender, and Møgens Trolle Larsen (London & Boston: Unwin Hyman, 1988), pp. 215-36.
[15] Don Fowler, 'Narrate and Describe. The Problem of Ekphrasis', *Journal of Roman Studies,* 81 (1991).
[16] Elizabeth Hill Boone, 'Beyond Writing', in *The First Writing. Script Invention as History and Process,* ed. by Stephen Houston (Cambridge: Cambridge University Press, 2004), pp. 313-48.

relationships between them? Literacy, as an attribute of human beings, would no longer mean the ability to vocalize texts and record utterances. It would become a generalized communicative competence in using graphic symbols.

Competence is clearly central to all our understandings of literacy. For most modern theorists of literacy the term denotes a broad competence in reading and writing. [17] Goody recognized too that key competences included the ability to use lists, calendars, timetables and the like. [18] Today "literacy" is often used metaphorically, as in the terms "computer literacy" or "emotional literacy", to mean a broad competence in handling various communicative systems. These competences goes well beyond mastery of pairs of skills like 'reading and writing', 'transmitting and receiving', or 'encoding and decoding', and some of these usages are arguably more than metaphorical.

Competence with sign systems involves complex skills and a sensitivity to context. Even with near phonetic systems, there are many words that are visually indistinguishable and can be differentiated only by their context. Readers often have to understand a good deal about formatting too, not just punctuation and capitalization but also how to interpret paragraph breaks and abbreviations, which font variations are significant for meaning and so on. When we look at individual ancient texts, whether papyri or inscriptions or ostraka or writing tablets, we realize at once that ancient readers needed not only to know their letters (*litteras scire*) but also to understand numbers, format and the rest.

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[17] For a clear statement David R. Olson, 'Why Literacy Matters, Then and Now', in *Ancient Literacies. The Culture of Reading in Greece and Rome,* ed. by William A. Johnson and Holt N. Parker (New York & Oxford: Oxford University Press, 2009), pp. 385-403.

[18] Remedied in Jack R. Goody, *The Interface between the Written and the Oral*, (Cambridge: Cambridge University Press, 1987). and cf. Sylvia Scribner and Michael Cole, *The Psychology of Literacy*, (Cambridge MA & London: Harvard University Press, 1981). Jack R. Goody, *The Logic of Writing and the Organization of Society*, (Cambridge: Cambridge University Press, 1986) considers what might be terms the pragmatic uses of non-alphabetic scripts in the ancient world.

This is particularly clear, for example, with Latin epigraphy. Epigraphists increasingly stress how much meaning was conveyed by the material, shape and arrangements of inscriptions (and their location and relations with surrounding texts and structures of course). Many 'texts' in fact often consisted largely of numbers, and what we usually call abbreviations. Were they always abbreviations, or had some come to function effectively as ideograms? Was the common formula D M at the top of tombstones generally understood as a convenient shorthand for D(is) M(anibus), as we usually restore it, or did it function to arrest the eye and identify the text that followed as funerary? All inscribed tombstones use writing to identify the deceased and many also identify the dedicator, but much of the other information (age, military unit is a soldier, tribe, offices or ranks held etc.) is typically presented in ways that need considerable expansion to make a text legible to someone without special knowledge.

These considerations are even more obvious when we consider some of the more complex documents to have survived from the ancient world. The Feriale Duranum, a papyrus calendar found at Dura Europos on the Euphrates and probably belonging to a Roman unit posted there in the early third century AD, records the dates of rituals presumably to be performed each year. Every entry consists of a date, the name of the festival and the specification of a victim. The entries are arranged in columns for each month, read top to bottom and then left to right. These conventions were used all over the Roman world for centuries, adapted to other languages and religions, containing different sequences of festivals, sometimes modified as here to list victims, sometimes used (with an entry for every day) to regulate permitted civic activities, and so on. Most calendars use complex signs as well as actual words.

Virtually none include a single spoken sentence.[19] Similar considerations apply to the papyrus land registers from Ptolemaic and Roman Egypt and to itineraries known in a range of media. Coinage is another medium in which images, size, weight, material and numerical marks all worked together with letters to create meaning. How vital was literacy (in the conventional narrow sense) to coin users, as opposed to numeracy, some sense of quantities, and of the values implied by different metals?

Nicholas Purcell, in a path breaking article entitled 'Literate Games' has argued that when we consider what skills were needed to play *alea, latrunculi, duodecim scripta* and all those other games of skill that involved manipulation of counters and signs, often on a board or frame, we find that these skills were exactly those needed by members of an urban populace who habitually had to deal with cash transactions, with weights and measures, and calendars and so on in their everyday life.[20] Calendars, board games and epigraphy alike demand appreciation of the significance of sequences and relative spacing. Michael Baxandall made a similar point about the relationship between the skills that fifteenth century Italian city dwellers needed to conduct commerce and run businesses and the skills demanded of them to appreciate (or create) early renaissance paintings.[21] Gauging volumes and weights, comparing proportions and envisaging spaces were all transferable skills, skills that artists might exploit. There is nothing very mysterious in this, indeed it would perhaps be odder if societies developed sign systems that bore no resemblance

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[19] For interesting recent thoughts on calendars Michele Renee Salzman, *On Roman Time. The Codex-Calendar of 354 and the Rhythms of Urban Life in Late Antiquity* (Berkeley & Oxford: University of California Press, 1990); Jörg Rüpke, *Kalendar Und Öffentlichkeit. Die Geschichte Der Repräsentation Und Religiösen Qualifikationen Von Zeit Im Rom*, (Berlin: Walter de Gruyter, 1995); Ray Laurence and Christopher Smith, 'Ritual, Time and Power in Ancient Rome', *Accordia Research Papers,* 6 (1995-6); Daryn Lehoux, *Astronomy, Weather and Calendars in the Ancient World. Parapegmata and Related Texts in Classical and near Eastern Societies.*, (Cambridge: Cambridge University Press, 2007).
[20] Nicholas Purcell, 'Literate Games. Roman Urban Society and the Game of Alea', *Past and Present,* 147 (1995).
[21] Michael Baxandall, *Painting and Experience in Fifteenth-Century Italy*, (Oxford: Oxford University Press, 1972).

to the world of experience. But the implications for the notion of literacy are important. The most useful cross-cultural definitions of ancient literacy will emphasize competence in using a broad set of graphic sign systems that included - but were not limited to - signs used to encode speech.

Semiological Competence in Practice

The advantage of replacing literacy with a focus on wider competences in sign using can be illustrated if we consider ancient economic activity. This could in fact be done for almost any period of antiquity, but I shall focus on the best documented, also the period of most intense economic activity, the early Roman empire, because it is to the documents of this period that a mass of recent attention has been devoted.[22] A range of mundane objects were made bearing a mixture of numbers and letters and other signs or else had marks scratched, impressed, stamped, painted or otherwise fixed on them in the course of their use life. Some were generated in the production of bricks and *terra sigillata*; others marked quantities on metal ingots and container amphorae. Mixtures of numbers, signs and letters also appear on weights and measures; on tax documents; and in receipts for sale, storage and transshipment. This use of graphic signs was completely routine in commercial and manufacturing activities of any scale beyond the immediately local. Most participants in these enterprises must have had some level of competence in handling them.

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[22] William Vernon Harris, 'The Inscribed Economy. Production and Distribution in the Roman Empire in the Light of Instrumentum Domesticum', in *Journal of Roman Archaeology Supplements,* ed. by J.H. Humphrey (Ann Arbor MI: Journal of Roman Archaeology, 1993). Greg Woolf, 'Literacy or Literacies in Rome?', in *Ancient Literacies. The Culture of Reading in Greece and Rome,* ed. by William A. Johnson and Holt N. Parker (New York & Oxford: Oxford University Press, 2009), pp. 46-68 pp. 56-59); Purcell; Mireille Corbier, *Donner à Voir, Donner à Lire. Mémoire et Communication dans la Rome ancienne*, (Paris: CNRS Editions, 2006), p. especially chapters 9 & 10; David Johnston, *Roman Law in Context*, (Cambridge: Cambridge University Press, 1999).

Consider the Dressel 20 amphorae that transported, mostly, olive oil produced on the banks of the Guadalquivir in Roman Baetica to its eventual places of consumption or decanting.[23] Almost impossible to reuse, these distinctive globular amphorae have been recovered in great numbers from Monte Testaccio beside the Tiber port in Rome, from Roman Britain where it is the most commonly imported amphora type, and from the Rhineland. At Rome and in the camps of the northern frontier this commerce provided privileged populations with a key component of their diet, and also fuel for lighting and an essential ingredient for bathing culture. And it provides us with some good examples of the use of graphic symbol systems. The first symbol concerned was the amphora itself: its distinctive form marking it out as different from those used for wine (mostly derived ultimately from forms in use in the Hellenistic east Aegean) and also from the containers used to bring African oil to Rome. The ultimate consumers, as well as those purchasing small numbers of amphorae presumably on the docks, would presumably see the Dressel 20 form as a guarantee of provenance, and perhaps of quality too. The amphorae themselves were, by this point in their cultural biography, covered in painted labels, *tituli picti*. José Remesal Rodríguez provides one example that reads as follows:

XCI
L.ANTONI EPAPHRODITI
CCXIIII

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[23] The vast bibliography begins from José María. Blázquez Martinez and José Remesal Rodriguez, 'Producción y Commercio del Aceite en la Antiguëdad. Congresso I', (Madrid: Universidad Complutense, 1980); José María. Blázquez Martinez and José Remesal Rodriguez, 'Producción y Commercio del Aceite en la Antiguëdad. Congresso II', (Madrid: Universidad Complutense, 1982); Michel Ponsich, 'Implantation Rurale Antique Sur Le Bas-Guadalquivir, 2 Volumes', (Madrid & Paris: Casa de Velasquez & de Boccard, 1974, 1979). For one influential interpretation of the epigraphy of Dressel 20 see José Remesal Rodríguez, 'Las Ánforas Dressel 20 y su sistema Epigráfico', in *Epigrafía Anfórica,* ed. by José Remesal Rodríguez (Barcelona: Publicacions i Edicions de la Universitat de Barcelona, 2004), pp. 127-48. For a different view Ulrike Ehmig, 'Werbung oder Konsequenzen aus den Risiken bei Seetransporten? Zur Funktion von Tituli Picti auf Römischen Amphoren im Kontext von Seedarlehen', in *Lege Artis. Festschrift für Hans-Markus Von Kaenel,* ed. by Fleur Kemmers, Thomas Maurer, and Britta Rabe (Bonn: Verlag Dr. Rudolf Habelt, 2014), pp. 85-99.

<pre>
            acc g primus
    charisianum aeliae aelian lviii

            ccxiiii anice
              D E N
            Iuli Lucan…
            tincares…..
            HXLV….
</pre>

This representation tidies up the actual arrangement of the tituli: the fourth and fifth lines were added on a slant across the shoulder of the amphora: each element was in fact was painted in a slightly different size and with different spacing, rather as we might use different fonts and colours. How exactly they should be read and how they were used is a matter of debated: we lack the knowledge and context that was obvious to ancient users. The numbers are probably weights empty and full in Roman pounds. Other labels presumably refer to the origin of the oil, and the names are a combination of owners, shippers, distributors and perhaps officials verifying the provenance. One school of thought sees these *tituli picti* added at each stage of a highly organized system of state-driven supply. Another sees them as mitigating the risks of loss or fraud involved when the products of many different producers spent time on the same vessels on their way to distant markets. However we reconstruct the mechanics of distribution, it is common ground that these texts could only function if some prior knowledge of labeling conventions was widely shared among those who handled them. Many other documents must have been generated in the course of this business: in Baetica *vilici* of the olive groves may have kept records of the kind Cato recommended centuries before, while the potters who made the amphorae perhaps had commercial contracts of the kind attested from Roman Egypt. It is likely that some records were generated at each transshipment point, on the Baetis, at the sea port and then again at their destination. Amphorae that ended up in Rhineland's military camps and on Hadrian's wall may have registered in the army's complex

provisioning records of which hardly any trace has survived. Sale and resale could have generated documents too.[24]

　　We may call this commercial or craft literacy if we wished, but much of the knowledge required was specific to handling Dressel 20 amphorae full of olive oil, and not easily transferred to other products. The conventions were slightly different, for example, for the preserved fish products from the south of Gaul, which travelled different routes in slightly different shaped amphorae, marked up with labels that detailed the exact product contained, the quality and or place of origin, the quantity contained and the name of a merchant.[25] The skills needed to participate in these various systems was both less and more than those generally denoted by the term literacy. Less than literacy because none of these labels constitute sentences or even phrases: we can read them perfectly, but cannot reconstruct any ancient utterances from them. The greater part consist of numbers or symbols, and much of the meaning is conveyed in what we might call the formatting. Only a few of these *tituli* could actually be phonetically spelled out – the names of places, of people or occasionally of a product. On the Gallic amphorae we can read names in the stamps – Seneca and Sacrovir among them – but most are abbreviated, as in the base stamp FLAV FEC. One Dressel 16 from London is labeled LIQUAM (presumably for the fish product *liquamen*) ANTIPOL (made in the style of Antipolis?). Those who purchased, sold on and then marketed the product knew enough to interpret the labels (and probably could recognize characteristic amphora types as well). This is a sign system more than it is the encoding of spoken utterances. Yet it demands more than conventional

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[24] For the documents that must have been generated by the export of Egyptian grain to Rome see Geoffrey Rickman, 'Problems of Transport and Storage of Goods for Distribution: Les Traces Oubliées', in *La Mémoire Perdue: Recherches sur l'administration romaine,* ed. by Claudia Moatti (Rome: École française de Rome, 1998), pp. 317-24.

[25] Fanette Laubenheimer, 'L'épigraphie Des Amphores Gauloises', in *Epigrafía Anfórica,* ed. by José Remesal Rodríguez (Barcelona: Publicacions i Edicions de la Universitat de Barcelona, 2004), pp. 275-88.

literacy because the knowledge necessary to make use of these annotations was not a generalized skill, but a working knowledge of the specifics of the trade. Understanding numbers, weights and measures was the really essential component.

Spanish oil and Gallic fish products were not unusual. Perhaps most long distance exchange systems depended on some means of transmitting information along with the product since the alternative – to have someone accompany it from origin to point of consumption – would have been expensive and often impractical. Attempts to reconstruct examples of these lost communications formed part of Claude Nicolet's project *La Mémoire perdue*.[26] The nature of the records generated by the collection, transportation and distribution of grain can be reconstructed in some detail, even if almost no traces of that documentation are left. The epigraphy of the brick trade has also been studied in detail. As with amphora epigraphy much remains unclear precisely because these texts were not created for the general reader but for makers, transporters and sellers who mostly just needed to know the numbers, weights and provenances.[27] The kiln talleys found on Gallic sigillata vessels are so esoteric and schematic that there is serious debate about what language they were written in.[28] The simple answer is that they are only incidentally and occasionally records of spoken language at all. Texts and objects of this kind test our conventional understandings of literacy to the limit. The ubiquity of marks and annotations on manufactured goods and containers or all kinds has led some interpreters to argue that

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[26] Claudia Moatti, 'La Mémoire Perdue: Recherches Sur L'administration Romaine.', in *Collection De L'école Française De Rome,* (Rome: École française de Rome, 1998); Claudia Moatti, 'La Mémoire Perdue Iii. Recherches Sur L'administration Romaine: Le Cas Des Archives Judiciaires Pénales', *Melanges de l'École française à Rome* 112 (2000).

[27] Margareta Steinby, 'L'organizzazione produttiva dei laterizi: un modello interpretativo per L'instrumentum in genere?', in *The Inscribed Economy. Production and Distribution in the Roman Empire in the Light of Instrumentum Domesticum,* ed. by William Vernon Harris (Ann Arbor MI: Journal of Roman Archaeology, 1993), pp. 139-43.

[28] Robert Marichal, *Les Graffites de la Graufesenque*, (Paris: Editions CNRS, 1988); Wolfgang Meid, 'Gallisch oder Lateinisch? Soziolinguistische und andere Bemerkungen zu Populären Gallo-Lateinischen Inschriften', *Aufstieg und Niedergang der römischen Welt,* 2 (1983).

"literacy levels" were generally higher in antiquity than is commonly thought.[29] I suggest that is the wrong conclusion to draw. Competence in handling olive oil containers or kiln records was not simply a diminished form of a general competence that when fully developed allowed one to read the *Aeneid.* After all, a highly competent reader of Virgil might have struggled to make sense of the sign systems and associated practices employed in the docks and brickyards of the Mediterranean. Better to say we are looking at overlapping sets of competences that made use of related graphic systems that included within them both signs for numbers and signs for sounds. Put that way, there were a lot of literates in the ancient world.

Mass Illiteracy?

The burden of this argument has been to suggest a reconceptualization of 'literacy' that places less stress on the ability to move back and forth between speech and text, or orality and literacy, and more on the capacity to handle complex graphic systems. Many of the inhabitants of the ancient world have a claim to be considered literate in the sense that they say they had sufficient competence with symbols for the lives they led. What about *illiteracy*? Olson and other educationalists are correct that in the modern world low literacy levels correlate with economic and political marginalization. That marginalization can be expressed in the plight of immigrants who cannot cope with official forms, or that of adult non-readers who conceal their inability to read in elaborate artifice, turning the pages of newspapers each day so that

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[29] The argument has become framed as a challenge to the central arguments of William Vernon Harris, *Ancient Literacy*, (Cambridge MA: Harvard University Press, 1989). Along with two collections of responses J.H. Humphrey, 'Literacy in the Roman World', in *Journal of Roman Archaeology Supplements,* (Ann Arbor MI: Journal of Roman Archaeology, 1991); Robin Lane Fox, 'Literacy and Power in Early Christianity', in *Literacy and Power in the Ancient World,* ed. by Alan Bowman and Greg Woolf (Cambridge: Cambridge University Press, 1994), pp. 126-48. the main challenge has come from those working with Hellenistic and Roman period papyri. But any quantitative statement faces real difficulties with the question What counts as literacy?

their coworkers and families never suspect their shame. Illiteracy is real enough today, a humiliating condition that disempowers those afflicted with it. But it derives from different roots in the modern world. Large scale illiteracy today, I suggest, is largely a symptom of rapid social change, the consequence of accelerating urbanization and migration, of the expansion of state bureaucracies in the Global South faster than the spread of the skills needed to thrive within them. Some ancient societies also experienced social transformations of this kind as states and economies expanded in range and complexity: the spread of a new language and fiscal system in Ptolemaic Egypt must have been profoundly disorientating for many indigenous Egyptians, and no doubt the same was true for the first generations of western provincials forced to deal with legal and administrative text in Latin. But the scale and pace of these changes was very moderate compared to what we see today. Illiteracy, as such, is not well attested in ancient testimony. The *loci communes* concern Egyptian peasants compelled to participate in a society suddenly making more use than before of written records.[30] Most of the people of the ancient world had more or less the competences with graphic systems that they needed for everyday life.

Does this mean that all writing systems are equally good and that - except in times of rapid change – most people are as literate as they need to be? Clearly not. The evolution of writing systems is well documented, as is their occasional complete disappearance.[31] Pen and paint brush replaced earlier implements, and markets developed in light and durable writing materials across the Old World. Part of the success of all those alphabets and abjads descended from the first ones invented in Syria at the start of the Iron Age must relate to these technological advances, and

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[30] Herbert C. Youtie, 'Β ρ α δ έ ω ς Γ ρ ά φ ω ν : Between Literacy and Illiteracy', *Greek, Roman and Byzantine Studies,* 12 (1971); Keith Hopkins, 'Conquest by Book', in *Literacy in the Roman World,* ed. by J.H. Humphrey (Ann Arbor MI: Journal of Roman Archaeology, 1991), pp. 133-58.
[31] John Baines, John Bennet, and Stephen Houston (ed.), 'The Disappearance of Writing Systems. Perspectives on Literacy and Communication', (London: Equinox, 2008).

perhaps sign systems that were more flexible and quicker to learn were favoured over others. Aramaic, Greek, Latin, Coptic and Arabic all benefited from these advances, but the success of these languages and literatures can hardly be explained by new writing systems alone. But writing systems disappeared too when the particular communities that employed them withered away. Both in Egypt and Babylonia it was temples that were the last places to use scripts developed in the Bronze Age, and it was there demise, not a deficiency in those writing systems, that brought about their end. Equally new writing technologies were often pioneered by particular groups with definite purposes in mind. If they were then often coopted to new ends – as when the codex was enthusiastically adopted by Christian communities - they often coexisted with earlier systems for long periods. Many writing systems never had many users, but this reflected on the whole the small number of people who needed to use them.

Mass illiteracy, however, with its inevitably modern connotations, is not a very productive way of characterizing any antiquity, classical or Near Eastern or indeed Pre-Columbian. If literacy levels, which we can barely measure even if we could agree on how to define literacy, merely provide another way of expressing the unmodernity of antiquity… well perhaps there are more interesting questions to ask. Fortunately a great deal of material has survived with which to answer those other questions.

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