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VOLUME 3

THE OXFORD ENCYCLOPEDIA OF ANCIENT GREECE AND ROME

Michael Gagarin

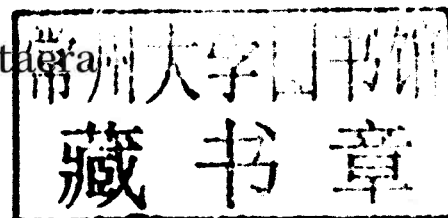
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Earthquakes–Hetaera



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COMMON ABBREVIATIONS USED IN THIS WORK

AUC	<i>ab urbe condita</i> , from the founding of the city of Rome
b.	born
BCE	before the common era (= BC)
c.	<i>circa</i> , about, approximately
CE	common era (= AD)
cf.	<i>confer</i> , compare
d.	died
diss.	dissertation
ed.	editor (pl., eds), edition
f.	and following (pl., ff.)
fl.	<i>floruit</i> , flourished
frag.	fragment
l.	line (pl., ll.)
m	meter, meters
n.	note
n.d.	no date
no.	number
n.p.	no place
n.s.	new series
p.	page (pl., pp.)
pt.	part
r.	reigned
rev.	revised
ser.	series
supp.	supplement
s.v.	<i>sub verbo</i> , under the headword
vol.	volume (pl., vols.)
*	reconstructed or hypothetical form
[]	false or doubtful attributions





THE OXFORD ENCYCLOPEDIA OF
ANCIENT GREECE AND ROME

E

EARTHQUAKES

The Mediterranean region has been a center of seismic activity throughout human history, because, as the science of plate tectonics has established, the African continental plate meets the European plate along a line running roughly east-west beneath the Mediterranean and Asia Minor. Earthquakes are particularly frequent in Greece and the Aegean, where the tectonic structure is complex, and relatively frequent in Italy and Asia Minor. Hence earthquakes were a familiar phenomenon in the classical world. Dozens of specific earthquakes are mentioned by classical writers, chiefly historians, but also in other genres, including geographical, philosophical, and scientific writing. Ancient descriptions of earthquakes are generally more concerned with their religious or socio-political consequences than with scientific description; but there were attempts to catalog the earthquakes that had occurred in Greece, by Demetrius of Callatis, Demetrius of Scepsis, and others, though these works do not survive. There are also many inscriptions, and occasional coin issues, that commemorate actions taken after earthquakes, including religious measures, repair and rebuilding work, and benefactions by communities or individuals to fund such work. It became increasingly common for badly affected cities to appeal to neighboring cities or rulers for help;

Hellenistic monarchs and, later, Roman emperors were prominent in giving financial and practical aid. Sometimes there is archaeological evidence of earthquake damage to buildings in classical times; in particular the destruction of Pompeii and Herculaneum in the eruption of Vesuvius in 79 CE preserved evidence of the effects of a powerful earthquake in the Campania region in 62 CE, and of subsequent repairs and rebuilding, some of which were still incomplete when the eruption occurred. Pliny, in a wide-ranging discussion of earthquakes (*Natural History* 2.191–203), states that certain building structures and materials (such as vaulting and brick) are more resistant to earthquakes, but it is uncertain whether such principles influenced ancient building practice, for the features concerned can always be explained in other ways.

Among the most famous earthquakes in antiquity were one in the mid-460s BCE that severely damaged Sparta and led to a revolt of the helots and war with the Messenians; major earthquakes and tsunamis (seismic sea waves) in 373 BCE that destroyed the towns of Bura and Helice on the Achaean coast of the Corinthian gulf; one at Rhodes around 227 BCE that caused the collapse of the famous Colossus; one that devastated twelve cities in Asia Minor in 17 CE; and the Campanian earthquake of 62 CE, already mentioned.

From earliest times the Greeks believed that earthquakes were caused by the god Poseidon, who in Homer is called the “earthshaker” (*seisichthōn*). In the Greek world, earthquakes were sometimes interpreted as divine punishments for past wrongdoing, sometimes as omens for the future, either good or, more commonly, bad. Hence even a slight earthquake could lead to the abandonment of a public meeting or a military expedition, and prayers or sacrifices could be offered to avert bad consequences. In Rome major earthquakes were regularly included in the annual lists of prodigies, and the senate oversaw the religious measures required to deal with them. But from the earliest stages of rational speculation about the physical world in Greece, earthquakes attracted the attention of philosophers. Thales reportedly said that the earth quakes because it floats on water, and sometimes rocks from side to side; other pre-Socratic philosophers variously said that water or air or fire caused cracking or subsidence or explosions in hollows beneath the earth, and this produced earthquakes on the surface. The fullest discussions of earthquakes that survive are by Aristotle (*Meteorologica* 2.9, 3.1) and Seneca (*Natural Questions* 6); Posidonius (fragments 12, 230–232, Edelstein-Kidd) also made an important contribution to the subject, though his work is lost. The prevalent theory, espoused with slight variations by these three among others, was that earthquakes were caused by violent winds, or air (*pneuma*) under pressure, beneath the earth. Empirical evidence was adduced in support: knowledge of cave systems and underground rivers lent weight to the hypothesis that the whole earth was riddled with cavities and passages; and volcanic eruptions gave evidence of air emerging under pressure from underground. As well as discussing the causes of earthquakes, some writers attempted to classify different types of earthquakes, and to identify regions that were particularly prone to, or relatively free from, earthquakes. There was popular lore about predicting earthquakes, from the behavior of birds, for example, or of water in wells, and Pherecydes and Pythagoras were said to have made successful predictions.

[See also Aristotle, *subentry* Aristotle’s Life and Philosophy; Colossus; Pompeii and Herculaneum; Pliny the Elder; Pompeii; Posidonius of Apamea; and Seneca the Younger.]

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Harry M. Hine

ECLIPSES

Humankind has always been fascinated by celestial phenomena. Of particular interest, both solar and lunar eclipses were sources of mystery and superstition. Babylonians began to keep eclipse records from c. 700 BCE, and Greek philosophers theorized about their causes and attempted to predict them. The authenticity of Thales’ prediction of a solar eclipse in 585 BCE remains contentious.

Anaximander (610–c. 547) envisioned the solar system as a series of concentric fiery wheels whose light we see through vents; eclipses then occur as those vents are occluded. Xenophanes (c. 560–c. 478) explained solar eclipses as the banishment of the sun into an uninhabited region of the earth where it “treads on nothing.” To Heraclitus

Aristotle’s Proof of Earth’s Sphericity

As the moon wanes during an eclipse, it retains a curved shape, which is possible only if the earth, whose shadow causes the eclipse, is spherical: *On the Heavens* 2.11 (297a8–298a20).

(fl. 510–490), celestial bodies were bowls filled with fire, and eclipses and lunar phases occurred as these bowls turned away from the earth. To the Pythagorean Philolaus (c. 470–390), lunar eclipses were caused when earth or “counter-earth” came between the moon and sun; “counter-earth” may have been invented to account for the greater frequency of lunar eclipses over solar.

Parmenides (fl. 490–450) seems to have understood that the moon’s lighted side always faces the sun, but Anaxagoras (c. 500–428) was the first to recognize that the moon reflects light from the sun. He correctly explained solar eclipses as the interposition of the moon between the earth and sun, and lunar eclipses as the earth’s shadow falling on the face of the moon. Thucydides (fl. 430–c. 400) understood that solar eclipses occurred only during a new moon, and lunar eclipses only during a full moon. Aristotle used lunar eclipses to “prove” the earth’s sphericity.

Aristarchus (fl. c. 270) speculated on the relative sizes and distances of the sun and moon: that they appear to be the same size explains how eclipses can be complete. Hipparchus’ collection of solar and lunar eclipses spanning six hundred years (extending back to the eighth century BCE) included extensive Babylonian material, hence establishing the indebtedness of Greek mathematical astronomy to Babylon. By comparing his own lunar eclipse observations with those of his predecessor the astronomer Timocharis (fl. c. 295–272), Hipparchus

(fl. 146–127) significantly discovered the precession of the equinoxes. He further used lunar eclipses to deduce stellar longitudes. Claudius Ptolemy (fl. c. 127–c. 170 CE), relying greatly on Hipparchus, applied solar and lunar models to study and predict eclipses. Greek geographical writers advocated using simultaneous eclipse observations to establish terrestrial longitudes, a method employed with the eclipse of 20 September 331 BCE, observed at Carthage and Arbīl, eleven days before Alexander the Great’s defeat of Darius III.

That Archilochus deemed the solar eclipse of 648 BCE as “inexplicable” likely represents opinions of average citizens. Well into the Roman era, the non-elite considered eclipses ominous and significant. Nicias’ retreat from Syracuse (413 BCE) was delayed because of a lunar eclipse; Attalus I ameliorated Gallic troops superstitious of a lunar eclipse with promises of land to retain their loyalty (213 BCE); and Pannonian troops under Drusus (the Elder) mutinied in fear of a lunar eclipse (14 CE). Pliny reported irremediable evils resulting if a woman’s menses coincides with an eclipse and that *glōs-sopetra* (tongue-stone), essential for selenomancy, falls to earth only during lunar eclipses (or lunar waning). Eclipses have been retroactively associated with major legendary and historical events: Xerxes crossing Hellespont, Odysseus’ executing Penelope’s suitors.

About 250 eclipses are reported in classical literature, and these records provide the only reliable dates for historical events, enabling the tracing of Roman calendrical deviations.

[See also Anaximander; Astronomy; Calendar, Greek; Heraclitus; Parmenides; Ptolemy, Claudius; Thucydides; Time and Timekeeping, Greek; and Xenophanes of Colophon.]

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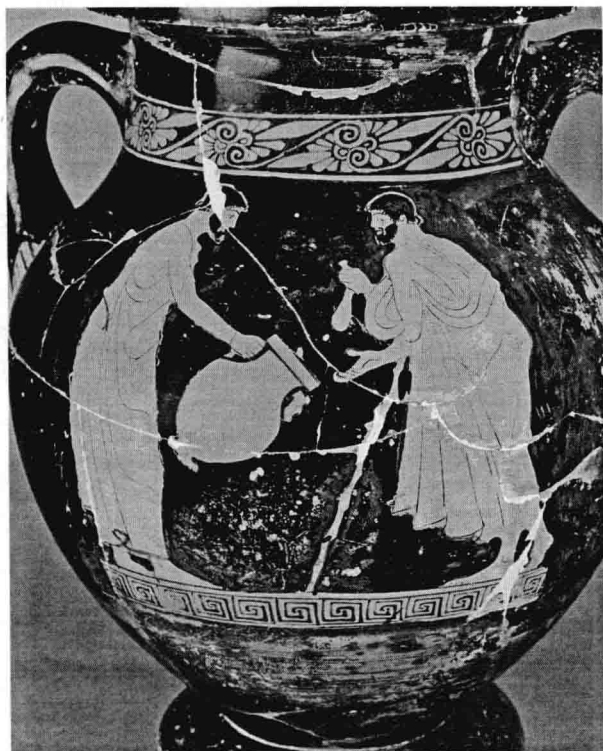
Thales’ Eclipse Predictions

O. Neugebauer argues that there is no evidence that Babylonian astronomers, who were thought to have influenced Thales, recognized the connection between astral events and geographical coordinates. The mathematical tools necessary for predicting solar eclipses were simply unknown at that time. Dmitri V. Panchenko argues that Thales’ prediction has been confirmed: “Thales’s Prediction of a Solar Eclipse,” *Journal for the History of Astronomy* 25 (1994): 277–288.

Georgia L. Irby-Massie

ECONOMY AND ECONOMIC THEORY, GREEK

The modern study of the economies of ancient Greece has been dominated by two debates and one scholar. One debate has been between the primitivists and the modernists. The former position was introduced by Karl Bücher, who introduced his *oikos* theory in 1893 (*Die Entstehung der Volkswirtschaft*), arguing that the vast majority of the people in the ancient Mediterranean were concerned economically with no social institution larger than the *oikos* (household). Eduard Meyer countered with his modernist position in 1895 (*Wirtschaftliche Entwicklung des Altertums*), asserting that he saw the seventh and sixth centuries BCE in Greece corresponding closely with the fourteenth and fifteenth centuries CE in Europe, which ushered in the modern world just as the earlier period had ushered in the Classical period.



Greek Economy. Men buying amphorae. Red-figure amphora by the Boreas Painter, 480 BCE. MUSÉE DU LOUVRE, PARIS, INV. CA 1852/ERICH LESSING/ART RESOURCE, NY

The second debate, between substantivists and formalists, is the younger and more persistent one. Substantivists, following Karl Polanyi, have argued that the ancient economy is embedded in noneconomic social institutions and thus must be studied as a collection of sociological phenomena; formalists use classical economics theory to study the same material. The scholar who has loomed over the study of the ancient economy is Moses I. Finley, who before emigrating to the United Kingdom worked closely in New York first with William Westermann at Columbia and later with Polanyi. Finley's shadow is less burdensome today than in the years before and after the publication of his Sather Lectures in 1973, but his position—that the economy of the ancient Greeks (as well as the Romans) was embedded in social relations, and society's goals were recognition, or status, rather than wealth—remains the default starting point. His primary critics today follow the lead of the sociologist Mark Granovetter, who criticized Finley and other substantivists for oversocializing the economy; more recently cultural historians have accused Finley of undersocializing the economy by taking the written evidence at face value instead of recognizing the role of ideology in written documents. The field at the start of the third millennium continues to evolve.

The Bronze and Dark Ages. The Greeks were little different from the other ethnic groups that shared the coast of the Mediterranean Sea. They shared with those neighbors a common diet, the "Mediterranean triad" of grains, grapes, and olives. Most of their economic efforts went into agricultural production, and both households and governments gave much attention to it. Athens and many other poleis became dependent on grain imports. The Greek landscape is characterized by mountainous stretches that contribute to interannual climatic variability, which engendered both fierce independence and a cooperative spirit. Thus it is difficult to speak of a single Greek economy, for the many poleis, like the *oikoi* that they consisted of, strived for self-sufficiency (*autarkeia*) and did so in ways peculiar to the circumstances of each. Nevertheless

it is possible to characterize and speak about the economy in broad terms in three periods: the Mycenaean age (c. 1600–1200 BCE) and the subsequent Dark Age, the Greek Archaic and Classical periods (c. 750–323 BCE), and the Hellenistic period (323 BCE and forward).

The first economic surge in the Aegean was centered on Crete until the Mycenaean Greeks took over the island in about 1400 BCE. The economy there and on the mainland was fundamentally redistributive and in this regard differed little from the hydraulic civilizations of the Near East. But there are emerging patterns of ceramics production and accompanying arguments that point to production centers functioning without regard for the center; there is more work still to be done before a new big picture can be drawn.

The Linear B tablets indicate that great flocks were kept by the economic centers and that these centers were able to commandeer large amounts of material and labor, especially in a time of crisis. Three aspects of the economy of the Mycenaeans are discernible in the tablets:

1. Agriculture and livestock. The main grains were wheat and barley; record keepers also account for wine and oils. There were at least two types of land, *ko-to-na ki-ti-me-na* and *ko-to-na ke-ke-me-na*, which may refer respectively to privately held and publicly held property, but this is not certain. Enormous flocks of sheep and also of bovids are indicated in the tablets.
2. Manufacture of textiles and metals. Wool (from sheep and goats) and linen (from grown flax) are mentioned regularly in the tablets. There appear to have been villages that specialized in textile production for delivery to the palace. There were experts working in precious (gold and silver) and ordinary (copper, tin, lead) metals. Iron, found abundantly in the ground in Greece, existed in processed form but awaited improved technology before becoming a common material for weapons and agricultural equipment.
3. Trade. It is clear from the tablets that some commodities were created in excess of domestic need: examples are wool production at Knossos and metalwork and linen goods at Pylos. Mycenaean-produced items have been found from the sixteenth century BCE forward as far west as Sicily and as far east as the Levant and Egypt. Activity abroad increases again beginning in about 1400 BCE.

It can be concluded that the population worked within a system that focused on the center but served the center and the periphery well. Beginning in about 1200 BCE, the redistributive formations collapsed in all locations; the ensuing stagnation after 1050 persisted until shortly after 850.

Reforms of Solon and the Classical Age. The emergence from the Dark Age before 800 BCE was without the redistributive formations of the Bronze Age, which were nevertheless not forgotten—consider Agamemnon's offer to Achilles in *Iliad* 9 of seven cities and their obedient populations. In the new world, which lasted half a millennium, there were two organizing formations, one new, the polis, and one old, the *oikos*. The *oikos* was the household of the ordinary Greek family, its population consisting of its leader, his family spanning two generations, and other free and nonfree individuals. Hesiod is the earliest witness to this essential social and economic formation. The polis was a community of equal citizens whose participation was in its first centuries economically restricted to those who owned property. These two institutions, the *oikos* and the polis, are prisms through which the ancient Greek economy might be viewed.

Hesiod's farm as it can be seen in *Works and Days* is probably the way that the majority of Greek polis citizens lived from about 700 BCE forward. To judge by the mouths that he had to feed (seven to twelve), Hesiod's farm was between fifteen and twenty-five acres (between six and ten hectares). This was probably a bit larger than the later ordinary Athenian's farm, the size of which was about fifteen acres (six hectares), but it is good to bear in mind that the farm had been twice that size when Hesiod's father

farmed it. Hesiod seems to be under great pressure to make sure that his farm is successful, and that pressure may be what led in Athens, and presumably elsewhere as well, to a crisis. At Athens there was a restructuring of society in about 594 BCE when Solon instituted his *seisachtheia* (shaking off of burdens), which was probably intended to liberate the *hektemoroi* (sixth-parters) from their obligation to pay one-sixth of their production to large landowners. (Alternatively the *hektemoroi* may have been so called because one-sixth was what they paid their wealthy neighbors as protection money.) Solon's other ostensibly political reforms were economically based: he created new categories of citizenship based on property values. The unrest that Solon's reforms were meant to quiet soon returned and were foiled by the rise of tyranny in the form of Peisistratus and his sons, who controlled Athens off and on from 561 until 510 BCE. The Peisistratids maintained popular support by carefully managing agricultural production and by investing their family assets in building programs.

During the Classical period at Athens and elsewhere, self-sufficient *oikoi* produced enough calories to maintain their own populations; any surplus was brought to market. Labor was provided to the *oikos* by its residents, which included slaves, and by hired help. (There is debate over to what extent slave labor was important to Athenian farming, especially on the large estates.) Individual poleis were able to encourage production of certain crops. Solon, for example, encouraged olive cultivation at Athens by forbidding export of any other product; in fact, Athens had begun exporting oil as early as 600 BCE.

Oikos manufacture appears to have been limited to textile production for household use; presumably some of this production could become surplus and bleed into the economy at large. Nonhousehold manufacture was certainly undertaken in a number of areas. Two examples are the ceramics factory of Nicosthenes from the sixth century BCE, which created goods for export, and the shield factory from the fourth century BCE, which was owned by Lysias' metic family.

Individual *oikoi* were involved in trade only exceptionally; poleis, however, were frequently concerned with importing sufficient grain for their populations. This is true of Athens at many times but certainly often beginning in the fourth century BCE. It is unclear whether individual Greeks at Naucratis, the emporium started before 610 BCE at the Canopic mouth of the Nile, were acting for their polis or for themselves.

However sponsored, before the fifth century BCE trade was more haphazard than not. The story of Colaeus's good fortune on a trading expedition (Herodotus 4.152) illustrates this well. However, the introduction of bottomry loans in the fifth century BCE and increased reciprocal relations with the non-Greek polities of the Black Sea brought a complexity to trade that scholars are still sorting through. The trade in grain at Athens accounted for no more than 10 to 15 percent of any annual need, but that percentage is significant, for the state's failure to bring that grain to the retail market would have seriously inflated prices paid by the public.

The polis provided labor opportunities to those with skills in the building trades. At Athens in the mid-fifth century BCE Pericles oversaw the completion of the Long Walls to Piraeus and, like Peisistratus a century earlier, inaugurated an ambitious public-works program that included significant structures in the Agora (e.g., the Hephaestum, 449–444 BCE) and on the Acropolis (e.g., the Parthenon, 447–432 BCE). These projects were funded with cash from the treasury of the Delian League—which covered up to half of Athenian state expenditures—and they provided both points of pride for Athenian citizens and jobs for citizens and metics alike.

Sources of Revenue. Though most individual *oikoi* used the labor of slaves in agriculture and in domestic settings, there were also state-owned slaves. At Athens most of these slaves worked under horrible conditions in the Laurium silver mines south of the urban center. By contrast, Sparta freed up their citizen equals from working by enslaving the entire population of their Messenian neighbors, forcing them, the helots, to farm the Spartans' parcels;

this allowed the Spartans to concentrate full-time on warfare.

In many poleis and certainly in Athens, domestic retail was in the hands of metics, apparently because of the expressed Athenian attitude toward their own dependent labor. Athenians had nothing against hard work, and most citizens worked hard on their farms—witness the daily commute undertaken by Euphiletus in *Lysias* 1. But they did not like to work for somebody else. For this reason they encouraged metics to do their work for them. All that said, Aristotle noted that he knew of citizens who were artisans in the ceramics industry, making very good livings without embarrassment.

As noted above, the activities of the Athenian state in the fifth century BCE were financed up to a half by the tribute that came in to the treasury of the Delian League. Another 20 to 25 percent came from taxes levied on metics, on slave sales, and on other activities closely monitored at the port of Piraeus, which had become an especially thriving international port after the defeat of the Persians in 479 BCE. The remaining 20 to 25 percent was covered by citizen liturgies, used primarily to underwrite shipbuilding and ship maintenance and religious events, including theater competitions. The Delian subsidy was replaced by other allied arrangements in the fourth century BCE, but the fifth-century levels would not be reached again.

As for financial institutions at Athens, many scholars believe that bottomry loans for long-distance trade were available in the early fifth century BCE and became essential in the fourth. Most scholars agree that there were successful bankers as early as the fourth century BCE at Athens, but there is disagreement as to their importance in the quotidian lives of ordinary Athenians.

Although Xenophon (early fourth century BCE) in his *Poroi* (Ways and Means) advocates that policies be introduced that would alleviate the suffering of the poor, an embarrassment to wealthy Athens, Plato is the first to address broader issues of economic planning. In his ideal state in the *Republic*, the lowest class, driven by appetite, will be the moneymaking class. The state will fix limits on wealth;

all transactions will be executed by outsiders. Plato's grasp of the market is flimsy, but Aristotle (384–322 BCE) in his *Politics* reveals an understanding of economic development, in his discussion of barter to acquire goods at a distance and the use of surplus wealth to facilitate trade. Coined money was invented to expand the array of possible exchanges, but this led to the unfortunate idea that accumulation was per se a worthy goal. For Aristotle material goods were a prerequisite to the successful human life, but an excess of necessary goods was problematic, a concern shared by later Stoic thinkers.

The states of Greece lost control of their individual economies with the rise of Philip II of Macedon, whose ascendancy began in 360 BCE and peaked in 338. Shrewd fiscal policies under the shadow of Macedon at Athens allowed the state to plod along. Megara had thrived through the politically perilous fourth century BCE by specializing in the woolen trade.

In the years following the death of Alexander the Great in 323 BCE, so much gold bullion flowed into Greece from Asia that Athens and other states witnessed unprecedented rises in prices and wages. The pieces into which Alexander's world was cut by his successors were not all the same, but they each organized their large territories centrally. Egypt under the Ptolemies and with its new capital Alexandria remained a powerhouse, continuing to supply wheat and barley to the Aegean world. Three outstanding characteristics of the Hellenistic period were the reappearance of enormous redistributive formations, the development of enormous personal and governmental estates, and the growth overall of the economy, perceivable through the survival of huge coin hordes and shipwrecks of unprecedented size. The economic history of Greece ends with the Roman establishment of a free port at Delos in 167/6 BCE, which brought an end to existing profitable Greek harbors, especially at Rhodes.

[See also Agriculture, Greek; Economy and Economic Theory, Roman; Environment; Finance, Greek; Finley, M. I.; Metic; Slavery, *subentry* Slavery in Greece; and Trade and Commerce, Greek.]

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David W. Tandy

ECONOMY AND ECONOMIC THEORY, ROMAN

The material remains of the Roman Empire bear witness to its wealth and power. Although the great public buildings and the lifestyles of the empire's elite have usually claimed historians' attention, developments in the living conditions of the masses were equally striking. Compared with the rest of the ancient world, the typical inhabitant of the Roman Empire had more possessions, and they were of better quality. The spread of new forms of consumption across the empire can be seen as an early example of globalization, and some evidence from bone analysis suggests that there were significant improvements in health as a result of a better diet. The wide distribution of fine-ware ceramics

and the containers used to transport goods like wine, olive oil, and fish sauce hundreds of miles from their place of production indicates the development of large-scale interregional exchange networks; the evidence of datable shipwrecks indicates a substantial rise in maritime traffic from the second century BCE onward.

Rome became a world of cities, promoting the establishment of urban centers on the classical Greek model in regions previously dominated by small, scattered settlements. Rome itself, with a population of approximately a million, was as large as any world city before the nineteenth century, and various lesser cities like Alexandria, Antioch, Carthage, and, from the fourth century, Constantinople would also feature in lists of the most populous centers of the preindustrial world. Both this clear increase in material wealth and the phenomenon of Roman imperialism itself depended on the empire's economic performance: its ability to produce a regular, substantial surplus beyond the needs of subsistence, and the ability of social and political institutions to mobilize this surplus to support conquest, imperial rule, building, and consumption.

Historiography. When comparing Rome with other preindustrial societies, especially classical Greece, there is a clear temptation to see it as, to some extent, modern. For a historian like M. I. Rostovtzeff, whose work in the first half of the twentieth century was crucially influenced by the dramatic increase in archaeological evidence for the everyday life of the empire's inhabitants, Rome was comparable to the later Middle Ages or the early modern period in western Europe. For Rostovtzeff the empire enjoyed significant economic growth and development that originated in the cities of the eastern Mediterranean in the Hellenistic period and that was inspired by a new class of merchants and industrialists that he characterized as a "bourgeoisie" similar to that associated with the birth of modern capitalism. Trade, manufacturing, and material culture all seemed to be developing along the lines of the later European model; the crucial question for a so-called modernizer like Rostovtzeff was why this society had in the end failed to



Distributing Food. Trajan distributing the *alimenta*. Marble panel from the Arch of Trajan, Benevento, Italy. ALINARI/ART RESOURCE, NY

take off into full modernity. Rome's economic history was ultimately marked by this failure, but its sophistication and dynamism in comparison to contemporary societies were nevertheless clear.

The opposing historical tradition, often labeled "primitivism," could be characterized, in contrast to Rostovtzeff's optimism, as pessimistic regarding the ancient literary and material evidence. Whereas modernizers were struck by similarities and parallels, historians like A. H. M. Jones and M. I. Finley constantly emphasized the differences between ancient and modern. Classical antiquity—Finley in particular tended to discuss "the ancient economy" as a whole, without giving any special status to Rome—had failed to take off into modernity because it was utterly different, economically underdeveloped if not actually "primitive," lacking all the qualities that later promoted the birth of capitalism. Greece and Rome had cities, but these were quite different from the dynamic "producer" cities of late medieval Europe. The Greek and Roman cities had trade, in the sense that goods might be moved long

distances, but this was largely directed by the state for noneconomic motives, with no integrated markets or interregional specialization; the trade mainly involved luxuries for the wealthy few. Ancient economic behavior lacked a productive mentality and was dominated by traditional social and moral values, whereas the modern bourgeoisie had developed new economically productive values. The ancients did not conceptualize the economy or see it as a separate part of human existence; the absence of "economic theory" in anything but the most rudimentary sense not only limited the possibility of "economically rational" decision making but also reflected the very limited development of the ancient economy: it was not identified by Greek or Roman thinkers as an object of study because it was so thoroughly embedded in ancient society. Even Aristotle's discussion of exchange and value in the *Nicomachean Ethics*, the closest the ancient world came to an abstract analysis of economic behavior, reveals its precapitalist assumptions in condemning exchange for profit as socially and

morally unacceptable. There are no Roman equivalents of Aristotle's analysis, though there are plenty of similar examples of the domination of traditional, noneconomic values.

Debates between historians on any aspect of the ancient economy have tended since the 1970s to fall into the ruts of the primitivist-modernizer debate. Those two paradigms have largely determined what questions historians address and the terms in which they address them. Was the ancient city a producer (and so economically dynamic) or a consumer? How much interregional trade was there in staple goods, or was trade primarily a matter of luxury goods for the elite and hence economically trivial? Were slaves employed on villas in Roman Italy because they were economically productive or for reasons of social status and conspicuous consumption? There are two obvious reasons for the longevity of this polarized way of viewing the ancient economy. First is the significance of the underlying issues: it does make an enormous difference whether antiquity is conceived as largely similar to the present or as essentially alien, and the choice between these perspectives has political implications in the present, such as whether capitalism is conceived as a universal and eternal phenomenon or merely as a limited phase in human development. Second is the fact that the ancient evidence is always open to different interpretations; even the vast accumulation of archaeological material cannot resolve differences between the interpretative frameworks used to make sense of it. For example, the wide distribution of Italian wine amphorae in Gaul could be equally held up as evidence of significant interregional trade or interpreted more skeptically as the product of army supply networks and other forms of nonmarket redistribution.

This impasse may explain the relative unpopularity of ancient economic history in recent decades, compared with its high point in the 1970s and early 1980s. An upsurge in interest since 2000 has come about above all because of the development of new approaches to old problems, the identification of new sets of questions, and a concerted effort to move beyond the unhelpful polarities of the old

debate. There is not yet a single approach that defines the debate for the future, in the way that Finley's *Ancient Economy* did in 1973, but rather a wide range of approaches drawing on different theoretical traditions, from the "institutional economics" directly inspired by the work of economists like Douglass C. North in the 1980s and 1990s to more "cultural" approaches that echo the ideas of anthropologists working in the tradition of Marshall Sahlins (*Stone Age Economics*, 1972) and Clifford Geertz (*The Interpretation of Cultures*, 1973).

What most of these approaches have in common is a wish to move away from explicit contrasts between antiquity and early modern Europe, on the basis that the mere fact of difference or similarity does not necessarily explain anything. The new approaches focus rather on the specific dynamics of Roman society, with a suspicion of excessive generalization and simplification. Discussion of "the ancient economy" is replaced with an emphasis on the contrasts not only between periods—some continuity between Hellenistic and Roman society in the East may be posited, but the economy of classical Greece is seen to be markedly different in both scale and sophistication—but also between regions, comparing the already highly developed East with the later development of the West under Roman influence. There is extensive debate as to whether Egypt, source of so much valuable evidence on different aspects of economic activity through the surviving papyrus archives, is at all typical of the rest of the Mediterranean, and therefore whether conclusions drawn from Egyptian sources have any wider validity.

Contexts of Economic Activity. One reason for the twenty-first-century focus on temporal and geographic variation is the impact of research on the contexts of economic activity, above all the environmental factors that conditioned individuals' behavior and set the limits of possibility of human effort. The most important characteristic of a pre-industrial economy is its dependence on organic energy, above all human and animal muscle, to perform most tasks, and hence its dependence on agricultural production to feed these sources of