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SHIPPING AMPHORAS AS ECONOMIC INDICATORS

My purpose in this paper is to call attention in summary fashion to a few of the ways in which the study of shipping amphoras is helping us toward an understanding of Roman commerce. As a means of accomplishing that purpose, I thought it might be useful to juxtapose some of the results of my own most recent work on several different varieties of Roman amphoras, in the hope that such juxtaposition might clarify the close interrelationships among all types of Roman amphoras, no matter what their dates or proveniences. With amphoras, the study of any one type of jar inevitably involves the comparative study of other types. Understanding such interrelationships also helps to bring into focus and to put into proper perspective the network of interdependence that characterized the Roman economy from the end of the Second Punic War to at least the end of the 3rd century A.D., and particularly during the Late Republic and the Early Empire.¹

The Latin word *commercium* survives in many modern languages. Basically, it denotes business activity, the interchange or buying and selling of commodities for profit, with the risks that the search for profit involves. Without risk there can be no profit. Study of shipping amphoras indicates that the Romans understood by commerce essentially what the modern world understands. The commercial amphoras that comprise one of the chief groups of finds on Roman sites today, both on land and underwater, thus assume the role of business indexes or indicators. They and the trademarks they bear can indicate who, living where, bought or sold or exchanged what, when, at what risk, and at what profit.

To illustrate the risks of Roman commerce, we have such great amphora shipwrecks as those off the Grand Congloué, off Spargi, Mahdia, Antikythera, Albenga. Such lost ships are silent but

eloquent proof of the gamble which ancient commerce entailed. On the other hand, the Roman Port of Cosa bespeaks the profits, as A.M. McCann's important excavations so clearly document.² The earliest Roman harbor so far studied, an export facility during the last two centuries of the Roman Republic, the Port of Cosa, by the amphoras manufactured there in large numbers, illustrates the history of an enterprise which, after the Second Punic War, grew steadily in size and scope until it had become one of the major exporters of wine from Italy to the western Mediterranean. The stamped amphora finds in the port and on the hill of Cosa allow us to reconstruct the chief characteristics of that export business. They reflect a combined container and wine company that practised on a large scale such procedures as competition, risk-taking, mass production, standardization, diversification, merging, innovation, and imitation - all to meet market demands and to accrue the greatest possible profits. The Sestii, the owners of the enterprise, were proverbially wealthy, and they were powerful politically. They had the capital, and the ships, with which to undertake long voyages, to respond efficiently, after the Third Punic War, to the new need for larger shipping containers, to diversify into the manufacture of garum at the beginning of the 1st century B. C. The many Sestius trademarks occur more frequently than any other stamps on the chief type of Late Republican wine jar (Will Type 4a, called "Dressel 1A" by Lamboglia). But the political problems in Rome in the first half of the 1st century B.C. played their part in the decline of the Sestius amphora empire, just as the great business in the Port of Cosa may itself have been a factor in politics. Like the so-called "Cola Wars" that are conducted today on a global scale, and with political overtones, the Roman nobles of the Late Republic seem to have been engaged more or less openly, many of them, in commercial activities that could have played a part in politics. The proscriptions and confiscations following the death of Caesar apparently helped, in any case, to bring an end to Cosa's economic hegemony. Although L. Sestius was probably amnestied in 39 B.C., and became consul

suffectus in 23 B.C., the great factory in the Port of Cosa that had brought wealth and power to his family for generations had virtually disappeared by the end of the century. It reemerged as the brick business of L. Sestius in Rome and perhaps as the Sestius Arretine potteries. But by the late 1st century B. C., its export business at an end, Cosa itself became an importing center of wine, olive oil, and garum. Consumption had replaced the production of a surplus.

The amphoras may well, in time to come, enable us to reconstruct a similar kind of history for the area of Pompeii, a history perhaps closely intertwined with that of Cosa. At Pompeii, the amphoras indicate that an active group of wine exporters after the Second Punic War had fallen into decline by the middle of the 2nd century B. C., whether because of competition from the Port of Cosa or because of inability to respond energetically to the new economic conditions prevailing after the Third Punic War. But with the Roman conquest of Pompeii by Sulla in 80 B.C., the wine and amphora industry or industries there revived dramatically. Sulla put his nephew Publius, Cicero's friend, in charge of the city. Study of the amphoras produced at Pompeii in the second quarter of the 1st century B.C. indicates that P. Sulla developed an amphora, and presumably a wine, business that was international in scope (Will Type 12; Dressel Forms 4 and 3).³ Rivalry with the aging Sestius concern of Cosa may well have played a part in the latter's decline. Sulla's business was not the only export concern in Pompeii at the time. Internationally distributed trademarks of several other known Pompeians occur on Type 12, indicating perhaps an interest to avoid the problems suffered by a monopoly like the one at Cosa. Excavation of the harbor area of Pompeii will one day help us to understand more fully the economic role played by the city in the Late Republic. With the 1st century A. D., Pompeii too declined economically, although its famous garum, and some wine, continued to be exported until 79 A.D. An interesting footnote to the destruction of Pompeii is the fact that the wine industry of Cosa

seems to have revived in the last quarter of the 1st century A.D., though not in the area of the Port. D.P.S. Peacock's discovery of a probable kiln site at Albinia, to the north of Cosa, may indicate that the revival was centered there.⁴ In any case, doublehanded Type 12 amphoras of "Sestius" clay constitute a fairly large group of finds on the hill of Cosa.

The profit-oriented, perhaps politically-connected network of wine exportation that characterizes the economic picture on the west coast of Italy in the Late Republic is paralleled on the east coast during the same period by the exportation of olive oil. A large group, possibly a consortium, of wealthy individuals less politically prominent than their wine-selling counterparts on the west coast exported ball-shaped amphoras of oil (Will Type 11) to the East in ever increasing numbers after the late 2nd century B. C. The port of Brindisi was understandably the center of such exportation, but firms up and down both coasts of the Adriatic vied in the race to supply oil, and some wine, to the East, especially to Alexandria. With the Augustan Age, the trademarks of more important individuals (T. Herennius Bassus, Calvia Crispinilla) appear on olive oil containers (Dressel Form 6; Will Type 14). But by the second quarter of the 1st century A.D., the energetic Spanish oil exporters along the Guadalquivir River had, amphora finds indicate, replaced the Adriatic firms that had been shipping to the East. As in the case of terra sigillata, the provinces stepped in to fill the vacuum, to capture the markets formerly supplied by products emanating from Italy and the area of the Adriatic Sea. The striking variety of early Spanish amphora stamps on jars of Dressel's Form 20 (Will Type 20) found in Alexandria and at Aegean sites attests to the competitive zeal with which a large number of Spanish oil exporters—doubtless small firms at first—rushed, during the first half of the 1st century A. D., to accommodate markets over 2000 miles to the East. Such evidence clearly proves the international character of Roman commerce in the Early Empire. As time went on, the wide variety of progressively more obscure abbreviations in such

stamps and in other marks on the amphoras attests to the longevity, the strength, and the complex organization of the surviving export firms of southern Spain. As the demands of the city of Rome grew, however, other areas received less oil from Spain, and African exporters eventually stepped in to fill the needs of Mediterranean markets that could no longer obtain Spanish oil.

I should like to close, finally, with a few remarks about my survey, conducted in 1983, of the Roman amphoras found in Sardinia. Over 460 amphoras from all over the island were seen in the survey. The study revealed that Sardinia reflects on a smaller, and perhaps more comprehensible, scale the economic history of the Italian mainland in the Roman period. Most of the amphoras reaching Sardinia in the 2nd and 1st centuries B.C. were wine jars exported from Italy. Such importation by the island had, however, all but ceased by the end of the Republic. Nor did many wine jars from elsewhere reach Sardinia at that time. We must conclude that Sardinia itself had begun to produce enough wine for domestic use. At the same time, with the attention to wine production, there was a decline in oil production on the island. Not much olive oil had been imported during the Republic, but now the need for imported oil grew. The oil exporters of southern Spain responded by adding Sardinia to their long list of markets. Garum, however, was from the Augustan Age onward the chief Spanish export to Sardinia, as seems to have been the case with Italy itself, except for the city of Rome. There the requirements of the dole caused an emphasis on the importation of oil. The resulting scarcity of oil on the world market led, in Sardinia as elsewhere, to increasing dependence on African oil by the Late Roman period. The Sardinian amphoras thus help us to see from another perspective the pattern of export/import interconnections in the major perishable liquid foodstuffs during the Roman period. We see the response of commercial interests to the ebb and flow of market demands, and we see the interdependence of far-flung production and consumption centers.

The finds of Roman shipping jars are thus enabling us, even at this early stage in amphora studies, to dispel with tangible evidence some of the uncertainties long felt about Roman economic history and to achieve a clearer perspective on the subject. It will be noted that the conclusions to which study of the amphoras leads us run counter to recent efforts on the parts of some scholars to suggest that trade was not of much importance in antiquity, that commerce was not profit-oriented, that it was rarely a source of great wealth, that the status of traders was generally low, that ancient towns were centers of consumption, not of production, that markets were not interdependent.⁵ Undoubtedly there is an element of truth in such generalizations, but on the whole the Roman shipping amphoras indicate that the Roman economy was instead governed by the response of manufacturers and shippers to the demands of an extensive network of interdependent markets. A pattern of energetic competition emerges as the dominant economic characteristic, especially during the last two centuries of the Republic and the early imperial period.

NOTES

- 1 For more detailed discussion of many of the points in this paper, see E.L. Will, *The Sestius Amphoras: a Reappraisal*, *Journal of Field Archaeology* 6 (1979), 339-350; *Ambiguity in Horace, Odes 1.4*, *Classical Philology* 77 (1982), 240-245; *Greco-Italic Amphoras*, *Hesperia* 51 (1982), 338-356; *Exportation of Olive Oil from Baetica to the Eastern Mediterranean*, in J.M. Blazquez Martinez, et al., *Produccion y comercio del aceite en la antigüedad (II Congreso Internacional)* (Madrid: Universidad Complutense, 1983) 391-440; *Aehnlichkeiten zwischen Stempeln auf Amphoren und auf arretinischen Gefässen*, *Rei Cretariae Romanae Fautorum Acta XXIII/XXIV* (1983-1984), 9-11; *The Roman Amphoras*, in A.M. McCann, et al., *The Roman Port and Fishery of Cosa: a Center of Ancient Trade* (Princeton: Princeton University Press, in press); *Amphoras and Trade in Roman Sardinia*, in M.S. Bal-

muth, ed., *Studies in Sardinian Archaeology II: Sardinia in the Mediterranean* (Ann Arbor: University of Michigan Press, 1986), 210-228 Amphora type numbers are explained in those publications and in my forthcoming book, *Stamped Roman Amphoras in the Eastern Mediterranean*, which will appear as a volume in the Athenian Agora series.

- 2 See especially McCann, et al., *op.cit.* (above, footnote 1), and A. M. McCann, *The Harbor and Fishery Remains at Cosa, Italy*, *Journal of Field Archaeology* 6 (1979), 391-411.
- 3 For a discussion of the various forms of Type 12 found at Pompeii, see Clementina Panella and Marco Fano, *Le anfore con anse bifide conservate a Pompei: contributo ad una loro classificazione*, *Méthodes classiques et méthodes formelles dans l'étude des amphores* (Actes du colloque de Rome, 27-29 mai 1974) (Rome: Ecole française de Rome, 1977), 133-177.
- 4 D.P.S. Peacock, *Recent Discoveries of Roman Amphora Kilns in Italy*, *Antiquaries Journal* 57 (1977), 262-267.
- 5 For a recent statement of such perspectives, see Peter Garnsey, Keith Hopkins, and C.R. Whittaker, eds., *Trade in the Ancient Economy* (Berkeley and Los Angeles: University of California Press, 1983).