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# WINE AND WEALTH IN ANCIENT ITALY

By N. PURCELL

## I

This account of viticulture in Italy during the period from the Punic Wars to the crisis of the third century A.D. is written in the conviction that the 'economic' history of the ancient world will remain unacceptably impoverished if it is written in isolation from the social and cultural history of the same period.<sup>1</sup> The orthodoxy which sees a revolution in Italian agriculture in the age of Cato the Censor and a crisis in the time of the emperor Trajan seems to me to be an example of this. It is based on a traditional and limited selection of evidence, and is unable to answer many of the questions which are increasingly being asked about production and exchange in the ancient world, questions about the social background and cultural preferences which underlie production strategies and the evolution of demand. I hope that this study may show some other possibilities, which have still been only partly explored by researchers, of illuminating the changing patterns of Roman agriculture and trade, through the use of comparative evidence and the re-examination of the relevant literary texts for data that are more than simply 'economic' in the most restricted sense.

The introduction, for whatever reason, into an agricultural system which has been basically devoted to simple subsistence strategies, of large-scale production of non-staple agricultural goods (the term cash-crop is too schematic for the ancient world) has far-reaching consequences throughout that society. The purely agricultural effects, on the patterns of land-holding and the choice of activities, are well known; recently, moreover, the intimate connection between the change towards the production of non-staples and the evolution of new systems of distribution has received more attention.<sup>2</sup> The social consequences of the risks involved in making such a change and the attitudes of those involved to the choice of agricultural method and to its various rewards are also extremely complex and wide-ranging. The nature of our evidence about economic production in the ancient world is such that we usually know far more about the cultural and intellectual repercussions of changes than we do about the changes themselves. So it is perverse to refuse to use the widest range of ancient cultural material in the attempt to shed light on the evolution of the economic and social realities. Such a refusal can worsen the most intractable dilemma of ancient economic history to-day: the nature of the relationship between important propositions of the economic historian such as 'surpluses were produced to raise coin to pay taxes', and the actual perceptions and decisions of the ancient agriculturalist. It is the vice of a single-mindedly economic approach that it may neglect these other considerations as the domain of the social historian, in spite of the fact that most of our miserably sparse information about things economic primarily concerns them.

The cultivation of the grape and the distribution of the wine which was its finished product was, of course, an economic matter. But for two kinds of reason the study of its social and cultural context is particularly vital. The first concerns the unusually high demands which the growing of vines makes on the agriculturalist; the

<sup>1</sup> Material in this paper has been presented at a meeting of the Roman Society in January 1984, and at a seminar in Cambridge in February 1985; I am grateful for the response and comments of both audiences, and to Lin Foxhall and Hamish Forbes. It is written in friendly disagreement with the view of Dominic Rathbone (*JRS* 71 (1981), 11) that 'agrarian history should be treated primarily as economic history'. He admits that 'social factors cannot be excluded totally': I believe that the inadequate evidence forces us to concentrate on them.

<sup>2</sup> Principally in the volumes *Società Romana e Produzione Schiavistica*, edd. A. Giardina, A. Schiavone (1981), the product of the 1979 Istituto Gramsci conference at Pisa. See especially the articles in vol. II, *Merci, mercati e scambi nel Mediterraneo*, by D. Manacorda (pp. 3 f.), C. Panella (p. 55) and J.-P. Morel (pp. 81 f.). Cf. D. F. S. Peacock, *Pottery in the Roman World* (1982), esp. chs. 7 and 10.

second (which has received much less attention) the consequences of the intoxicating properties of wine for the changes in the pattern of its demand and consumption.

The ancient agricultural historian has much to learn from the splendid history of French viticulture by Roger Dion.<sup>3</sup> His accounts of the difficulties and rewards of viticulture, and his investigations of the social history of wine are enormously stimulating, and some of the similarities between the French and the Roman experience are close enough to make it possible to attempt a reconstruction of the history of wine in Roman Italy. Above all, it is quite clear from the post-classical experience of vine-growers that viticulture is an extremely uncertain and risky, almost marginal, agricultural activity among the various options of non-staple crops possible in the Mediterranean. This is because of the highly irregular labour régime required for cultivating wines, and their temperamental response to seasonal weather conditions. These problems evoked a wide range of sometimes highly sophisticated solutions from the ancient farmer, as is clear from the enormous detail about viticulture preserved in the ancient agricultural writers.<sup>4</sup> Doubt is sometimes expressed about the possibility of explaining their differences in terms of evolution of agricultural practice.<sup>5</sup> But Cato, Varro, Columella and Pliny had no special ability to escape the preoccupations and preferences of their epochs. So it may not be unrewarding to seek to explore in their discussions some reflections of the changing social and economic setting of the growing of grapes and the trade in wine. Certainly they reflect a very rich and diverse set of cultural attitudes, worth examining in their own right.

This is partly also because of the more positive, singular characteristics of the grape, which are responsible for its cultivation on the largest scale in spite of the perennial disadvantages involved. In particular the fermented grape was by far the commonest source of alcohol in the ancient world, and alcohol by far the commonest intoxicant available. This created for wine a wholly distinctive pattern of demand and consumption and, associated with it, a rich variety of cultural behaviour. In general, when wine was scarce it was, not unnaturally, a very high status commodity, and it never wholly lost its associations with the aristocratic life which it derived from the Homeric poems and from the realities of life among the Archaic age aristocracies of the Mediterranean.<sup>6</sup> It is beyond the scope of this paper to discuss these further, and sufficient to point out that these aristocratic associations always preserved an incentive to produce very high quality wines, even though these demanded much more labour and expertise. And, as with post-classical France, this demand for high quality combined with the uncertainties of the season to make viticulture a still more risky speculation. That wine was the only widely available intoxicant also, importantly, made the nature of demand for it very singular. Consumption of such intoxicants can increase very rapidly in times of stress and trouble as well as in times of growing prosperity; and a falling off in prosperity need not, on the other hand, induce a proportional decline in the consumption of wine. In other words, if savings are necessary, it is elsewhere that they are made first. Finally, because wine does cause drunkenness, it is of all agricultural products the one which attracts the greatest theoretical attention from legislators, philosophers and other members of the literary élite of antiquity (cf. n. 17); this had a marked effect on the history of viticulture, and is partly responsible for the relative abundance of our evidence.

<sup>3</sup> R. Dion, *L'histoire de la vigne et du vin en France* (1959).

<sup>4</sup> The case of viticulture does not fit well with the more extreme orthodoxy of Moses Finley about the complete lack of economic ratiocination among ancient agriculturalists, *The Ancient Economy* (1973), 110.

<sup>5</sup> For example the remarks in *Studies in Roman Propriety*, ed. M. I. Finley (1976), 4 (by the editor).

<sup>6</sup> The consumption of wine among ancient aristocrats is now receiving serious attention: L. Bek, *ARID* 12 (1983), 81 f.; A. Rathje, *ibid.*, 7 f.; cf. M. Gras, in *Forme di contatto e processi di trasformazione* (1983), 1067 f. See also the forthcoming paper of B. Bouloumié in the *Acta* of the Sixth British Museum Colloquium of Classical Archaeology.

## II. ATTITUDES TO VINES

'Sell off his woodlands and keep the vineyards—how about that for a prodigal son!' sneers Cicero at Rullus in 63 B.C.<sup>7</sup> André Aymard was stimulated by this remark to publish in the *Annales* for 1947 a fascinating essay on the agricultural attitudes of the Roman upper class.<sup>8</sup> Until recently this important study has been largely overlooked, but Paul Veyne has taken it as his starting-point in a very recent and brilliant investigation of the Roman ideal of self-sufficiency, in which he builds on Aymard's view without taking on the implausibly capitalistic overtones which the earlier author gave to Roman thinking on the subject.<sup>9</sup> Veyne's subject leads him to be more concerned with the reliability of forest property, which as the younger Pliny said, provided a 'modest but reliable' return (*Ep.* 3, 19, 5, 'sicut modicum ita statum'); but it is also worth examining, on the other hand, the perils of viticulture, the risks for which it has been well known since antiquity. The clearest statement is in the Elder Pliny, who describes the temptation to introduce labour-saving devices in vineyards because 'in periods of falling prices outgoings exceed takings',<sup>10</sup> and Varro too remarks that 'there are some who consider that a vineyard eats up the money that is spent on it'.<sup>11</sup> The link between these judgements and Cicero's swipe at Rullus is made plain by a further passage of Pliny (*HN* 17, 161) where he attacks a labour-intensive method of sowing vine-slips with the same word that branded Rullus—'luxoriosus'. Wanton expenditure and financial ruin were associated with viticulture. This is because the prices of wine were always prone to extreme fluctuation because of the vagaries of the season. Glut years and ruined vintages are both only too common. Price changes might have been survived but for the problems of labour in the vineyard.

At vintage-time the demand for labour is extremely high, but the vines do not demand the attention of so many labourers at other seasons. So who will feed them at other seasons? It has now been accepted that this difficulty practically rules out the exclusive employment of slave-labour in the vineyard, and it is clear that the hiring of temporary labour for the vintage is the most economic solution.<sup>12</sup> A similar situation is found in the case of fruit-growing, and in modern Campania villages dependent on seasonal earnings in the orchards exist in near-subsistence squalor for the rest of the year. The movement of seasonal labour from towns, as with hop-picking in the environs of London until the twentieth century, is another possible solution. Finally, a careful plan of crops which mature at different seasons will keep farm personnel more profitably occupied all the year round. But it is obvious that these expedients may be impracticable in particular circumstances, and then viticulture moves much nearer the brink of unprofitability. This is exacerbated by the general labour-intensiveness of viticulture, which the ancient agronomists estimated to need up to three times as many staff as oleiculture or arable farming.<sup>13</sup> Often too the situation is made much more complicated by the difficulty of deciding how much extra labour can be afforded for the production of higher quality wine. Prices are still more unpredictable and judgements more uncertain at the top end of the market; but the possibility of very great success provides strong temptations. It is this element of rash gambling which generated the reactions mentioned above. No vine-grower or wine-maker could be

<sup>7</sup> Cicero, *de leg. agr.* 2, 48: 'luxoriosus est nepos qui prius silvas vendat quam vineas'.

<sup>8</sup> A. Aymard, 'Les capitalistes romains et la viticulture italienne', *Annales ESC* 2 (1947), 257 f., oddly not mentioned in K. D. White, *Roman Farming* (1970), J. Kolendo, *L'agricoltura nell'Italia romana* (1980), or the Istituto Gramsci volumes (above, n. 2).

<sup>9</sup> *REA* 84 (1982), 261 f.

<sup>10</sup> *HN* 17, 213: 'quia vilitate reditum impendia exuperent'.

<sup>11</sup> Varro, *RR* 1, 8, 1: 'contra vineam sunt qui putent sumptus devorare'.

<sup>12</sup> e.g. Rathbone, *op. cit.* (n. 1), 10 f. Cf. the view of M. I. Finley, *Opus* 1 (1982), 204, that slave systems regularly coexisted with a free rural population. But note Columella, *RR* 1, 9: *vinitores* were often chained slaves, cf. J. Kolendo, *Acta Conv. XI Eirene* (1970), 34 f.

<sup>13</sup> The most sensitive account of the economics of viticulture in Roman Italy, making this point (p. 59), is R. Duncan-Jones, *The Economy of the Roman Empire, Quantitative Studies* (1982), ch. 2.

confident; neither could he be as innocent of economic ratiocination as Sir Moses Finley's typical farmer (cf. n. 4). Further detail in the agricultural writers, above all in Pliny's *Natural History*, confirms this analysis.

The problem of the cost of labour is highly conspicuous. Pliny (*HN* 17, 214) uses the exact phrase *compendium operae* (which is one of the advantages of growing vines without support). He recommends (*HN* 17, 215) only one *vinitor* for ten *iugera* of vineyard, compared with Columella's 1:7 (3, 3, 8). Similarly, intercropping of vines with other crops helps avoid the worst problems, a scheme which moves towards one of the remedies outlined in the last paragraph.<sup>14</sup> He also recognized (*HN* 17, 192) how the need for economies led to the lowering in the quality of the wine—'this method is the large-scale grower's penny-pinching, not the legitimate haste of nature'. The tension between quantity and quality, which had destroyed the reputation of Falernian wine and was threatening to do the same for Surrentine, is closely associated with a remarkable openness to new methods in Roman viticulture, and both are part of a more complex process which is traced below (Section VI). But it is clear, although Pliny can in the end find no more elaborate solution to these problems than *subtilitas parsimoniae* (*HN* 17, 172), that Roman vine-growers were quite sophisticated in their calculation of the different options open to them. As we might expect, various forms of rather complex labour relations developed, some of which will be discussed below, and the most vital figure is the hired vintager, the *vindemiator auctoratus* (Pliny, *HN* 14, 10).

All this helps explain the puzzling case of L. Tarius Rufus, as commented on by Pliny (*HN* 18, 37). A man of the humblest origins, but of old-fashioned thrift, he collected *HS* 100,000,000 through the generosity of the emperor Augustus. He spent the lot, to the ruin of his heir, in the purchase and improvement of estates in Picenum, the sort of showy behaviour in which disaster and penury regularly lurk. Although it is vital to run your estate well, *nothing could be less advantageous than running it as well as possible* ('*nihil minus expedire quam agrum optime colere*'; the phrase was proverbial). Some crops simply do not pay the landowner to harvest because of the labour costs; the thing can be impossible if you do not have children, or tenants of some kind whom you are bound to support in any case. Running an estate as well as possible—that is lavishing time and money on it—is disastrous because of the fluctuating returns. We should remember, too, that this view is based in part on the important distinction between cash-in-hand and unrealized capital among the Roman upper class. Buying estates, or rather exchanging them at a profit, was normal; spending cash on improving them was a much more prodigal thing to do (compare n. 39 below). It is not certain that Tarius Rufus was growing vines, but it is at least extremely likely (see below, n. 80); and the attitude is generally applicable in any case.

But this quite explicable caution about what has been in every society before mechanization a disastrously risky form of agriculture is not the whole story. About another Italian cash crop, dyer's madder (*rubia*) Pliny has an even stranger remark, which stands for a whole attitude: 'two kinds are known only to the filthy mob, since they produce an enormous profit'.<sup>15</sup> Vines were doubly objectionable; not only because they were a dangerous choice for the farmer but because sometimes—frequently enough to make it worth the risk—they did extremely well. And some members of the upper class could disapprove of it precisely because of these indecent returns. Trimalchio and his friends of course set the scene. A typical Petronian loudmouth (*Sat.* 43) describes a friend who had succeeded at viticulture: 'the first magpie he plucked was for sorrow, but his first vintage soon had his ribs lined up straight—he sold the lot, and the price was up to him!'. A famous collection of anecdotes in Pliny (*HN* 14, 48–52) and Suetonius (*Gramm.* 25) belongs in a similar context and has much to tell us about first-century viticulture. The grammarian Remmius Palaemon took advantage of low prices in a depressed part of the periphery of Rome to buy an estate, to cultivate which he hired the son of a freedman

<sup>14</sup> Pliny, *HN* 17, 196–8 on the planting of the fodder crop *ocinum* in vineyards (cf. Cato, *Agr.* 33). Did the ordinary clover *trifolium* give its name to the new Campanian wine *Trifolinum* (*HN* 14, 69, cf. below, p. 19)?

<sup>15</sup> Pliny, *HN* 19, 47: 'sunt duo genera non nisi sordido nota volgo, cum quaestu multum polleant'.

called Acilius Sthenelus, who had already greatly improved the value of a neighbouring property by systematic viticulture. The result was spectacular; yields and returns were enormous, the vintage became a popular entertainment, it was so copious, and within ten years Palaemon passed the estate on to none other than Seneca at four times the price he had originally paid. Palaemon is portrayed as both greedy and showy, 'a counterfeit farmer motivated solely by vanity'; Pliny is surprised at Seneca, who was usually 'no enthusiast for frivolities'. At all events Nomentan wine was third-rate in the time of Martial, and the case was almost certainly one of the pursuit of quantity at the expense of quality (below, Section VI). The same tone of showy frivolity is found in the eagerness of landowners to experiment with vines (p. 19); and Augustus (Suet., *Aug.* 42) in resisting the mob's craving for wine was a *saluber princeps*, not *ambitiosus*.

Vines, moreover, were not *utilis* but *amoenus*.<sup>16</sup> They were a frivolity, a plaything, ornamental, and the mood of display and indulged curiosity behind the fervent experimentation in viticulture discussed below (Section VI), even if it was maintained by economic necessity, was not universally approved. After his enthusiastic account of the successes of growers Pliny in more sombre mood comments on the waste of *ingenium* spent on devising new alcoholic drinks (*HN* 14, 150). For the *luxuria* to which vineyards led was not just that of the greedy and innovative landlord, who might be raising dormice for the table more harmlessly. For the grape led in the end to abandon, to lack of control. This was scarcely acceptable, I suppose, while it was the senator's peers whose symposia were disgraced by over-indulgence, but, as I shall argue below in Section IV, the period under discussion also witnessed an increased availability of wine in Roman society, and a great downward diffusion of wine-drinking in social terms. This is the likely background to the mood of austerity which, as Barbara Levick has recently argued, led the emperor Domitian to attempt to counter the *nimis vinearum studium* by his much-discussed edict on the subject.<sup>17</sup>

In my view, one of the most important corollaries of this set of attitudes was that senators were not much involved in investment viticulture until the imperial period.<sup>18</sup> The existence of Cato's treatise lies behind the modern orthodoxy that, Hannibal disposed of together with conveniently large numbers of the former Italian smallholders, the Roman upper class seized huge tracts of land, avidly perused Hellenistic treatises on plantation agriculture, and were at once provided by a kindly fortune with the necessary colossal numbers of slaves to make it possible. For the agricultural aspects of this revolution Cato is of course almost our only evidence.<sup>19</sup> There are obvious difficulties with this orthodoxy: Cato's treatise is about farms of modest extent and value, it justifies agriculture as the producer of military manpower, it is in places clearly addressed to the *vilicus* of the villa, there is no positive indication that it is addressed to senators, and indeed there are many suggestions (for example about having recourse to Rome for problems arising from contracts, *Agr.* 149) which seem odd advice for Roman senators. Moreover, if Cato were addressing senators, the opening remarks of his treatise about the high profits of trade, and how they do not in fact always exceed the return of a farm, might seem a little cynical for the high-principled Censor. Elsewhere (Plutarch, *Cato* 21, 5), perhaps when he *did* have a senatorial audience in mind, Cato did not recommend viticulture at all. Further, Cato's own personal experience need not be typical in any way of the senate of the time, as he was

<sup>16</sup> Livy 22, 15, 2, the *ager Falernus* 'consita omnia magis amoenis quam necessariis fructibus'.

<sup>17</sup> B. Levick, *Latomus* 41 (1982), 50 ff., at 66 and f. It is interesting how most philosophical discussions of *ebrietas* (e.g. Seneca, *Ep.* 83) have a clearly elite background. See also Pliny, *HN* 14, 137-50.

<sup>18</sup> The senatorial names on wine amphorae are best taken as showing involvement in the pottery production (thus J. Paterson, *JRS* 72 (1982), 154 f.) or carrying trade (thus P. Castrén, *Ordo Populusque Pompeianus* (1975), 32; J. Andraeu, *Les affaires de M. Jucundus* (1974), 231; J. D'Arms, *Commerce and Social Standing in Imperial Rome* (1981), 51-2, 56-8). The phenomenon

is characteristic of the age of Cicero and should not be casually retrojected. For the problem of the supposedly protectionist prohibition of viticulture and oleiculture in a part of Narbonese Gaul, Cicero, *Rep.* 3, 16, see recently J. Paterson, *CQ* 28 (1978), 452 f. with bibliography.

<sup>19</sup> *Esp. Agr.* 1, 7. The archaeological evidence showing the third-century prominence of the Campanian wine trade has much weakened the case; vigorous trade and the holdings of senators in Campania did not begin together. For an example of this orthodoxy see A. Astin, *Cato the Censor* (1978), 240.

a rather unusual senator and a *novus homo*, and in any case need be reflected in the treatise no more than was that, for example, of Julius Frontinus, three times consul and no *ensor* or *gromaticus*, in his treatise on land-surveying.

Otherwise no text at all unequivocally links a senator with viticulture on any scale, let alone viticulture as a serious investment, at any time before the middle Julio-Claudian period, with the possible exception of a vineyard of Scipio Africanus beside his villa at Liternum.<sup>20</sup> There is no hint in the whole Ciceronian corpus, nothing in our relatively detailed information about the properties which came into the hands of Augustus and his relatives and formed the basis of the imperial *patrimonium*. The early *principes* gave their names to every conceivable product—including types of paper—but never to grapes, vines or viticultural methods.<sup>21</sup> This was true also of the preceding age: 'both kinds derive their name from Caecilius Metellus' says Columella—but he is talking about lettuces.<sup>22</sup> Tiberius Caesar could interest himself in the forcing of cucumbers; but not, it seems, in viticulture.<sup>23</sup> The disincentives were too strong. The same goes, as we might expect, for the grander *equites*. Although we know in a certain amount of detail about the lucrative enterprises of this *ordo* in the late Republic, nothing links a prominent *eques* with vines before the naming of a grape variety after C. Maecenas (Pliny, *HN* 14, 67), and no *Romano di Roma* he, but the dissolute scion of Etruscan royalty.

Our evidence is by no means good enough to make this an effective *argumentum ex silentio*. But it is at least interesting to see how this picture complements the unequivocally hostile moral tradition which appears so forcibly in the age of Cicero. It also complements the available evidence for who actually was growing the vines in Republican Italy, and it is to that more constructive argument that we should now turn.

### III. THE ITALIAN VINEYARD BEFORE AUGUSTUS

The evidence points clearly to Campania. The Romans themselves claimed that the famous Campanian wines were the oldest of the peninsula. They did not, in the nature of the literary tradition, have any reliable information on the subject.<sup>24</sup> For Pliny, for example (for whom the great expansion in Italian viticulture was, for reasons which we will examine below, a first-century B.C. phenomenon), it is Cato's treatise, the first literary discussion of vines (see *HN* 14, 47 'nec sunt vetustiora de illa re linguae latinae praecepta; tam prope ab origine sumus'), which marks in his system the *origo* of this art. But Cato is no revolutionary; the agriculture of his system was in existence when he wrote, and it is unambiguous from the places that he names that Campania and Latium 'adiectum' were the main objects of his attention.<sup>25</sup>

Equally clearly connected with the same areas are the principal types of Republican wine amphora. Two are of particular importance, the 'Greco-Italic' and the Dressel I with its subdivisions. In a recent monograph E. Lyding Will has done much to establish the

<sup>20</sup> The difficulty here is that vineyards do not flourish for long. Between Africanus and Seneca the vineyard would have needed at least four replantings, as well as continuous care.

<sup>21</sup> Whatever it indicates, the first imperial nomenclature on amphorae is Domitianic: M. H. Callender, *Roman Amphorae* (1965), 238. This period is also that of the first allusions to the imperial administration of the Falernian and Statan vineyard regions: M. W. Frederiksen, *Campania* (1984), ch. 2, p. 50 n. 49.

<sup>22</sup> Columella, *RR* 10, 182: 'utraque Caecilij de nomine dicta Metelli'.

<sup>23</sup> At *HN* 14, 16 an improvement in maturing wine is attributed to Tiberius, but it is a purchaser's discovery, not a producer's. Nor do Hortensius' 10,000 amphorae (*HN* 14, 96) need to be his own produce (for investment in wine, Pliny, *HN* 14, 56-7). It is a still more telling sign of desperation to use the story of his watering trees

with wine (Macrobius 3, 13, 3) as evidence of senatorial viticulture (I. Shatzman, *Senatorial Wealth and Roman Politics* (1974), 346).

<sup>24</sup> Livy 22, 15, 2 (cit. above, n. 16) has a Falernian vineyard during the Hannibalic War; this could be as anachronistic as Silius Italicus 7, 260. Falernian was often supposed to be the oldest Italian wine to win fame (Silius Italicus 7, 160 for an aetiology): Cf. the supposed Thessalian origin of the Aminaeon grape, also really Campanian: Σ Virgil, *Georg.* 2, 17, cf. F. Olck, *PW*, s.v. *Aminaea*. The two are identified by Macrobius 3, 30, 7 (cf. n. 87). Pliny's dissenting and unorthodox view that Surrentine wine is senior (*HN* 23, 33) refers to medicinal uses.

<sup>25</sup> Cato mentions only Cales, Capua, Casinum, Minturnae, Nola, Pompeii, Rome, Suessa, Venafrum. For Cato as the oldest viticulturalist, *HN* 14, 46-7.

chronology and origins of the former.<sup>26</sup> It is now certain that they represent an organized commerce in wine from well before the Hannibalic War, which had already reached considerable proportions by the first decade of the second century; and—not surprisingly, since the painted labels on their necks are Greek and Oscan, with the latter increasingly in Latin forms—that they come in a large part from Campania.<sup>27</sup> E. Lepore has very plausibly connected the type with the maritime prosperity of Naples throughout the third century.<sup>28</sup> To this trade the commerce of the Dressel I is to some extent an heir. Much recent work has been devoted to the phenomenon, which is spectacular in the geographical extent of the region covered and the length of the period involved.<sup>29</sup> This is the commerce which was beginning at the time of Cato's *De agricultura*, which brought the gradual extension of the Italian commercial vineyard northwards along the coast from the *ager Falernus* into Latium and Etruria (see Section VII below), and which is attested on so large a scale in the Gallic provinces, which formed its principal market. It is of this time that Pliny wrote that Italy (in 121 B.C.) 'was beginning to appreciate her advantages, though the wine types had not yet achieved celebrity' (*HN* 14, 94). Certainly the agriculturalist Saserna (Col. 1, 1), in the early first century B.C., expresses surprise at where you can grow vines, and attributes their spread to climatic change.

Recent work (above, n. 2) has explored the complex economic symbiosis of land-owner, trader, shipowner and terracotta manufacturer which lay behind the trade. A wide variety of qualities of wine was carried in the amphorae, but the standardization as well as the propulsion behind the early development of the trade are best explained by a general aim at a consistent, relatively high quality. But there is no need to look for huge vineyards owned by enormously wealthy individuals; small vineyards aiming at producing good wine for a respectable return are behind this trade. And that is entirely consonant with our knowledge of the size of Italian vineyards. The famous wine of Caecubum all came from a single vineyard which could be destroyed in the Neronian period by planning blight and one man's incompetence (Pliny, *HN* 14, 61). The vineyards excavated in Pompeii and its suburb are of very modest extent, the largest only two *iugera*.<sup>30</sup> A small part of the *ager Falernus* produced five separate *appellations* (Falernian, Faustian, Massican, Caucine, Statan). The evidence of storage facilities and presses at the first-century B.C. estate of

<sup>26</sup> For an excellent survey of the amphora evidence, Paterson, art. cit. (n. 18); more recent bibliography in E. Rodríguez-Almeida, *Il Monte Testaccio* (1984). For the Hellenic background the pamphlet of V. Grace, *Amphoras and the ancient wine trade* (1961), is still useful. Fundamental are F. Zevi, *Arch. Cl.* 18 (1966), 208 f., a general survey, A. Tchernia, *Archivo Esp. Arqueología* 44 (1971), 38 f., on the role of Hispania Tarraconensis, but with vital methodological points, and the collaborative version of these two scholars in *Recherches sur les amphores romaines*, Coll. Éc. Fr. Rome 10 (1972), 35 f. *Méthodes classiques et méthodes formelles dans l'étude des amphores*, Coll. Éc. Fr. Rome 32 (1977), contains much useful material of a more technical kind; more historical material is to be found in the papers of A. Tchernia and C. Panella on Falernian, *MAAR* 36 (1980), 305 and 251 respectively. The synthesis of C. Panella, op. cit. (n. 2), is also of the highest importance. On the Greco-Italics, and their early origins and third-century development see now E. Lyding Will, *Hesperia* 51 (1982), 338 f.; P. A. Gianfrota and P. Pomey, *Archeologia subacquea* (1983), 151; Paterson, art. cit., 150. The first large-scale trade securely attested (by wrecks containing several hundred amphorae, Grand Congloué and El Lazareto) is that of form c, dated 200–190 B.C.; form d, which is that of Trebius Loisius (below, n. 28), is prominent at Cosa and may represent the background to the first Dressel I amphorae there and the trade of the Sestius stamps. For a possible third-century prototype of this stamp, Lyding Will, 346. The first Mediterranean amphorae are Levantine and connected intimately with the development of maritime trade: Grace, nn. 11–20; Gianfrota and Pomey, 146–7; A. Mele, *Prexiss ed emporie* (1979),

56. For the first arrival of viticulture in Italy, C. Ampolo, *Dd'A* 2 (1980), 15 ff. at 31 with bibliography; Etruscan large-scale exports at Saint-Blaise near Marseilles, B. Bouloumié, *Latomus* 41 (1982), 74 f. (sixth century); contacts between Campania, home of the Greco-Italic trade, and the Mediterranean *koine*, *Campania* (cit. n. 21), chs. 3–5.

<sup>27</sup> See A. Hesnard and C. Lemoine, *MEFRA* 93 (1981), 243 f. The trade is old enough for there to be a link with the settlement of Romans in the *ager Falernus* in 314 B.C. (on which see *Campania* (cit. n. 21), ch. 8). It makes more difficult the view that investment viticulture arrived in Italy from Sicily in the third century; but cf. Pliny, *HN* 14 (a vine introduced to Italy from Tauromenium). The practice of *arbustum* was said to be Punic, and much used at Surrentum (Columella, *Arb.* 4, 1). For Italic influence on Sicily note *HN* 14, 66, cf. 97 with Athenaeus 1, 27d, the Sicilian wine called Mamertinum or *Italiotes*, and *HN* 14, 35, cf. 46, the wine of Morgantina called Murgentinum after the town's Italic name.

<sup>28</sup> E. Lepore, *PdelP* 7 (1952), 300 f.; *Storia di Napoli* (1967), 241 f., using evidence from G. Buchner's excavations on Ischia. Note too the Neapolitan merchant Trebius Loisius (Callender, op. cit. (n. 21), 1737), cf. *Campania* (cit. n. 21), 305; Lyding Will, op. cit. (n. 26), 350.

<sup>29</sup> For the Dressel I trade, Paterson, art. cit. (n. 18), 152.

<sup>30</sup> W. Jashemski, *The Gardens of Pompeii* (1980), chs. 10 and 11, cf. *AJA* 77 (1973), 27 f. Note also that the large single vine of the Porticus Liviae of Rome yielded twelve amphorae of wine yearly, Pliny, *HN* 14, 11.

Settefinestre near Cosa (see below, n. 78) suggests only between 50 and 100 *iugera* of vines. The pioneering suburban vineyard of Palaemon at Nomentum (Pliny, *HN* 14, 48–52) was of 60 *iugera*. The size of the neighbouring concern which was bought by Seneca can be calculated from Pliny's figures at about 360 *iugera*. Cato's *formula* for viticulture (*Agr.* 11) deals with a vineyard size of only 100 *iugera*. The largest size of vineyard suggested by any evidence is the estate of 480 *iugera* which would have been required to fill the vats of the enormous wine-warehouse recently discovered at Donzère on the lower Rhone.<sup>31</sup> But this establishment could be the centre for several estates, the property of a merchant; and it is important to remember that several vintages were regularly aged side by side (Cato, *Agr.* 1, 11, 1, with Varro's inaccurate version, *RR* 1, 22, 4). Estates of this size are appropriate for the municipal élites of Italy, and their connection with viticulture is not indeed limited to the possible involvement of the Italic merchants of Delos with the Dressel 1 amphora trade.

Our best evidence is from Pompeii. This is fortunate; the accident of the eruption of Vesuvius has given us the opportunity of probing a little more deeply into the viticultural economy of one of the most ancient and important centres of wine production in Italy.<sup>32</sup> (For the history of viticulture in Campania see further below.) Interestingly, even here it is the labels and stamps on amphorae which provide the most useful material; the town's epigraphy only confirms the status of the growers and their relationships with each other. Nothing does more to warn of the futility of the argument from epigraphical silence in the economic history of Roman Italy. The Lassi family are most prominent in the earlier first century B.C., the Clodii in the Augustan period; perhaps the Clodii even inherited their predecessors' interests.<sup>33</sup> Connected with these families was also the *gens Eumachia*, which is known to have been involved in the actual production of amphorae.<sup>34</sup> The Holconii gave their name to a type of grape, the Alleii almost certainly to a wine; both had links with the other families mentioned.<sup>35</sup> Three other family names which are found at Puteoli and Capua as well as at Pompeii are connected with viticulture. The Granii and Numisii give their name to grape varieties; the Tiburtii are connected with the origin in the mid-first century A.D. of Trebellic wine (Pliny, *HN* 14, 69).<sup>36</sup> It is to these very small-town landowners with an eye on their cousins in the harbour cities that Cato's treatise seems best suited, and not to the Roman senator who had benefited on a colossal scale from the Hannibalic War but whose interest in viticulture, as we saw above, remains doubtful. It comes as no surprise to find, a century and a half later, that it is viticulture to which Virgil allots so prominent a place in the *Georgics*, a poem which is designed to celebrate the Italy of men like these, and not the land of the senator's villa or the slave-run *latifundium*.<sup>37</sup>

Not surprisingly; for the attitudes of the highest Roman élite to their estates were negligent by any standards. The mixture of craven lack of commitment and disdain of success which we examined in Section II was disastrous for much of their property. Israel

<sup>31</sup> See provisionally *Archéologie et histoire* 78 (1978), 56 f.

<sup>32</sup> For Pompeian viticulture see Castrén, *op. cit.* (n. 18), 40–1, 94–6. The town itself gave its name to a grape variety, Pliny, *HN* 14, 38.

<sup>33</sup> For the Lassi, some of whose amphora stamps are in Oscan, see J. Heurgon, *PdélP* 7 (1952), 113; Castrén, *op. cit.* (n. 18), 181, no. 212 (with other bibliography). Stamps of a M. Porcius, which may refer to a prominent Pompeian of the mid-first century B.C., are also known, but their origin is disputed: Castrén, 88–9. For the Clodii, Castrén, 94–6 and 154–5, no. 119. Cf. Callender, *op. cit.* (n. 21), 11, mistranslating SVRR-(entinum) CLOD(ianum), which is Sorrento wine from the vineyard of Clodius.

<sup>34</sup> Castrén, *op. cit.* (n. 18), 165, no. 160. The active involvement of free and libertine Fabii from Pompeii in the wine trade, if not in actual production, should also be noticed: Castrén, 166, no. 161, cf. Callender, *op. cit.* (n. 21), 10 with references to amphorae marked SVR(entinum) FABIAN(um), etc.

<sup>35</sup> For the *Holconia vitis*, Columella, *RR* 3, 2, 7; Pliny,

*HN* 14, 35; Holconii are not known except at Pompeii, Castrén, *op. cit.* (n. 18), 176, no. 197. *Ibid.*, 133, no. 23 for the Alleii, not noticing *CIL* IV, 5571, amphora marked ALLIANUM.

<sup>36</sup> Granii, Castrén, *op. cit.* (n. 18), 172, no. 187; Callender, *op. cit.* (n. 21), no. 454. Numisii, Castrén, 197, no. 278, cf. Pliny, *HN* 14, 34 on the naturalization of their grape at Tarracina (below, n. 76). Tiburtii, Castrén, 229, no. 409.

<sup>37</sup> There is scattered evidence for viticulturalists of this social milieu elsewhere in Italy. *ILLRP* 487, with C. Nicolet, *L'ordre équestre à l'époque républicaine* 1 (1966), 303–4 for the Ancharii of Amiternum; Varro, *RR* 1, 2, 8, a junior officer who had a very successful vineyard at Faventia; cf. n. 76 for the *coloni* at Caecubum (who ruined the vines); Nicolet II, 942 f. Cf. Corellius, the Cisalpine *equus* who improved chestnut stock on his estate near Naples by grafting it on to itself. His freedman Tereus repeated the process. Both resulting strains were successful, and took their names from the grafter.

Shatzman and Claude Nicolet have quite rightly pointed out that the involvement of Roman senators in the owning of enormous quantities of land does not entail either that they were compelled to increase systematically that part of their income which derived from it or that they were actually much interested in agriculture.<sup>38</sup> Had Roman senators been devotees of *any* form of agricultural investment their prejudice against viticulture might have been much weaker. But by the time of the protestations of Varro that despite common belief Italy is perfectly fertile, and the ethos of the *laudes Italiae* of the *Georgics*, the interest of the aristocracy in agriculture had reached a low ebb.<sup>39</sup> The depressing effect of this lack of concern, even on areas of agriculture in which senators were little involved, combined with the disasters of the Civil Wars, ensured that Italian viticulture alone could not cope with rising consumption. This explains the increase in imports of wine from the provinces in the Augustan period which seems to be indicated by the amphora evidence. We need not, however, postulate any actual decline in Italian production. This is also the time when the Dressel I amphora, the product, and for us the hallmark, of the nexus between trade and agriculture which had characterized Italian viticulture for at least 300 years, disappears and the new types Dressel II-IV begin. They have a distinctive shape which imitates (though without hope of deception) famous Greek amphora types. Why the change? And why this particular new style? More was changing in Augustan Italy than fashions in wine jars. We must look at the wider view if we are to find an explanation.

#### IV. THE EARLY IMPERIAL BOOM IN VITICULTURE

The wine trade of Italy had hitherto had the closest of links with the vineyards. It had been tightly bound up with the unique set of circumstances which made Italy and above all Campania the pivot of Mediterranean commerce, especially the formation of the provincial Roman Empire. Those connections have been well traced elsewhere. By the Augustan period, however, a great deal was changing. Emigration from Italy and the growth of commercial opportunities elsewhere naturally ensured that the privileged position of Campania and of Italy in general could not last. The identification of types of amphora which originated in the provinces, in Tarraconensis and Narbonensis, and their arrival on the sites of Italy have led to various versions of the theory that overseas competition destroyed the prosperity of Italy's vineyards.<sup>40</sup> Of this disaster the concern of Varro and Virgil and the demise of the Dressel I amphorae are usually taken as signs. It is often adduced as part of the background to a general crisis in Italian agriculture which became particularly serious at the end of the first century A.D. Italian amphorae are no longer found at Ostia after the first years of the second century, and remarks of the younger Pliny (*Ep.* 3, 19; 4, 6; 7, 30, 37; 10, 8) on the difficulties of his tenants are taken to illustrate the underlying malaise. The edict by which Domitian is said to have restricted the spread of viticulture is taken in a protectionist spirit as a triumphant proof of the desperate need to save Italian farmers from the effects of provincial competition.<sup>41</sup>

It is from the period of these alleged difficulties that our most positive and enthusiastic descriptions of the viticulture of Italy come. Pliny the Elder, considering vines among the plants of which Italy may be regarded as the 'peculiaris parens' (14, 1),

<sup>38</sup> Shatzman, *op. cit.* (n. 23), 107: 'on the whole, the enrichment of the senatorial class cannot be explained by truly economic activity'; Nicolet, *op. cit.* (n. 37), 308-11. See too Sallust, *Cat.* 4, 1: 'agrū colundo aut venando, servilibus officiis'.

<sup>39</sup> *Aedificatio* was a popular way of adding to the market value of a villa; of agricultural practices only *pastio villatica* appealed much, because of its aesthetic and recreational aspects: hence its emphasis in Varro, who also needed (*RR* 1, 4, 3) to persuade his readers that good farming made a farm 'vendibiliorem, atque adiciunt ad fundi pretium'. R. Reitzenstein, *De scriptorum rei rusticae libris deperditis* (Diss. Berl., 1884), 28, saw agricultural decline behind the odd lack of agricultural treatises after the *Georgics* from so literary an age. See n. 47 below for the gulf between great and

small landowners. The date of c. 58-7 B.C. for the composition of Varro, *RR* 1 argued by R. Martin, *Recherches sur les agronomes latins* (1971), 237 fits our argument well. P. A. Brunt, *CR* 22 (1972), 304 argues rightly that Varro is anachronistic in attributing his optimism to Scrofa.

<sup>40</sup> For the Catalan wine trade see recently R. P. Guasch, *IyNA* 13 (1984), 245 f. The fundamental account remains A. Tchernia, *Archivo Esp. Arqueologia* cit. (n. 26). On imports in general Tchernia and Zevi, *op. cit.* (n. 26); Panella, *Gramsci* 1, cit. (n. 2), 55 f. For the long survival of the importation of Greek wines to Rome, below, n. 43.

<sup>41</sup> The best recent discussion of the Vine Edict is by B. M. Levick, *art. cit.* (n. 17). For the sources, *ibid.*, n. 70.

goes on to assert that her primacy in viticulture gives her the lead over all foreign products (14, 8: 'quarum principatus in tantum peculiaris Italiae est ut vel hoc uno omnia gentium vicisse . . . possit videri bona', cf. 87). Although Italy was 'already appreciating these advantages' (14, 94) in the second century B.C., for Pliny the golden age of Italian wine began after Caesar (95–7)—the beginning of the supposed age of crisis. From then, too, we find Varro's cautious insistence on the real merits of Italy (*RR* 1, 2, 6–7), the *laudes* of the *Georgics*, and in the end the bold defence of the vine against the view that it is a *res infamis*, as in Section II above, from Columella (3, 3). Pliny's vigorous partisanship is just the culmination of the process. Further, much other evidence shows that Italian wine was still prominent in the second and third centuries.<sup>42</sup> So the evidence of the amphora trade must be unreliable: the involvement of other, less archaeologically well-known containers is called for. There are in any case difficulties about making Ostia the measure of Italy's wine production; Rome received, as we shall see, much wine which did not come through its port, and that port is particularly well sited for the western Mediterranean wine trade. Spanish and Gallic amphorae are likely to be over-represented there. More seriously, the notion of competition is badly flawed. First, it does not take into account either the effect of the possible choice of strategies between high quality and high quantity production, a mistake which is linked with a lack of appreciation of the very individual character of the market for wine. Second, it fails to allow for a sufficiently wide network of commercial exchange; the competition for the Tyrrhenian trade would be only part of the whole phenomenon of Italian and Spanish exports; the eastern Mediterranean in particular is only just now beginning to receive enough attention. Third, it is hard to see the process by which the deleterious effect of the supposed competition grew and came to be felt. A third of the amphorae in the Augustan La Longarina dump are already non-Italian, but the majority of the amphorae in the Flavian layers of the Terme del Nuotatore in Ostia are still Italian. Greek wines had rivalled Italian production in any case from before the latter was produced in bulk, and continued to be well known until the third century. So exactly when and of what kind was the crisis caused by the competition, and how did it operate?<sup>43</sup>

The literary evidence too is of the slenderest. The younger Pliny wants only to show how magnanimous a landlord he is, and there is nothing out of the ordinary about the bad seasons he describes, while the Vine Edict is, when properly examined, actually evidence not for the decline of viticulture but for the boom which is attested by Columella and Pliny. Domitian's reaction would have done justice to a Republican senator; his concern is one of the last examples of the feelings outlined in Section II.<sup>44</sup> Even Columella or Pliny smacked a little of the 'luxuriosus nepos'.

For one of the noteworthy accompaniments of this age of prosperity is a change in the social setting of viticulture. In particular, from the Augustan period onwards we begin at last to find an interest in viticulture in senatorial circles. This is perhaps not entirely unexpected. For one thing, the social background of senators was very different. The wave of Italian senators which eventually brought a Vespasian to the imperial power introduced to the Roman aristocracy the very families which had been in earlier generations the

<sup>42</sup> A. Tchernia, *MAAR* 36 (1980), 305 f. (Falernian), simply disbelieved by Duncan-Jones, op. cit. (n. 13), 376.

<sup>43</sup> See Tchernia and Zevi, art. cit. (n. 26), 66–7: 'de tels échanges [as the Spanish and Gallic imports to Italy] témoignent seulement de la qualité du niveau de vie et de la facilité des relations commerciales'. La Longarina, A. Hesnard, *MAAR* 36 (1980), 141 f.; Terme del Nuotatore, Ostia 3 (= *Studi Miscellanei* 21) (1973), 667–8; eastern Mediterranean trade, D. W. Rathbone, *Opus* 2 (1983), 81 f. On Greek wine Paterson, art. cit. (n. 18), 151 n. 35. It was still popular according to Varro (*RR* 2, 1, 3). For Italian alongside Greek in the sumptuary law of 89 B.C., below, p. 18. For Hellenic antecedents of the Greco-Italic trade, Lyding Will, op. cit. (n. 26). A recently explored wreck off Mallorca at Sant Jordi (D. Cerda, *La nave romana republicana de la Colonia de Sant Jordi* (1980)) of c. 125–100 B.C. was carrying a revealing mixture of Dressel I amphorae, fine

pottery and Greek wine amphorae. Italian wine exports inserted themselves, it seems, into the existing wine trade.

<sup>44</sup> Levick, art. cit. (n. 17). The arguments which I offer for the nature and effects of the growth in consumption of wine in the Empire during the first and second centuries, and for the nature of hostility to the vine and its product, help reinforce the case made in this article. Suetonius' 'excessive zeal for viticulture' (cf. 'summa ubertas vini'—hardly a crisis!) (*Dom.* 7, 2), Philostratus' observation that wine led to plans for revolution (*Vit. Soph.* 520), and Statius (*Silv.* 4, 3, 11–12) on the return of land to Ceres are texts which can only properly be understood against the background of viticultural boom outlined here. It is hard to see how they could ever have been taken to illustrate a protectionism conceived of to protect ailing Italy from competition for a limited market.

mainstay of Italian viticulture. In this milieu the moral anxiety about the perils of viticulture was meaningless. Augustus himself represents a departure from the standards of the preceding age, *saluber princeps* though he was; his taste in wines was that of the *domi nobilis* of Velitrae, not the patrician Iulius (Pliny, *HN* 14, 72). In his reign we find the first clear involvement of figures in the élite with viticulture, developing what seems to be a newly organized and rapidly growing Adriatic equivalent of the Tyrrhenian ensemble of estates and wine trade (cf. below, p. 16 and n. 80). The opening up of Roman markets in the Balkans and Middle Danube may be to this trade what the Rhone basin and its hinterland had been to Dressel 1. Even so, in the last years of the Republic Varro's agricultural treatise, directed as it is at senators of an older kind, can pass by viticulture with a superficial treatment which we may ascribe to the imitation of Cato; it is the period when the Principate was well established which produced Columella and his predecessors, Atticus, Graecinus and Celsus, from whom derives much of what Columella and Pliny have to say about vines.<sup>45</sup>

Almost nothing is known of the standing in society of these three early writers, which is enough to separate them most distinctively from Varro, Saserna and Cato. Columella was from the province in which viticulture was most rapidly growing at the time. It was to Eprius Marcellus of Capua, typical figure of the new Italian senatorial élite of the first century A.D. and hailed as Campanian consul by Silius Italicus, that he dedicated a lost work on the cultivation of vines.<sup>46</sup> The occasion was typical of the coming of age of Italian viticulture. From now on it is no surprise to find vineyards in the ownership of men like Seneca or the younger Pliny.

It is worth noticing that freedmen are also important in the picture, whether we think of the story of Palaemon (above, p. 4) or of the freedman whom Seneca found refurbishing the vineyard on the villa of Scipio at Liternum.<sup>47</sup> It is interesting to find freedmen practising viticulture when it is considered for how long they had been regularly employed as entrepreneurs to make money for the aristocracy from other pursuits which the aristocracy disdained. In many parts of west central Italy, moreover, freedmen who have risen rapidly in wealth and status, as *Augustales* for example, can in very many ways be seen, from the epigraphical record of town life, as the successors of the middling rank municipal landowners and businessmen of the Republic. It is also striking to find in Seneca's anecdote a freedman being engaged as an expert, in making competitive, in the age of Gaius, a vineyard in Campania which had been allowed to become exhausted. The situation closely resembles the commonest solution to the problems of labour costs and the maintenance of quality in the history of French viticulture, a distinctive contractual relationship known as *complant*.<sup>48</sup> In this relationship the owner of a piece of marginal or underworked land, or an exhausted vineyard (and vines will not go on yielding indefinitely) associates with a wealthy man who wishes to grow high quality grapes for fine wine. The investor provides capital and know-how; the owner of the plot provides the labour, and they divide the proceeds in a proportion agreed on in advance. In practice things were never so simple; the poorer man sneaked more time on his own private vines, or skimmed on the work in other ways, and the system only worked well right beside towns from which it could be supervised, as was clearly the case at Nomentum.

A change in the social position of vineyard owners can then be traced during the early Empire. At the same time we begin to find a change in the evidence for the organization of the Italian wine trade. Since this evidence is epigraphic, it is not surprising that a large

<sup>45</sup> Columella, *RR* 1, 2 on earlier authors; 3, 3, 11 attributes his zeal to his predecessor Julius Graecinus (the father of Agricola), cf. Reitzenstein, *op. cit.* (n. 39), 41. Some of the enthusiasm of these men may derive from the successful experiences of provincial viticulture (Pliny has several admiring references to the vineyards of Gallia Narbonensis, but their tone is still that of the vindication of Italy: Columella 1, *pr.*, is indignant that 'vindemias condimus ex insulis Cycladibus ac regionibus Baeticis Gallicisque').

<sup>46</sup> Eprius Marcellus: *Scriptores Rei Rusticae*, ed. G. J. Schneider (1794), 2, 1, p. 19; 2, 2, p. 673.

<sup>47</sup> See p. 4 above on the Nomentan freedman. Pliny, *HN* 14, 49 gives his gentile name as Vetulenus, and confirms that he is a freedman. *CIL* IV, 5481-2 has TIRON(janum vinum), which some have connected with Cicero's Tiro. The parallel case of Corellius Tereus, above, n. 37. Compare the self-consciously earthy and unlearned agricultural ethos of the smallholder Castricius, *CIL* XI, 600, a former military tribune of the Augustan period; the story of Furius Chresimus, Pliny, *HN* 18, 41, displays similar attitudes.

<sup>48</sup> Dion, *op. cit.* (n. 3), 202 f.

proportion refers to the later Antonine period when inscriptions were dedicated most frequently. From Ostia and Rome, however, the total of inscriptions from the first century A.D. is high enough for an argument from silence to seem plausible. And the *vinarii* and their organization are, on the basis of this material, above all a phenomenon of the second century. Even if the silence of the inscriptions is misleading about the nature of the wine trade in the previous centuries, the nature of the Antonine material makes it abundantly clear that the trade flourished for a century and a half after the demise of the last identifiable amphorae. It is in any case quite likely that the new organization grew up after the gradual disappearance of the forms of commercial organization which had characterized the wine trade of the late Republic. One recent suggestion is that the destruction of the Vesuvian vineyards and of their centre, Pompeii, gave the *coup de grâce* to the wine trade.<sup>49</sup> That is an attractive idea, provided that it is seen that it was the old, long-distance *maritime* trade which was dead; new forms of distribution of wine with different centres and a different organization were ready to fill the vacuum.

At Ostia there was by the age of Hadrian a Forum Vinarium of a monumental design; wine auctions were held there, and it was the seat of at least two guilds of wine merchants.<sup>50</sup> Their honorary officials were men of high standing in the town, and the *collegium importantium et negotiantium vinariorum* is described as a *splendidissimum corpus*: no casual epithet, but a sign of what has been called 'un aristocrazia di commercio'.<sup>51</sup> The official life of these associations was closely linked with the monuments of the Forum Vinarium, the temple of its Genius and a four-horse-chariot group of statuary.<sup>52</sup>

At Rome a Portus Vinarius is first attested in A.D. 68,<sup>53</sup> and from the reign of Trajan appears the first of a series of purpose-built wine warehouses, *cellae vinariae*, mostly on the river bank.<sup>54</sup> Another centre for the wine trade is the address, probably in Transiberim, called Septem Caesares, again attested from the second century onwards.<sup>55</sup> One unloading-place which became important in the late Empire was known as Leaning Storcks, Ciconiae Nixae, almost certainly because of the derricks (compare the words 'crane' or *grue*) by which the cargoes were unloaded.<sup>56</sup> Again *collegia* are attested, closely associated with Ostia in one case; and at Septem Caesares the presence of numerous money-lenders and debt-collectors (*coactores argentarii*) reflects the complex financing of the business.<sup>57</sup> A possibly unreliable literary allusion (*SHA, Alex. Sev.* 33) suggests a reorganization of the corporation of *vinarii* in the third century.

Already at the end of the Republic Varro alludes to the *mercatores* who use teams of donkeys for transporting wine to the sea. The setting is Apulia.<sup>58</sup> The *mercatores*, it may be assumed, have bought the wine on the estate. They are presumably not making the donkeys carry amphorae as well as wine, but are using skins. This is a glimpse of the system regulating such sales which is described later in passages of the Digest, as has been well pointed out recently.<sup>59</sup> It is this system which requires the complex financial

<sup>49</sup> M. A. Levi, *Athenaeum* 41 (1963), 392 f.

<sup>50</sup> R. Meiggs, *Roman Ostia*<sup>2</sup> (1973), 283, 317 on Ostian wine trade. For the Forum Vinarium (once, not plausibly, identified with the Piazza delle Corporazioni), *CIL* XIV, 318 = *ILS* 6162; *CIL* XIV, 376; *CIL* XIV, 409 = *ILS* 6146; *CIL* XIV, 430 = *ILS* 6168; H. Bloch, *Epigraphica* 1 (1939), 37 f.

<sup>51</sup> By Levi, art. cit. (n. 49).

<sup>52</sup> Levi, art. cit. (n. 49); id., *R. Linc.* 29 (1974), 313 f.; H. Bloch, *NSc* 1953, 240. It was in a Temple of Bacchus that one of these *vinarii* dedicated the Torlonia Relief (Meiggs, op. cit. (n. 50), plate 20), showing the unloading of wine amphorae in the Claudian Harbour in the early third century.

<sup>53</sup> *CIL* VI, 9189-90; 37807; cf. S. Panciera, *Rend. Pont. Acc.* 43 (1970-1), 110 f. *CIL* XI, 3256 refers to the Portus Vinarius superior, no doubt upstream; *CIL* VI, 37807 a *lagonarius* from the Portus Vinarius.

<sup>54</sup> *CIL* VI, 8826 (A.D. 102), *cellae vinariae Nova et Arruntiana Caesaris*; *AE* 1937. 71 (A.D. 111), *Civiciana*; *AE* 1971. 30, *Lucciana*, cf. R. E. A. Palmer, *Bull. Comm.* 85, 1976-7 (1980), 135 ff., at 156; *CIL* VI, 706,

*Groesiana*; 31065 = 37309, *Nigriniana*. See now Rodriguez-Almeida, op. cit. (n. 26), 35 and figs. 26-8.

<sup>55</sup> *CIL* VI, 712 (second century); *CIL* IX, 4680; *CIL* XIV, 2886. Cf. the Forum Vinarium of *CIL* VI, 9181, a, b, c, probably different from that of Ostia.

<sup>56</sup> J. Rougé, *REA* 59 (1957), 320 f. It is clear from the epigraphic evidence discussed here that by the fourth century barrels (*cupae*) were in common use for this trade.

<sup>57</sup> *CIL* XIV, 2886, XI, 3156, VI, 9181 a, b, c, 9189-90. For the same reason many wine merchants diversified, just as viticulturalists did: 'negotiator pecoris et vinorum', *CIL* VI, 9671; 'negotiator vinarius et omnium generum transmarinarum'.

<sup>58</sup> *RR* 2, 6, 5; cf. Columella, *RR* 1, 2: it is cheaper for the farmer to hire oxen than to keep them. For Varro's date of writing, above, n. 39.

<sup>59</sup> Paterson, art. cit. (n. 18), 154 f. The term *culleus* for a twenty-amphora measure suggests the regular use of skins, confirmed by some well-known pictorial evidence. For barrels see n. 56 above. For amphorae even in local Italian wine trade, Martial 13, 112.

arrangements provided by the *coactores argentarii* of Septem Caesares; and it is characterized by the formation of the *collegia* and *corpore* whose public life is so well attested. The association of *mercatores* is already suggested by Varro. I suggest, however, that it is a relatively new commercial strategy of the first century B.C., more typical of the newly developed vineyards of the Adriatic than of the old maritime trading relationships of Campania and Etruria, where corporations of traders were of much less importance.

To what should we attribute the vigorous optimism of the agricultural writers and the busy, complex life of the second-century wine market? How can they be reconciled with the many and various problems associated with ancient viticulture, fully explained above, difficulties which have led many interpreters to the gloomiest view of Italian vineyards in a period when much of the evidence asserts their prosperity? A vast growth in consumption and demand is the answer here proposed for these questions; a growth for which there is in fact considerable evidence. This is examined in the next section.

#### V. THE GROWTH IN CONSUMPTION OF WINE

Figures for production and consumption of wine are hard to arrive at, but we cannot proceed without an impression at least of orders of magnitude. The yield of 3 *cullei/iugerum* (hereafter c./i.; one *culleus* = 20 amphorae = c. 500 litres; one *iugerum* = c. 0.25 hectares) given by Columella (3, 3, 11) has often been doubted, and certainly medieval and early modern yield statistics that are very much lower can be quoted.<sup>60</sup> Yields of 10 c./i. and 15 c./i. from Cisalpine Gaul (Varro 1, 2, 7-8) are therefore regarded as fabulous. But all evidence from the past for comparative yield is difficult to use. Conditions vary very widely even within the same locality, and the vine above all is extremely sensitive to the average temperature and humidity of air and soil. More importantly, production strategies are still more various, and low yield may reflect the state of the market much more than the productive possibilities. In Section VI below some of the very different approaches to viticulture which were generated by the ancient market conditions are examined. By way of a more modern illustration the example of the early-nineteenth century French vineyard may be taken: the yield of Champagne, catering for the close and growing Paris market, was about 2 c./i., whereas the vineyards of the south produced only just more than a third of that figure.<sup>61</sup> The amphitheatre vineyard in Pompeii (above, n. 30) is estimated by its excavators, in collaboration with modern viticulturalists, to have had an expected yield of 10 c./i. Since this property, if any, will have been designed for intensive viticulture aimed at maximum yield of low-price wine, this does not seem impossible. Columella's estimate need not be called into question.

The only consumption figure we have is Cato's allowance of 7 *amphorae* of wine for each of his slaves, rounded up to 10, with more for the chain-gang (*Agr.* 57), every year. At a bottle a day by modern reckoning, this seems quite generous. The distribution was irregular, however, 11 litres being reserved for two major festivals, and three months being provided with grape-wash instead of wine. The total annual consumption of 250 litres each is high by post-classical standards,<sup>62</sup> but it should be noted that we do not know the alcoholic content of Roman wine. However, at these figures, a million consumers would have taken the product of nearly 170,000 *iugera* at Columella's estimate, and some 50,000 *iugera* at the yield of the Pompeian vineyard. This makes the estimate of 2 million *cullei* for the wine production of ancient Italy look rather low.<sup>63</sup>

Now agricultural workers and country-dwellers in general no doubt depended on crude local wine from time immemorial. There is no easy or obvious way of making available surpluses to urban populations. But the elaboration of the Roman wine trade, as

<sup>60</sup> A. I. Pini, 'La viticoltura italiana nel medioevo', *Studi Medievali* 3, 15 (1974), 74. Duncan-Jones, op. cit. (n. 13), 376 quotes a range of 0.6 c./i.-1.2 c./i. for early-twentieth-century Calabria; A. Aymard, *Annales ESC* 28 (1973), 479, 0.82-1.33 c./i.

<sup>61</sup> H. Clout, *Agriculture in France on the Eve of the Railway Age* (1980), 139.

<sup>62</sup> For eighteenth-century consumption in Paris, Val-

ladolid and Barcelona, below, n. 71. At Rome in the same period *per caput* consumption ranged between 210 and 280 litres each year; since this was mostly cheap, low-alcohol, local wine it perhaps affords a close parallel for the ancient situation: J. Revel in *Food and Drink in History*, edd. R. Forster and O. Ranum (1979), 37 ff., at 46.

<sup>63</sup> Levi, art. cit. (n. 49), 395.

it emerged in the previous section, suggests that the effort was made. We might expect the relatively privileged member of the urban *plebs frumentaria* to demand more access to wine than the Elder Cato's slaves. If they did (but cf. n. 74), it would follow that the most enormous catchment area will have been required for the provisioning in wine of Rome. Is it possible to show anything of the process by which wine became widely available to the populace of Rome, and by extension to the other urban populations of Italy and the Empire? For the habit of widespread regular drinking does not develop suddenly of its own accord; and the reduction of price with the growth of a mass market and the spread of bulk low-cost production is not speedy.

It seems very likely that it was free distributions of wine that provided one mechanism for the spread of the taste for wine—that certainly seems to have been the case in France from the eleventh century—distributions, that is, from a patron to his dependants, or to a whole community by a benefactor.<sup>64</sup> It is astonishing in this context that there is no up-to-date systematic account of the distribution in Roman towns of pastry and sweetened wine, *crustulum* and *mulsum*, which is quite well known from inscriptions. It was this type of lavishness on the part of benefactors who could afford it that introduced many of the urban luxuries which we associate with Roman towns to the range of expectations of their poorer inhabitants. Public spectacles and bathing are two further examples. Also connected is the gradual extension by the state of the annonal system to cover the various ingredients of this lifestyle: olive oil, meat to eat, and, in the reign of Aurelian, wine (*SHA, Aurelian* 21). On the whole public banquets of all kinds are a feature of the late Republic and early Empire (Varro, *RR* 3, 2, 16; cf. Tertullian, *Apol.* 39). There seem to be no pre-Augustan examples of this kind of benefaction in the Italian towns.<sup>65</sup> Closely parallel is the increasing frequency of the *collegia* of the urban poor, which provided meals and wine with them for members.<sup>66</sup> These associations were united by the celebration of wine-drinking, and we are reminded of Philostratus' linking of wine with public disorder in the cities of the East (above, n. 44). Finally, since the Dressel II–IV trade of the first century B.C. was oriented mainly towards the needs of Rome's armies, the experience of the soldier will have been a potent ingredient in the downward percolation of the taste for wine.

The Empire is also the period during which we begin to find the development of a vigorous drinking-place culture among the urban communities of Roman cities. Once again there is no reason to imagine this an automatic and immemorial feature of town life: when we find it we must search for the date and cause of its development. Kléberg, in his classic thesis on Roman taverns, and Hermansen, in his new collection of essays on Ostia, pile up the copious evidence for the main purpose of all the cook-shops, dives and bars of Roman cities—the consumption of wine.<sup>67</sup> For all that, both authors have an unrealistic and fastidious optimism about their subject: Kléberg felt that imperial control of taverns was devoted to furthering the philanthropic aim of providing clean, spacious, hygienic living conditions for the urban poor, while Hermansen thinks that the emperor's prohibitions worked—the style of cook-shop in Ostia is quite different from the earlier, Pompeian, examples. What is missing later is, in fact, the equipment for serving food, however; the wine counter is larger and better appointed than ever. The regulations for the control of drinking establishments by the aediles at Rome provide some confirmation. The *cura Urbis* is often imagined to be timeless; but in fact it is overwhelmingly in the very

<sup>64</sup> Dion, op. cit. (n. 3), 476 f.

<sup>65</sup> O. Toller, *De spectaculis, cenis, distributionibus in municipiis romanis imperatorum aetate exhibitis* (1889). The practice is very likely to have spread in imitation of the great public banquets of Julius Caesar in 46 B.C. (for an earlier occasion (63 B.C.) Plut. *Luc.* 37, 3 with Pliny, *HN* 14, 96). Pliny (*HN* 14, 66) asserts that official sanction for such occasions was formally given by the dictator, as was to be found in his published letters. The date and *popularis* context are wholly appropriate. Pliny also suggests (*HN* 14, 97, with chronological problems) that it was at one of Caesar's public banquets that four kinds of wine were first served together,

powerful testimony to the later date of the proliferation. The first passage also perhaps indicates the role of these public distributions in allotting a semi-formal ranking to wines ('quartum curriculum publicis epulis obtinere . . . Mamertina etc.').

<sup>66</sup> T. Schiess, *Die römischen collegia funeraticia nach dem Inschriften* (1888), cf. O. Waltzing, *Les corporations professionnelles I* (1895), 51 and 170 (the *seribibi* of Pompeii), cf. IV (1900), 227 f. and 687 f.

<sup>67</sup> G. Hermansen, *Ostia, Aspects of Roman City Life* (1981), ch. 4, 125 f.; he studies thirty-eight identifiable taverns at Ostia. T. Kléberg, *Hôtels, restaurants et cabarets dans l'antiquité romaine* (1957).

late Republic and Empire that low-class establishments selling wine attract the systematic attention of the authorities.<sup>68</sup> There is another close link between the new vineyards of the first-century boom and the wine-shop world: the vineyard bars of Pompeii, where triclinium, restaurant, drinking place and shady, elaborate, investment vineyard actually combined.<sup>69</sup> Once again we compare how the yields at Nomentum became a public spectacle (above, p. 5). As late as the end of the fourth century Ammianus Marcellinus is at pains to show how unusually dissolute the urban populace of Rome is, and drunkenness, tavern life and the demand for wine are prominent in the picture he presents of a city in which the luxury of the aristocracy is matched by the misrule of the masses.<sup>70</sup> There is nothing conventional in this theme; bibulous Rome, the product of the process described here, was not normal by the standards of the ancient Mediterranean world.

The phenomenon would be less easy to recognize if it were not for the striking comparative evidence from other pre-industrial societies. There are clearly recognizable periods in which the demand for wine increases dramatically, and the distribution of its consumption within societies also strikingly expands. An example from Catalonia in the late eighteenth century speaks for all: the amount of wine consumed in taverns in Barcelona increased by 46 per cent in a period of twelve years (1783–95), during which the population only increased by 22 per cent.<sup>71</sup> This was in a period of very rapid urban growth, with all its attendant social stress and anxieties. The same phenomenon of urbanization is usually predicated of the Roman world between Sulla and Hadrian, and above all of the City of Rome. In Britain we usually associate the abuse of alcohol in rapidly urbanized societies with the Industrial Revolution, but the history of the growth of towns in early modern France shows that this type of development can easily take place also in pre-industrial society.<sup>72</sup> The laws against 'ivresse publique' which are so familiar from French bars have a lineage which goes back to the late Middle Ages. André Tchernia has deployed this insight excellently in the area of maritime trade in the western Mediterranean, and the growth in consumption of wine in the provinces.<sup>73</sup> But it is no less important in Italy. Demand and consumption increase; production increases; prices fall and demand receives further encouragement. Had Rome consumed the amount postulated above the logistic problems would have been enormous; better to assume that the potential demand was never fully met. In other words, if wine was cheap enough, it would in all circumstances be saleable in Rome. There could be no competition at this end of the market. The effect of this on Italian viticulture may be imagined.<sup>74</sup>

<sup>68</sup> Hermansen, *op. cit.* (n. 67), ch. 5, esp. 196 f.

<sup>69</sup> Jashemski, *op. cit.* (n. 30), 215 and 230 f. For parallels from the neighbourhood of Rome see below, n. 83.

<sup>70</sup> Ammianus 14, 6, 25; 28, 4, 29 on tavern life; 15, 7, 3 on riots over the price of wine. This was a feature of the growing disorder of the Roman mob as early as the reign of Augustus, when the supply of wine was less assured as the processes of distribution discussed here evolved. Suetonius, *Augustus* 42 on wine riots then.

<sup>71</sup> Tchernia, *art. cit.* (n. 26), 38 f. In circumstances like this vineyards tended to replace cereal lands, which has been suggested as one of the factors affecting Domitian's Vine Edict (above, n. 44). For consumption figures of 100 litres/person in late-sixteenth-century Valladolid, and 120 litres/person in late-eighteenth-century Paris, F. Braudel, *Les structures du quotidien, le possible et l'impossible*, 194 f.; Boissons et 'dopants'. Cato (*Agr.* 57) allowed about 250 litres of wine each year to each of his agricultural slaves. Cf. n. 74 below.

<sup>72</sup> The eleventh-century recovery of French viticulture was intimately linked with the rebirth of the towns (Dion, *op. cit.* (n. 3), 201). Wine became a status symbol of the *burgensis*: note the formula 'burgensis qui ad hospitium vinum bibere solet'. The *potationes* of the *burgenses* gave a social context to this development. For

the spread of drunkenness in the towns of early modern France, *ibid.*, 486 f.

<sup>73</sup> *art. cit.* (n. 26).

<sup>74</sup> A comparison may be made with olive oil. The Testaccio wharves (Rodríguez-Almeida, *op. cit.* n. 26) handled some 4,000,000 kilos of olive oil annually in some 55,000 amphorae. To provide a million consumers with wine at the rate Cato offered his slaves would require 250,000,000 litres of wine p.a., which in terms of amphorae would be 10,000,000 pieces to handle. It seems self-evident that this demand could not have been met; but the distribution system, and not either agriculture or demand, was the limiting factor. Prices were low enough for the trade to exist on this scale, at least in times of relative abundance: Columella, *RR* 3, 3, 10 suggests a price of about 15 *HS*/amphora. The prices calculated by Duncan-Jones, *op. cit.* (n. 13), 263 and n. 3 are much higher, but note the corrections to his calculations made by A. Tchernia, *Epigraphica* 44 (1982), 57 (23 or 28.5 *HS*/amphora in A.D. 153). This new estimate is preferable, and is quite an accessible price for wine (an amphora is just over 25 litres). Even Opimianum when produced cost only 100 *HS*/amphora (Pliny, *HN* 14, 55–6). But the salient fact about wine prices remains their extreme proneness to violent fluctuation.

## VI. TOWARDS A HISTORY OF VITICULTURE IN ITALY

As Rome and the other cities of Italy grew, the market for cheap wine expanded greatly. It is likely that the market for expensive wines also grew. It is to some extent possible to trace the effect of the process on the geography of Italian viticulture. The literary evidence of the names and origins of wines, and the various anecdotes about vineyards in the agricultural writers must be the main source. It is of course very incomplete and affected by various kinds of distortion; but a coherent picture does in fact emerge.<sup>75</sup>

We must first distinguish 'export-trade viticulture' from the rest. Section III above traced the origins of the Campanian vineyard and its close connection with overseas exchanges. The success of Campanian wine was quickly imitated in other coastal areas of west central Italy. Two are relatively well known to us from very different circumstances. The wine of the plain of Fundi becomes prominent during the first century B.C., and the small scale of its most famous vineyard, Caecubum, is clearly demonstrated by Pliny's narration of its extinction.<sup>76</sup> Work on amphorae has shown the intimate links between the vineyards, the wealthy villas of this resort-coast, and the Dressel I trade, above all of a man called P. Veveius Pappus. The heyday of the wine is referred to by Strabo, in whose time it was probably already dwindling.<sup>77</sup> At Cosa in Etruria the excavation of the wine-producing villa of Settefinestre and the study of the amphora stamps of L. Sestius has given us a similar vignette of another area where this economic relationship thrived during the first century B.C.<sup>78</sup> It is not unreasonable to suppose that vineyards attested at Statonia, Graviscaea and Caere in Etruria were planted with these prospects in mind.<sup>79</sup> The relations emerging between the spread of vineyards in Apulia and Istria at the end of the first century B.C. and the growth of the northbound Adriatic trade suggest that a similar pattern followed in this area too.<sup>80</sup>

But Pliny asserts that after the period when Falernian and Surrentine wines had been most famous, Alban took first place. He is clearly still talking of high quality wine. For him the period of glory of Falernian is the late second and early first centuries B.C. It is still the stock great wine of literature and anecdote in the age of Caesar. Dionysius is the first author to mention Alban, and it is clear from his eloquent enthusiasm that the production of wine here is at its zenith. His opinion is reinforced by that of Strabo. Now inland Alba is

<sup>75</sup>None of the writers used in this account (principally Cato, Varro, Columella and Pliny) attempts a systematic survey of types of grape or varieties of wine. That Pliny at least had some notion of a total of separable kinds of wine is suggested by 14, 87 (cf. 97): two-thirds of a world total of eighty wines are Italian, and this also implies that he is not just dealing with varieties of some exceptional interest, such as medicinally interesting wines. These he explicitly distinguishes (14, 19; cf. 98-115. Wines made from odd plants are only 'cognita iucunda, sollertia humani animi omnia exquirente' (115)). Given the different interests of these writers and the other writers to mention a series of different wines (Martial, Galen, Athenaeus, Macrobius), it can perhaps be assumed that we have a representative selection.

<sup>76</sup>Caecuban wine is prominent in Horace (*Odes* 1, 20, 9; 37, 5; 2, 14, 25; 3, 28, 7, the last referring, perhaps jokingly, to a vintage of 59 B.C.). Amphorae of it were found in the dump at the Castro Pretorio (of mid-first-century A.D. date), Paterson, art. cit. (n. 18), 146. The vineyard was marshy, which may have increased its yield (Strabo 5, 3, 5; Pliny, *HN* 14, 61, which is also the source for its extinction. Note, however, mentions by Martial 6, 27, 9 and Athenaeus 1, 27a). Lin Foxhall points out to me that the *arbutum* method used here will have helped reduce waterlogging. For the introduction of the Campanian grape 'surcula Numisiana' at Tarracina, *HN* 14, 34. The earliest allusion to the wines of Fundi (mentioning Caecuban) is Vitruvius 8, 3, 12; the latest Martial 13, 115, cf. Athenaeus 1, 27a.

<sup>77</sup>For the stamps of P. Veveius Pappus and the trade of

Fundi, A. Hesnard, *MEFRA* 89 (1977), 157 f.; Paterson, art. cit. (n. 18), 152.

<sup>78</sup>On Settefinestre A. Carandini, *MAAR* 36 (1980), 1 f.; Rathbone, op. cit. (n. 1). For the Sestii at Cosa see D. Manacorda, *JRS* 68 (1978), 122 f.; *Gramsci* 11 (cit. n. 2), 3 f.; J. D'Arms, *MAAR*, cit., 77 f. Although their connection with the production of wine amphorae at Cosa and with the shipping of the wine overseas seems very likely, it has not been demonstrated that they grew the grapes and made the wine. For the antecedents of their trade, above, n. 26.

<sup>79</sup>Pliny, *HN* 14, 67: 'ab infero autem Latiniensia, Graviscaea, Statoniensia'. Cf. Columella on Silvinus' vineyard at Caere, 3, 9, 6.

<sup>80</sup>Cato alleged a yield of 15 c./ji. for the *ager Gallicus*: *Orig. ap. Varro*, *RR* 1, 2, 7. For Cisalpine viticulture in general V. Righini, *Studi Romagnoli* 25 (1974), 185, a fundamental account, suggesting that Etruscan practice survived here by contrast with the basically Greek viticulture of west central Italy. For the later Republic G. Chilver, *Cisalpine Gaul* (1941), 22 (possible estates of Livja in Istria). For the great advancement of Istrian vines and the Laecanii Bassi, a local family which made good (cf. Section III), F. Tassaux, *MEFRA* 94 (1982), 227 f.; Paterson, art. cit. (n. 18), 153 and the works cited in his n. 48. For Julia and Istrian wine, *HN* 14, 60. The case of Tarius Rufus (above, p. 4) should be seen in this context. *HN* 14, 69 gives a share in *gloria* to Adriatic wines, with a hint of condescension. It is striking that the grape Maccenatiana (*HN* 14, 67) is associated with this region of new investment.

not situated to exploit the Tyrrhenian amphora trade; here we have our first reflection of the growing market of Rome. From the Augustan age, too, we hear of the high reputation of the wines of Setia and Signia, also sited more for the Roman than the maritime market.<sup>81</sup>

These wines, however, were, if any, the products which were vulnerable to competition from the new vineyards of Tarracensis and Gaul; it is always the top end of the wine market which is most precarious. Their fame was relatively short-lived. Instead, the rapid spread of vineyards aimed at a larger, poorer market took place. Indeed it is almost possible to say that the proliferation of imports from the provinces encouraged the growth of the suburban vineyard of Rome, for local low-quality production could always find a market and was always cheaper than wine that had been transported long distances in amphorae. For similar reasons Rome has supported a belt of vineyards around the walls until as recently as the 1870s.<sup>82</sup> In antiquity there had been an obstacle however; the city had depended on suburban agriculture for its staples, and it was only with the growth in the reliability of the annonal corn supply that the periphery of the city could be partly emancipated from cereal production. A rush into high-profit agriculture aimed at the urban market followed, and both intensive horticulture and high-yield viticulture rapidly became widespread. Many a tomb inscription records vineyards of this sort from the Augustan age onwards.<sup>83</sup>

This is the background to the establishment of new vineyards in many places accessible from the city but not the sea. Most striking of all, and closely dated (Columella, *RR* 3, 3, 'his certe temporibus Nomentana regio celeberrima fama . . .'), is the anecdote of the Nomentum vineyards, discussed above (p. 4). The spread of vineyards in the Tiber valley, to Clusium for example, where Pliny the Elder records the introduction of a Campanian grape variety, or to Tifernum, where the vineyards of his nephew were, also dates to this period. The consequence was the siting of the Portus Vinarius, the Ciconiae Nixae depot, and the wine warehouses of the Temple of the Sun at Rome for the convenience of merchandise coming *down* the Tiber. But it is from this period, too, that we first hear of the wine of Praeneste and Tibur, and we are so well informed about the countryside of these two famous suburban centres that the argument from previous silence does seem for once admissible.<sup>84</sup> Vineyards further afield in Italy probably turned to supplying Rome in this period; with the end of the maritime trade some disappeared, but it is equally clear that others survived. If their wine was not to be shipped overseas there was no reason to use amphorae; the end of Italian wine amphorae thus means only a shift in the direction of the trade. It is certain at any rate that the wine coming down the Tiber to Ciconiae Nixae in the fourth century came down in barrels (above, n. 56).

The same tension between quality and quantity is reflected in the agricultural practices of the age. One of the most spectacular examples has emerged from a recent excavation in the neighbourhood of Rome, on the road to Laurentum, which has revealed

<sup>81</sup> For Augustus' own taste, cf. p. 11 above. Setia is more celebrated than Signine, and seems to have remained a high quality, expensive product: Strabo 5, 3, 6, cf. 10; Pliny, *HN* 14, 61; 23, 21; and an unusually wide range of notices in silver Latin poetry (though *HN* 14, 52 may be taken as a sign of difficulties there). It did use amphorae at least in part: *CIL* IV, 1292, Callender. Signine is attested from Strabo (5, 3, 10) to Galen (Kühn) VI, p. 334; X, p. 831, in largely medicinal contexts: which reinforces the impression that in general these wines singled out in the literary evidence have more characteristics than being simply of use to doctors. Note also passing allusions to wine from Arpinum (Varro, *RR* 1, 8), Fregellae (Columella, *RR* 3, 2) and Privernum (Pliny, *HN* 14, 65; Athenaeus 1, 27a), the last presumably closely associated with the development of the vineyards of Tarracina and Setia. For the importance of water communications to the establishment of a quality vineyard, Dion, op. cit. (n. 3), 57-8.

<sup>82</sup> W. Sombart, *Die römische Campagna* (1888), 27 f. for the *vigne* of the Campagna. Highly relevant is the discussion in Dion, op. cit. (n. 3), 478 f. of the provisioning of the urban poor (who drank, he argues,

much more than the peasantry) with cheap wine specially produced from vines in garden plots and open spaces within the built-up area of the town. The process led eventually to the change-over from quality to quantity production throughout the suburban vineyard (pp. 490-1).

<sup>83</sup> e.g. *CIL* VI, 10239, 15993, cf. N. Purcell, *The Gardens of Rome*, forthcoming, for the whole process. For the distinctive viticultural practices of the *suburbium* see also n. 92 below. See also Revel, op. cit. (n. 62), 45 on *vino romanesco* in the eighteenth century: 'a multitude of little garden patches, usually rented, were cultivated during free hours by families who drank between forty and sixty per cent of the wine they produced. This wine . . . was the wine of the poor; it "made them feel rich"'.  
<sup>84</sup> *HN* 14, 4; Athenaeus 1, 26e and Diocletian's Edict for Tiburtine wine; Athenaeus, cit. for Praenestine and for Labican. For Gabii, Galen (Kühn) VI, p. 334. Arician, *HN* 14, 3; Laurentine, Pliny, *HN* 14, 4. The degree of preservation of amphorae labels from earlier periods is another basis for this argument from silence, as no 'suburban' wine is thus attested.

a vineyard in which the substitution of a lower quality viticultural technique for a more careful form of growing for fine wine is quite apparent.<sup>85</sup> This is precisely what happened in the suburban vineyards of late medieval France, to the distress of the connoisseurs (of whom there were already many).<sup>86</sup> The parallel may help us to see what development was taking place in the Roman wine trade, and why it has been mistaken for an agricultural crisis.

The history of French viticulture has been that of an everlasting tension between the production of fine wine and that of large quantities of low quality but cheap wine. The two do not resemble each other, or overlap; there is no grey area between them; they are completely different degrees of investment. The resulting product differs enormously in price and quality. This was well known to the later agricultural writers, less important to the earlier. Pliny is very interested in the different types of grape and the qualities of wine, as is Columella; Varro much less so and Cato least of all. What we know of the nomenclature of Italian grapes and wines is interesting in this respect. In the background is a very extensive range of local names for grape varieties, preserved for us by sources interested in linguistic history.<sup>87</sup> Few of them came to have any significance beyond the region in which the name applied. But with the gradual development of investment in the Italian vineyard in the third and second centuries at least two (Eugeneum and Aminaeum) achieved a wider fame. Aminaeum was specified alongside Greek wine in the sumptuary legislation of 89 B.C. (Pliny, *HN* 14, 95).<sup>88</sup> The identification of particular vintages (Anicianum, 160 B.C.; Opimianum, 121 B.C.) simultaneously reflects the successful pursuit of very high quality.<sup>89</sup> The multiplication of fine wines led to a more complex range of regional *appellations* (*HN* 14, 97) by the mid-first century B.C. Now the production of cheap wine begins to become important. The distinction between *nobilis genera* and the rest becomes clear in the Augustan period (Strabo 5, 3, 10, for example).<sup>90</sup> Pliny applies it to Tarraconensis too (*HN* 14, 71), contrasting the *elegantia* of the Lauronensian and Balearic with the Laetane which 'copia nobiletantur'. Columella has the clearest advice (3, 2): '[a wine of hardy and excellent properties] should be our choice even if it is only moderate in yield, if the flavour of the wine is top quality and of high value. If it is coarse or cheap it is best to sow for high yield, so that returns may be increased by the abundance of the vintage'. Note also the complaints of the younger Pliny (*Ep.* 4, 6, 1): 'abundantia sed par vilitas'. As wine began to reach lower levels of society regularly, its qualities became more and more closely stratified. The consequence was the risk of debasement of the best product (as happened also in the French vineyards from the eleventh century) and violent fluctuations of fashion with desperate competition for reputation (see *HN* 14, 59-72).

The grower of the vines in the Via Laurentina vineyard was one of the viticulturalists whom Pliny had in mind when he discussed the strong temptation to cut corners, and condemned it (cf. above, p. 4). He was able to cite cases where the drive for quantity had destroyed vineyards which had once been famous for their select and delicious wines. But Pliny himself is our best witness to the positive response to the process, the extraordinary spirit of innovation and invention which was induced in growers of vines by the need, uniquely present in this branch of agriculture, to develop an attractive and saleable product at the lowest possible cost to themselves.<sup>91</sup> He quotes (14, 46) the advice of Cato to show how much progress 230 years had made in Italian viticulture: real progress too, and not 'gratia a primordio'. We get a strong impression of the thrill of this risky, audacious, fast-developing form of agriculture, somewhat sleazy in its moral tone, always changing and always producing abject disasters and the most glittering rewards. 'There was no one'

<sup>85</sup> R. Santangeli Valenziani, *Arch. Cl.* 32 (1980), 206 f.

<sup>86</sup> Dion, *op. cit.* (n. 3), ch. 14, cf. ch. 6.

<sup>87</sup> See above all the spectacular list at Macrobius, *Sat.* 3, 20, 7 f., including several otherwise unknown but clearly Italic names.

<sup>88</sup> For Aminaeum see above, n. 24. Eugeneum, Columella 3, 2, 16; Pliny, *HN* 14, 25.

<sup>89</sup> Consular dates: Opimianum, *HN* 14, 55-7. For dates known epigraphically, Paterson, *art. cit.* (n. 18), 130 and n. 26.

<sup>90</sup> Strabo 6, 1, 14; cf. Pliny, *HN* 17, 199. The success of fine wines is interestingly described by political words such as *gratia* and *auctoritas*.

<sup>91</sup> It is remarkable how little the Roman interest in agricultural improvement has figured even in accounts of Roman agriculture, let alone in the wider debate on progress and invention in ancient society. For a brief account, K. D. White, *Roman Farming* (1970), 231, cf. 260 and his n. 89.

says Pliny 'who did not rush to see the heap of grapes in the vineyard of Palaemon.' Viticulture was showy, racy, exciting and famous.

Pliny is, of course, always very interested in progress and discoveries, but only in the section of the *Historia Naturalis* devoted to small fruit (another high risk form of agriculture) is there any parallel, however slight, for the number of recent advances which he asserts for viticulture. The famous debates about method had their origin in the first century B.C. and were still raging in his own day. In particular they concerned the merits of the planting system called *arbustum*,<sup>92</sup> which produced quality wine at high cost, as at Caecubum; contrast the system of *vitis compluviata* (Pliny, *HN* 17, 166) found in the amphitheatre vineyard at Pompeii (above, n. 30) and renowned for its high yield. This was probably also the later method of the Via Laurentina vineyard. The older experiments also concerned propagation, but that is less of a production problem.<sup>93</sup> More significant are the reports of new types of grape and new wines (e.g. 14, 18). Some grapes had been developed as recently as the last seven years (14, 43, the Carbonica, now grown all over Narbonese Gaul). Four new wines of both quality and quantity had appeared in Campania (Pliny, *HN* 14, 69) quite recently *sive cura sive casu* (and for what it is worth Galen had a longer list, which may well imply that the process continued). Grape types were continually being introduced experimentally from one region to another, and even from Gaul to Italy and vice versa; a circumstance which suggests that economic competition was not at any rate perceived between the two by the growers of the time (*HN* 14, 20–39, with many examples). This ingenuity was not just limited to increasing yield, reducing labour in the vineyard, and finding optimum conditions of plant-type and setting for high quality production. Money could be saved on vinification and marketing. Hence the great improvement of pressing techniques over the century before Pliny.<sup>94</sup> Hence, too, some of the aspects of amphora history which have puzzled scholars: the decision whether to use clay vessels at all, the degree of standardization which suggests uniformity of quality among really very variable products, and individual changes in amphora style like the creation of types Dressel II–IV in imitation of Greek containers.<sup>95</sup> For Pliny (*HN* 14, 68) this type of commercialization, the systematic adulteration of Narbonese wines in an industrial *officina*, simply rules them out of any discussion.

The agricultural phenomena described in this last section are clear even in our selective and anecdotal sources. A relatively high proportion of detail is recoverable. This development is the result of the changes in the demand for wine outlined above, but it is also the strongest non-comparative evidence for those changes. That this aspect of agricultural history has for so long been obscure is the result of the failure to understand how competition works in the marketing of wine, and to make proper distinction between quality and quantity production: so Pliny's regret at the passing of some Italian fine wines is taken to apply to all viticulture. And the Roman mistrust of the whole business, summed up by Cicero's gibe at Rullus, has caused further misunderstanding. In fact these mistakes have travestied the agricultural realities. The period from Augustus to Hadrian saw in Italy and Narbonensis some of the most creative agricultural developments attested from antiquity; if these were not confined to viticulture they were, however, most spectacular in that field. There was no crisis; rather these were years of boom. The new vineyards of Spain and Gaul cannot possibly be said to have destroyed the viticulture of Italy, and cannot, therefore, be said to contribute to an Italian agricultural crisis. In the reign of Hadrian more wine was being made from Italian grapes than ever before.

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<sup>92</sup> Pliny, *HN* 17, 199 f., cf. Columella, *RR* 1, *pr.* on the need for *varietas experimentorum*. Note also *HN* 17, 77, a method of planting-out associated with the particular type of *arbustum* found *sub urbe*.

<sup>93</sup> The Sasernae and the vine-shoot experiments: *HN* 17, 199; compare, significantly, 17, 116; 'nostra aetas correxit', older, inefficient methods of grafting vines. For disputes about viticulture, Columella 3, 2, 31.

<sup>94</sup> *HN* 18, 317: the 'Graecanicum' press is a century old, a smaller and more compact version was invented twenty-two years previously (c. A.D. 55); this fits well the needs of the spreading small suburban vineyards.

<sup>95</sup> For Dressel II–IV see Paterson, art. cit. (n. 18), 150–1.