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The Roman slave supply

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Abstract: This survey of the scale and sources of the Roman slave supply will be published in Keith Bradley and Paul Cartledge (eds.), *The Cambridge world history of slavery, 1: The ancient Mediterranean world*.

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I. Problems and methods

Any reconstruction of the Roman slave supply depends on two variables: the total number of slaves, and the relative contribution of particular sources of slaves to overall supply. Due to the nature of the record, these issues are at best only dimly perceptible. A simple comparison with the history of US slavery highlights the severity of this predicament: decadal census counts not only record the number and distribution of slaves but also permit us to calculate rates of natural reproduction and even to assess the patterns of the domestic slave trade. This body of data gives us a good idea of the scale and development of the underlying slave system. In the study of the world history of slavery, by contrast, an evidentiary basis of this kind is the exception while uncertainty and guesswork are the norm. Roman slavery firmly belongs in the latter category: hardly any genuine statistics are available, and historians face two similarly unpalatable options. Thus, we may decide to eschew speculative quantification altogether and focus on what our sources readily provide – that is, qualitative impressions of the prevalence of slave-ownership and the provenance of slaves. This humanistic approach allows us to draw a rich canvas of slaveholdings large and small and of a variety of sources of supply from capture in war all the way to voluntary self-enslavement. What it cannot do is to give us even a remotely reliable notion of the representative value of scattered references. Conversely, we may choose to advance broad probabilistic estimates of the demand for slaves and the likely weight of different sources of supply. This approach is likewise fraught with serious problems: it depends on inherently aprioristic notions of plausibility; if these notions are backed up by comparative evidence, they run the risk of circularity; yet in the absence of comparative contextualization, they invite arbitrary implausibility; it may be hard if not impossible to link broad models to qualitative source references; and models may at best produce a range of competing probabilities instead of a single authoritative reconstruction. What they can do, however, is to enhance our understanding of overall structure and scale in ways that would not otherwise be possible.

Any meaningful discussion of the Roman slave supply must seek to combine both approaches for the fullest possible picture. In the following, I juxtapose evidence and models, and emphasize uncertainties and conjecture. This almost inevitably makes for an account that will appear both overly timid and unaccountably bold: frequent reminders about the shakiness of our readings and interpretations will jar with the far-flung propositions that are required to set up an overarching quantitative framework. I begin by considering the probable size of the slave population in Italy, in Egypt, and in the Empire as a whole (section II). The core of the chapter consists of a review of the various sources of slaves and the mechanisms of the slave trade (section III), followed by a brief conclusion (section IV).

II. The scale of Roman slavery

1. Italy

We do not know the number of slaves in any particular community of Roman Italy or in a particular sector of the economy at any given point in time, let alone for the region as a whole. Between the fifth and the first centuries BC, the aggregate slave population must have increased dramatically (Chapter 13), yet this process is almost impossible to quantify except in the barest outlines. The only thing we can in fact be sure of is that conventional ‘top-down’ guesses lack any support in the evidence and are consequently without merit. Hence, the common notion that by the end of the Republican period, about one-third of the Italian population consisted of slaves, and that this share translated to a grand total of some two to three million slaves depending on the underlying population estimates, owes more to unwarranted extrapolation from conditions in the Antebellum South or nineteenth-century Brazil than to any information preserved in ancient

sources.¹ It is true that the tenor of the sources implies widespread slave-ownership in elite circles, to the extent that slavery probably made a significant contribution to the demographic make-up of the population of Italy. A handful of references evoke massive slaveholdings: the 4,116 slaves in the bequest of Tarius Rufus (Plin. *NH* 33.135); the 400 household slaves of the city prefect Pedanius (albeit a purely symbolic number) (Tac. *Ann.* 14.43); and Augustus' regulations aimed at owners of more than 500 slaves (Gai. *Inst.* 1.43). While extreme examples such as these may well hint at a much bigger iceberg underneath, they are of little help in generating a usable estimate of the overall importance of slave labor in the heartland of the Empire.

Ideally, slave totals would be tallied up from local or sectoral counts. In the absence of such data, I have tried to construct a probabilistic model that seeks to simulate this process by aggregating individual estimates for the likely demand for slaves in different sectors of the Italian economy (Scheidel 2005a). Needless to say, this method necessarily entails huge margins of error and cannot provide more than a rough notion of final outcomes under certain starting assumptions about the scale of domestic service or agricultural inputs. For this reason, my estimate of around 600,000 non-farming slaves in late Republican and early imperial Italy cannot be more than a highly tenuous conjecture. It may be somewhat less hazardous to assess levels of rural slavery, given that slave numbers can be linked to specific labor requirements. Rural slave numbers assume a pivotal role in any reconstruction of servile demography: in an 'organic' economy, for the share of slaves in the overall population to have been very large (e.g., along the lines of New World slave societies), the majority of slaves would need to have been employed in the countryside. However, in view of constraints on the expansion of cash crop farming and other areas of rural employment, this is very unlikely to have been the case in Roman Italy. Barring some fundamental misconceptions about the nature of Italian farming, it would seem difficult to defend an estimate in excess of three quarters of a million agricultural slaves, and a significantly lower total is certainly plausible. In my model, the most probable range of outcomes is consonant with a cumulative total of between one and one and a half million slaves in Italy at the peak of this labor regime, equivalent to some 15-25% of the total population.² In the most general terms, there can be little doubt that despite their potentially vital contribution to agricultural production, slaves were disproportionately concentrated in the cities (Jongman 2003).

2. Egypt

As so often, Roman Egypt is the only part of the Empire that has produced some documentary evidence that supports limited statistical analysis of actual conditions in select locales. Pride of place goes to the census returns, papyrus texts that were drawn up every fourteen years and list the members of individual households including lodgers and slaves. 11.6% of 1,108 persons recorded in the surviving texts from (mostly) Middle Egypt are slaves, but comparatively slave-rich urban households are over-represented in this sample: slaves were more common in district capitals (14.6%) than in villages (8.4%). A separate census register from one city in Upper Egypt yields a lower urban rate of 7% (Bagnall, Frier and Rutherford 1997: 98). This spread may be a sign of significant but otherwise obscure regional variation, with a stronger presence of slaves in the more 'Hellenized' and perhaps wealthier centers of Middle Egypt. Levels of slave-ownership may well have been higher in the provincial capital of Alexandria but remain unknown due to the lack of papyrological evidence (Biezunska-Malowist 1976; cf. P.Oxy 44.3197).

If we use the two urban census tallies to establish a notional urban average of 10.8%; set the share of slaves in the villages of Upper Egypt by extrapolating from the respective urban/rural

¹ Scheidel 2005a: 65, *contra* Beloch 1886: 415-8; Brunt 1971: 124-5; Hopkins 1978: 68; Finley 1998: 148.

² Cf. Scheidel 2004b: 2-9 for overall population size.

ratio in Middle Egypt (for an Upper Egyptian rural mean of 4%) and thereby infer an overall rural average of 6.2%; and if we assume that cities contained 15-20% of the population of Egypt outside Alexandria, we may guess that slaves accounted for about 7% – or perhaps more cautiously 5-10% – of the total epichoric population. Scattered lists of men subject to *corvée* or taxation suggest comparable shares, ranging from 0 to 10%.³

Moreover, slave-ownership was limited in scope: only 15% of households in well-preserved census texts owned any slaves, and most of those only one or two (Fig. 1). This suggests that slaves were mostly employed as domestics. We have no evidence for large slave-staffed estates: tenancy and wage labor appear to have been the norm.⁴

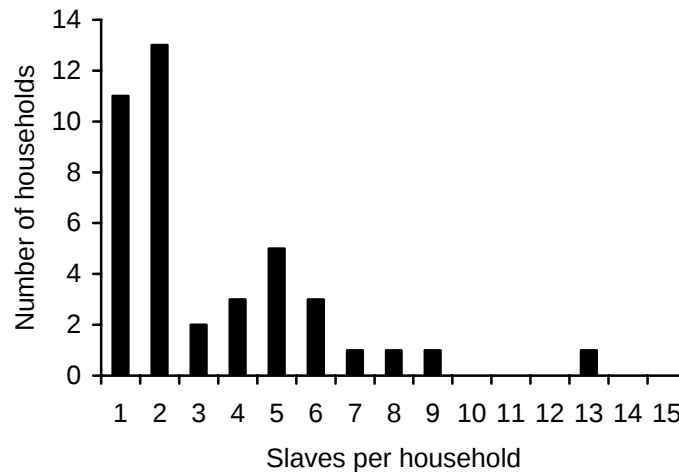


Fig. 1 The distribution of slave-ownership in the census records of Roman Egypt (1st-3rd centuries AD)

3. The Empire

In this regard, Egypt differed considerably from Italy. The big question is whether the other provinces were, on average, closer to the ‘Italian’ or the ‘Egyptian’ end of the spectrum. On a rough estimate, these other regions accounted for about 80% of the population of the Empire: thus, even if we were to agree on notional shares for Italy (say, 15-25%) and Egypt (say, 5-10%), any estimate of overall slave numbers would critically depend on conditions in areas that yield hardly any pertinent information. Existing proposals – of 10% or 17-20% for the entire Empire – are necessarily mere guesses.⁵

Qualitative evidence conveys the impression that slavery was common in several parts of the Empire, not just in domestic service but in all sectors of the economy.⁶ Once again, the degree of slave-ownership in farming is key: if slaves were to be very numerous overall, they had to

³ Westermann 1955: 87-88 (seven samples in which slaves account for 0, 0.5, 1, 1, 4, 7, and 10% of all men). Biezunska-Malowist 1977: 156-8 reckons with a share of slaves of 7-11% outside Alexandria.

⁴ Data from Bagnall and Frier 1994: 181-312; Bagnall, Frier and Rutherford 1997: 57-88. Lack of large slave estates: Biezunska-Malowist 1977: 73-108; cf. Rathbone 1991.

⁵ Scheidel 1997: 158 (10%); Harris 1980:118; 1999: 65 (17-20%). Cf. also MacMullen 1987: 375 for what looks like a guess below 10%.

⁶ For detailed surveys, see esp. Staerman et al. 1987; Marinovic et al. 1992; Bussi 2001.

maintain a strong presence in the rural labor force. The fact that a parable in the Gospel of Luke casually assumes that someone might own a slave to till the land and tend livestock (Luke 17.7) indicates that the use of slaves in farming was hardly unheard of. The best evidence comes from some census registers from western Asia Minor (around AD 300?) which report levels of slave-ownership on country estates: most holdings did not have any slaves at all, while those that did usually had two or three (who may have been managers or quasi-tenants rather than laborers), and – excepting a couple of unusually slave-rich units –, not more than perhaps 10-12% of the registered agricultural population were of unfree status (Jones 1974: 242-4). Whether even a moderate presence of farming slaves was a characteristic of Aegean labor regimes or somehow representative of larger parts of the Empire is impossible to ascertain.

It is true that occasional reports from various provinces hint at very substantial levels of slave-ownership. They include the flight of 107 public slaves from the Anatolian city of Kabeira in AD 74 (IGRR 4.914); Josephus' claim that Apollodotus, the strategos of Gaza, commanded 10,000 slaves (or citizens?: *Ant.* 13.359); John Chrysostom's clearly hyperbolic assertion that the rich of Antioch in Syria owned 1,000 or 2,000 slaves each (alongside 10 or 20 bath-houses!) (*Homil. in Mt.* 63.4 PG 58.608); Apuleius' claim that his wife Pudentilla could give away 400 slaves in Oea in Tripolitania (*Apol.* 93); and the report that in AD 280, a wealthy pretender from the Maritime Alps was able to arm 2,000 of his own slaves in a bid for the throne (*HA Firmus* 12.2). According to Galen (5.49), Pergamum was inhabited by 40,000 (male) citizens and 80,000 'wives and slaves' (but no children?), while Strabo (12.2.3 & 6) credits two Cappadocian temples with 6,000 and 3,000 slaves, respectively. Unfortunately, with the exception of the first testimony, none of these references can lay claim to precision, or even accuracy: symbolic numbers such as 400, 1,000, 3,000, 6,000 and 10,000 abound, and the context invites exaggeration to varying degrees.⁷ In some of these cases, we might also wonder about the actual status of these 'slaves' – whether they should be seen as freely alienable chattels or rather as dependants bound by local traditions of subservience. What remains is the impression that large concentrations of slaves in the hands of elites outside Italy were by no means considered implausible. The Talmudic notion that 100 slaves constitute wealth (*Sabbath* 25b) chimes with the Augustan restrictions on manumission that envisioned similarly large holdings.

The hypothetical breakdown in Table 1 is meant to invite further consideration of the limits of the plausible. Constrained in the first instance by often conjectural findings regarding Italy and Egypt, this model yields a share of slaves of between 7 and 13% of the imperial population – i.e., somewhere close to one-tenth. Its main advantage is that unlike earlier guesses, it is not completely free-floating but grounded in explicit assumptions about its constituent elements. Any future revision must start by addressing these underlying variables, not with the final total itself.

⁷ Cf. Scheidel 1996b on symbolic figures.

Table 1 Hypothetical distribution of the free and slave population of the Roman Empire (in millions)

	Urban		Rural	
	Free	Slaves	Free	Slaves
Italy	1.3m	0.6m	3.5m	0.6m
Egypt	1.25m	0.25m	4.2m	0.3m
Others	4-5m	0.4-1m	42-45m	2.5-5.5
Total	6.5-7.5m	1.3-1.9m	49-52m	3.5-6.5m

Key: Italy: Scheidel 2004b (free population), 2005a (slave population). Egypt: Scheidel 2001: 246-7 (total population); Alexandria (guess; cf. Scheidel 2004a): 350,000 free + 150,000 slaves; other cities (above): 890,000 free + 110,000 slaves; villages (above): 4,220,000 free + 280,000 slaves. Other provinces: Scheidel 2007 (total imperial population, provincial breakdown, and urbanization rates); low estimate: slaves are 10% of urban population (~ Egypt) and 6% of rural population (~ Egypt); high estimate: slaves are 20% of urban population (~ Italy/Egypt mean) and 12% of rural population (~ Italy/Egypt mean).

III. The sources of slaves

1. The scale of the slave supply

For statistical reasons, the average ‘social life expectancy’ of slaves (i.e., the amount of time spent in slavery, allowing for episodes of freedom before and/or after enslavement) must have been relatively close to 20 years regardless of the sources of slavery. Therefore, if there were somewhere between 5 and 8 million slaves in the Roman Empire, some 250,000 to 400,000 new slaves were required every year to maintain numbers. However, even if we can be reasonably confident that annual demand amounted to several hundred thousand slaves, it is difficult to estimate the relative contribution of different sources of slave supply, and how they changed over time.⁸ Even so, although there is no denying that warfare and breeding were “mutually supportive strategies” rather than stark alternatives (Bradley 1987a: 50), it is safe to say that in the most general terms, the relative significance of capture in war had to be gradually eclipsed by natural reproduction, if only because ‘new’ (i.e., freeborn) slaves were required for substantial build-ups such as that experienced in Republican Italy and growing slave numbers would have boosted natural reproduction. Logic dictates that the larger a slave population becomes, the more difficult it is for capture to retain a dominant position as a source of supply, whereas the relative contribution of natural reproduction is bound to increase with overall size. The real question is whether the latter was sufficient to maintain overall strength or whether a decline in the former would have undermined slavery as an institution: different outcomes can be simulated with the help of parametric models but depend on untestable starting assumptions.

Likewise, the volume of the slave trade remains obscure: while free-born slaves would have been sold at least once (unless they were kept by or directly assigned to their original captors, primarily soldiers), individuals born into slavery need not have changed hands at all, although some of them surely did, and an unknowable percentage of all slaves would have been traded multiple times. This concatenation of uncertainties makes it almost impossible even to guess the average number of transactions per year: in theory, it could have been as low as 100,000 (if 80% of 250,000 slaves were slave-born and one-quarter of them were sold once in their lifetime, and each new slave was sold only once), or as high as close to a million (if each of 400,000 slaves was sold twice). It seems very likely that the truth must lie between those extreme assumptions: an annual tally of several hundred thousand transactions may count as a credible

⁸ Boese 1973: 51-103 (Republic) and 104-142 (Empire) is the main chronological survey.

guess, equivalent to a few per cent of the total number of slaves in the Empire.⁹ Long-distance transfers would account for an unknown fraction of these sales: for what it is worth, I have argued that annual imports into Italy averaged between 10,000 and 20,000 during the last two centuries BC (Scheidel 2005a).

2. Free-born slaves

Capture in war

The Roman legal tradition makes it clear that capture in war caused loss of freedom.¹⁰ The sale of freshly seized enemy combatants and civilians was standard practice: the term employed for this process, '*sub corona vendere*', was so ancient that its meaning had already become unclear by the second century BC: it may refer to the captives' wearing of wreaths, or perhaps rather to their being surrounded by a circle of guards (Gell. NA 6.4.3-5, with Welwei 2000: 12-14).

Owing to the limited time-depth of the Roman historiographical tradition, specific references to wartime enslavement are rare until the beginning of the third century BC: the true extent of the alleged mass enslavement of the inhabitants of Veii in 396 BC remains unknowable.¹¹ The scale of predations expanded as the catchment area grew. The annalistic sources report the enslavement of between 58,000 and 77,000 individuals in a mere five years of campaigning during the Third Samnite War (297-293 BC). The First Punic War (264-241 BC) netted well over 100,000 new slaves, its sequel (218-202 BC) even more. For a mere 35 years from 201 to 167 BC, and despite the neglect of massive operations in Northern Italy and Spain, the sources report the capture of some 300,000 people.¹² Almost incessant campaigning ensured a steady inflow of new slaves, punctuated by periodic mass enslavement events: the sack and enslavement of the entire surviving population of Acragas in Sicily, one of the largest Greek cities in the western Mediterranean, in 261 BC set the tone for the future. The largest recorded tally for a single operation that may bear some semblance to reality is that of 150,000 captives taken in the sack of Epirus in 167 BC.¹³ We must bear in mind that while particular reports may well be exaggerated,¹⁴ they nevertheless cumulatively understate the actual scale of slave-making: tallies are provided in a haphazard fashion, focusing on the most notable events but neglecting minor operations or even entire theaters. Thus, the grand total of approximately 700,000 slaves recorded for the years from 297 to 167 BC fails to capture the full scale of war-time enslavements (Table 2). Yet it is hardly coincidental that these sources indicate a clear progression in the annual volume of captures, from an annual mean of c.3,300 for 297-241 BC to c.5,300 for 241-202 BC and c.8,700 for 201-167 BC. Despite the probable deficiencies of the underlying tallies, unreasonably large adjustments would be required to alter the basic ratios of this sequence. The scale of enslavement was primarily a function of the geographical reach of Roman imperialism.

⁹ In the US in the 1850s, c.200,000 slaves were traded annually between states (or 0.5% of all slaves), but the scale of exchange within states remains obscure: Tadman 1989: 31. At that point, the system relied entirely on natural reproduction, which may have depressed the volume of sales.

¹⁰ Florent. D. 1.5.4.2; Marcian. D. 1.5.5.1; Wieling 1999: 4-9. In war, Romans only enslaved foreigners, never Romans captured in civil wars.

¹¹ Welwei 2000: 35-42. Veii: Livy 5.22.1, with Welwei 2000: 32-5.

¹² Welwei 2000: 42-48 (Third Samnite War), 65-81 (First Punic War), 88-131 (Second Punic War); Ziolkowski 1986: 74-5 (210-167 BC).

¹³ Diod. 23.9.1 (Acragas), with Zon. 8.10; Livy 45.34.5 and Ziolkowski 1986 (Epirus).

¹⁴ Cf. Boese 1973: 40; Welwei 2000: 149.

Table 2 Reported enslavements of war captives, 297-167 BC (see above, n. 12)

Third Samnite War (297-293 BC)	58,000-77,000
First Punic War (264-241 BC)	107,000-133,000
Gallic War (225-222 BC)	32,000
Second Punic War (218-202 BC)	172,000-186,000
Various wars (201-168 BC)	153,000
Sack of Epirus (167 BC)	150,000
Total	672,000-731,000

It is unclear to what extent this trend continued beyond the early second century BC: the sources for later periods are far less assiduous in reporting slave counts.¹⁵ Occasional tallies are suspect in various ways, either because they mirror earlier totals – such as the 60,000 Cimbri and 90,000 Teutones supposedly seized by Marius in 102/101 BC (Liv. *Per.* 68), equivalent to the Epirotic loot in 167 BC – or simply because of their enormous size – most notably Caesar’s alleged enslavement of one million (or more) prisoners in Gaul in 58-51 BC (Plut. *Caes.* 15; App. *Kelt.* 1.2; cf. Vell. 2.47.1), or Trajan’s putative yield of 500,000 new slaves in Dacia in AD 105/106 (Lydus *De Mag.* 2.28). Modern estimates can do little to mitigate the lack of comprehensive coverage in the sources.¹⁶ A series of major campaigns threw vast numbers of slaves on the market: 55-60,000 captures are reported for the fall of Carthage in 146 BC; the destruction of the Cimbri and Teutones in 102/101 BC and the Mithradatic wars in the Asia Minor from the 80s to the 60s BC cannot have failed to generate a massive intake of slaves, even if credible figures are scarce; even at far less than the reported tally of one million, Caesar’s ravaging of Gaul in the 50s BC – where just two sackings reportedly netted over 90,000 slaves – would surely have resulted in another glut of captives. The potential contribution even of comparatively minor operations is highlighted by the fact that when Roman forces liquidated the Alpine tribe of the Salassi in 25 BC, the entire surviving population of 44,000 was sold into slavery. Forty years of persistent warfare under Augustus must have helped to keep up the pace.¹⁷

In the following centuries, mass enslavement came to be limited to less frequent campaigns and the suppression of rare uprisings. The Jewish Wars of AD 66-73 and 132-135 occupy a prominent position in the historiographical tradition: Josephus gives a total of 97,000 enslavements for the former, and the latter permitted Jewish captives to be sold for the price of horses. The sack of the Parthian capital Ctesiphon in 198 AD is said to have yielded 100,000 slaves.¹⁸ Again, no proper statistics are available, and cumulative tallies out of reach: even so, there can be little doubt while the average annual intake must have dropped significantly below late Republican levels, military endeavors continued to make a substantial contribution to the Roman slave supply.

Despite the huge scale and frequent occurrence of war-time enslavements, the sources allude only sketchily to the logistics of these transactions. It appears that merchants often followed Roman armies and bought up newly captured slaves on the spot. In other cases, slaves were moved to locations that were more suitable for conducting their sale, or even shipped to Rome and auctioned off there. Sale to local populations or ransoming by relatives were additional

¹⁵ Boese 1973: 71-89 (200-31 BC), 104-142 (31 BC-AD 180).

¹⁶ Cf. Boese 1973: 87 (c.1.8 million from 200 to 31 BC, including Caesar’s ‘1 million’), 109 (c.400,000 from 31 BC to AD 180).

¹⁷ Carthage: App. *Lib.* 126, 130; Oros. 4.23; but cf. Zon. 9.30. Germans: above, n. ##. Mithradatic Wars: Boese 1973: 79-80. Gaul: Caes. *BG* 2.33, 7.89, and above, n. ##; cf. Westermann 1955: 63 (150,000?). Salassi: Strabo 4.6.7. Augustus: e.g., Florus 2.52 (Cantabrians).

¹⁸ Jos. *BJ* 6.9.3 (66-70 BC); Westermann 1955: 85 nn. 13-14 (Jews); Dio 75.9.4 (Ctesiphon).

options. Victorious generals might also hand captives directly to their soldiers as a share of the booty.¹⁹

It would be misleading to limit a discussion of capture in war to campaigns conducted by Roman armies. Warfare and the enslavement of captives among third parties sustained most of the major 'slave societies' in world history – the Greek Aegean in antiquity, Islamic societies in the Middle East, and the colonial plantations systems of the Americas and South Africa in the modern period. Roman slave-owners likewise drew on this source of supply: as outlined below, warring among independent Gauls, Germans, Dacians and other neighbors of the Roman Empire may well have been an important source of human merchandise for the Mediterranean slave markets. Nevertheless, from a world historical perspective, Roman slave society stands out for the crucial importance of the *direct* link between Roman campaigning and slaving: to a much greater extent than other slave-rich systems, Roman elites relied on their own military forces to procure a captive labor force. The Sokoto Caliphate in nineteenth-century Nigeria may be the only major analogous case.

Other modes of enslavement

The closest parallels to enslavement in warfare were capture by pirates and brigands – de facto equivalent to standard military practice but lacking public sanction –, and penal slavery, the Roman state's enslavement of its own citizens. The enslavement of abandoned newborns and the sale of children by their parents belong in a separate category of de facto enslavement without formal legal recognition and – whilst violent – lacked the dimension of organized predation or coercion inherent in the other mechanisms of capture. Self-sale by adults stands apart as a (formally) voluntary and legally binding procedure.

Modern scholarship tends to accord great significance to the provision of slaves by eastern Mediterranean 'pirates' in the second and early first centuries BC. There are indeed many indications that communities based in Rough Cilicia and Pamphylia as well as Crete that had gained autonomy from the erosion of the great Hellenistic powers engaged in increasingly wide-ranging raiding ventures that presumably entailed a considerable amount of slave-making.²⁰ However, their supposed role in the Roman slave supply is supported by a single hyperbolic passage in a later geographical survey that links the establishment of a free market on the Aegean island of Delos in 166 BC that eventually came to turn over 'a myriad' (literally '10,000', de facto, 'very many') slaves per day to the activities of the pirates who could now avail themselves of this port to unload their human loot and 'pass themselves off as slavers' (Strab. 14.5.2). Yet there is no good reason to interpret the spasmodic character of Roman countermeasures as a sign of tacit collusion between sellers and buyers: when the pirates stepped up their operations in the context of the Mithridatic Wars – even sacking Delos c.69 BC and enslaving its people –, Rome did not hesitate to suppress their activities.²¹ While large-scale piracy undoubtedly contributed to the Roman slave supply, it is hard to assess the relative significance of this source. Later episodes of piracy show no clear connection with the slave trade, at least not until maritime raiders were said to carry off the inhabitants of coastal villages in Illyria and North Africa in the fifth century AD.²² At the local level, terrestrial brigandage accounted for sporadic kidnappings throughout the Empire, including Italy itself. Yet even though a contemporary observer could credibly present

¹⁹ Volkmann 1990: 106-7 (merchants), 108-9 (transfers). Soldiers: e.g., Livy 4.34.4; Caes. *BG* 6.31.1-2, 7.89; Suet. *Iul.* 26. Cf. also Sall. *Jug.* 44.

²⁰ Pirates and slaving: e.g., Maroti 1969/70; Boese 1973: 61-71. For more critical accounts, see Avidov 1997; de Souza 1999: 97-148.

²¹ 'Conspiracy theory': Pohl 1993: 186-90; cf. Boese 1973: 69-71; contra: de Souza 1999: 99-100. Suppression in 67 BC: *ibid.* 161-78.

²² Piracy after 67 BC: de Souza 1999: 179-224. Illyria: *CTh* 10.10.25. North Africa: August. *Epist.* 10*; Szidat 1985.

kidnapping as a source of slavery, it seems inherently unlikely that gangs of bandits could make a noteworthy contribution to the Roman slave markets.²³

Servi poenae were persons whose crimes caused them to be reduced to slave status, in a process known as *capitis deminutio*. In the Republican period, this penalty could affect draft-dodgers and those who eluded the census. Later on, *dediticii* – free people of ‘infamous’ status – were to be sold into slavery if they entered a 100-mile radius around the city of Rome. Other targets of this measure included free women who cohabited with a slave against his owner’s will, and egregiously ungrateful freedmen. Defendants were frequently sentenced to work in the mines (*in metallum*). It was only in the sixth century AD that the state abolished enslavement by verdict.²⁴

Ancient sources convey the impression that the enslavement of exposed babies was an unexceptional event. While impossible to quantify, this practice may conceivably have been the leading domestic source of free-born slaves in the mature Empire. Its numerical significance depends in part on the overall incidence of child exposure, a rather intractable issue that cannot be discussed here. Suffice it to say that the latter is consistently portrayed as a widespread custom, and that ethnic groups that raised all their children were considered exceptional.²⁵ The raising of foundlings as slaves is well documented in Roman Egypt, especially in wet-nursing contracts: crude calculations suggest that given known levels of adult slave prices, it made economic sense to rear foundlings despite the considerable risk of premature death.²⁶ In an exceptionally rich papyrus cache of over 700 contracts recorded in the Fayum village of Tebtunis in AD 42-47, 22 out of 30 cases that involve slaves are wet-nursing contracts arranging for the raising of slave children, as opposed to a mere 5 slave sales (P.Mich. 121, 123, 238). While we must allow for villagers’ unknown purchases at urban slave markets, this ratio strongly suggests that the enslavement of foundlings played a major role in the local slave supply – although it may be inadvisable to generalize too broadly from this one example. In Roman law, neither exposure nor enslavement of foundlings were illegal per se; however, in formal legal terms, these acts did not affect the free status of the child, and surviving children technically remained in *patria potestas*: in principle, such persons could always be reclaimed later, although compensation could be due to their de facto owners. In practice, it may have been difficult to establish the free origin of enslaved foundlings, especially if geographical transfers had occurred: even so, later claims to freedom did occasionally result in legal conflicts.²⁷

Outright abandonment was complemented by other forms of cession. In mainland Greece and especially in Asia Minor, *threptoi* raised as slaves need not always have been foundlings but may on occasion have been ceded to another family who incorporated them in a subordinate position.²⁸ The overt sale of one’s own children was commonly regarded as exceptional: in ancient sources, it recurs as a topos that symbolizes extreme duress, pictured as the last resort of desperate parents squeezed by tax demands, debts, or famine. Only stereotypically ‘barbarous’

²³ Brigandage: Shaw 1984; Grünewald 2004: 14-32. Italy: Suet. *Tib.* 8 (kidnapped travelers in slave prisons). Observer: Dio Chrys. 15.25.

²⁴ Donatuti 1934; Ziletti 1968; Burdon 1988; Wieling 1999: 18-22, 28-9. Definition: Ulp. D. 48.19.2 pr. Republic: Arr. Men. D. 49.16.4.10; Cai. Inst. 1.159; Ulp. Epit. 11.11. *Dediticii*: Cai. Inst. 1.27, 159. Wives and freedmen: Wieling 1999: 20-2, 28-9. Mines: Cai. D. 28.1.8.4; Ulp. D. 48.19.8.4; Hermog. D. 48.19.36; Paul. Sent. 3.6.29. Abolition: Nov. Iust. 22.8.

²⁵ Boswell 1988: 53-179; Harris 1980: 123, 1994: 9-10, 18-19; also Pomp. D. 3.5.10; Venul. D. 21.1.65; Marcian. D. 39.4.16.3. Quantification: Scheidel 1997: 164-6; Harris 1999: 74. Exposure common: Harris 1994. Exceptions: Strabo 17.2.5; Tac. *Hist.* 5.5 and *Germ.* 19.

²⁶ Biezunska-Malowist 1977: 21-6; Straus 1988: 854-6; Bagnall 1997. Contracts: Masciadri and Montevecchi 1984: 10-20. Economics: Saller 2003: 203 n.65.

²⁷ Status: Wieling 1999: 27-8. *Patria potestas*: Scaev. D. 40.4.29; Cod. Iust. 7.14.2. Compensation: Cod. Iust. 5.4.16; but cf. CTh 5.9.1. Conflicts: esp. Plin. *Epist.* 10.65-6.

²⁸ Nani 1943/44 (slaves); Guinea 1998 (cession).

peoples were thought to indulge this habit on a more regular basis.²⁹ The popularity of these tropes make it impossible to gauge the actual frequency of child sale: more frequent references in late antiquity were brought about by changes in rhetorical style rather than economic or legal developments. It is unlikely that Roman fathers ever had a formal right to sell their children; in classical law, family members could not be sold into slavery or pawned. As in the case of enslaved foundlings, the state favored a pragmatic compromise position: the sale of minors did not affect their status and was technically void; therefore, redemption remained possible, with or sometimes without compensation. This focus on redemption accounts for prohibitions of the sale of such slaves overseas.³⁰

As a result, there were no clear boundaries between sale, pawning, and lease: given the formal inviolability of free status, 'sale' might merely amount to an extended lease of minors in times of hardship. Thus, late Roman sources decree a period of 20 years of labor to achieve release, and set an age limit of 25 years for redemption. Only the sale of newborns (*sanguinolenti*), singled out in imperial constitutions, would more likely result in lasting servitude. This was a gray area where the official dichotomy of free and slave broke down, generating *de facto* alternatives to chattel slavery. Arrangements of this kind may well have been common in certain parts of the Empire but largely remain hidden from our view.³¹

The same is true for self-enslavement. Roman law focuses on fraudulent transactions in which a free person pretending to be a slave colluded with a dealer in arranging a sale but subsequently reclaimed his freedom and received a share of the proceeds: although the sale itself could not legally affect the fake slave's free status, adult impostors were to be punished by actually being reduced to slavery. Genuine self-sales may arguably have occurred for the sake of upward mobility, with an eye to a career and later manumission. The quantitative weight of such events was presumably minimal.³² (Self?-)enslavement for debts is a particularly shadowy issue: the complaint lodged in 104 BC by Nicomedes III of Bithynia that many of his subjects had been unlawfully carried off as slaves by Roman tax collectors hints at potentially significant means of (*de facto*) enslavement that are not otherwise covered in our sources. The presence of putative debt-bondsmen in various parts of the Empire also suggests the continuing creation of relationships of dependence that straddled the formal boundary of free and slave.³³

3. The slave trade

Considering the huge scale of the Roman slave trade, substantial amounts of capital must have been committed to the procurement and distribution of slaves, and large numbers of middlemen had to be involved in this business. Nevertheless, the identity and social standing of professional slave traders remain almost completely unknown. Known as *venalicius/venaliciarius* or *mango* in Latin and *somateporos* or *andrapodokapelos* in Greek, they may have owed their relative obscurity to the fact that they often dealt in other commodities as well, or perhaps rather to the contempt in which their profession was held by members of the literate elite. Adverse moral judgments focus on the supposed greed and general turpitude of slave dealers, who were accused of tricking out their wares to defraud buyers, and likened to pimps: the fact that these condemnations arose from concerns for the well-being of the customers rather than the slaves

²⁹ Topos: Vuolanto 2003: 170-9, 203-4, with rich source references.

³⁰ Law: Fossati Vanzetti 1983; Wieling 1999: 16-17; Vuolanto 2003: 179-88. Redemption: CTh 5.10.1; Cod. Iust. 4.43.1-2. Compensation: CTh 3.3.1; Nov. Val. 33. Prohibition: CJ 4.43.1; August. *Epist.* 10*.3.6-7; Nov. Val. 33.

³¹ Vuolanto 2003: 189-97. Limits: Sent. Syr. 98; CTh 4.8.6; August. *Epist.* 10*.2.1-2, with Willvonseder 1983. Newborns: Fr. Vat. 34; CTh 5.10.1; cf. Sent. Syr. 65.

³² Buckland 1908: 427-33; Wieling 1999: 25-6. Status: Callistr. D. 40.12.37. Fraud and penalty: Hermog. D. 40.12.40; Ulp. D. 40.13.1. pr.; Pompon. D. 40.13.3. Mobility: Ramin and Veyne 1981: 488-97.

³³ Bithynia: Diod. 36.3.1-2. Debt-bondage: Varro *RR* 1.17.2; Colum. *RR* 1.3.12; Lo Cascio 1982.

themselves may surprise modern observers but is perfectly in line with the unchallenged acceptance of slavery in the Roman tradition. In the face of such prejudice, the famous epitaph of the slave trader Aulus Capreilius Timotheus from Amphipolis in Thrace (himself a freedman) that depicts a dozen chained slaves remains a unique testimony of professional pride.³⁴ In terms of social standing, the few known slave traders range from Toranius Flaccus, who moved in the company of Antonius and Augustus and may even have been a tribune of the plebs, all the way to the occasional freedman only known from his tombstone. What meager evidence we have suggests that in the late Republic and early Empire, dealers were often Roman citizens. It was only in late antiquity that Galatians came to be seen as proverbial members of this profession. Much as in other sectors of the imperial economy such as banking or shipping, the degree of elite involvement can only be guessed at. It may be significant that in the 40s AD, the slave traders of Ephesus honored the super-wealthy top aristocrat C. Sallustius Crispus Passienus as their patron. Even if the C. Sornatius who built a slave-market (*statarion*) in Phrygia in the 70s BC really was the homonymous legate of Lucullus, selling war captives from the Bithynian campaign, this alone would not make him a slave dealer. It may even be possible to read Suetonius' biography of the emperor Vespasian as insinuating that he briefly traded in eunuchs to restore his finances not long before he reached the throne. The jurists assumed that slave dealers routinely formed *societates*, allegedly to impede legislation but perhaps also because of the capital requirements of their ventures.³⁵ At the opposite end of the spectrum, the roaming Galatian slave dealers who in the early fifth century AD ransacked African villages whilst enjoying the protection of powerful patrons show that suppliers hailed from a wide variety of backgrounds and might operate under very different circumstances. Soldiers are also known to have had a hand in the trade.³⁶

Slaves changed hands in established centers of exchange in metropolitan centers, such as Rome, Ephesus, and perhaps most famously the island of Delos; at periodic markets, such as the epigraphically attested bi-weekly slave fair in the Syrian city of Baetocaece; at 'opportunistic' markets that would temporarily be set up by itinerant dealers in the wake of military campaigns to dispose of the human booty; and in small-scale transactions at the local level.³⁷ Occasional snapshots reveal long-distance transfers: we know of a Cretan woman and a Greek boy who were sold in Dacia, and of a slave woman in Spain who hailed from northern Italy. A Phrygian girl sold in Side and another one from Osrhoene sold in Tripolis both ended up in Egypt, as did a slave woman from Libya who had been sold in Ravenna in Italy by a man from Miletus in Asia Minor to a soldier of the Egyptian fleet.³⁸

Legal constraints on the slave trade were light (see also Chapter 19). Earlier restrictions such as the provision in Rome's treaty with Carthage of 348 BC that outlawed the sale of captives from allied polities in Roman ports disappeared with Rome's takeover of the Mediterranean. Although the castration of slaves was outlawed in the late first century AD, the trade in eunuchs was never suppressed by the state; and later rules against the long-distance transfer of sold children or the separation of slave families may not have had much effect either.³⁹ Fiscal intervention probably only had a moderate impact on the volume of trade: tariff records from Palmyra from AD 137 stipulate customs dues equivalent to not more than 2 or 3 % of the value of teenage slaves, while the tariff recorded in an analogous inscription from Zarai in Numidia (AD

³⁴ Traders: Boese 1973: 158-70; Harris 1980: 129-32; Bodet 2005. Prejudice: *ibid.* 193 n.52-3. Timotheus: Finley 1977: 154-66; Duchêne 1986. Cf. Schumacher 2001: 58-65.

³⁵ Examples: Bodet 2005: 183-6. Citizens: Harris 1980: 131. Vespasian: Suet. *Vesp.* 4.3, with Bosworth 2002. *Societates*: Cai. Inst. 3.148; Paul. D. 21.1.44.1.

³⁶ Galatians: August. *Epist.* 10*.8.2; Szidat 1985: 362. Soldiers: Biezunska-Malowist 1977: 32-5; Ammian. 31.4.11.

³⁷ Harris 1980: 125-8 is still fundamental. For the free port of Delos (166-69 BC), see also Strabo 14.5.2; Rauh 1993: 43-52. Fairs: OGIS 262 (Baetocaece); De Ligt 1993: 61, 67, 71, 126.

³⁸ Harris 1980: 128; Straus 2004: 279-83 (and cf. 283-7 for trade within Egypt).

³⁹ Treaty: Polyb. 3.24.6. Eunuchs: Guyot 1980: 45-51. Children: above, n. ##. Families: CTh 11.48.7 (AD 371).

202) envisions an even lower rate. In Egypt, Roman authorities upheld the earlier practice of requiring export permissions and export fees (of unknown size) for slaves.⁴⁰

The relative prevalence of private sales versus transactions arranged by professional dealers is unknown. In slave markets, slaves were displayed on platforms and could be undressed for closer inspection; new arrivals were marked with chalked feet. Slaves wore placards (*tituli*) advertising their qualities around their necks (including their origin, state of health, and propensity to run away), or special caps (*pillei*) in those cases where the seller would not offer guarantees.⁴¹ Extant sales contracts, primarily from Egypt with rare additions from Italy and Dacia, testify to the scrupulous observance of formal legal requirements, and give us a rough idea of the age distribution of traded slaves, dominated by individuals in their teens and twenties.⁴²

Known slave prices are rare and once again mostly available from Egyptian papyrus records. Sporadic records from Italy, Africa, Dacia and Syria help to flesh out the picture.⁴³ The only surviving systematic pricing schedule – a section of the tetrarchic edict setting maximum prices of AD 301 – is late and highly schematic but bears some resemblance to schedules used by nineteenth-century slave dealers in the United States.⁴⁴ Manumission tariffs reported in Greek sanctuaries, above all Delphi, may be only imperfectly related to actual market prices.⁴⁵ Overall, it is clear that base prices were highly sensitive to age, and that skill premiums could be very considerable, running to high multiples of base rates. Episodic mass enslavement could temporarily depress price levels (Volkmann 1990: 118). Our evidence suggests real slave prices in the first three centuries AD of the order of about 4 tons (+/- 50%) of wheat equivalent for a young adult slave of moderate skills. Thus, in terms of food prices and wages, real slave prices in the imperial period appear to have been considerably higher than in classical Athens. The fact that slave prices for the Republican period are almost completely unknown forestalls direct comparison with earlier periods of Roman history. We are reduced to the mere assumption that slave prices in Republican Italy ought to have been *relatively* low during the massive expansion of the regional slave complex.⁴⁶

Roman law required dealers to disclose the ethnic origin (*natio*) of slaves: that some groups were considered more desirable than others hints at the presence of racist attitudes within an otherwise indiscriminately voracious regime of slaving. Such prejudices, however, were not normally elaborated beyond generic slurs against entire cultures or narrow recommendations of groups thought suitable for specific tasks, such as the notion that slave families from Epirus made superb herders.⁴⁷

Where did Roman slaves come from? The origins of newly captured slaves shifted with the geographical spread of Roman imperialism: peninsular Italy down to the end of the third century BC; northern Italy, the Iberian peninsula, the southern Balkans, North Africa, and western Anatolia in the second century BC; Gaul, the central Balkans, Anatolia and the Levant in the first century BC; Britain, Germany, Dacia and Parthia from the first century AD onwards. In addition, large numbers of slaves were purchased from beyond the Roman frontiers. Prior to conquest, Gaul, the Balkans, and Anatolia may have been the leading foreign providers of slave labor. In free Gaul, Roman merchants bartered Italian wine for Celtic chattels: one modern estimate puts the annual turnover at 15,000 slaves. Dacia and the Lower Danube basin's rapid

⁴⁰ Palmyra: OGIS 629 = CIS II 3913 (22 denarii for imports and 12 denarii for exports); Zarai: CIL VIII 4508 (HS 6); Egypt: Gnomon/Idioslogos (BGU 1210) §§ 65-9; Straus 2004: 302-5.

⁴¹ See Bradley 1992. Placards: Gell. NA 4.2.1. For physical remains of slave markets, see JRA 18, 2005: 196-234. Etymology: Poccetti 1985.

⁴² Contracts: Polay 1962; Straus 2004. Age: Bradley 1978; Straus 2004: 262-70.

⁴³ Boese 1973: 152-7; Mrozek 1975: 45-8; Duncan-Jones 1982: 348-50; Straus 2004: 296-8; Scheidel 2005b.

⁴⁴ Scheidel 1996c; Tadman 1989: 287-8.

⁴⁵ Hopkins 1978: 133-71, with Duncan-Jones 1984.

⁴⁶ These are the central points of Scheidel 2005b and forthcoming b.

⁴⁷ Ulp. D. 21.1.31.21 (*natio*); Isaac (2004), e.g. 316-7, 338, 359 (prejudice); Varro RR 1.17.5 (Epirotes).

penetration with Roman coins from the mid-first century BC onwards has been interpreted as the result of a massive surge in slave exports from that region, possibly in response to the curbing of piracy and the annexation of parts of the Levant in the 60s BC.⁴⁸ The Black Sea region and the Caucasus had been well established as a major source of slaves since the archaic Greek period (see Chapter 6), and this tradition continued into late antiquity. Together with free Germany, that northeastern periphery must have accounted for most imports once the Roman empire had reached its maximum extension. Black slaves from as far away as Somalia and the occasional import from India made for comparatively rare but consequently high-prestige retainers.⁴⁹ As outlined above (section 3.2), various mechanisms ensured continued flows of slaves from within the provinces as well. ‘Internal’ slaves of Anatolian extraction loom large in the literary tradition: Phrygian slaves in particular had long become a stock motif, while Lydia, Caria, and Cappadocia likewise garnered attention. The neighboring Syrians are also frequently mentioned as slaves, and massive Jewish uprisings in the first and second centuries AD made periodic contributions to the slave markets (Harris 1980: 138-9).

Slave names are a poor indicator of actual provenance. Greek names dominate the record not just because many slaves came from the Hellenistic East, but also because they were fashionable. A massive survey of all 5,800-odd slave names in the city of Rome reveals that about two-thirds of all attested metropolitan slaves bore Greek names, and most others Latin ones. At 2 or 3 per cent of the total, the extreme scarcity of ‘barbarian’ (mostly Semitic) names hardly reflected actual ethnic origins. The fact that auspicious or otherwise cheerful names such as Felix, Primus/Prima and Eros topped the popularity rankings indicates that they were customarily assigned without regard for ethnicity.⁵⁰ Reports of actual provenance are rare: under the empire, slaves from the Hellenistic East and Italy proper feature prominently, arguably because of their higher skill levels and resultant likelihood of commemoration. Of some sixty slaves in Egypt whose origin is known, about one-quarter had been imported from other regions: Asia, Africa and Europe all contributed to the Egyptian slave supply.⁵¹

Given the very considerable uncertainties surrounding any attempt to gauge the relative weight of the various sources of Roman slaves, a diachronic perspective remains almost completely out of reach. The manumission inscriptions at Delphi, dating from the second century BC to the first century AD, provide a rare exception to our pervasive ignorance. Taken at face value, these records point to an increase in natural reproduction at the expense of purchased slaves (Figs. 2-3; Westermann 1955: 32-3, 98).

⁴⁸ Gaul: Tchernia 1983; Crawford 1985: 169-72. Dacia: Crawford 1977. Cf. also Strab. 5.1.8 (Illyrians).

⁴⁹ E.g., Tac. *Ann.* 12.28 (?) (Germany); Strabo 11.2.3 (Lake Asov); Proc. *Bell. Pers.* 2.15.5 (Caucasus); *Per. Mar. Er.* 8, 13 (Somalia), with Snowden 1970: 184-6; Tibull. 2.3.55-9; Philostr. *VS* 1.8 (India).

⁵⁰ Solin 1996. Cf. also Gordon 1924.

⁵¹ Bang 1910 (empire), with Boese 1973: 124-5; Straus 1998: 864-6 (Egypt).

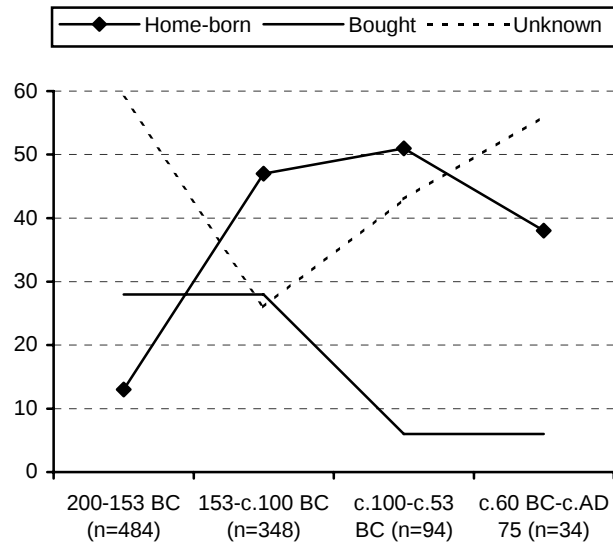


Fig. 2 Manumitted slaves in Delphi, by provenance (in per cent)

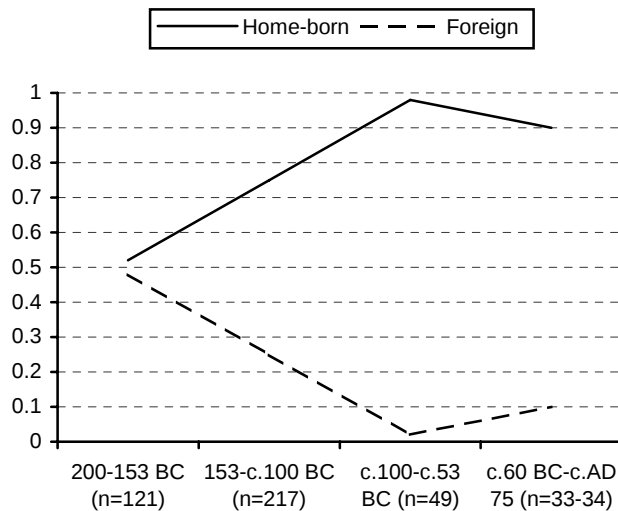


Fig. 3 Ratio of home-born to imported manumitted slaves in Delphi (total = 1)

4. Natural reproduction

Under Roman law, the offspring of slave women assumed the status of their mothers, except when the mother had been free and married at the time of conception or, since the second century AD, if she had in fact been free at any moment during pregnancy.⁵² Slaves born in the households of their current owners (known as *oikogenes* or *verna*) formed a special category within slaves from birth: conventionally imbued with greater prestige – thus serving as the counterpoint to the *palimpratos*, the ‘oft-sold slave’ –, they could also be viewed as ‘crafty and

⁵² Cai. *Inst.* 1.82; Marcian. D. 1.5.5.1; Wieling 1999: 9-10.

deceitful' for their presumed ability to play the system.⁵³ Whilst sometimes the result of de facto unions between slaves who were legally incapable of marrying (see Chapter 19), home-born slaves could also be fathered by their mothers' owners, a feature that was common in other slave societies and may well have been significant in Roman households.⁵⁴

In the present context, the relative contribution of natural reproduction to the overall slave supply is of paramount importance. Unfortunately, our sources do not permit any empirical assessment of this issue. Home-born slaves are common among slaves mentioned in Egyptian papyri, an observation that is consistent with high retention rates of fecund slave women and the strong representation of slave children in census returns from that region (see below).⁵⁵ For most parts of the empire, no comparable evidence is available. When in the first century AD, the Roman agronomist Columella offered rewards to slave mothers of three and four children (or sons?), it is unclear whether we should take this to mean that such cases were rare or common. Appian's sweeping claim that in late Republican Italy, 'the ownership of slaves brought the rich great gain from the multitude of their progeny' (*BC* 1.7) might be true for that period; or for his own lifetime; or might merely be an artifact of the political polemics of a bygone age. Mere mention of slave children or their labor in other texts is devoid of statistical value.⁵⁶

Systematic consideration of the critical determinants of slave fertility yields uneven results. The overall contribution of natural reproduction to the Roman slave supply depended on two factors, namely the average rates of slave births and attrition, each of which is made up of two constituent elements – sex ratios and family structure, and the incidence of mortality and manumission.

Servile sex ratios are obscure. While some records from Roman Italy and Alexandria indicate high (i.e., male-biased) sex ratios, the surviving census returns from Egypt report fairly balanced sex ratios prior to manumission.⁵⁷ We are left wondering if genuine regional differences or the properties of different media of recording account for this divergence. Similar uncertainties beset our understanding of the relative scarcity of jobs held by women in urban inscriptions or the emphasis on male labor in agronomical treatises: female slaves may have been comparatively rare, or in fact ubiquitous but less skilled or tacitly taken for granted.⁵⁸ A number of general factors should discourage us from underestimating the quantitative presence of female slaves. Ancient sources consistently convey the impression that women and children were over-represented among war captives (and the victims of kidnapping); freeborn baby girls were perhaps more likely to suffer exposure than boys (though not necessarily as likely to be rescued to be raised as slaves); and half of all born slaves must have been female (and there is no evidence for the sex-selective exposure of newborn slaves). Thus, there is no good reason to assume that male slaves greatly outnumbered unfree women. Over time, with growing numbers of slaves in the core areas of the Roman slave society, natural reproduction must have become relatively more important, and sex ratios were liable to even out (Scheidel 2005a). Under those circumstances, substantial fertility rates were at least theoretically feasible. In practice, as comparative evidence suggests, the frequency and stability of quasi-marital unions among slaves would have been instrumental in determining actual outcomes (e.g., Fogel 1989: 150). While such arrangements were sufficiently common to surface repeatedly in the literary and legal traditions, and to achieve some prominence in inscriptions of putatively privileged slaves and ex-slaves, representative quantifiable data that could shed some light on the likely impact of slave family patterns on their reproductive success are sorely lacking.⁵⁹

⁵³ Herrmann-Otto 1994 (general); Kudlien 1986: 242-4, 253-4 (image).

⁵⁴ Herrmann-Otto 1994: 254-61; Scheidel forthcoming a.

⁵⁵ Straus 1988: 853; Biezunska-Malowist 1977: 47-8.

⁵⁶ Colum. *RR* 1.8.19, with Scheidel 1996a. Child labor: Bradley 1991: 103-24; Petermandl 1997.

⁵⁷ Treggiari 1975a: 400-1, 1975b: 58 (Italy); P.Oxy 44.3197 (Alexandria); Bagnall and Frier 1994: 342-3 (Egypt).

⁵⁸ Treggiari 1976, 1979; cf. Scheidel 1996d.

⁵⁹ Polay 1967; Bradley 1987b: 43-80.

Owing to heavy disease loads, life was short even in the top echelons of Roman society. For that reason alone, slaves need not have lived significantly shorter lives simply because of the hazards inherent their legal status. However, the use of slaves in particularly unhealthy rural locales and especially their disproportionate concentration in large and therefore infection-rich cities may well have lowered their overall mean life expectancy even further, thereby impeding natural reproduction at or near replacement level.⁶⁰ Manumission was probably a more important determinant of attrition and thus slave fertility. The age-specific incidence of manumission of female slaves is of pivotal importance. According to the Egyptian census returns, women were not normally manumitted prior to menopause, a custom that ensured that all their offspring remained the property of their owners. The price edict of AD 301 also indicates that a premium was placed on the reproductive capabilities of female slaves. By contrast, inscriptions from Italy and the western provinces frequently commemorate young and fecund freedwomen.⁶¹ Once again, we lack the means to decide whether we are dealing with genuine geographical variation or merely distorting recording practices that (in the latter case) gave undue prominence to the experience of privileged and otherwise unrepresentative slave women.

Several factors militated against slave reproduction at or near replacement level: imbalanced sex ratios if and when they persisted; higher mortality in cities and mines and on malarial estates; family break-ups through sale or inheritance; and the manumission of slave women of childbearing age. Comparative evidence shows that the high rates of natural growth in the slave population of the Antebellum South were truly exceptional; but so were catastrophic levels of attrition in parts of the Caribbean. General conditions in the Roman period permitted natural reproduction on a large scale: for mathematical reasons alone, it is hard to imagine that it was not at least as important as all other sources of slaves combined. My earlier guesstimate of an overall biological replacement rate of 80% in the mature empire has met with criticism but no plausible alternative. In more recent work, I allow for a reproductive shortfall of up to 50% in late Republican Italy, at a time when the slave population was greatly expanding and dynamically unstable.⁶² For what they are worth, these tentative reconstructions seek to trace the boundaries of what one might consider plausible. The nature of the evidence rules out more precise estimates.

IV. Conclusions

Any assessment of the Roman slave supply must distinguish between different stages and spheres of development. In the eastern half of the Mediterranean, slavery was already a common and firmly established institution when Rome first embarked on overseas expansion. That process must have affected patterns of supply and demand, and may well have resulted in significant changes that nevertheless remain invisible to the modern observer. For instance, it is possible that increases in the cost of obtaining unconditional manumission recorded in first-century BC Delphi were ultimately caused by the pull of the Italian slave markets that drove up demand and hence the value of slaves; but it is equally possible that other factors, such as a change in social composition of the sample, account for this phenomenon.⁶³ In Egypt, the only part of the Mediterranean world where crude time-series of slave prices can sometimes be pieced together, changes in the currency system impede direct comparisons between the late Hellenistic and Roman imperial periods (cf. Straus 2004: 295-9). What is more, empirical evidence for the relationship between slave supply and demand in the Italian heartland of the Roman empire is almost completely missing. Logic dictates that genuine ‘slave societies’ are most likely to emerge

⁶⁰ Scheidel 1999 (elite); Sallares 2002: 247-55 (unhealthy); Jongman 2003; Scheidel 2005a (cities).

⁶¹ Scheidel 1997: 160-3 (census returns); Scheidel 1996c (edict); Alföldy 1986: 286-331 (inscriptions).

⁶² Scheidel 1997: 166; Harris 1999: 64-72; Scheidel 2005a.

⁶³ Hopkins 1978: 162; Duncan-Jones 1984.

in the context of relatively high real wages (i.e., demand for labor) and relatively low slave prices. It is plausible yet impossible to prove that Republican Italy conformed to this model (Scheidel forthcoming b, c). For the period of the Principate, persistently high real slave prices are consistent with a high-equilibrium scenario of significant supply constraints and continuing strong demand for slave labor that encouraged natural reproduction, the enslavement of helpless insiders, foreign imports, and moderate restraint in manumission. It is unclear if or to what extent the Roman slave system eroded as the imperial period progressed (see Chapter 23): if decline did indeed occur, it was more likely to be propelled by changes in demand than in supply (Scheidel 2005a: 79).

During the millennium from the emergence of the Roman empire to its eventual decline, at least 100 million people – and possibly many more – were seized or sold as slaves throughout the Mediterranean and its hinterlands. In terms of duration and sheer numbers, this process dwarfs both the transatlantic slave trade of the European powers and the Arabic slave trade in the Indian Ocean. For all we can tell, enslavement and the slave trade constituted the principal means of geographical and (both upward and downward) social mobility in the ancient world (cf. Scheidel 2004b, 2005a). The modern observer must wonder how to do justice to the colossal scale of human suffering behind these bland observations: the story of the Roman slave supply must count as one of the darkest chapters of human history.⁶⁴

Bibliographical note

Boese 1973, the only book-length study of the Roman slave supply, is useful mainly as a collection of pertinent source material. More sophisticated syntheses can be found in Bradley 1987a and 1994: 31-56. The best information on actual patterns of slaveownership is recorded in the Roman Egyptian census returns analyzed by Bagnall and Frier 1994 and Bagnall, Frier and Rutherford 1997. Straus 2004 offers an exhaustive account of the unique evidence for slavery and the slave trade in Roman Egypt. Harris 1980 is a pioneering study of slave markets and traders, now supplemented by a series of articles in *JRA* 18, 2005. Scheidel 2005b provides the most recent survey of slave prices. Volkmann 1990 and Welwei 2000 discuss the rich evidence for Roman mass enslavements in wartime. For comparative conjectures about the size and reproduction of the Roman slave population, see Scheidel 1997 (on the empire as a whole), with the critique by Harris 1999, and most recently Scheidel 2005a, focusing on conditions in Roman Italy.

Bibliography

- ALFÖLDY, G. (1986) *Die römische Gesellschaft: Ausgewählte Beiträge*. Stuttgart
 AVIDOV, A. (1997) 'Were the Cilicians a nation of pirates?', *Mediterranean Historical Review* 10: 5-55
 BAGNALL, R.S. (1997) 'Missing females in Roman Egypt', *SCI* 16: 121-38
 BAGNALL, R.S. and FRIER, B.W. (1994) *The Demography of Roman Egypt*. Cambridge
 BAGNALL, R.S., FRIER, B.W. and RUTHERFORD, I.C. (1997) *The Census Register P.Oxy. 984: The Reverse of Pindar's Paeans*. Brussels
 BELOCH, J. (1886) *Die Bevölkerung der griechisch-römischen Welt*. Leipzig
 BIEZUNSKA-MALOWIST, I. (1976) 'L'esclavage à Alexandrie dans la période gréco-romaine', in *Actes du colloque 1973 sur l'esclavage*, 291-312. Paris

⁶⁴ For evocative reconstructions, see Bradley 1986, 1992, 1994: 43-56.

- BIEZUNSKA-MALOWIST, I. (1977) *L'esclavage dans l'Égypte gréco-romaine II: Période romaine*. Wrocław
- BODEL, J. (2005) 'Caveat emptor: towards a study of Roman slave traders', *JRA* 18: 181-195
- BOESE, W.E. (1973) 'A study of the slave trade and the sources of slaves in the Roman Republic and the Early Roman Empire'. Diss. University of Washington
- BOSWELL, J. (1988) *The Kindness of Strangers: The Abandonment of Children in Western Europe from Late Antiquity to the Renaissance*. New York
- BOSWORTH, A.B. (2002) 'Vespasian and the slave trade', *CQ* 52: 350-7
- BRADLEY, K.R. (1978) 'The age at time of sale of female slaves', *Arethusa* 11: 243-52
- BRADLEY, K.R. (1986) 'Social aspects of the slave trade in the Roman world', *MBAH* 5.1: 49-58
- BRADLEY, K.R. (1987a) 'On the Roman slave supply and slavebreeding', in Finley, M.I., ed., *Classical Slavery*, 42-64. London
- BRADLEY, K. R. (1987b) *Slaves and Masters in the Roman Empire: A Study in Social Control*. New York and Oxford
- BRADLEY, K.R. (1991) *Discovering the Roman Family: Studies in Roman Social History*. New York and Oxford
- BRADLEY, K. (1992) 'The regular, daily traffic in slaves: Roman history and contemporary history', *CJ* 87: 125-38
- BRADLEY, K. (1994) *Slavery and Society at Rome*. Cambridge
- BRUNT, P.A. (1987) *Italian Manpower 225 B.C.-A.D. 14*. Rev. edn. Oxford
- BUCKLAND, W. W. (1908) *The Roman Law of Slavery*. Cambridge
- BURDON, J. (1988) 'Slavery as a punishment in Roman criminal law,' in Archer, L., ed., *Slavery and other Forms of Unfree Labour*, 68-85. London and New York
- BUSSI, S. (2001) *Economia e demografia della schiavitù in Asia Minore ellenistico-romana*. Milan
- CAMERON, A. (1939) 'Threptos and the related terms in the inscriptions of Asia Minor', in *Anatolian Studies Presented to W. H. Buckler*, 27-62. Manchester
- COARELLI, F. (1982) 'L'"agora des Italiens" a Delo: il mercato degli schiavi?', *Opuscula Instituti Romani Finlandiae* 2: 119-45
- CRAWFORD, M. H. (1977) 'Republican *denarii* in Romania: the suppression of piracy and the slave-trade', *JRS* 67: 117-24
- CRAWFORD, M. H. (1985) *Coinage and Money under the Roman Republic: Italy and the Mediterranean Economy*. London
- DE LIGT, L. (1993) *Fairs and Markets in the Roman Empire: Economic and Social Aspects of Periodic Trade in a Pre-Industrial Society*. Amsterdam
- DE SOUZA, P. (1999) *Piracy in the Graeco-Roman World*. Cambridge
- DONATUTI, G. (1934) 'La schiavitù per condanna', *BIDR* 42: 219-37
- DUCHÊNE, H. (1986) 'Sur la stèle d'Aulus Caprilius Timotheus, *somateporos*', *BCH* 110: 513-30
- DUNCAN-JONES, R.P. (1978) 'Two possible indices of the purchasing power of money in Greek and Roman antiquity', in *Les Dévaluations à Rome: époque républicaine et impériale*, 159-68. Rome
- DUNCAN-JONES, R. (1982) *The Economy of the Roman Empire: Quantitative Studies*. 2nd ed. Cambridge
- DUNCAN-JONES, R. P. (1984) 'Problems of the Delphic manumission payments 200-1 B.C.', *ZPE* 57: 203-9
- FINLEY, M. I. (1977) *Aspects of Antiquity: Discoveries and Controversies*. 2nd ed. Harmondsworth
- FINLEY, M. I. (1981) *Economy and Society in Ancient Greece*. Ed. B. D. Shaw and R. P. Saller. London

- FINLEY, M.I. (1998) *Ancient Slavery and Modern Ideology*. Exp. edn, rev. B.D.Shaw. Princeton
- FOGEL, R. W. (1989) *Without Consent or Contract: The Rise and Fall of American Slavery*. New York
- FOSSATI VANZETTI, M. B. (1983) 'Vendita ed esposizione degli infanti da Costantino and Giustanino', *SDHI* 49: 179-224
- GORDON, M. L. (1924) 'The nationality of slaves under the early Roman empire', *JRS* 14: 93-111
- GRÜNEWALD, T. (2004) *Bandits in the Roman Empire: Myth and Reality*. London and New York
- GUINEA, P. (1998) 'La peculiaridad de los *threptoí* en el Asia Menor', *DHA* 24.1: 41-51
- HARRIS, W.V. (1980) 'Towards a study of the Roman slave trade', in D'Arms, J.H. and Kopff, E.C., eds. *The Seaborne Commerce of Ancient Rome: Studies in Archaeology and History*, 117-40. Rome
- HARRIS, W.V. (1994) 'Child-exposure in the Roman empire', *JRS* 84: 1-22
- HARRIS, W.V. (1999) 'Demography, geography and the sources of Roman slaves', *JRS* 89: 62-75
- HERRMANN-OTTO, E. (1994) *Ex ancilla natus: Untersuchungen zu den "hausgeborenen" Sklaven und Sklavinnen im Westen des römischen Kaiserreiches*. Stuttgart
- HOPKINS, K. (1978) *Conquerors and Slaves: Sociological Studies in Roman History 1*. Cambridge
- ISAAC, B. (2004) *The Invention of Racism in Classical Antiquity*. Princeton and Oxford
- JONES, A.H.M. (1974) *The Roman Economy*, ed. P.A. Brunt. Oxford
- JONGMAN, W. (2003) 'Slavery and the growth of Rome: the transformation of Italy in the second and first centuries BCE', in Edwards, C., and Woolf, G., eds., *Rome the Cosmopolis*, 100-22. Cambridge
- KUDLIEN, F. (1986) 'Empticius servus: Bemerkungen zum antiken Sklavenmarkt', *Hermes* 35: 240-56
- MACMULLEN, R. (1987) 'Late Roman slavery', *Historia* 36: 359-82
- MARINOVIC, L. P., GOLUBCOVA, E. S., SIFMAN, I. S., and PAVLOVSKAJA, A. I. (1992) *Die Sklaverei in den östlichen Provinzen des römischen Reiches im 1.-3. Jahrhundert*. Stuttgart
- MARÓTI, E. (1969/70) 'Der Sklavenmarkt auf Delos und die Piraterie', *Helikon* 9/10: 24-42
- MASCIADRI, M. M., and MONTEVECCHI, O. (1984) *I contratti di balatico*. Milan
- MEMMER, M. (1991) 'Ad servitutem aut ad lupanar...: Ein Beitrag zur Rechtsstellung von Findelkindern nach römischem Recht unter besonderer Berücksichtigung von §§ 77, 98 Sententiae Syriacae', *ZRG* 108: 21-93
- MROZEK, S. (1975) *Prix et rémunération dans l'occident romain (31 av.n.è. – 250 de n.è.)*. Gdansk
- NANI, T.G. (1943/44) 'Threptoí', *Epigraphica* 5/6: 45-84
- PETERMANDL, W. (1997) 'Kinderarbeit im Italien der Prinzipatzeit: Ein Beitrag zur Sozialgeschichte des Kindes', *Laverna* 8: 113-136
- POCETTI, P. (1985) 'Gr. *statarion*/Lat. *statarium* "Sklavenmarkt": Lehnwort oder Bedeutungsentlehnung?', *Glotta* 63: 172-80
- POHL, H. (1993) *Die römische Politik und die Piraterie im östlichen Mittelmeer vom 3. bis zum 1. Jh. v. Chr.* Berlin
- POLAY, E. (1962) 'Sklaven-Kaufverträge auf Wachstafeln aus Herculaneum und Dakien', *AAntHung* 10: 385-97
- POLAY, E. (1967) *Die Sklavenehe im römischen Recht*. Szeged
- RAMIN, J. and VEYNE, P. (1981) 'Droit romain et société: les hommes libres qui passent pour esclaves et l'esclavage volontaire', *Historia* 30: 472-97
- RAUH, N. K. (1993) *The Sacred Bonds of Commerce: Religion, Economy and Society at Hellenistic Roman Delos, 166-87 B.C.* Amsterdam

- SALLER, R. (2003) 'Women, slaves, and the economy of the Roman household', in Balch, D. L., and Osiek, C., eds., *Early Christian Families in Context: An Interdisciplinary Dialogue*, 185-204. Grand Rapids and Cambridge
- SCHEIDEL, W. (1996a) 'Columellas *privates ius liberorum*: Literatur, Recht, Demographie. Einige Probleme', *Latomus* 53: 513-27
- SCHEIDEL, W. (1996b) 'Finances, figures and fiction', *CQ* 46: 222-38
- SCHEIDEL, W. (1996c) 'Reflections on the differential valuation of slaves in Diocletian's price edict and in the United States', *MBAH* 15: 67-79
- SCHEIDEL, W. (1996d) 'The most silent women of Greece and Rome: rural labour and women's life in the ancient world, II', *G&R* 43: 1-10
- SCHEIDEL, W. (1997) 'Quantifying the sources of slaves in the early Roman empire', *JRS* 87: 156-69
- SCHEIDEL, W. (1999) 'Emperors, aristocrats and the Grim Reaper: towards a demographic profile of the Roman élite', *CQ* 49: 254-281
- SCHEIDEL, W. (2001) *Death on the Nile: Disease and the Demography of Roman Egypt*. Leiden
- SCHEIDEL, W. (2004a) 'Creating a metropolis: a comparative demographic perspective', in Harris, W. V., and Ruffini, G., eds., *Ancient Alexandria between Egypt and Greece*, 1-31. Leiden
- SCHEIDEL, W. (2004b) 'Human mobility in Roman Italy, I: The free population', *JRS* 94: 1-26
- SCHEIDEL, W. (2005a) 'Human mobility in Roman Italy, II: The slave population', *JRS* 95 (in press)
- SCHEIDEL, W. (2005b) 'Real slave prices and the relative cost of slave labor in the Greco-Roman world', *AncSoc* 35: 1-17
- SCHEIDEL, W. (2007) 'Demography', in Scheidel, W., Morris, I., and Saller, R., eds., *The Cambridge Economic History of the Greco-Roman World*, 38-86. Cambridge
- SCHEIDEL, W. (forthcoming a) 'Sex and empire: a Darwinian perspective', in Morris, I., and Scheidel, W., eds., *The Dynamics of Ancient Empires*. New York
- SCHEIDEL, W. (forthcoming b) 'The comparative economics of slavery in the Greco-Roman world', in Dal Lago, E., and Katsari, C., eds., *Slave Systems, Ancient and Modern*. Cambridge
- SCHEIDEL, W. (forthcoming c) 'A model of real income growth in Roman Italy', *Historia*
- SCHUMACHER, L. (2001) *Sklaverei in der Antike: Alltag und Schicksal der Unfreien*. Munich
- SHAW, B. D. (1984) 'Bandits in the Roman empire' *P&P* 105: 3-52
- SNOWDEN, F. M. (1970) *Blacks in Antiquity: Ethiopians in the Greco-Roman Experience*. Cambridge MA
- SOLIN, H. (1996) *Die stadtrömischen Sklavennamen: Ein Namenbuch*, I-III. Stuttgart
- SPRANGER, P.P. (1984) *Untersuchungen zu den Sklavenfiguren des Plautus und Terenz*. 2nd ed. Stuttgart
- STAERMAN, E. M., SMIRIN, V. M., BELOVA, N. N., and KOLOSOVSKAJA, J. K. (1987) *Die Sklaverei in den westlichen Provinzen des römischen Reiches im 1.-3. Jahrhundert*. Stuttgart
- STRAUS, J.A. (1988) 'L'esclavage dans l'Égypte romaine', in ANRW II 10.1, 841-911. Berlin and New York
- STRAUS, J. (2004) *L'achat et la vente des esclaves dans l'Égypte romaine*. Munich
- SZIDAT, J. (1985) 'Zum Sklavenhandel in der Spätantike (Aug. epist. 10*)', *Historia* 34: 362-71
- TADMAN, M. (1989) *Speculators and Slaves: Masters, Traders, and Slaves in the Old South*. Madison and London
- TCHERNIA, A. (1983) 'Italian wine in Gaul at the end of the Republic', in P. Garnsey, K. Hopkins and C. R. Whittaker, eds., *Trade in the Ancient Economy*, 87-104. Cambridge
- TRAMONTI, S. (1994) "*Hostes communes omnium*." *La pirateria e la fine della repubblica romana (145-33 a.C.)*. Ferrara
- TREGGIARI, S. (1975a) 'Family life among the staff of the Volusii', *TAPhA* 105: 393-401
- TREGGIARI, S. (1975b) 'Jobs in the household of Livia', *PBSR* 43: 48-75
- TREGGIARI, S. (1976) 'Jobs for women', *AJAH* 1: 76-104

- TREGGIARI, S. (1979) 'Questions on women domestics in the Roman West', in *Schiavitù, manomissione e classi dipendenti nel mondo romano*, 185-201. Rome
- VOLKMANN, H. (1990) *Die Massenversklavungen der Einwohner eroberter Städte in der hellenistisch-römischen Zeit*. 2nd ed. Stuttgart
- VUOLANTO, V. (2003) 'Selling a freeborn child: rhetoric and social realities in the Late Roman world', *AncSoc* 33: 169-207
- WELWEI, K.-W. (2000) *Sub corona vendere. Quellenkritische Studien zu Kriegsgefangenschaft und Sklaverei in Rom bis zum Ende des Hannibalkrieges*. Stuttgart
- WESTERMANN, W.L. (1955) *The Slave Systems of Greek and Roman Antiquity*. Philadelphia
- WIELING, H. (1999) *Die Begründung des Sklavenstatus nach ius gentium und ius civile*. Stuttgart
- WILLVONSEDER, R. (1983) 'XXV annorum operae', *ZRG* 100: 533-541
- ZILETTI, U. (1968) 'In tema di "servitus poenae"', *SDHI* 34: 32-109
- ZIOLKOWSKI, A. (1986) 'The plundering of Epirus in 167 BC: economic considerations', *PBSR* 54: 69-80