

CHAPTER 4

HOUSEHOLD AND GENDER

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I INTRODUCTION

In the Greco-Roman world the household was the basic unit of production as well as consumption. This truism makes it imperative to understand how the household functioned through its life cycle, how property rights and labor participation were configured by gender and age. Too often in the past economic historians of antiquity have written with the implicit assumption that property owners and laborers were adult males.¹ Even a rough understanding of ancient Mediterranean demography suggests that such an assumption is unwarranted: women and children were important potential sources of labor and, in some legal regimes, substantial property owners.

The centrality of the household and family in the ancient economy is reflected in the most influential Greco-Roman work on the “economy,” Xenophon’s *Oeconomicus*. Written by an Athenian in the fourth century BC, this treatise of advice on estate management was read and cited as a source of wisdom for more than two millennia.² The work has been set aside as “not modern economics” (which it is not), and has been characterized as moral ideology (which it is).³ But neither point should obscure the fact that its basic theme, the gendered division of labor, was fundamental in household production and consumption.⁴

The principal focus of this chapter will be on the configuration by gender and age of property rights and labor in the households of classical Athens and Roman Italy. This focus will necessarily involve simplification of the rich variety of ancient societies, because the evidence is not adequate to capture the variation. Where chance survival of a law code provides a glimpse of Greek women’s property rights (e.g., for the Cretan *polis* of Gortyn in the fifth century BC), the law is quite different from that of Athens – a warning not to generalize from Athenian evidence to the condition of all Greek women. The choice of focus on Athens and Roman Italy is justified not only by the fact that these two societies are best attested, but also by

¹ Neither Rostovtzeff 1957 nor Finley 1973a has an entry in the index for women.

² Finley 1973a: ch. 1. ³ Murnaghan 1988. ⁴ Pomeroy 1994: ch. 5.

the fact that they exemplify two different conceptions of “patriarchy.” That term has been used, rather confusingly, to cover both the husband’s domination of his wife, and the father’s domination of his children. With respect to property ownership, the first sense is appropriate to classical Athens, where citizen wives had practically no independent rights over property, whereas the second sense is appropriate for classical Rome, where there was no age of majority for children in their father’s power.

This chapter opens with a methodological discussion of the difficulties with the sources. There follows an account of the demography of household formation and organization. The core of the chapter lies in the analysis of the patterns of property ownership and management by gender and age in Athens and Rome, and then of women’s and children’s labor in both societies. The differences between Athens and Rome in women’s property rights is more evident than differences in labor participation. The stronger property rights of wealthy Roman women enhanced their social status, but it is not obvious that they much affected decisions about economic production. The participation of women and children in particular sectors of production appears similar from fifth-century BC Athens to second century AD Rome: the fact that the changes in the training and labor-force participation of women and children were limited over these centuries is one aspect of the story of limited development within a fairly low-level equilibrium in the ancient economy.

II SOURCES

The epistemological challenge of this subject is compounded by three basic problems. First, of course, there is the common problem of all ancient economic history, the absence of quantitative data. Comparative evidence suggests that patterns of property ownership and labor participation by gender and age can have demonstrable effects on the quality of life for women and children, but both the levels of participation and the effects are impossible to substantiate for antiquity in the absence of aggregate data.⁵ Second, even in contemporary economics it can be difficult to document the dynamics of decision-making within the household – all the more so in antiquity with the thin, male-dominated sources. Third, this difficulty is exacerbated in antiquity by the heavy moralizing overlay in discussions of the household, without a counterweight in the form of works written by women.⁶

In economic history as in other forms of ancient history, the source materials are usually not genuine documents (except the Egyptian papyri and some inscriptions) but are representations in a variety of genres.⁷ The

⁵ Dercon and Krishnan 2000.

⁶ Dixon 2001, Murnaghan 1988.

⁷ Dixon 2001.

literary and philosophical representations, from the Homeric epics through the late Stoic philosophers, were powerfully shaped by the fundamental polarity of male outdoor/female indoor work and by the ideals of female domesticity.⁸ Often children are invisible or recognized in casual asides.⁹ As a result, these works should be treated not as sociological observation of behavioral patterns but as expressions of (adult male) moral ideals. Having acknowledged as much, I would also argue that these representations of women are not merely arbitrary fictions, unconnected with their lives. Rather, there is a substantive, as well as methodological, issue here: that is, to what extent did the ideology have practical effects, limiting women's ownership and labor participation? The brief answer is that the few, precious, relevant corpora of documents point to strong asymmetries of gender in accord with the ideology.

In Athens and Rome the law laid out a basic institutional framework for a configuration of roles and rights within the household by gender and age. Indeed, the relative prominence of the family in Athenian forensic speeches and Roman juristic texts is basic testimony to its centrality in organizing economic and social life. Of course, any use of Athenian orations must take account of the fact that they are heavily tendentious, that by definition the opposing sides in the court case represented the situation and perhaps the law itself differently.¹⁰ The Roman juristic texts, mostly the product of later excerpting, present cases real and imaginary. Although the cases themselves cannot be taken as sociological description, it seems probable that the underlying socioeconomic assumptions were realistic in the elite citizen's world of the jurists; otherwise, patently unrealistic premises would have been challenged in legal contests and undermined the authority of their responses. On the other hand, it must be recognized that Latin usage often effaced gender distinctions in the legal texts, making it difficult to detect women, and could be ambiguous with regard to age.¹¹

Evidence from the legal realm also raises substantive as well as methodological issues. To what extent did the legal rules and principles reflect practice? How influential were the legal institutions in shaping practice? Since the latter question is usually answered with respect to legal prescriptions and rules, it should be emphasized that legal institutions also enabled behavior. As an illustration, the Roman law of *patria potestas* did not grant independent property rights to adult sons in their father's power, and yet the legal institution of *peculium* gave these sons dependent property rights that enabled them to carry on a business.

Inscribed stones have a special value for the ancient historian, because they survive in the hundreds of thousands and from all regions of the

⁸ Scheidel 1995: 205; Pearce 1974; Mactoux 1994–5: 309.

⁹ Wiedemann 1989. ¹⁰ Cox 1998: xix–xx.

¹¹ Gardner 1995; Saller 1999; Wiedemann 1989: 154.

Mediterranean, including some from which no other texts survive.¹² Many of these texts are epitaphs on gravestones and are representations of the deceased. A substantial minority of the representations includes occupation and provides some of the finest-grained evidence available for the working classes. But these inscriptions should not be mistaken as a representative cross-section of the working population: women, young children, and the very poor are underrepresented. Some types of Attic inscriptions are genuine documents and have special value. For instance, the presence or absence of women in inscriptions recording loans or manumissions of slaves deserves particular attention. Likewise, the appearance of women's names in the wooden tablets recording business transactions in Roman Italy and on bricks and pottery permit insights that go beyond gender stereotyping.

III HOUSEHOLD ORGANIZATION

The household (*oikos* in Greek, *domus* in Latin) can be defined by the characteristics of coresidence, kinship, commensality, and economic cooperation.¹³ Certain basic features of family and household can be found across the Greco-Roman world. Monogamy was the rule, though not without exception.¹⁴ Divorce was permitted and available to husband and wife. Where it is possible to discern patterns, later male–earlier female marriage was the norm or the common practice. In Athens the norm seems to have been for men in their thirties to marry much younger girls in their teens, though the evidence for this practice is very limited.¹⁵ The data for ages at first marriage in Roman society are fuller and more varied. The literary and legal texts for aristocratic practice suggest that it was not uncommon for girls to be married in their early teens; men of the senatorial elite were expected to marry in their early twenties.¹⁶ Among men and women of the humbler social strata, marriage took place at a somewhat older age, though still with an age gap between men and women. The patterns of funerary commemoration reveal that responsibility for commemoration of women shifted from parents to husband around the age of twenty and for men it shifted from parents to wife around the age of thirty. The most economical explanation for the commemorative shift is that men in their late twenties or early thirties typically married women in their late teens or early twenties.¹⁷ In Roman Egypt the household census records suggest that older brothers married their sisters in their early teens, whereas other men and women married at a somewhat older age, but still with an age gap typical of what Hajnal called the “Mediterranean type.”¹⁸

¹² Saller 2001a. ¹³ Gallant 1991. ¹⁴ Goodman 1991: 174.

¹⁵ Strauss 1993: 67–70; Cox 1998: 120–2. ¹⁶ Hopkins 1965; Shaw 1987.

¹⁷ Shaw 1987; Saller 1994: ch. 2. ¹⁸ Hajnal 1965; 1982.

Newly married husbands at the age of thirty in a high-mortality regime had an average additional life expectancy of the order of 25–30 years, or less in unhealthy cities and lowlands. As a result of mortality and divorce, we must envisage societies in which widows and orphans were pervasive and vulnerable. Augustan legislation pressed the propertied citizen women of Rome to remarry up to the age of fifty by imposing testamentary disabilities on those who did not, but with what effect is uncertain. The census data from Roman Egypt show that marriage was the near-universal practice for freeborn women, and yet by the age of 35–40 only half of the women were still married.¹⁹ In a context of high mortality, women who lived through their child-bearing years must have had on average five or six children in order to maintain the population. A plausible guess is that one-third to one-half of those children survived to age ten, and those surviving ten-year-olds could expect on average an additional 35 or 40 years of life. A computer simulation of kinship in Roman society suggests that the average age at paternity was about thirty-six, that perhaps one of three children lost their father before they reached the age of puberty, and that two of three were fatherless by the time they reached full adulthood at age twenty-five. The child who reached adulthood with both parents alive would have been among the fortunate minority (20 percent). Family fragmentation and reconstitution, with all the concomitant complications for property and labor, must have been typical, and indeed appear very prominently in the Attic orations and the Roman legal texts.

In the face of harsh mortality, Greek and Roman writers from Hesiod to the Roman jurists represented the normative core of the family unit as nuclear – that is, husband, wife, and children. Aristotle in the *Politics* discussed the household head's responsibility to govern his wife, his children, and his slaves (1253b5–10). This was the basic group that shared the household stores of food and drink. The Latin word for stores was *penus*, and the Roman jurists defined *penus* as the stock of food and drink intended for consumption by the head of the household (*paterfamilias*), his wife and children, and his domestic slaves “who do not work” (*Dig.* 33.9.3pr., 6). Neither in this basic definition nor in any other evidence from Athens or Rome do we find an assumption of a norm of extended, multi-family households – that is, no *frereche*.²⁰ Nor did the societies of the ancient Mediterranean develop systems of primogeniture or ultimogeniture inheritance; all practiced partible inheritance in one form or another.

In reality, households were extended in numerous ways to accommodate contingencies and needs through the household life cycle. Households included widowed mothers, orphaned children, and unmarried relatives; in addition to kin, ancient households incorporated slaves and other

¹⁹ Bagnall and Frier 1994.

²⁰ Sallares 1991: 196; Crook 1967.

dependants.²¹ The census returns from Roman Egypt – the only systematic listings of members of households from the ancient Mediterranean – reveal a luxuriant variety of household forms, including numerous multi-family units (both parents and married children, and married brothers with their families).²² In these returns, extended family households are more common in rural areas than in the towns. The same may have been true of other Mediterranean societies, but there are no data to confirm the hypothesis. The evidence for Athens and Rome suggests that property ownership and management were generally undertaken by individual families. The *consortium* in Rome, in which adult brothers held an undivided patrimony, was legally possible but regarded as exceptional in practice.²³

IV PROPERTY OWNERSHIP AND MANAGEMENT

Athens and Rome present two different models of the distribution of property rights within the household. The Athenians held a unitary conception of household property, in which the husband was *kyrios* or manager of his wife's, as well as his own, property. Adult sons had the legal capacity to own property, but did not realize full legal control of the family estate until the death of their father. The unitary regime of household property may have been usual in early Rome, but by the classical era the typical marriage *sine manu* did not transfer the woman or her property to the authority of her husband. By contrast, in the absence of an age of majority, Roman children had no independent legal capacity to own property until the death of their father or their emancipation from him (not a common practice). What implications did this legal distinction have for economic practice?

(a) Athens

The law of classical Athens gave citizen women very limited discretion in dealing with property. Before marriage an Athenian girl had her father as her *kyrios*; during marriage her husband was her *kyrios*; and after marriage either an adult son or a male kinsman from her natal family would serve in that role. On her own, a woman could enter legally enforceable transactions only up to the value of a *medimnos* of barley (about a week's food for a family). The precise meaning and consequences of this law are debatable, but several indicators corroborate the narrow limitations on Athenian women's economic rights.²⁴

The Athenians practiced a system of partible inheritance in which sons received equal shares of the patrimony, whereas daughters were provided

²¹ Bradley 1991. ²² Bagnall and Frier 1994: 57–74.

²³ Crook 1967; Bannon 1997: ch. 1. ²⁴ Schaps 1979: 54.

with dowries for marriage.²⁵ The dowries could be substantial and usually comprised movables (cash, furniture, slaves), leaving the real property to male heirs. As security for the value of the dowry, husbands offered land, marked by inscribed stone *horoi*.²⁶ On the extant stones, the mortgages range widely in value from less than 500 drachmas to over a talent.²⁷ As a proportion of the family wealth, the values attested by the orators run from less than 5 percent of the patrimony to nearly 20 percent.²⁸ As long as the marriage continued, the husband as *kyrios* controlled the dowry and was responsible to provide maintenance for the wife, but not according to any fixed formula. The inability of poor families to dower a daughter could endanger her chances of getting married.

The possibility of divorce at the wife's or husband's instigation required that forethought be given to the return of the dowry. The return of a large dowry could place the husband in an awkward situation. As a result, Greek authors over the centuries lamented the leverage that a large dowry could give to a wife over her husband.²⁹ If the marriage ended by divorce or death of the husband, whoever held the dotal property owed annual interest at 18 percent in support of the woman until the dowry was returned. Overall, though Athenian women did not control their dowries and it is something of a misnomer to refer to it as "theirs," an adequate dowry provided a woman with some security against mistreatment or neglect through an unpredictable life course.

Aside from the dowry, Athenian women could benefit from wills or intestate succession. They did not acquire independent control of the bequests, but were the conduit through which the property flowed to another *oikos*. The starkest illustration of this principle was the institution called the *epiklerate*. In those cases where an Athenian man died with an unmarried daughter and no sons, the daughter became an *epikleros* and was married to her closest male kinsman. The estate was managed by the husband and then passed to the ownership of the sons of this marriage two years after puberty. Alternatively, an aging father with only a daughter could adopt a son to be a husband to his daughter; that son had to give up his claim to his natal patrimony.³⁰ These rules and others left Athenian heads of households with much less testamentary discretion than their Roman counterparts, and left Athenian women with only passive roles in succession.

A later section will discuss women's labor in crafts and commerce. Here it should be noted that the sources do not reveal Athenian women using their capital to engage in large-scale commerce. Though they occasionally made loans to relatives, they do not appear as professional moneylenders.³¹

²⁵ Harrison 1968. ²⁶ Cox 1998: 76. ²⁷ Schaps 1979: 99.

²⁸ Schaps 1979: 78. ²⁹ Schaps 1979: 76.

³⁰ Schaps 1979: ch. 3; Cox 1998: 94–9. ³¹ Schaps 1979: 63.

They are very rare in the Eleusinian accounts of transactions in the 320s BC, and they are absent as masters in the Athenian manumission inscriptions of the late fourth century BC.³²

The rule limiting women's legally enforceable transactions to the value of one medimnos of barley should logically have excluded Athenian women from any major financial transaction, but such a picture would be too stark and simple. There are scattered references to women making large loans and one collecting an *eranos* loan. How should these cases be explained within the context of the law? Schaps argues that the restriction on women's transactions was designed to protect the *kyrios* and that, if he was not regarded as a threat to challenge the transaction (e.g., in a loan to a relative), it could take place. Alternatively, in the case of the woman recorded as collector of an *eranos* loan, she was able to rely on her *kyrios* to provide the needed standing in law.³³ These examples appear to have been exceptional in a society in which large financial transactions between households were coded as belonging to the male domain. That this was true not only in ideology but also in practice is demonstrated by the inscribed documents recording loans and manumissions.

Most of the evidence for property rights of Greek women comes from Athens; the fragmentary testimony for other *poleis* reveals quite different legal systems. The fifth century BC legal code of Cretan Gortyn was conceptualized in terms of individual rights of family members rather than the unitary household of Athenian law.³⁴ As a result of this code, the male *kyrios* in Gortyn no longer had the right to dispose of his wife's or mother's property. The household consisted of maternal property as well as the patrimony. Sons and daughters stood to inherit shares of both, daughters receiving shares one-half the size of sons'. For Sparta there is the famous complaint of Aristotle that women had come to own 40 percent of the property in the fourth century BC (*Pol.* 1270a23–6). That wealth, in turn, allowed them to enter the public sphere of competition for status in the Olympic chariot races with teams they owned.³⁵ Even in Athens, by the period of Roman rule women were more visible as landowners.

How much importance should be attached to the minimal economic prerogatives of women in classical Athenian law? Lin Foxhall has made the argument that formal property rights in law do not regulate interactions within the *oikos* in a context of generalized reciprocity.³⁶ As Xenophon was at pains to stress, the wife had considerable responsibility to organize and manage the household, its stores and members. Within the one-medimnos rule, the woman could carry out daily transactions to keep the household fed.³⁷ More informally, wives could influence their husbands' decisions

³² De Ste. Croix 1970: 224.

³³ Harris 1992.

³⁴ Schaps 1979: 7.

³⁵ De Ste. Croix 1970.

³⁶ Foxhall 1989.

³⁷ Schaps 1979: 55.

about the management and distribution of property, as is implied by the law prohibiting the exercise of influence by a woman over a man drawing up a will.³⁸ And in the end, the woman had the threat to leave the husband's house with her dowry. So much is true, and Athenian women should not be depicted as entirely passive and powerless. Comparative evidence suggests that women's power to initiate divorce and take much of the property can enhance their well-being in a society.³⁹ Nevertheless, divorce was a fairly crude instrument of influence and, of course, limited to women with sizeable dowries relative to their husband's wealth. The Athenian wife's lack of other forms of major discretion in the disposal of property surely restricted her power and influence, to judge by a comparison with classical Rome.

(b) *Rome*

If the stories about the early Roman family are credible, Rome moved from a unitary conception of the household to highly individualized rights for spouses. In Roman law the *paterfamilias*, the oldest living male ascendant, was the head of the household with a monopoly of rights over its members and property. In early Rome, the woman upon marriage was transferred along with her dowry from her father's authority to her husband's (or that of his father, if still alive).⁴⁰ The dowry was the woman's share of her father's property, as in classical Athens. If the husband predeceased the wife, she had a right to an equal share of his estate, together with the deceased's sons and unmarried daughters (collectively known as *sui heredes*). Early Roman law permitted divorce only for serious moral transgressions and punished it severely.⁴¹ In other words, as in later Christian Europe, marriage was regarded as a lifetime arrangement with a single property regime under the ownership and management of the husband. *Sui heredes* were conceived to have an interest in the patrimony during the father's lifetime and hence automatically inherited on his death. No documents from this era are extant to confirm this picture of unified families, and the Roman penchant to idealize their past certainly simplified realities that are beyond our grasp.

By the time of the historical era illuminated by contemporary texts (after 200 BC), family practices and the situation of women had already begun to change in the direction of individualization. Divorce without moral cause came to be possible and by the first century BC was quite frequent among the senatorial elite.⁴² The most common form of marriage came to be *sine manu* – that is, without transfer of the woman to the authority of her

³⁸ Isae. 2.1, Dem. 48.56, Hyp. Athen. 5.17, *Ath. pol.* 35.2; Cox 1998: 75.

³⁹ Dercon and Kirshnan 2000. ⁴⁰ Treggiari 1991b: 324–6.

⁴¹ Watson 1975: ch. 3. ⁴² Bradley 1991: ch. 7; Treggiari 1991b: ch. 13.

husband. The wife remained under her father's power (*patria potestas*) and part of his property regime as long as he lived; after his death, she became independent (*sui iuris*) with property rights nearly the equal of men's. Only the woman's dowry was transferred to the ownership of her husband. The Roman jurists elaborated a full and sophisticated law of dowry based on the premise that the dowry's income would support the *onera matrimonii*, or costs of the wife in the new household.⁴³ Unlike Athens, in Roman society dowries often included land to produce revenue. The attested values of dowries in the late Republic and early Empire ranged from tens of thousands of sesterces for the curial class to a million sesterces for senatorial daughters. The jurists make it clear that expectations were set in accordance with the wealth of the bride's father and the status of the groom (*Dig.* 32.43). Relative to the size of the estate of the bride's father, the conventional sizes of dowries seem to have been about 5–10 percent, or roughly one year's income from the total patrimony. This relative size is consonant with the custom of paying the dowry in three annual installments out of current income without borrowing. By contrast with some other European societies in which the dowry was the daughter's full share of the patrimony and its payment strained family finances, Roman dowries were relatively modest and show no signs of inflation through the classical period.⁴⁴

Since the dowry did not automatically satisfy the daughters' claims on their fathers' estates, they stood to inherit additional property from their fathers and also their mothers, other relatives, and friends. The recently discovered *Senatus Consultum de Pisone patre* (lines 104–5) offers an illustration in the treatment of Calpurnia, the daughter of the condemned senior senator, Cn. Calpurnius Piso.⁴⁵ Out of Piso's estate the senate, surely guided by conventional expectations, awarded Calpurnia one million sesterces as a dowry and an additional four million as her own property. After the marriage, classical Roman law kept the woman's property quite separate from her husband's, to the point that gifts of value between spouses were not permitted during the marriage. Maintaining the separation of property in a household where some of the slaves and other moveable property belonged to the husband and some to the wife presented intricate legal questions for the lawyers.⁴⁶

After her father's death, the independent woman received a guardian (*tutor mulieris*), whose authorization was required for significant property transactions. In contrast to guardianship in Athens and many other societies, the *tutor mulieris* in Rome could not be the woman's husband, because the institution was intended, at least in part, to protect the wife's

⁴³ Treggiari 1991b: ch. 10. ⁴⁴ Gardner 1986: 97–116; Crook 1990: 164; Saller 1994: 212–18.

⁴⁵ Text and English translation can be found in Potter and Damon (1999).

⁴⁶ Crook 1986a; 1990; Dixon 1986; Treggiari 1991b: ch. 11.

independence in marriage. Over time the authority of the tutor, his capacity to limit the woman's discretion, was diluted to the point that Romans discussed women's transactions without any allusion to the tutor's approval. Augustus gave women with three children a set of privileges (the *ius trium liberorum*) including exemption from guardianship; a generation later Claudius abolished agnatic guardians, the only type that the woman had not been able to change in case of disagreement with the *tutor*.⁴⁷ These reforms were the culmination of developments that gave women a level of discretion to manage their own affairs and to bequeath their property unparalleled in European history before the twentieth century.⁴⁸ Even the women of the Gortyn Code, who had individualized rights within the family, did not have the testamentary discretion enjoyed by Roman women.⁴⁹

As a result of the institutional framework, women owned a substantial, but unspecifiable, share of the wealth of the Roman economy. There is impressionistic evidence that some Roman testators used wills to give sons a larger share of their estates than daughters, but, as in the case of Calpurnia, daughters often received something substantial beyond their dowry.⁵⁰ Furthermore, other testators had only daughters as *sui heredes*, and those daughter-heirs received the property unconstrained by the sort of rules that made the Athenian *epikleros* a passive conduit for the property to her sons. Roman men could use the legal device of adoption to make up for the absence of a natural son, but what evidence there is suggests that they did not do so nearly as often as they might have. On the basis of a study of the consular *fasti* it has been estimated that, even in a context of a high rate of failure in the male line of succession to high office, adoption was used to repair the male line in only about 4 percent of the cases.⁵¹

Altogether, there are reasons to think that women in Roman society owned a substantial fraction of the property, though it is impossible to gauge with precision. Testamentary customs and demographic realities make it likely that the estimate that 20 percent of wealth in the Roman world was owned by women is too low.⁵² Perhaps half of adult women had no living brother to take a larger share of the paternal and maternal estates, according to computer simulations.⁵³ Interestingly, about one-third (49 of 149) of the names of owners of brickyards in Roman Italy collected by Setälä are female.⁵⁴ Although this is hardly a scientific sample measuring women's ownership of property, the very substantial presence of women

⁴⁷ Gardner 1986: 5–30. ⁴⁸ Crook 1986b. ⁴⁹ Schaps 1979: 67.

⁵⁰ Saller 1994: 222; *contra* Champlin 1991: 117. ⁵¹ Hopkins 1983: 74.

⁵² Champlin 1991: 48, 119.

⁵³ Saller 1994: 49, Table 3.1.b. Roughly speaking, about one-third of fathers died without a son, and another third died with a daughter to compete with male heirs.

⁵⁴ Setälä 1977: App. 2; Dixon 2001: 97.

points in the same direction as other arguments and stands in contrast to the evidence from Athens.

How fully Roman women exploited their property rights and with what economic consequences are not clear. Examples from the elite illustrate the potential social power and status that women could derive from their discretion. The jurist Papinian assumed that wealthy women with testamentary discretion were regularly cultivated by their husbands, who commonly tried to soothe angry wives threatening to change their wills (*Dig.* 29.6.3). The letters of Cicero and Pliny provide a sense of the social power of property wielded by women within their families and beyond.⁵⁵ At a humbler level, a freedwoman named Manlia Gnome boasted on her tombstone that she had had clients – a symbol of prestige requiring resources to support (*CIL* 6.21975). Other women advertised their public benefactions, sometimes of striking size. Fabia Agrippina, for example, advertised her donation of one million sesterces to support girls in Ostia.⁵⁶

The wooden tablets from Murecine provide a precious, albeit elliptical, glimpse of how Roman women's property rights were manifested in business activities on the Bay of Naples in the mid first century AD. The waxed tablets attest a variety of dealings, including loans, sales of slaves, and suretyship. With the exception of standing surety, women are found in all roles, but only in a handful of the 170 documents and with a male tutor acting on their behalf. In the documents, slaves are found as the business agents for their masters, both male and female.⁵⁷ The use of slaves and freedmen as agents and managers meant that in the transactions women property owners were represented in the same way as men. That is, the availability of slaves as front men and managers may have effaced gender distinctions in the management of property among the elite. Terentia had her freedman manager, Philotimus, and Cicero had his, Eros.⁵⁸

The power of property in women's hands threatened men with an inversion of what they took to be the natural gender hierarchy. Already in the early second century BC the stern moralist Cato was decrying independently wealthy women, complaining of wives who were rich enough to loan money to their husbands and then hounded them to repay when they became unhappy. The motif of the wife who used her wealth to dominate her husband recurred in Latin literature through the centuries.⁵⁹

Despite all the legal potential for women's rights and men's anxieties, it is certain that the sociocultural hierarchy of gender affected marital relationships so that Roman women did not utilize their discretion over property

⁵⁵ Saller 1994: 128–30; Dixon 2001: 96. ⁵⁶ *CIL* 14.4450; Dixon 2001: 108.

⁵⁷ Gardner 1998. ⁵⁸ Dixon 2001: 96.

⁵⁹ Cato, as reported by Gell. *NA* 17.5; similarly, Plaut., *Asin.* 87; Hor. *Carm.* 3.24; Mart. 8.12; Juv. 6.136.

to fullest effect.⁶⁰ Whatever the legal safeguards, the jurists recognized that some wives turned over their property to their husbands to manage. Although gifts between husband and wife were invalid during marriage, a spouse could validate in a will after death any *de facto* gifts bestowed while alive. On account of women's perceived vulnerability to men's blandishments and pressure, the *Senatus Consultum Velleianum* was passed in the first half of the first century AD to take away legal action to enforce women's suretyship on loans.⁶¹

Unfortunately, the meager evidence does not allow an answer to the question of whether Roman women's notably broad property rights affected investment and management in the imperial economy. It could be argued that, as in more recent societies, women were more risk-averse than men, because women had fewer opportunities to work for an income in order to recover any losses or worked at lower wages. Risk-aversion underlies the Augustan rule that husbands could not alienate the wife's dotal land in Italy without the wife's approval. However, since there was a general aversion to risk and a preference for investment in land among male owners and guardians of children's property, it is not obvious that women's property was treated differently, especially among the elite using slaves and freedmen as managers.

(c) *Property of minor children*

In the context of high mortality and late male marriage, both Athenian and Roman society included many children who inherited their father's property as orphans before adulthood. Within a legal framework of individualized property rights and a social context of nuclear family households, such orphans and their property required guardianship by adult males outside the household. The broad outlines of guardianship of underage children, and the economic implications, were broadly similar in Athens and Rome. Guardianship of orphans' property appears prominently in Athenian and Roman forensic and juristic texts. The importance of the institution is evident in the fact that in both societies very senior magistrates – the Athenian eponymous archon and the Roman praetor or consul – took general responsibility for oversight of the guardianship of orphans.⁶²

Athenian and Roman law specified the age thresholds for full adult responsibility in property management somewhat differently. In Athens fatherless boys under the age of seventeen or eighteen and girls under the age of fourteen were given guardians. Roman law evolved from 200 BC to AD 200 to extend effective guardianship from *impuberes*, boys under the

⁶⁰ Cohen and Saller 1994: 48–55. ⁶¹ Crook 1986b; Dixon 2001: ch. 6.

⁶² Harrison 1968: 102; Saller 1994: 183–4.

age of puberty around age fourteen, to *minores*, adolescents up to the age of twenty-five. A plausible estimate is that as many as one-third of children inherited their share of the paternal estate before adulthood. After the extension of responsibilities of the *curator minorum* in imperial Rome, perhaps two-thirds of males inherited from their fathers before they were regarded as fully competent adults. In aggregate perhaps one-sixth of the property in these societies was owned by orphans. Consequently, the institution of guardianship had important implications for the economies of Athens and Rome.⁶³

Guardians in Athens and Rome were in the first instance the choice of fathers, who turned to trusted relatives and friends. In the absence of a guardian chosen by the father, the responsibility fell to adult male kin. As a last resort, the archon or praetor could appoint guardians. In both societies it was common to have more than one guardian. Multiple guardians mitigated the risk posed by the death of any one guardian before the child reached adulthood, and also created a situation in which one guardian could monitor the other to protect against embezzlement or neglect. Athenian and Roman law required guardians to provide an account of the estate when the orphan came of age, and offered legal actions against corrupt or negligent guardians.⁶⁴

The risk of lawsuit may well have encouraged guardians to manage orphans' estates conservatively. In Athens guardians could work the wards' estates themselves or rent them to the highest bidder in a public auction supervised by the archon. The latter option amounted to public assurance that the guardian was acting in the best interests of the ward to maximize return on landed capital. Over the centuries Roman law tightened up the investment options left to guardians, culminating in the ruling of Septimius Severus in AD 195 that guardians could not sell their wards' rural or suburban properties (*Dig.* 27.9.1 pr.). Other legal texts suggest that the threat of lawsuit was an incentive for guardians to invest returns safely, and land was regarded as the preferred safe investment.⁶⁵

Modern societies, like ancient, have laws to regulate the management of orphans' property in order to safeguard it. This is the unsurprising consequence of the perceived vulnerability of orphans. But whereas in the modern world the life expectancy of parents is such that the number of orphans is quite small, in the ancient world the proportion was high enough to have a noticeable impact on the economy and society. Though the impact cannot be quantified, it is likely to have been in the direction of conservative investment, exemplified most clearly in Septimius Severus' freeze on landed capital of orphans.

⁶³ For Athens, Osborne 1988: 304–10; for Rome, Saller 1994: ch. 8.

⁶⁴ Harrison 1968: 97–121; Saller 1994: 182–9. ⁶⁵ Kehoe 1997.

V WOMEN'S LABOR

Women's participation in the labor force has important implications for the total production of the economy as well as for the status and treatment of women, as the work of Ester Boserup and subsequent research have shown. The level and location of women's involvement in work for exchange in the ancient world are difficult to assess, because the ideology of the domestic wife has obscured or understated aspects of women's labor in our sources.⁶⁶ Nevertheless, I will argue that the ideology probably did have a marked effect in limiting women's range of occupation and level of participation through a gendered coding of jobs. Further, that code remained broadly similar through Greco-Roman antiquity. The likelihood that women's work remained much the same over a millennium has consequences for any consideration of economic growth. The following analysis will divide the subject along the lines of Athenian and Roman, rural and urban, free and slave.

(a) *Athens*

The basic cultural distinction between men's outdoor and women's indoor labor, associated with plough cultures, can be found in Greek literature as early as Homer.⁶⁷ The division of labor by gender is central to Xenophon's *Oeconomicus* (7.22), in which the wife has the duties of supervising the household stores, managing the domestic slaves, and overseeing the preparation of food and production of clothing.⁶⁸ Xenophon argued that this domestic labor should not be undervalued. This is certainly a male ideological simplification, but is it entirely wrong?

Comparative evidence and practical considerations suggest that when circumstances compelled an intensification of labor to feed the family, Athenian women worked in agriculture alongside men or in place of them. The household life-cycle meant that the ratio of working hands to hungry mouths changed with the birth, growth, and departure of children.⁶⁹ Furthermore, the high and unpredictable incidence of death, sickness, and war must have often left some families with less than the needed number of male hands to work in the fields. Greek authors contain scattered, explicit references to female participation in the harvest and the gleaning of corn-ears afterwards, whereas practically no evidence attests to women using the plough.⁷⁰ Demosthenes regarded female agricultural work as exceptional,

⁶⁶ So also in early modern Europe: de Vries and van der Woude 1997: 603.

⁶⁷ Scheidel 1995: 205. ⁶⁸ Pomeroy 1994: 36.

⁶⁹ Gallant 1991: ch. 4, whose model is oversimplified in not allowing for infant mortality and wide variation in the number of children in a family.

⁷⁰ Scheidel 1996b: 1; Dem. 57.45; Theoc. *Id.* 3.32.

done only under the compulsion of poverty. Plato in the *Laws* (805d–e) contrasted the Athenians with the Thracians who employed their women in the fields. Foxhall finds some indirect confirmation of Plato's norm in the fact that female religious festivals were scheduled at harvest time, taking the participants away from their farms.⁷¹ The indirect and normative evidence, and the argument from silence will not bear great weight; nevertheless, all of this points in the direction of some participation of Athenian women in agriculture, but much less than the regular, full-time work of their modern counterparts in tobacco production in Greece and Turkey.⁷² Which is not to say that ancient Athenian women were idle: the grinding of grain for food and the production of textiles were time-consuming tasks.

In the city, women can be found in various jobs that fall under Boserup's rubric of the bazaar and service sector. The Athenian law limiting the value of women's transactions to one medimnos would have allowed them to engage in petty commerce such as the sale of foodstuffs and in the provision of services such as wetnursing, midwifery, innkeeping and prostitution.⁷³ In the manufacturing sector women are found in various crafts (e.g., as cobblers), but are heavily concentrated in wool-working, at least in our sources. In Athenian manumission inscriptions, of the forty-one female ex-slaves with known occupations thirty-one were wool-workers (*talasiourgoi*) and the remaining eleven were scattered across eight occupations.⁷⁴ This corpus of documents suggests that the ideological representation of the good woman engaged in textile production, starting with Homer's Penelope, was not a serious distortion of gendered practice that extended from the free citizen population to slaves.

(b) *Rome*

The evidence for the working women of Rome and Italy is more extensive and allows for a more textured picture. Furthermore, the Roman empire brought far greater concentrations of wealth and, concomitantly, a finer division of labor. Nevertheless, the broad outline of gender coding in the workforce is similar.

The analysis of women's rural labor should start from a rough distinction between the peasant family farm and the large estates employing slaves or other non-family labor. In the absence of fine-grained evidence, one should assume regional differences, but the specification of variation is hampered by the rhetorical coloring of the few fragments of testimony about regions. Roman authors, like Greeks, associated female field labor with marginal and barbarous peoples, such as Strabo's native Spaniards.⁷⁵ The one place

⁷¹ Foxhall 1995. ⁷² Sallares 1991: 220.

⁷³ Brock 1994: 341–2; Herfst 1922: 48. ⁷⁴ Schaps 1979: 19. ⁷⁵ Saavedra 2000.

in the empire in which documents offer an alternative to literary stereotypes is Egypt, where the evidence suggests that the ideology was not at marked variance with practice. The references to women's agricultural labor (e.g., an olive-carrier) are relatively few; women laborers were paid less; and they are absent as workers in the accounts of the vast Appianus estate of the third century AD.⁷⁶ Furthermore, it has been common for peasant households in Egypt and elsewhere to lease plots of land to utilize labor through the life-cycle, but very few Egyptian women are found as lessees, whereas they are common in the role of property owners leasing land.⁷⁷ The provisional picture that emerges from the admittedly sketchy evidence is that among working families in Egypt the ideology of outdoor male/indoor female labor was a simplification but not a complete distortion of the reality. Of course, there is no justification to take the Egyptian evidence to represent the empire as a whole, but it shows that even in the face of harsh realities there could be strong asymmetries by gender in agricultural labor.

For the larger estates of Roman Italy, the estate handbooks provide a schematic view of the organization of labor, albeit tinged with moralizing advice. Columella provides a description of the responsibilities of the *vilica*, the bailiff's wife, who by virtue of her partnership with the *vilicus* had important supervisory duties. According to his pseudo-historical account, in the good old days the *dominus* and *domina* were so heavily involved in the work of the farm that little was left for the *vilicus* and *vilica* to do (*Rust.* 12 pr. 8). By contrast, in Columella's day the *materfamilias* was idle and self-indulgent, and shrugged off the household duties to the *vilica*, who was supposed to supervise the work and tend to the health of sick members of the *familia*. She had the major responsibility to inspect, store, and keep track of perishable and non-perishable items, according to Columella with reference to Xenophon's *Oeconomicus* (*Rust.* 12.3.5). And the *vilica* was obliged to keep a stock of wool on hand, so that on cold or rainy days when women could not be expected to be outdoors doing farm work (*opus rusticum*) they could be kept busy making cloth (*Rust.* 12.3.6).⁷⁸

Columella's comment about the "farm work" of slave women raises the major question of how the majority of slave women were exploited on the farm. Some historians, citing this text, have argued that slave women were not subject to the ideology of honorable domesticity and hence were used in the fields, at least at harvest time.⁷⁹ Other historians have suggested that the outdoor male/ indoor female dichotomy affected slave women as well as free, limiting the use of female slaves in agriculture and hence lowering productivity of the rural slave labor force as a whole.⁸⁰ As a point of

⁷⁶ Rathbone 1991: 164. ⁷⁷ Rowlandson 1998: 220.

⁷⁸ Carlsen 1993. ⁷⁹ Erdkamp 1999: 571; Scheidel 1995: 208.

⁸⁰ Brunt 1971: 234; de Ste. Croix 1981: 231.

comparison, it is useful to consider the American Antebellum South. There a higher proportion of slave women (69 percent) than men (58 percent) were field hands.⁸¹ Plantation owners in assigning tasks regarded women as three-quarters of a field hand, or less if they were pregnant.⁸²

Roman estate owners appear to have thought of rural female slaves differently from their American counterparts, in so far as they considered slave women as adjuncts rather than a central element of the workforce in the fields.⁸³ Columella's reference to *opus rusticum* is vague and could encompass almost any outdoor task, including the tending of small animals, mentioned elsewhere;⁸⁴ the phrase need not imply regular work in the fields.⁸⁵ Comments of the jurists, especially their concepts of *fundus instructus* ("equipped farm") and *instrumentum instrumenti* ("equipment of the equipment") contain an assumption that many slave women did not participate in what was regarded as the central productive work of the farm and so could not be categorized as part of the *instrumentum*, defined as the productive humans, animals, and tools.⁸⁶ As part of the support staff (the *instrumentum instrumenti*) some women baked bread, kept the villa, served in the kitchen as *focariae*, spun wool (*lanificae*), and cooked the gruel for the *familia rustica* (*Dig.* 33.7.12.6). These texts, though not detailed, suggest that the slave wives' primary responsibility was domestic, though they did some farm work. The productive value of the domestic work should not be underestimated. As Boserup noted of low-technology societies, "it is not always realized how very time-consuming is this crude processing of basic foods," which in Africa and Latin America could take thirty hours per week or more.⁸⁷ But by comparison, slave women of the US South typically put in full days of work in the fields and then did the domestic work in their off-hours. A Southern planter would not have excluded slave women from the *instrumentum*, as defined by Roman jurists.⁸⁸ Overall, the juristic texts at least suggest – though they are hardly adequate to prove – that labor on Roman estates was not organized to exploit female slave labor to the fullest extent possible. If this was true, then one might ask why the equilibrium reached in the Roman economy did not press female slaves' production, despite the fact that they could be coerced.

Only a fraction of the population of the Roman empire lived and worked in the cities, perhaps 10–20 percent. Even though a minority, the urban population is far better known than the rural majority, and they were important in making the urban material culture characteristic of the empire. Consideration of women's labor in the urban artisanal class must start from

⁸¹ Fogel 1989: 45–6. ⁸² White 1985: 121; Hudson 1997: 4. ⁸³ Cf. Scheidel 1995: 212.

⁸⁴ Scheidel 1996b: 4. ⁸⁵ Scheidel 1996b: 3. ⁸⁶ Saller 2003. ⁸⁷ Boserup 1970: 164–5.

⁸⁸ Brunt 1971: 707 suggested that "one may doubt if either women or children were used as much on Roman as on American plantations," but he did not argue or develop the point.

Susan Treggiari's studies of the funerary inscriptions from Rome listing occupations.⁸⁹ This category comprised families – free, freed, and slave – practicing a craft and/or selling goods and services. The activities ranged from the manufacture of clothing, jewelry, or perfume, to the sale of fruits and vegetables, to the provision of prepared food, wine, rooms, and sexual services.

Treggiari drew several important conclusions from the list of occupations. First, women are attested in many fewer occupations than men: thirty-five for women in comparison with 225 or so for men.⁹⁰ Furthermore, Treggiari noted the gendered distribution by occupation: "Women appear to be concentrated in 'service' jobs (catering, prostitution); dealing, particularly in foodstuffs; serving in shops; in certain crafts, particularly the production of cloth and clothes; 'fiddly' jobs such as working in gold-leaf or hair-dressing; certain luxury trades such as perfumery. This is a fair reflection of at least part of reality."⁹¹ In short, women in Rome, as in Athens, were found in what Ester Boserup dubbed the "bazaar and service sector," characteristic of a number of areas of the developing world.⁹²

Sandra Joshel's quantitative summary of participation by gender in the work force of Rome reinforces Treggiari's point. A comparison of women's occupational distribution with men's in Joshel's Table 3.1 highlights the rarity or absence of women in banking, building, transportation, and administration (Table 4.1). The category of job in which women and men are most nearly balanced is "skilled service," but a breakdown of the specific jobs in this category (barber, hairdresser, masseuse, entertainer) reveals gendered patterns here as well. The funerary inscriptions listing occupations are by no means a cross-section of the workforce, but represent those workers who took enough pride in their jobs to identify with them on their tombstones.⁹³ The absence of women in some, but not other occupational categories may not be a direct, unmediated reflection of their absence in those jobs, but is surely related to their lower participation in certain kinds of labor. It was no doubt the case that within the Roman value system it was preferable to represent deceased women as virtuous wives, even if they were also workers. But the distribution of those women represented with occupations across sectors is likely to have been related to their actual work.

Treggiari drew a second general conclusion from the inscriptions with regard to the independence of women with jobs: "The frequency with which a woman is paired with a man, usually a husband, in the same trade suggests that many of them worked alongside husbands."⁹⁴ In view of the (male) Roman ideal of subordination of wife to husband, this "working

⁸⁹ See also Gardner 1986: 233–55. ⁹⁰ Treggiari 1979: 78. ⁹¹ Treggiari 1979: 78.

⁹² Boserup 1970: 91. ⁹³ Joshel 1992: 16. ⁹⁴ Treggiari 1979: 76.

Table 4.1 *Gender asymmetries in occupational participation, from Roman epitaphs (CIL 6) as tabulated by Joshel**

Occupation	Men	Women
Building	112 (100%)	0
Manufacture	282 (85%)	49 (15%)
Sales	99 (92%)	9 (8%)
Banking	42 (100%)	0
Professional	101 (84%)	19 (16%)
Skilled service	40 (53%)	35 (47%)
Domestic service	235 (73%)	86 (27%)
Transportation	55 (100%)	0
Administration	296 (97%)	10 (3%)

* Joshel 1992: 69 (Table 3.1).

alongside” is likely to have been on unequal terms and may be part of the reason for the lower epigraphic visibility of women in occupations, as suggested by Natalie Kampen.⁹⁵ The division of labor within an artisan family often left women, boys, or girls with the responsibility of minding the shop.⁹⁶

The relative rarity of women with an *artificium*, a skilled occupation, in the epitaphs may be partially explained by the evidence for apprenticeship practices. Unfortunately, apprenticeship contracts of the sort found in Roman Egypt are not extant for Italy. Most of the Egyptian contracts concern weaving and range in duration from one to five years.⁹⁷ The terms varied by occupation and within occupations. Apprentices in weaving generally received monthly rations of wheat and oil (or the equivalent in cash) in the first year or two, and then received additional wages if they continued, presumably to compensate the increased value of their skills from training.⁹⁸ In the few dozen contracts most apprentices are free boys; some are slave boys and slave girls; and not one is a freeborn woman.⁹⁹ If a similar gendered pattern was true of Rome, the correspondence with gendered patterns of occupational distribution would be suggestive: the effect of the ideology may have been to limit the training or human capital of freeborn women. To judge from modern development economics, the gender bias against free women in the crafts could have had several interrelated consequences: less training of women, hence lower productivity and lower wages for women, hence less economic independence and possibly lower

⁹⁵ Kampen 1981: 125. ⁹⁶ Treggiari 1979: 73; Kampen 1981: 112–13; *Dig.* 14.3.8.

⁹⁷ Bradley 1991: 107; Rowlandson 1998: 268.

⁹⁸ Johnson 1936: 388–91 for a summary of contract terms. ⁹⁹ Bradley 1991: 108.

valuation of women in their families, and less growth in productivity for the economy as a whole.¹⁰⁰

The big urban households could be very large units with scores or even hundreds of members. The basic distinction in these households was between the free owner's honorable family and the honorless slaves. One of the prominent characteristics of the large household was the fine differentiation of duties and titles that, along with the personal names, were the identities marking domestic slaves in their burials in *columbaria*.¹⁰¹ Plautus' comedy, *Mercator*, revolves around a distinction among female slaves between the attractive slave attendants (*pedisequae*) and the functional *ancillae* who did the tedious chores of weaving, grinding grain, cutting wood, spinning, sweeping, cooking, and taking a beating (396–8). As in Greece, wool-spinning was the quintessential women's work, represented as honorable in the foundation legend of the Republic (Livy 1.57.9).¹⁰² In the empire, jurists associated spinning with *ancillae* more often than any other type of labor (*Dig.* 7.8.12.6; 24.1.31.1; 33.7.16.2).¹⁰³ Wool-working was honorable enough to suit the matron and even the first empress. Other domestic duties of the *ancilla*, such as washing the latrine, were among the most sordid and degrading in the household (Plaut. *Curc.* 577; Cic. *Tusc.* 5.20.58).

In view of the broad Roman ideology of gender hierarchy, it is not surprising that women are rarely attested in administrative and managerial jobs in the household or elsewhere.¹⁰⁴ The limited evidence for the teaching of slaves suggests that males more than females received the benefit of an investment in their skills through education in literacy and numeracy.¹⁰⁵ Here again, however, the ideology is too simplistic, though not wholly misleading. Aubert's comprehensive study of business managers turned up scattered examples of women managing estates and other enterprises.¹⁰⁶ The largest set of data comes from the brickstamps listing *officinatores* along with owners: Setälä found twenty women among the 355 *officinatores* she catalogued, that is, just under 6 percent.¹⁰⁷ In the brickstamp industry women were far better represented as the owners than as the managers.

VI CHILDREN'S LABOR

The means by which children are educated or trained and are drawn into the labor force are tightly linked to the level of economic productivity. A

¹⁰⁰ Urbanization in the Roman empire is generally assumed by economic historians to be an index of economic growth, but Boserup points out that in some modern developing countries the migration of families from the countryside to the towns had led to increased productivity for males but less economic opportunity and lower productivity for the females. Boserup 1970: 175.

¹⁰¹ Treggiari 1976: 82–5. ¹⁰² Larsson Loven 1998; Dixon 2001: 117–25.

¹⁰³ Larsson Loven 1998: 75; Treggiari 1976: 82–5.

¹⁰⁴ Treggiari 1973: 46; Treggiari 1976: 77; Kampen 1981: 121, 133; Joshel 1992: 69 (Table 3.1).

¹⁰⁵ Mohler 1940: 262–80. ¹⁰⁶ Aubert 1994: 193, 224, 268, 292, 372, 419. ¹⁰⁷ Setälä 1998: 106.

society's investment in human capital in the form of training is both a cause and an indicator of development.¹⁰⁸ In qualitative terms, the training and labor of children in classical Athens and the Roman empire are broadly similar, though limited development can be detected.¹⁰⁹

An analysis of child labor must start from the basic distinction between leisured aristocratic families and working families.¹¹⁰ One of the distinguishing characteristics between the two, noted by Lysias (20.11), Isocrates (*Paneg.* 68), and Aristotle (*Pol.* 6.1323), was that the children of the latter had to do the work expected of slaves in wealthier households. If manual labor was the lot of children in working families, infant exposure and enslavement was the fate of the most impoverished, attested in Greek and Latin texts (e.g., Ael. *VH* 2.7; Plut. *Mor.* 497E, *Fragm. Vat.* 34 of AD 313).¹¹¹ The grim outcome of exposure might well be work as a child prostitute (Ps.-Dem. 59; Justin, *Apol.* 27).

The age at which children began work must have varied but was broadly constrained by physical capacity. According to Ulpian, slave children under age five were not able to provide services of value (*Dig.* 7.7.6.1). By age seven children were regarded as capable of useful labor.¹¹² A few Roman funerary dedications associate occupations with children under age ten, though they may reflect sentimental, wishful thinking.¹¹³ The apprenticeship contracts of Roman Egypt, mostly for weavers, appear to concern children in their early teens or a bit younger.¹¹⁴ The maximum prices for slaves in Diocletian's Price Edict suggest that adolescent males in their mid-teens were regarded as worth two-thirds the value of adult males.¹¹⁵

The direct evidence in Greek and Latin texts for child labor consists of no more than a few dozen, scattered asides. In the rural economy poor free children or slave boys are represented as watching fowl, herding small livestock, driving donkeys, gathering fodder, trimming vines, cutting ferns, and gathering olives – in other words, light tasks of the sort also assigned to old women.¹¹⁶ Because land was generally limited, rural families had the challenge of matching capital to labor through the family life-cycle, as the ratio of workers to dependants shifted as the children grew. Strategies typical of modern peasant farms and attested in antiquity include the use of the children's labor in the production of the household through intensification of arable cultivation or more extensive herding on marginal land;

¹⁰⁸ Becker, Murphy and Tamura 1990; Lucas 2002; Johnson 2000.

¹⁰⁹ Golden 1990: 32–5; Bradley 1991: 103–24; Wiedemann 1989: 153–6.

¹¹⁰ Bradley 1991: 106. ¹¹¹ De Ste. Croix 1981: 169–70. ¹¹² Wiedemann 1989: 153.

¹¹³ E.g., Pieris, a nine-year-old hairdresser (*CIL* 6.9731); Vicentia, a nine-year-old gold worker (*ILS* 7691=*CIL* 6.9213).

¹¹⁴ Bradley 1991: 108. ¹¹⁵ Scheidel 1996b.

¹¹⁶ Columella, *Rust.* 8.2.7 for *puer* or *anus* watching fowl; Varro, *Rust.* 2.1.10 and 3.17.6; Lysias 20.11; Apul., *Met.* 7.17; Plin. *HN* 13.132; Columella, *Rust.* 4.27.6.

another option was the contracting out of children's labor. In the Greco-Roman world the institution of slavery offered a more brutal method of the circulation of children to match labor to capital through exposure.¹¹⁷

In the urban and village craft economy children are represented as minding the shop and working in a range of jobs as stonemasons, mosaicists, jewelers, bakers, cobblers, and others. Most of the apprenticeship contracts from Roman Egypt (24 of 30) were in textile production.¹¹⁸

In conceptualizing the investment in the training and education of children, one might think in terms of three broad stages of development: first, learning from parents in the household; second, apprenticeship outside the household; and third, education or training for a period of time in lieu of work. The huge investments in human capital characteristic of developed economies today come in the third stage when children and young adults forgo years of earnings in costly schooling in order to acquire knowledge and skills. In the agricultural and craft sectors of the Greco-Roman world it seems likely that most of the acquisition of skills took place as children watched their parents, just as Plato posited for craftsmen such as potters (*Resp.* 5.467a) and as a law of Solon prescribed (*Plut. Sol.* 22.1).

This method of intergenerational transfer had limitations: at best, children had to follow in their parents' occupations; at worst, parents sometimes died before passing on their knowledge. Larger wealthy households offered a context to overcome these limitations, since slave children could be trained by any member of the household and in any of the skills practiced in the house. For humbler free families apprenticeship was an avenue to training beyond the family. The contracts from Roman Egypt reflect the child's acquisition of human capital, inasmuch as the child received no more than basic subsistence during the first year or two of training, and then in the later years received in addition cash compensation as skills increased. Three basic points should be made about the economics of this form of apprenticeship: (1) no labor participation need have been forgone in the training, as children gradually became involved; (2) parents did not make an investment – though they gave up the labor, they saved the cost of maintenance of the child; (3) although apprenticeship allowed for the circulation of children beyond the household with potential efficiencies, it did not markedly increase the skill level beyond what could have been achieved by the transmission of craft skills from parent to child.

The Greco-Roman era witnessed the development of the third stage, institutionalized schooling. As early as the fifth century BC the Greek sophists began to offer teaching for pay – a notion so radical that it was at first regarded with deep suspicion. This education was initially a matter of the skills and knowledge of political leadership and cultural cultivation for

¹¹⁷ Gallant 1991: 131. ¹¹⁸ Bradley 1991: 109, 113–22.

the elite. Over the centuries, paid education and training filtered down to the point that in the late Republic and imperial eras the practical value of some wealthy Romans' slaves was enhanced by basic literacy and numeracy. Such slaves were sometimes taught in the household, but were also sent out to professional teachers paid to transmit basic learning (Nep. *Att.* 13.3).¹¹⁹ This sort of training contributed to the management of large, complex estates and public institutions in the Roman empire.¹²⁰ But investment in human capital was quite limited: the vast majority of the rural working population had no schooling available, and only part of the urban population could have afforded it. Wealthy masters were willing to invest in the education of chattel slaves, who did not have the independence to leave with their human capital. It is reasonable to suppose that in total much less than 10 percent of the population would have benefited from an investment in formal education. This makes sense in a world where short life expectancy limited the returns to, and increased the risk of, investments in children's skills.¹²¹ Furthermore, the Greco-Roman world experienced the same contradiction that modern Europe faced before effective public health measures in the later nineteenth century: that is, greater investment in human capital could be acquired and used to greatest value in the cities, precisely the places where life expectancy was lowest, depressing the length of return on the investment.¹²²

VII CONCLUSION: PROPERTY, LABOR, AND ECONOMIC GROWTH

What implications did the configuration of property rights within the family and the patterns of labor participation have for economic growth in the ancient Mediterranean world? In the absence of data on growth, it will be possible only to suggest some broad hypotheses, not to test them.

With the extension of Roman citizenship around the empire, the law of highly developed, individualized property rights within the family was widely applied, at least in principle. The claims of the Neo-Institutionalists would lead us to believe that the legal framework of property rights should have had a bearing on economic growth. One might argue that the decision-making by the *paterfamilias* or *kyrios* in a unitary household in early Rome or Athens was different from that of husbands and wives with separate property in the classical Roman era. One might hypothesize that individual family members felt freer to make investment decisions than the head of a unitary household with responsibility, above all, to preserve the estate

¹¹⁹ Mohler 1940. ¹²⁰ Rathbone 1991. ¹²¹ Meltzer 1992.

¹²² Scheidel 2003a on the appalling mortality in the city of Rome; Meltzer 1992: ch. 5 on the centrality of public health improvements to the increase in return on investment in education.

for future generations through conservative management. Although it may seem intuitively likely that greater individualism in property rights encouraged greater fluidity in investment of capital, there were countervailing tendencies. The highly individualized property rights of classical Roman law put a large share of the capital in the hands of women and fatherless children who inherited before adulthood; furthermore, the law encouraged the safe investment of this capital in land.

As for labor, what changes or development can be identified in women's and children's participation and productivity over the period from classical Athens through the early empire? Even though we lack the quantitative evidence to give a fine-grained answer to this question, the very length of time involved means that even small, sustained improvements in women's productivity or children's education would have yielded large, obvious results over seven centuries or even the four centuries of the Roman classical era. As a substitute for data on productivity, we may consider the physical and human capital invested in women's and children's production, or lack thereof.

As noted above, women in both Athenian and Roman society were associated with textile production, above all, spinning. Spinning required a simple but time-consuming technology involving a distaff and spindle.¹²³ No marked gains in productivity were realized here. In the subsequent stages of cloth production – weaving, dying, and finishing – urbanization brought with it specialization and professionalization, but no sustained technological advances. A. H. M. Jones argued that in the Roman empire cloth was not generally woven in the home; in place of dispersed part-time production by the women of the household, professional weavers worked full-time in cities specializing in different qualities of clothing from cheap garments for slaves to luxury clothing.¹²⁴ It seems likely that the specialization entailed some increase in per capita productivity, but the increase and its impact were probably limited by several factors. First, the archaeological evidence of loom weights in houses suggests that weaving at home was not completely displaced by professional production in the empire.¹²⁵ Second, professionalization was not accompanied by a substantial improvement in the technology of weaving. The shift from the warp-weighted loom to the foot-powered treadle loom becomes apparent in the Roman Egyptian archaeological record in late antiquity.¹²⁶ Third, to the extent that professionalization shifted the task of weaving from women to men, that shift would have resulted in an overall increase in production and higher living standards only if the women used their time in other, more productive pursuits. This may have occurred in ways that are now undetectable, but

¹²³ Wild 1970: 169. ¹²⁴ Jones 1960: 184.

¹²⁵ Jongman 1988a: 163; Dixon 2001: 118. ¹²⁶ Carroll 1985.

comparative evidence shows that this cannot be assumed.¹²⁷ Overall, in spinning and weaving of textiles there were some gains in productivity, but they were cumulatively modest over a long time span. Further, it is not clear that women workers were the main beneficiaries of the gains through specialization. That the free women of the Greco-Roman world did not fully participate in production for exchange is hardly surprising. What is perhaps more notable is that female slaves on Roman estates were not fully utilized in production for exchange, as were their counterparts in the American South. For both slave and free women there is some evidence for investment in their productive skills, but less than for men. One index of economic growth per capita from fifth-century BC Athens to second-century AD Rome is the improvement in productive techniques used by women. In the sectors principally associated with women, notably spinning, those improvements do not add up to much over the better part of a millennium.

The story of the development of children's labor and education is similar. There are indications that from archaic Greece to the Roman Empire investment increased as institutionalized education and training beyond the family emerged. But that development left the mass of agricultural workers, as well as urban freeborn women, largely untouched. Thus, the *average* skill level of the ancient working population surely increased, but only a little over a span of centuries.

¹²⁷ De Vries and van der Woude 1997: 604–5.