

PART I

Economic and ecological parameters





CHAPTER I

Introduction

This is a book about demography. As the study of population, demography attempts to grasp the dynamics of life: death, sex and migration. It targets turning points in people's lives that they themselves would not easily forget: how many wedding rings (if any) they wore; when they were first married and to whom; the birth of their children; how and where they moved and how long they stayed there; personal sickness and health; and the deaths of loved ones. In trying to figure out these details, demographers are like children in their annoying 'why?' phase, dissatisfied with facts and wanting to know the reasons behind them.

Establishing reasons 'why' is never easy. And although we may think that we can at least create our own 'demographic fact sheets', sometimes we cannot. Ages, for example, are not considered equally important across societies, so that reliable age records cannot always be obtained. And as we move back in time, reaching more and more remote 'ages', retrieving basic demographic facts becomes increasingly difficult. Time blurs memory, and history destroys collective memory and its records.

These facts must be faced from the first, for this is a book about Roman historical demography. Setting out to spy on the lives of people who lived over two thousand years ago in Roman Republican Italy is an exciting thought, but the project can be tricky. Given the many lost – or never even created – records, we will need to take advantage of the strongly interdisciplinary character of the scholarly field of population studies to approach the questions and problems that arise in the most fruitful way.

How and why is demography interdisciplinary? Neighbouring disciplines – including history, biology, sociology, economics, anthropology and other sciences – and sub-disciplines that study the behaviour of groups and individuals are of undisputed value for understanding demographic

¹ The *Dictionary of Demography* by Petersen and Petersen (1985) provides translations of demographic terminology into various languages.



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processes and parameters. Ultimately, these depend on human behaviour that can be fruitfully analysed only by taking a multitude of variables and perspectives into account. At the same time, it would be a mistake to view demographic outcomes as purely the result of human demographic behaviour. Socio-political structures and natural environments play important roles as well. In pre-industrial contexts in particular, mortality is shaped by exposure to (primarily infectious) diseases that are locus-specific (endemic). Such disease pools in turn are influenced by ecological factors, notably climatic conditions. The natural environment also affects agricultural production, which was and is crucial to sustaining population in pre-industrial settings. Likewise, socio-political structures affect demographic outcomes by setting the (perceived) limits of the possible, and by encouraging or discouraging certain types of behaviour. Agency in migration and fertility is influenced by societal structures. In a similar vein, conditions generated by the organization of society affect mortality rates.

This dazzling interconnectivity makes the study of demography challenging. At the same time, it provides us with many tools and angles to take on questions relating to fertility, mortality, migration and aggregate population development. It is the hope and aim of this study to exploit these tools and angles to the full to help understand demographic life and demographic developments in late Republican Italy.

That said, the purpose of the remainder of this chapter is to give the reader a brief overview of what questions will be dealt with in this book, and how. Science is about standing on the shoulders of giants and trying to reach further by improving on their biases, mistakes and blank spots. The 'what' and 'how' of this book are accordingly determined in part by previous scholarship. We therefore start by taking a brief look at the historiography of ancient demography and traditional views of Roman population developments, and then proceed to set out the specific aims and organization of this book, and the sources and methods used.

I.I ANCIENT DEMOGRAPHY: A VERY SHORT HISTORIOGRAPHY

Historical analyses of macro- and micro-demography add perspective to the findings of modern studies by situating the present in the context of the past. They identify, define and explicate processes of change and continuity. As noted, this study is located in the realm of historical demography and focuses more specifically on Roman Italy during the last two centuries BCE. To facilitate understanding of the demographic developments during this period, historical data from the Imperial period relevant to the history of



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the Republic are also taken into account. This is true in particular for the census figures dating to the reign of the first emperor of Rome, Augustus. Notwithstanding the inclusion of a small chunk of Imperial history, I refer throughout this book to the period under study (201 BCE-14 CE) as the 'late Republic'.

In limiting its scope to a particular region and period, this monograph adds to the small collection of similar books on the demography of the Greco-Roman world. That these monographs are few in number is not a coincidence, but the product of two factors characteristic of ancient demography. The first is that this is a relatively young field. Even less than a decade ago, the introduction to a volume on ancient demography could begin by remarking that 'ancient demography has finally arrived'. For Italy during the late Republican period, there have been monographs that connected views of the demographic developments during the last two centuries BCE with the study of social and economic history. Most prominent among these is Peter Brunt's Italian Manpower (1987; first edition 1971).3 But the emergence and development of ancient demography as a full-fledged subdiscipline of ancient history largely post-dates these projects, a fact that in itself justifies a new study. Although the demographic analyses pursued in these earlier works included demographic theory and archaeological evidence to some extent,4 they largely dealt with the interpretation of ancient literary sources. Attention focused on the macro-demographic level: population numbers, size and trends. In this, earlier students of the question followed in the footsteps of the pioneering work of Karl Julius Beloch at the end of the nineteenth century. More important, while these studies used the demography of Roman Italy to explain historical developments, they did not attempt to clarify the workings of the demographic system itself. Demographic theory beyond Malthus' Essay on the Principle of Population (1798) received little attention. This study aims to fill part of this gap by paying due attention to theories of demographic development and behaviour that derive from various behavioural sciences. It also draws on comparative evidence to a much larger extent than most earlier publications have done.

The second reason why studies of ancient demography do not fill bookshelves is linked to the state of the evidence, which is, in a nutshell, plagued

² So Scheidel in the introduction to *Debating Ancient Demography* (2001c).

³ Note also Arnold Toynbee's Hannibal's Legacy (1965), and Keith Hopkins' Conquerors and slaves

⁴ Hopkins' Conquerors and slaves (1978a) occasionally builds on the author's work on ancient demography, which introduced the findings and methods of modern demography into ancient history. But the book itself is ultimately a socio-political history of the Republican period.



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by lacunae and invariably problematic. This is characteristic of all ancient history. But it is a particular problem in population studies, because the quantitative aspects that are of pivotal importance to the discipline often require more than the ancient sources can give. Demography needs reliable numbers, and history tends to be bad at transmitting them. One of the more pessimistic accounts of Roman demography, Tim Parkin's *Demography and Roman Society*, has made this all too clear.⁵

Even so, we are not entirely without quantifiable resources to explore. What we have for the Roman world are totals of census counts transmitted through a variety of literary sources, inscriptions (for example, gravestones), and papyri from Ptolemaic and Roman Egypt that include mummy labels recording deaths and documents in which households were registered for the census. Of these, the census documents provide the richest source of evidence, and for this reason Egypt has been the centre of attention in the major demographic monographs with a regional orientation. The physical conditions required to preserve materials as perishable as papyri preclude their conservation in Italy.

As far as textual material is concerned, the Italian Peninsula offers us only inscriptions and accounts by Roman and Greek authors. The use of funerary inscriptions as demographic evidence is notoriously problematic, because of a range of biases connected with what has been dubbed the 'epigraphic habit'. Funerary records, even if their numbers are substantial, are unlikely to represent underlying populations faithfully because (a) not everyone was equally likely to be accorded a grave memorial in stone, and (b) the demographic information recorded on the stone may not reflect reality. The recording of ages is particularly vulnerable to distortion. Accounts of Roman and Greek authors pertaining to demographic conditions and developments have their own particular problems. But these accounts do include a quantitative source that is unique to the Republican and early Imperial periods and enables quantitative demographic study in a way impossible for other times and areas in the ancient world: most of the totals of the Roman census counts, which were held about every five years to register Roman citizens, have been preserved. Studies of the demography of Roman Italy are forced to make the best use possible of these sources that is, to approach them critically and put them to the test with the aid of demographic models, theories and comparative evidence from later periods and neighbouring disciplines. This is the approach adopted here.

⁵ Parkin (1992).

⁶ Bagnall and Frier (2006) (2nd edition; the first edition dates back to 1994); Scheidel (2001b).



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Archaeology, and in particular survey archaeology, has in recent years made increasingly important contributions to the historiography of late Republican Italy. The complex evidence of settlement trends uncovered by archaeological studies and their potential value to the study of demography deserves full-scale separate discussion and evaluation.⁷ In Chapter 8, however, I briefly discuss this type of evidence.

At this point, the traditional views challenged by this project deserve more detailed attention. In terms of demographic development, the main thesis of the long-accepted orthodoxy is that the free citizen population of Roman Italy declined over the last two centuries BCE. This view is indissolubly linked to what is often called the 'low count' interpretation of the Augustan census figures. It postulates that the entire free citizen population consisted of around four million people in 28 BCE, about half a million less than roughly two centuries earlier. All three main demographic variables – mortality, fertility and migration – played a role in shaping this outcome.

The argument may be summarized as follows. One factor in the demographic process at hand was the warfare that was an ineluctable part of the process of Rome's conquest of an empire. In particular, the Second Punic War and the Civil War in the mid-first century BCE inflicted heavy death tolls on the Roman population. But an even larger role is attributed to two other factors: a decline in fertility and the negative impact of migration and urbanization on the mortality and fertility rates of free citizens. These would have been the ultimate demographic effects of the military-political developments that transformed Rome from the dominant power in Italy into the core of an empire stretching over much of the Mediterranean and beyond. The processes of warfare and conquest wrought economic and social transformations in Italy. The influx of material wealth and slaves created opportunities that disproportionately favoured those who were better off to begin with. As wealth increased, inequality rose. The poorer members of society suffered not just from relative deprivation, but from absolute impoverishment. A major factor in this was that the rapidly (self-) enriching elite preferred land-ownership as a means of economic gain. In their search for more land, they evicted the poor from their small plots,

⁷ See now Pelgrom (2012) and Launaro (2011).



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and established large estates. The high rates of military mobilization in the first half of the second century BCE in particular facilitated and speeded up this process. They exacerbated the situation of many smallholder families. While the male heads of many smallholder households were waging war overseas, their wives and children faced insuperable difficulties in running their farms and often went 'out of business'. In brief, the position of smallholders was undermined by warfare, and the rich seized the advantage. As Hopkins famously summarized the issue, Roman smallholders 'fought for their own displacement'.⁸ They were not needed as labourers on these estates, because the large estate holders could man their landed property with enormous numbers of slaves who had entered Italy as the spoils of conquest.

Under these circumstances, many farmers were no longer willing or able to start a family. Often they remained unmarried, and birth rates dropped. Consequently, a decline in fertility was a second major factor explaining the shrinking number of free citizens recorded in the census figures. Unemployment drove other former farmers to the cities, in particular to Rome, where they added to a growing group of proletarians who barely managed to survive. Among these urbanites too, marriage and fertility rates were low. Moreover, mortality rates in the (over)crowded cities were high, much higher than in the surrounding countryside. Increasing urbanization therefore also had a major impact on mortality rates. It consumed any natural growth still present.

In recent years, scholars have begun to undermine some of the pillars of this model of late Republican history. There has been considerable discussion, and new views have emerged debating, for example, the number of slaves in Roman Italy, the impact of warfare on the sustainability of Italian smallholder households, and the prevalence of large villas. Focusing on the macro-demographic realm, Elio Lo Cascio added new vigour to the debate by offering a different interpretation of the Augustan census figures, which implies a population total approximately three times as high as that proposed by low counters. The implications of this revisionist view are substantial: they alter perceptions on issues such as urbanization, rates of political participation, the impact of soldier mobilization, the pace of population growth and the performance of the Roman economy. The low and the high count interpretations sketch demographic and socio-political scenarios that are worlds apart.

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Hopkins (1978a), p. 13.
Lo Cascio in various publications, e.g. (1994), (1999a) and (2001b).
Scheidel (2008b) sets out the issues in detail.



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1.3 AIMS AND ORGANIZATION

My aim here is to adopt a critical stance towards both of these interpretations and to take a fresh look at the demographic history of Italy during the late Republic. I attempt to question the validity of the dichotomy in the debate, by approaching the problem of Italy's population development and population size in two ways: analysis of the demographic variables that affect population size and population development is the first; the second is a reanalysis of the data on the macro-demography of late Republican Italy. Because of the nature of these data, which concern only those inhabitants of Italy who had citizen status, the focus of this project is on citizens. Other groups – slaves and foreigners – are discussed mainly in so far as their demographic fates elucidate, affect or interact with those of free Roman citizens.

The organization of the book is as follows. Part I continues with a chapter that sets the stage, by offering an analysis of the economic and political framework that characterized late Republican Italy. Ever since Malthus posed his hypothesis, the economic framework of a society has been thought of as crucially important to demographic developments. Malthusian ideas have entered the debate on population size and growth-rate potential in Roman Italy as well – in particular in the shape of the concept of 'carrying capacity' and in the discussion of living standards. The importance of debates on the Roman economy to the discussions on demography is the main reason to begin with a (necessarily brief) analysis of the economy of Italy in the late Republican period.

Chapter 3 then considers prevailing climatic conditions and their importance to both economic and demographic developments. I argue that, because of their significance as a variable that affects and interacts with demographic and economic determinants, climate and climatic change deserve to be paid more attention than they have hitherto received. As long as in our final analysis we consider climate as just that – a factor to be taken into consideration as *one* variable in a system or 'model' of numerous interactions – the threat of determinism is kept at bay.

Once the larger framework is set, we are in a better position to begin analysis of the proximate (or indirect) determinants of demographic development, many of which are affected by (changes in) these background conditions. The central question framing the subsequent chapters (Part II) is how the proximate determinants of demographic variables can be expected to fluctuate under the economic, political and social circumstances prevalent in the late Republic. How should we expect human behaviour to



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respond to these circumstances on a macro-demographic level, and how did these conditions shape macro-demographic developments? This is a broad and complex question that can branch out in many directions. To focus discussion, a classic demographic structure that organizes the analysis along the three main determinants of demographic developments and demographic behaviour (mortality, fertility and migration) is adopted here. Each of these is in turn determined by the interplay of a range of factors that shape their so-called 'proximate determinants'. Such proximate determinants include age at first marriage, the prevalence of certain diseases, birth intervals, sex ratios and incentives for migration. In other words, the proximate determinants are the basic parameters that shape fertility, mortality and migration outcomes – the quantifiable factors. At the same time, the underlying social, economic, political, climatic and cultural conditions and factors that affect these proximate determinants are also paid considerable attention. When quantitative data are missing, analysis of underlying variables can help narrow down plausible options.

Two corollaries of this approach should be made explicit. As an unavoidable result of the interplay of variables, the reader will occasionally notice overlap between chapters. More important, as a direct consequence of this variable-oriented approach, demography is given a leading position in the historical narrative of late Republican Italy. This has obvious disadvantages, but the choice was made deliberately. My aim is to clarify which hypotheses related to the determinants of demographic variables underlie the various narratives that circulate for the Republic, and thus to encourage reflection and reconsideration. More insight into the workings of mortality, fertility and migration processes is informative in itself. But in the context of the debate regarding late Republican Italy, it may also provide us with arguments to support or undermine demographic scenarios better grounded in (ancient and comparative) evidence and behavioural theories.

In the course of Parts I and II, various traditional arguments adduced to support the idea of population decline are tested, to determine which are sapped of their vigour when scrutinized. Several economic and demographic conditions and circumstances seem to lend support to a scenario of moderate population growth rather than decline. In Chapter 7, the first chapter of Part III, I demonstrate that these observations can be seen to conform to the primary extant source material, the census figures, if we allow for a reinterpretation of their meaning. This re-interpretation, I argue, tallies better with the purposes of census taking and with definitional clauses added to census figures that have not been given due attention so far. In Chapter 8, I venture into the findings of recent archaeological surveys to