4 Wealth and Political Office at Pompeii

The relatively abundant evidence from Pompeii makes this *civitas* (community) the ideal starting point for a study on the economic and socio-political structures of Early Imperial Italy. The catastrophic eruption of Mount Vesuvius in 79 CE abruptly ended life at Pompeii, while simultaneously preserving unparalleled amounts of evidence for modern historians. This chapter draws on this wealth of archaeological evidence to reconstruct the top part of the Pompeian wealth distribution.

Pompeii should however not be assumed to be representative for all (or even the majority) of the communities of Roman Italy. It was neither average nor typical. Early Imperial Pompeii belonged to the few large Italian urban centres. It ranks sixteenth among the more than 400 Italian towns when considering its inhabited area, as estimated by Luuk de Ligt.[1] Similarly, Neville Morley includes Pompeii in the top 7 per cent of Italian towns with regard to its population size.[2] If the inhabited area and population of a Roman town can be taken as a rough proxy for the wealth of the entire *civitas* which it administered (see also Section 5.2), these observations suggest that the Pompeian *civitas* was one of the wealthiest communities of Italy around the middle of the first century.

The main argument of this chapter is that the number of Pompeian households with sufficient wealth to advance a candidate for political office exceeds the number of Pompeiians holding the corresponding offices with a wide margin. This applies to both the curial and senatorial level. In other words, there was a significant number of Pompeian households who possessed curial or senatorial wealth but whose members did not hold curial or senatorial rank respectively. The case study of Pompeii thus provides the first quantitative evidence for my main argument that there was a significant and systematic discordance between wealth and officeholding in Early Imperial Italy.

1 De Ligt 2012, updated in de Ligt 2016: 60–62.
2 Morley 1996: 182.

The analysis presented in this chapter entails comparing the number of Pompeian decurions and senators with an estimated number of households satisfying the census qualifications for these offices. Surprisingly little is known about the number of Pompeian decurions and senators, despite the relative abundance of the Pompeian evidence. On the one hand, the evidence does not allow a great deal more than assuming that the Pompeian council consisted of the canonical 100 decurions.[3] On the other, there is not a single certainly attested Pompeian senator for the Imperial period. This lack of any attested senators is remarkable, considering the high number of attested equestrians (about a dozen) and the role of Campania as an important supplier of the Roman senate.

There are better possibilities to assess the distribution of elite wealth at Pompeii. Recently, Geoffrey Kron modelled the Pompeian income distribution using the sizes of the intramural houses.[4] I discuss his method in more detail in Table 4.1, where I also apply a probabilistic framework to it. Here it is worth noting that Kron's results imply that almost two-fifths of all Pompeian households had an income commensurate with a patrimony of at least HS 100,000 (the commonly assumed curial wealth requirement; see also Section 4.4). If we assume with Miko Flohr that there were close to 1,500 households living within the town walls of Pompeii,[5] this would mean that there were close to 600 households with curial wealth, sixfold the size of a canonical council of 100 decurions. Kron's results further suggest that 1 to 2 per cent of the Pompeian households would have had an equestrian income (commensurate with a notional wealth of HS 400,000). This would result in about fifteen to thirty equestrian households. Finally, according to Kron's reconstruction, none of the Pompeian households had an income at senatorial level (i.e., implying a notional wealth of more than 1 million sesterces). This latter result, taken at face value, might explain the lack of any firmly attested Pompeian senators.

In this chapter, I will argue for two important adjustments to the picture implied by Kron's model. First, the number of households with curial wealth was significantly lower, probably just over 200. Based on a presumed council of 100 members, this still constitutes a twofold surplus of households with curial wealth, a significant surplus. Second, there must have been at least a few Pompeian households that owned enough wealth to satisfy the senatorial census requirement of 1 million sesterces. This puts the lack of any certainly attested Pompeian senators in another light, implying that it is

3 *Cf.* Jongman 1988: 320, Mouritsen 1988: 29.
4 Kron 2014: 136–38.
5 Flohr 2017: 56–62.

likely that there were several Pompeian households with senatorial wealth who were not represented in the senate in Rome. Finally, adjusting downwards and upwards the number of households with curial and senatorial wealth respectively implies a higher level of inequality at the top of the wealth distribution of the Vesuvian town.

The new reconstruction of the top part of the Pompeian wealth distribution presented in this chapter entails the application of an economic model, a power-law model, to the archaeological evidence from Pompeii.[6] The sizes of the Pompeian residential houses form the basis of the model, under the assumption that residence size can proxy the wealth of the household who occupied it. The fact that the Pompeian residence sizes are distributed in a similar way as wealth is typically distributed is a reassurance for assuming a correlation between the two quantities. Moreover, the largest residences appear to be distributed following a power-law function, which further corroborates the applicability of the model.

The application of economic models on historical societies (i.e., cliometric modelling) is typically fraught with epistemic uncertainties. For this reason, I use probabilistic calculations to formally account for these uncertainties.[7] Simply put, probabilistic calculations propagate the uncertainties of the model inputs to estimate the uncertainty in the model output(s). To do this, probability density functions (PDFs) are assigned to the input variables instead of point estimates (scalars) as is done in traditional deterministic calculations. The range and shape of these PDFs are chosen to reflect my beliefs about the uncertainty in the value of the inputs.[8] In the choice of the ranges of the PDFs, I err on the side of underestimating the level of wealth concentration at the top of the distribution. This serves to strengthen my conclusion that there were large surpluses of wealthy households outside the socio-political orders.

As the results of probabilistic calculations are also PDFs, I will use two summary statistics to evaluate them. The first is the expected value, which is the probability-weighted mean of the model output or its 'most-likely' value. The second statistic is the 95-per-cent highest probability density (HPD) interval, which represents the shortest continuous range which includes 95 per cent of the probability mass. This range thus excludes 'outliers' and can be understood as the 'plausible' range for the value of the output variable.

6 For details of the power-law model, see Section 3.2.

7 For a good introduction to this methodology, see Lavan 2019b, Jew and Lavan 2023 and Beven 2009, esp. 49–104. For the application of this method to problems in ancient history, see Lavan 2016, 2019a and the chapters in Lavan et al. 2023.

8 Note that this method is based on a Bayesian interpretation of probability, which means that all probabilities are personal and subjective (Lavan 2019b: 95–99).

The results of the probabilistic modelling on the one hand emphasise the high level of uncertainty that is involved in these cliometric models (even for our best-evidenced town!), but simultaneously imply that it is very plausible that there were considerable numbers of Pompeian households with curial and senatorial wealth outside the respective orders.

4.1 The Residences of Pompeii

The evidentiary basis of my reconstruction of the top of the Pompeian wealth distribution is the local housing stock. I assume that the size of a residence roughly correlates with the wealth of the household that occupies it. Even though the property portfolio of wealthy Roman households consisted of many different types of assets, including mostly land but also real estate, loans, slaves and so on, assuming that the main residence of a household alone can proxy this entire portfolio is commonly done by economic historians of both the Roman and other periods.[9] In Appendix A, I discuss the issues related to this assumption in detail, with a particular focus on the Pompeian archaeological evidence. The subsequent paragraphs summarise the main conclusions of this discussion.

The archaeological record consists of the physical remains of buildings. Buildings are however not equivalent to houses. Many buildings were subdivided into multiple houses. A house is therefore defined as all spaces only connected with themselves and the street.[10] I furthermore only use residential houses. Houses can have different (possibly overlapping) functions, for example, residential, industrial, commercial. I assume that the economically unproductive area (i.e., the residential space) is the best way to measure the size of a house if used as a proxy for the household's wealth. The size of houses with non-residential functions are probably very differently correlated with the wealth of those who occupy them compared to that of residential houses. Including both residential and non-residential houses would thus distort the proxy dataset. Also, adding non-residential spaces that happen to be contingent to the main house (e.g., the *tabernae*) would come down to adding an arbitrary part of the other household's other assets and thus also introduce an incontrollable bias. By excluding non-residential spaces and houses, I might miss a few wealthy households, which however aligns well with my conservative approach.

[9] E.g., Jongman 1988: 238–41, Schoonhoven 2006: 174–82, Stephan 2013, Kron 2014: 136–38, Mouritsen 2015: 91–96, Flohr 2017 and 2019. Economic historians: e.g., Kohler and Smith 2018, Kohler et al. 2017, Smith et al. 2014.

[10] *Cf.* Wallace-Hadrill 1994: 72–73, Robinson 1997: 136–38, Flohr 2017: 58.

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I use ground-floor area to represent the size of a house, which introduces various technical issues. The two most important problems are related to unroofed areas and upper stories. Many unroofed areas (particularly atria and peristyles, but also gardens) formed a pivotal part of Roman upper-class houses. For this reason, I include them as part of the ground-floor area of the residences. However, horticultural plots have been excluded as they are not considered to be residential. Upper stories should ideally also be taken into account when the size of a residence is determined. They could constitute significant proportions of the residential area of a house. However, the unevenness in the quality of information on upper floors of the Pompeian houses, which is primarily due to the different standards prevalent in the different periods when the different parts of town were excavated, would distort the dataset insuperably. Upper stories are therefore ignored, which again accords with a conservative approach as it probably leads to an underestimation of the level of inequality.

There are furthermore various problems with the assumed proxy relationship between residence size and household wealth. First, urban housing is relatively inflexible (compared to, e.g., land ownership) to adapt to changing levels of wealth of the household. Households were not always able, due to existing urban features such as roads or other buildings, to enlarge their residence if their wealth was increasing. This limitation applies particularly to the wealthier households and thus leads to an underestimation of the inequality. Second, a household could rent instead of own the house in which they resided. The size of their house would then be a better proxy for their income than for their wealth. Fortunately, the shape of the top of the income and wealth distributions probably overlapped considerably, as most income of the richest households would have been returns on wealth, which makes this problem less acute for the present study of the top of the wealth distribution. Third, even though Roman houses were in principle occupied by a single nuclear family, not all residences would have (always) housed precisely one family. On the one hand, house-sharing must have existed at Pompeii as it did in many other parts and periods of the premodern world. House-sharing probably distorts the lower part of the distribution more than its upper part. Moreover, in the case larger houses were shared, the relationship between the households was probably very unequal; most boarding families were socially and economically dependent on the main occupier of the house (e.g., their patron). These shared residences therefore can still proxy the wealth of the households occupying them. On the other hand, it is unclear whether all Pompeian residences were occupied in 79 CE. Unfortunately, the Pompeian archaeological evidence is insufficient to come to any meaningful quantitative assessment of the vacancy of residences. Fourth and last, land prices must have varied considerably over town. This means that larger houses in cheaper areas are overestimating the wealth of their owners, and vice versa.

Finally, there is the question of how well the excavated residences represent the economic top layer of Pompeian society. First, it is important to realise that, even though the Pompeian archaeological record is very rich, only about three-quarters of the town has been excavated. Taking the existing data to represent the entire intramural population thus involves significant extrapolation. The houses in the unexcavated quarter might conceal a significant different social make-up. Second, this study focuses on the houses within the town walls' perimeter. Some impressive villas are located just outside the walls, while many others are located within the assumed territory of Pompeii. The exclusion of these villas, some of which might have been the primary residence of some very wealthy Pompeiians, thus leads to an underestimation of the local wealth inequality.

All the aforementioned biases affect the level of inequality implied by the Pompeian residences. Considered together, I expect that the intramural Pompeian residences *underestimates* the local wealth inequality. This is mainly due to the inflexibility of an urban residence to adapt to the ever-changing wealth of the occupying household as well as the disregard of upper floors and the exclusion of wealthy Pompeians residing outside the town walls. An underestimation of the local wealth inequality leads to an underestimation of the number of households with curial and senatorial wealth, which thus strengthens my conclusions that there were significant numbers of such households.[11]

I created a new database of the ground-floor areas of all fully excavated residential houses within the town walls of Pompeii (see Figure 4.1). To determine which spaces were residential, I follow the work of Eschebach et al.[12] The size of a residences is defined as its ground-floor area and is measured using the GIS data available online.[13] My dataset includes 366 residences.[14] The largest residence has a ground-floor area of 2,832 m^2 (VI.12.2), while the smallest covers just 25 m^2 (VI.6.15). The mean and median ground-floor area are 416 and 302 m^2, respectively. This dataset will form the evidentiary basis of my reconstruction of the local wealth distribution.

11 A fuller discussion of all the biases and uncertainties is presented in Appendix A.
12 Eschebach et al. 1993.
13 https://digitalhumanities.umass.edu/pbmp/, accessed 27 May 2019.
14 The data are tabulated at the end of Appendix A.

Figure 4.1 Houses with a residential function at Pompeii (dark grey).

4.2 Elite Wealth Inequality

The starting point for my reconstruction of the Pompeian wealth distribution is determining the level of wealth inequality. To represent how unequal wealth was distributed among the richest Pompeiians, I use the shape of the top of the residence size distribution.

For this purpose, the residence size data are plotted in a Zipf plot in Figure 4.2.[15] This plot suggests that the residences follow the same functional shape as a typical wealth distribution (see also Chapter 3). Wealth distributions typically have a bipartite shape in a Zipf plot, following at low to medium wealth an exponential function (appearing in the plot as convex decreasing) and a power law at high wealth (appearing as linearly decreasing). It is a reassurance that the distribution of the Pompeian residence sizes has the same bipartite shape, which thus implies that the residences are probably a good proxy for the local wealth distribution (or, stated negatively, if the residence size distribution would not have followed this shape, it would have been a problem). As my interest is in elite wealth, I mostly focus on the top part of the wealth distribution, that is, the part

15 Plotting the Pompeian residences as mean-excess and Zenga plots confirms that their size distribution closely resembles a power-law distribution. See Cirillo 2013 for the technical details of making these plots.

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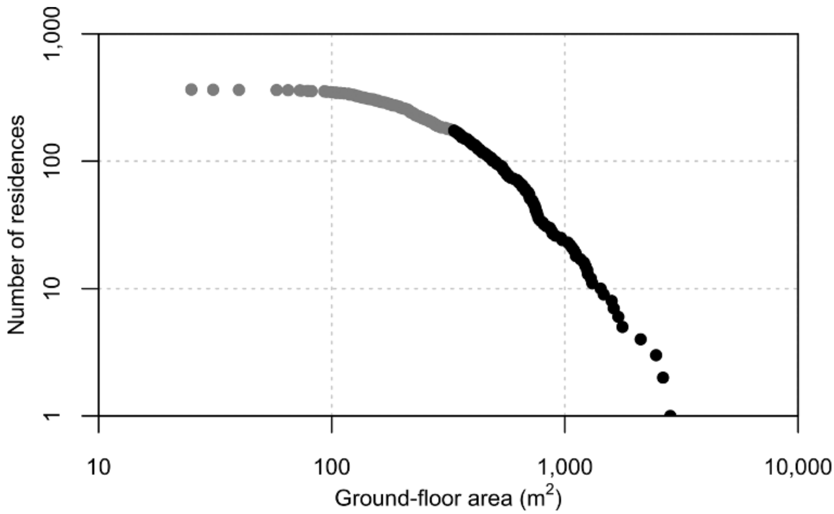

Figure 4.2 Zipf plot of the ground-floor areas of the Pompeian residences.

of the residence size distribution that follows a power law (the straight line in the Zipf plot, here also referred to as the power-law tail of the distribution).

Since the top of the Pompeian residence size distribution seems to follow a power-law function, I can use the shaping parameter of the power-law function (*alpha*, which is related to the steepness of the distribution) as a mathematical representation of the level of local elite wealth inequality. I estimate *alpha* for the power-law tail of the residence size distribution using maximum likelihood estimation (MLE). However, when a value of *alpha* is estimated using MLE, an estimate for *xmin* (also called the inflexion point) is also required. The inflexion point is the threshold value above which the data are distributed as a power law (i.e., the point between the curved and straight parts in the Zipf plot). The estimates of the inflexion point *xmin* and the shaping parameter *alpha* are moreover strongly correlated. If a different value for *xmin* is chosen, the value of *alpha* changes as well. This introduces considerable uncertainty. I evaluate the extent of this uncertainty by using bootstrapping (a form of resampling from the original dataset to determine the level of uncertainty in the predictions).[16] This method produces probability distributions for the estimated values of *xmin* and *alpha* instead of point estimates. These probability distributions then reflect the uncertainty introduced by the parameter estimation.

16 For technical details, see Clauset et al. 2009.

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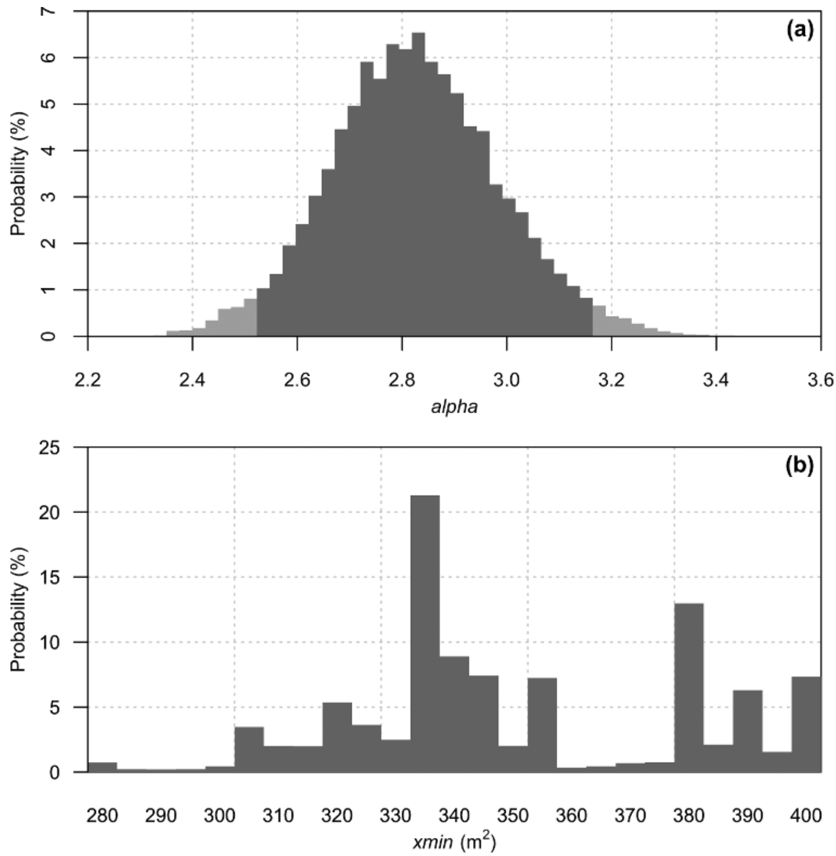

Figure 4.3 Probability density distributions of the estimated value of (a) the shaping parameter and (b) inflexion point of the power-law tail of the Pompeian residence size distribution. Dark grey is the 95-per-cent HPD interval.

Using these methods, I have estimated values for *alpha* and *xmin* for the power-law tail of the Pompeian residence size distribution. The expected value of *alpha* is 2.82 with a 95-per-cent HPD interval between 2.53 and 3.13 (the dark-grey bars in Figure 4.3a). Note that *alpha* is inversely correlated with the implied level of inequality; a higher value of *alpha* implies a lower level of inequality and vice versa. For the inflexion point, the value of 335 m^2 appears as most likely, while there is some variation around it between 300 m^2 and 360 m^2 (Figure 4.3b).

Comparative data suggest that my estimates for the Pompeian *alpha* are plausible. My values of *alpha* fall within the typical range, roughly between 2 and 3, observed for wealth proxy datasets from many other (pre)modern societies.[17] The closest ancient comparandum is the housing stock from the

[17] See, e.g., Brzezinski 2014.

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fourteenth-century-BCE Egyptian city of Akhetaten, which implies a value of *alpha* of 2.59.[18]

The values of *alpha* estimated based on the Pompeian residences suggest that elite wealth inequality in the Vesuvian town was relatively modest. An underestimation of the level of inequality might (in part) be due to the biases related to the use of houses to estimate wealth inequality (as discussed in Appendix A). It is also possible that wealth was distributed relatively equally at Pompeii. This is what a comparison with the values of *alpha* based on other Early Imperial Italian wealth proxies implies (see Chapter 8 for further details). A similar picture is drawn by a comparison of the Gini coefficients estimated for samples of houses from other Roman towns.[19] Unfortunately, these Gini coefficients cannot be directly compared with the estimated values of *alpha*, as the former are based on the entire Pompeian wealth distribution and the latter only on its top part.

4.3 Elite Residences

In the previous section, I used the Pompeian residence size distribution to infer the level of elite wealth inequality. In this section, the same data are used to estimate the total number of households that would be in the top of the Pompeian wealth distribution (its power-law tail). The main assumption is that each Pompeian residence represents one household.[20] I count the residences that are larger than the inflexion point estimated with MLE. For example, assuming a value of 335 m^2 for the inflexion point (*xmin*) results in 174 residences which are larger than this inflexion point.

This count however only includes residences in the excavated part of town. A correction for the residences in the uninterred parts is required. About three-quarters of the urban area of Pompeii has been excavated; the unexcavated parts cover 26.7 per cent of the area within the town walls.[21] Straightforward extrapolation of the housing stock of the excavated parts using this proportion is however impeded by the uncertainty of whether the unexcavated parts were built up in a similar manner as the excavated parts. Several studies identify some degree of spatial zoning within Pompeii.[22] Luckily, residential houses seem to have been an exception as they seem to have been spread relatively uniformly over town (compared to,

18 Abul-Magd 2002.
19 Kron 2014: 128–29, Wallace-Hadrill 1994: 65–90. Flohr 2017: 56–58 (data published separately as Flohr 2018) comes to a much higher Gini.
20 See Appendix A for further discussion of this assumption.
21 Flohr 2017: 61–62.
22 Robinson 1997 and Schoonhoven 1999.

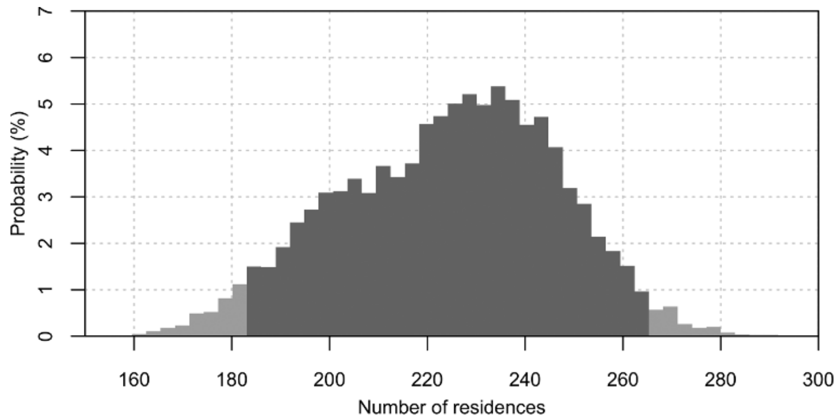

Figure 4.4 Probability density distribution of the estimated total number of residences in the power-law tail of the Pompeian residence size distribution. Dark grey is the a 95-per-cent HPD interval.

e.g., *tabernae*).[23] Miko Flohr has moreover estimated the composition of the housing stock of the unexcavated parts by extrapolating the houses of only the *insulae* that are nearest to the unexcavated parts.[24] He predicts that about 28.0 per cent of the residential houses have not yet been uncovered. The difference between his revised percentage and the simple proportion of unexcavated area is thus relatively small. I nonetheless incorporate this uncertainty by using a uniform PDF ranging between the two proportions (26.7 and 28.0 per cent) to estimate the number of residences in the unexcavated part of town.

In Figure 4.4, a histogram is depicted of the estimated total number of Pompeian households which would be in the power-law tail of the local wealth distribution (denoted as *N*). I used a range of values for the inflexion point as estimated in the previous section (between 300 m^2 and 360 m^2, see Figure 4.3b). The expected value of this distribution is 229 residences with a 95-per-cent HPD interval between 187 and 268. The variability in the estimated number of households is due to the uncertainties in the exact location of the inflexion point and the proportion of residences which remain unexcavated.

These estimates are distinctly lower than Wim Jongman's count of 500 to 600 'large and respectable atrium houses', which he bases on a simple count of all houses with status architecture.[25] They are however more numerous

[23] Robinson 1997.
[24] Flohr 2017: 61–62.
[25] Jongman 2017: 425.

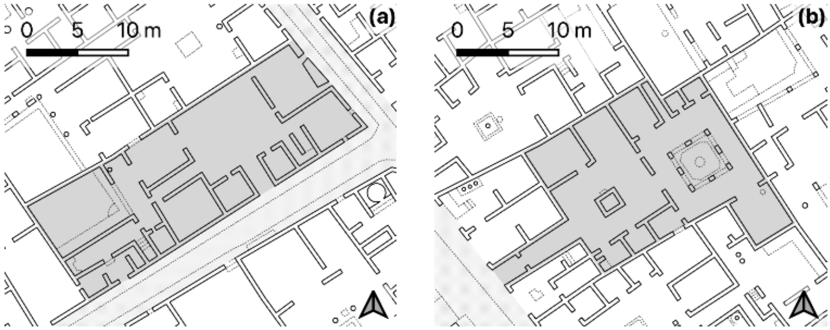

Figure 4.5 (a) House I.2.6 with a ground-floor area of 309 m^2 and (b) house IX.2.15–16 with a ground-floor area of 357 m^2 (the house of Brittius Balbus).

than the 150 and 174 elite residences as identified in the Pompeian housing stock by Walter Scheidel and Henrik Mouritsen, respectively.[26]

It is worth mentioning that all the residences in the power-law tail can be shown to have been 'elite' (in the social sense of the term) as evidenced by the presence of status architecture in these houses. In a Roman elite residence, at least an atrium or (pseudo-)peristyle can be expected.[27] In the online database of Flohr, these types of status architecture are conveniently overviewed for all Pompeian houses.[28] All residences that are larger than the inflexion point have either an atrium or a (pseudo-)peristyle, which is a reassurance that these are proper elite residences.

4.4 Household Wealth

Last, I will estimate the notional average wealth of a household occupying a house in the estimated range for the inflexion point (between 300 m^2 and 360 m^2). This is the most challenging task. The main objective of this section is thus to estimate the notional average wealth held by a household that occupied a house at Pompeii with a ground-floor area of between 300 m^2 and 360 m^2. Two examples of such houses at Pompeii are depicted in Figure 4.5.

At this point, it is useful to note the socio-political significance of the power-law tail of the Pompeian residence size distribution. It seems that this part of the distribution is the same layer of society from which Pompeian magistrates were recruited. This is implied by the fact that the smallest houses in the power-law tail (i.e., close to the inflexion point) are of similar

26 Scheidel 2017: 76, Mouritsen 2015: 91–93.
27 Wallace-Hadrill 1994: 82–87.
28 Flohr 2018.

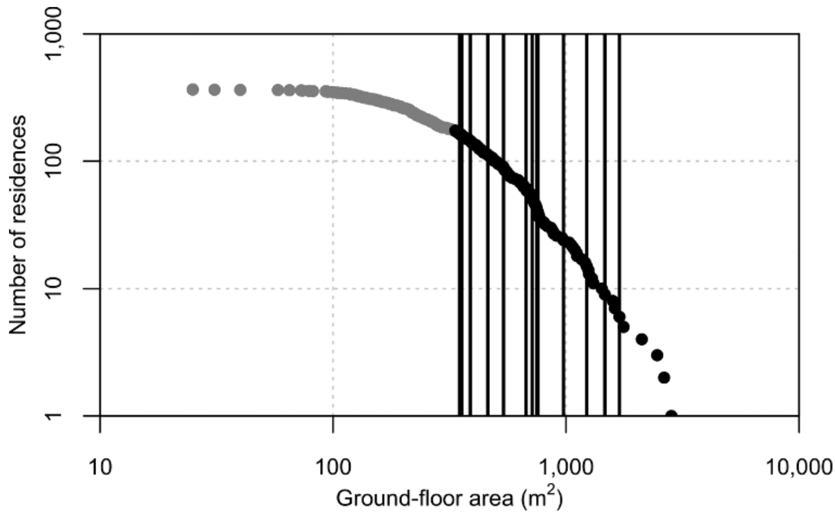

Figure 4.6 Zipf plot of Pompeian residences (black dots are above the inflexion point of 335 m^2) with the magisterial houses as identified by Mouritsen 2015: 91 note 10 depicted as vertical lines.

size as the smallest houses of identified Pompeian magistrates or magisterial candidates. Henrik Mouritsen identified the residences of fifteen Pompeian magistrates or magisterial candidates, based on a scrutiny of the work of Matteo della Corte.[29] The house of Q. Brittius Balbus (IX.2.15–16) is the smallest of these houses with a ground-floor area of 357 m^2 (see Figure 4.5b). Balbus was aedile in 56/7 CE and duoviral candidate at a later time.[30] The size of his house falls precisely within the range estimated for the inflexion point. Moreover, the house of Balbus is not an outlier among the houses of the Pompeian magistrates. Figure 4.6 presents the sizes of all fifteen magisterial houses identified by Mouritsen (vertical lines) in relation to all Pompeian residences (circles) in a Zipf plot. The magisterial houses are spread over the entire power-law tail of the residence size distribution (the black circles). The households whose wealth fell in the power-law tail of the wealth distribution, that is, above the inflexion point, therefore seem to constitute the same layer of Pompeian society from which local magistrates and decurions were recruited.

This connection between the top of the wealth distribution and the socio-political structures in Pompeii is a crucial observation. It implies a relationship between the (predominantly?) economic processes which

29 Mouritsen 2015: 91–93, esp. 91 note 10. Della Corte 1965, with a critical evaluation of this work in Mouritsen 1988: 13–27.

30 Castrén 1975: 143–44 and Franklin 2001: 80–81.

result in the emergence of a power-law tail in the wealth distribution and the Roman socio-political institutions. Further study of this connection (e.g., regarding their causalities) is warranted but outside the scope of this book.[31]

For present purposes, it is worth noting that the connection between the magisterial houses and the power-law tail of the wealth distribution implies that the inflexion point might be related to the curial census qualification. The Pompeian census qualification could thus help to estimate the wealth of the households occupying a residence measuring between 300 m^2 and 360 m^2.

Although not explicitly attested anywhere, it is very probable that there was a formal wealth requirement to fill a magistracy at Pompeii. The existence of such formal thresholds for local *ordines* are attested for several other Italian towns.[32]

The exact value of the Pompeian threshold is much harder to establish. The literary evidence suggests that Italian *civitates* in general used a 'standard' census minimum of HS 100,000.[33] Pliny the Younger famously implies this value for Comum in Cisalpine Gaul in the early second century CE.[34] Petronius and perhaps Catullus may furthermore confirm this figure as typical for Italian *civitates*.[35] Scholars therefore often assume the figure of HS 100,000 for all Italian *civitates*. However, they simultaneously acknowledge that qualifications might have varied between *civitates*; particularly smaller *civitates* would not have always been able to maintain this canonical qualification.[36] A fuller discussion of the variation in census qualifications in the Italian *civitates* follows in Chapter 6.

Presently, the crucial question is to determine whether this 'Italian standard' was used at Pompeii. As a qualification of HS 100,000 is relatively firmly established for second-century-CE Comum, I start by comparing the expected level of wealth of Pompeii in 79 CE with early second-century Comum. I focus on inhabited area, population and territory size, assuming that these demographic factors give a rough idea of the local level of wealth and thus the value of the curial census requirement. The size of the urban centre of Comum was only around 25 ha when it was founded in the middle of the first century BCE, whereas the Pompeian walls enclosed 63 ha roughly a century later.[37] It is however probable that the urban centre of Comum had expanded considerably between the 50s BCE and the

31 Christian Silva and Yakovenko 2005 might be the starting point to study this.
32 Cic. *Verr.* 2.2.120 and 122. For an overview, see Duncan-Jones 1982: 147.
33 Rathbone 1993: 130–31.
34 Plin. *Ep.* 1.19.
35 Petron. *Sat.* 44 and Catull. 23.24–27. *Cf.* Rathbone 1993: 130–31.
36 Duncan-Jones 1982: 147–48, le Roux 1991: 105–7, Jacques 1984: 527–32, Alföldy 1988: 128.
37 Comum: Conventi 2005: 104. Pompeii: Flohr 2017: 62.

time of Pliny the Younger. Early second-century-CE Comum seems in fact to have been more populous than Pompeii. Richard Duncan-Jones suggests, based on one of Pliny's gifts, that only the citizens of the urban centre of Comum (excluding foreigners, freedmen and slaves) already numbered between 14,700 and 17,500 souls.[38] Most estimates for the entire Pompeian intramural population (including slaves) range between 7,000 and 12,000.[39] Finally, the territory of Comum (estimated to encompass more than 1,500 km^2) must have been an order of magnitude larger than the Pompeian territory, estimated between 80 and 200 km^2.[40] The territory of Comum of course included large tracts of mountainous areas, whereas that of Pompeii mostly consisted of fertile volcanic soils. I conclude that second-century-CE Comum was of comparable size to, or maybe even slightly larger than, first-century Pompeii. This comparison thus cautiously suggests that if the Pompeian census qualification differed from that in Comum, it may have been lower.[41]

An alternative approach entails the extrapolation of locally paid *summae* and/or *honoraria*. *Summae* were legally stipulated sums that magistrates had to pay upon their taking up office (and *adlecti* upon their entry into the council). An *honorarium* was a voluntary euergistic payment to the town in honour of an office or adlection.[42]

Fortuitously, one such payment was made at Pompeii; Aulus Clodius Flaccus gave the city HS 10,000 in honour of his first duovirate around 10 BCE.[43] It is impossible to establish conclusively whether this was a *summa* or an *honorarium*. Peter Garnsey argues that Flaccus' payment was a voluntary benefaction, based on the fact that his payment is attested in an honorary inscription.[44] Mark Pobjoy however suggests that Italian magistrates also commemorated the things they were obliged to do.[45] Flaccus' payment might have been an *honorarium* which included (and exceeded) the legally stipulated *summa*.[46] In either case, an *honorarium* was probably still related

38 Comum: Duncan-Jones 1982: 266–67.

39 Pompeii: Eschebach 1970: 60–61, Russell 1977: 107–9, Jongman 1988: 108–12, Flohr 2017: 62–68. The estimate of Osanna 2018: 315–16 of 30,000 men, women and children (based on an *epulum* (banquet) mentioned in a recently discovered first-century-CE inscription) probably refers to the population of the entire Pompeian *civitas* (*cf.* Duncan-Jones 1982: 267–68).

40 Comum: Chilver 1941: 45–50. Pompeii: Jongman 1988: 106–8, Flohr 2017: 68–69.

41 *Cf.* Duncan-Jones 1982: 147–48.

42 Garnsey 1971a. Bruun 2014: 71–75 argues that *summae* could also be seen as voluntary benefactions, but see Eck 2022: 460–63 and Campedelli 2014: 73–78.

43 *CIL* 10.1074. For a discussion of other Italian evidence for such payments, see Chapter 6.

44 Garnsey 1971a: 324. *Cf.* Duncan-Jones 1982: 86–87.

45 Pobjoy 2000: 89–90.

46 *Cf.* Bruun 2014: 74–75.

to the general level of wealth expected of a decurion. Even though its value was not stipulated legally, it was probably prescribed by tradition and/or custom.[47]

What level of wealth would Flaccus' payment of HS 10,000 suggest? Several scholars have connected the *summa* with the local curial census requirement by hypothetically taking the former as equivalent to an annual return on the latter.[48] They argue that it is unlikely that the *summa* was more than the average annual return on wealth at the minimum level (typically assumed at 6 per cent) because if the *summa* would have been more, it would have impoverished a candidate possessing this minimum in the year he took up office (and therewith made him technically ineligible). Richard Duncan-Jones thinks that *summae* could be even higher, hypothesising that in Roman Africa they could amount to up to a tenth of a candidate's wealth.[49] According to these theories, Flaccus' payment (if it was a *summa*) implies a minimum curial wealth at Pompeii of HS 100,000 or more. The implied wealth is however lower in case it was an *honorarium*.

In conclusion, the extant literary evidence suggests that there was a 'canonical' curial threshold of HS 100,000, which was probably used in most medium-sized and larger towns of Roman Italy. A comparison of first-century Pompeii with second-century Comum suggests that Pompeii had a similar, if not lower, census qualification. Conversely, the only attested *summa* or *honorarium* from Pompeii implies a similar, possibly even higher, value. In sum, also considering that Roman census qualifications were typically expressed in round figures, the canonical value of HS 100,000 appears to be the most plausible estimate for the curial census qualification at Pompeii.

There are two other, more speculative, ways in which the wealth of a household occupying a house with a ground-floor area of between 300 m^2 and 360 m^2 can be assessed. The first (dubbed the 'house method') is similar to the approach followed by Geoffrey Kron.[50] In this method, first the value of the house is estimated based on its ground-floor area and the building price per roof tile given by Cato the Elder.[51] Subsequently, the obtained house value is converted to annual expenditure on housing (rent or maintenance), which is then converted to total annual income and wealth. These latter conversions are predominantly based on comparative evidence. The

47 Garnsey 1971b: 125, Duncan-Jones 1982: 150.
48 Pleket 1971: 235, Jacques 1984: 530–32.
49 Duncan-Jones 1963: 169. *Cf.* Charles-Picard 1959: 118–19.
50 Kron 2014: 136–38.
51 Cato *Agr.* 14.

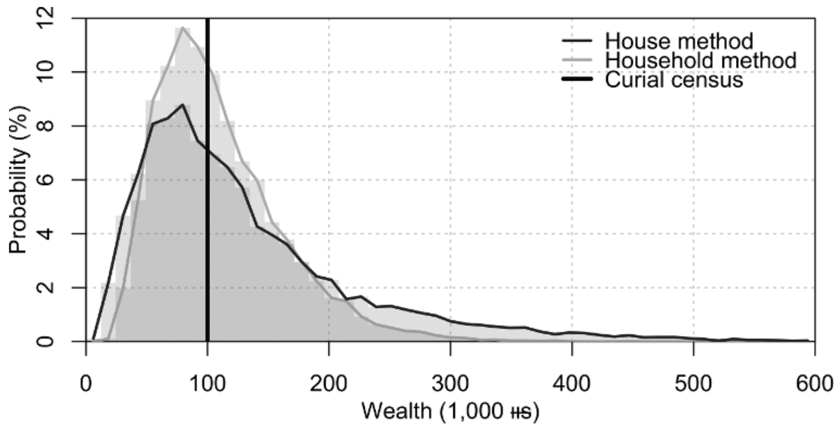

Figure 4.7 Probability density distributions of the estimated wealth of a household occupying a residence with a ground-floor area of 300 m^2 to 360 m^2.

variables used by Kron, together with my assessment of their values and epistemic uncertainties, are summarised in Table 4.1.

The other method (dubbed the 'household method') is based on the size of the household occupying the house. In this approach, I first estimate the number of household members based on the number of rooms in the house.[52] The aggregate annual income of the household members is then estimated based on an assumed *per-capita* annual expenditure (using Robert Allen's respectable basket).[53] Assuming this income is provided exclusively by returns on property, the total wealth of the household can be estimated. All the involved variables, including the evidence I use to determine their values and the epistemic uncertainties, are overviewed in Table 4.2.

Figure 4.7 presents histograms of the results of these two methods. These results thus represent the probabilities for the average wealth of a household occupying a house with a ground-floor area of between 300 m^2 and 360 m^2. The vertical black line denotes the 'canonical' curial census qualification of HS 100,000.

Three important observations can be made. First, the house and household methods result in largely overlapping probability densities. This reinforces their plausibility (*cf.* Keith Hopkins' wigwam argument),

52 *Cf.* Flohr 2017: 64–68, van Minnen 1994: 234–37, Wallace-Hadrill 1994: 100, Packer 1971: 70.
53 Allen 2009, with Scheidel 2010: 427–36.

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Table 4.1 Variables and their epistemic uncertainties for the 'house method'. A minimum and maximum is given for uniform PDFs, while for triangular PDFs a most-likely value (the peak of the triangle) is also given.

Calculation method: $A \cdot ((1 - B) \cdot \frac{1}{C} \cdot D + E) \cdot \frac{F}{G \cdot H}$

Variable	PDF	Sources and Comments
[A] Residence ground-floor area (m^2)	-	There are twenty-seven houses in my database with a ground-floor area of between 300 m^2 and 360 m^2 (the estimated range for the inflexion point in the residence size distribution).
[B] Fraction open area (%)	triangular [5–8–27]	Kron 2014: 136–38 ignored the fact that significant proportions of Pompeian houses would have been open to the sky (e.g., gardens, peristyles). Figure 4.8 presents a frequency distribution of the proportion of area that is uncovered in all twenty-seven residences with a ground-floor area of between 300 m^2 and 360 m^2. Plotting these proportions versus residence size (graph not shown) reveals that these two variables are not correlated within this sample.

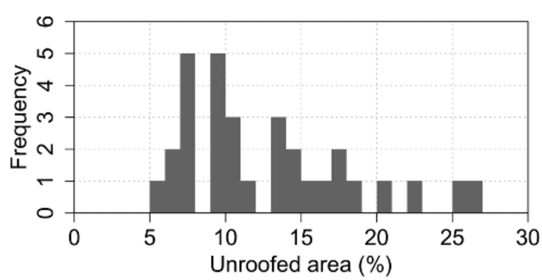

Figure 4.8 Percentage of uncovered area of residences with a total ground-floor area between 300 m^2 and 360 m^2.

Variable	PDF	Sources and Comments
[C] Average roof tile size (m^2)	uniform [0.09–0.3]	Kron 2014: 136 assumes 0.09 m^2, following Frank 1959b: 165, which is based on a roof tile found in Roman Britain (Brodribb 1987: 12). However, the sizes of several *tegulae* found at Pompeii, Rome

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Table 4.1 (*cont.*)

$$\text{Calculation method: } A \cdot ((1 - B) \cdot \frac{1}{C} \cdot D + E) \cdot \frac{F}{G \cdot H}$$

Variable	PDF	Sources and Comments
		and Ostia range between 0.16 m^2 and 0.35 m^2 (Adam 1999: 435–38). These tiles would cover, at a maximum slope of 30 degrees, up to 0.3 m^2 per tile. Moreover, simply dividing the ground-floor area by the size of an average roof tile underestimates the total building cost that Cato gives as he uses the roof tile as a unit of calculation (gutter and joint tiles, for example, count double and quadruple in his calculation).
[D] Building cost (HS/tile)	uniform [1, 2.5, 3]	Kron 2014: 136 assumes a building cost of HS 2.5 per roof tile, based on Cato *Agr.* 14: *Huic operi pretium … in tegulas singulas II S.* It is unclear if the price given is in asses or sesterces. Duncan-Jones 1982: 125 assumes asses, which converts to 1 HS per roof tile. This is also in the Loeb translation. Frank 1959b: 165 assumes it was 2.5 sesterces per roof tile, while he also mentions the possible conjecture of one *victoriatus* or HS 3. Furthermore, the building cost cited by Cato (for construction in the countryside during the second century BCE) is probably an underestimation, as building costs at Pompeii during the middle of the first century CE were probably higher. Last, Cato's estimates are minima, as he only includes labour, excluding the cost of building materials and their transportation to the site.
[E] Land cost (HS/m^2)	uniform [1.4–36.2]	Kron 2014: 136 assumes Columella's (*Rust.* 3.3.8–10) land price of HS 1,000 per *iugerum* (0.4 HS/m^2). This price is however for agricultural land. Three Egyptian papyri (*P.Lond.* 2.154, *P.Tebt.* 2.472 and *P.Oxy.* 505) mention sales prices of urban plots in Karanis, Tebtunis and Oxyrhynchos in 68, 120 and 179 CE at 1.4, 19.6 and 36.2 HS/m^2, respectively

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Table 4.1 (*cont.*)

Calculation method: $A \cdot ((1 - B) \cdot \frac{1}{C} \cdot D + E) \cdot \frac{F}{G \cdot H}$

Variable	PDF	Sources and Comments
		(Johnson 1959: 157). These Egyptian prices were probably still lower than those at Pompeii in the first century CE.
[F] Housing expenditure as proportion of house value (%)	uniform [6–9]	Kron 2014: 136 uses 7 per cent (mentioning a possible range of 6 to 8 per cent). Ownership and letting of urban real estate was seen in the Roman world as exceptionally risky (Frier 1980: 21–23). For this reason, annual depreciation or rent probably constituted a relatively high proportion of the house value to cover the risk. The closest comparative (ancient) evidence comprises two houses in fourth-century-BCE Athens which were rented for 8.6 per cent of their capital value (Is. 11.42 and Frier 1980: 22).
[G] Housing expenditure as proportion of total expenditure (%)	uniform [5–25]	Kron 2014: 136–37 uses 10 per cent. Both Allen 2009: 334–35 and Scheidel 2010: 432 note 14 assume that a Roman non-skilled male labourer spent on average 5 per cent of his total income on housing. However, households in higher social classes typically spent more on non-food items such as housing. The English gentry in the thirteenth to fifteenth century spent from 5 per cent to possibly up to 25 per cent of their total income on housing (Dyer 1989: 79–83). The 'well-to-do' in Nuremberg, Verona and Mira in the sixteenth and seventeenth century spent between 3 and 27 per cent of their income on housing (Cipolla 1993: 21–24). Higher expenditure on housing is also likely for the Roman world because the house was a prime status symbol (Cic. *Off.* 1.138–39 and Vitr. *De arch.* 6.5).

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Table 4.1 (*cont.*)

Calculation method: $A \cdot ((1 - B) \cdot \frac{1}{C} \cdot D + E) \cdot \frac{F}{G \cdot H}$

Variable	PDF	Sources and Comments
[H] Average rate of return on wealth (%)	uniform [5–6]	The Romans themselves regarded 6 per cent as an acceptable average rate of return on property (Duncan-Jones 1982: 33 note 3). Lo Cascio 1978: 321–25 asserts that the real average could not have been more than 6 per cent and was probably closer to 5 per cent per year. Piketty 2017: 249–62 also observes average rates of return on capital in the eighteenth and nineteenth centuries of between 5 and 6 per cent.

especially considering the fact that the two methods are completely independent (i.e., based on different variables, methods and evidence).[54]

Second, the expected values of the two methods are very similar: HS 114,000 and HS 108,000 for the house and household methods, respectively. It is also remarkable how close these expected values (and the areas of highest probability) are to the 'canonical' census qualification of HS 100,000.

Third, the 95-per-cent HPD intervals of the two probability distributions are very wide: between HS 14,000 and HS 276,000 and between HS 29,000 and HS 210,000 for the house and household method respectively. These very wide HPD intervals emphasise the speculative nature of these calculations and caution against putting too much confidence in any exact numbers. They reveal the embarrassing extent of our ignorance on these economic structures in the Roman world (even at Pompeii!) and therewith emphasise the importance of using probabilistic calculations. A deterministic evaluation of these methods might have led to two very different and seemingly incompatible results, while the inclusion of the uncertainties reveals a clear overlapping area of high plausibility.

In conclusion, the main objective of this section was to estimate the average wealth of a household occupying a house with a size at the inflexion point of the residence size distribution. Due to the coincidence of this inflexion point with the smallest attested magisterial house, this wealth level might have coincided with the local curial census. A digression on

[54] Hopkins 1978: 19–20.

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Table 4.2 Variables and their epistemic uncertainties for the 'household method'. A minimum and maximum is given for uniform PDFs, while for triangular PDFs a most-likely value (the peak of the triangle) is also given.

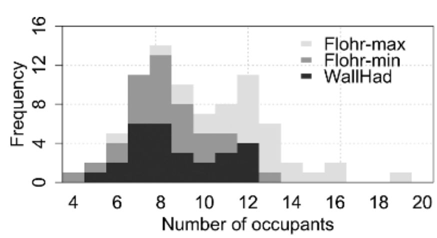
Calculation method: $a \cdot b \cdot c \cdot \frac{d}{e} \cdot \frac{1}{H}$		
Variable	**PDF**	**Sources and Comments**
[*a*] Average number of household members (-)	discrete triangular [4–8–19]	To estimate the average number of occupants of a house, I follow the archaeological-ethnographic method in which the number of ground-floor rooms is assumed to be a rough indicator of the number of inhabitants (*cf.* Kolb 1985: 581–86, Packer 1971: 70, Storey 1997: 969–73). I explore the methods used by Wallace-Hadrill 1991: 193–214 (counting selected rooms with one person per room, following Eschebach et al. 1993 for room identifications) and Flohr 2017: 64–68 (counting all rooms with either 0.48 or 0.72 persons per room). The results for the twenty-seven houses with a ground-floor area between 300 m^2 and 360 m^2 are presented in Figure 4.9 as a frequency histogram. This diagram forms the basis for the assumed PDF. These methods probably underestimate the number of household members as they do not account for slaves (Wallace-Hadrill 1994: 39). The House of the Prince of Naples (VI.15.8, with a ground-floor area of 258 m^2) is a case in point. For this house, I count with Wallace-Hadrill 1994: 215 eight persons and with Flohr 2018 seven to ten persons. However, Strocka 1984: 40–50 estimates the number of occupants, based on scrutiny of the archaeological evidence, at eight to fifteen persons.  **Figure 4.9** Estimated house occupancies for residences with a ground-floor area of between 300 m^2 and 360 m^2.

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Table 4.2 (*cont.*)

Calculation method: $a \cdot b \cdot c \cdot \frac{d}{e} \cdot \frac{1}{H}$		
Variable	**PDF**	**Sources and Comments**
[*b*] Conversion household members to adult male equivalents	uniform [0.67–1]	To adjust the number of household members to adult male equivalents, I follow Allen 2009 and Scheidel 2010: 427–36, who assume that women and children consume 33 per cent less than an adult male. I include the entire range of possible household compositions: only adult males (no adjustment) to only women and/or children (reduction with 33 per cent).
[*c*] *Per-capita* expenditure (HS/adult male)	uniform [242–362]	I use the respectability basket (a list of quantities of twelve Mediterranean commodities typically consumed in a year by an unskilled male worker in antiquity), as defined by Allen 2009 and costed for Roman Egypt in the period between 80 and 160 CE by Scheidel 2010: 427–36, as an estimate for *per-capita* expenditure. It is worth noting that the term 'respectability' is relative to bare subsistence; it is not a luxurious basket. The basket includes 182 kg of bread, while Cato (*Agr.* 56) gives his chained slaves about 530 kg (Oates 1934). However, Cato gave no beans, meat, eggs or cheese, which are all included in the basket. The basket further includes 68 litres of wine. Cato (*Agr.* 57) thinks that an annual wine ration of up to 250 litres per slave, including three months of *lora* (after-wine or grape-wash), is not excessive. Modern scholars do think this is excessive (*cf.* Purcell 1985: 13–15). Morley 1996: 113 and Tchernia 1986: 21–27 estimate average annual consumption to be around 160 and 146 litres per person (women and children included), while Jongman 1988: 132–33 is more conservative, with 100 litres per person per year. Last, 7.8 litres of olive oil is included, for both consumption and lighting. Cato (*Agr.* 59.) gives his slaves a pint a month, which adds up to about 6.5 litres per year, a comparable amount. Estimates for

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Table 4.2 (*cont.*)

Calculation method: $a \cdot b \cdot c \cdot \frac{d}{e} \cdot \frac{1}{H}$		
Variable	**PDF**	**Sources and Comments**
		average *per-capita* oil consumption in the Graeco-Roman world are however much higher, at around 20 litres per year (Mattingly 1988: 22) and for Rome even up to 30 litres (Meijer 2005: 272). In sum, the respectable basket is relatively frugal.
[*d*] Average Italian wheat prices (HS/modius)	triangular [2–4–7.5]	Prices were generally higher in Italy than in Egypt (Rathbone 2009: 303–10, von Freyberg 1988: 141–48). To convert the cost of an Egyptian respectability basket to that of an Italian basket, I use the ratio between local wheat prices. Extrapolating differences in wheat prices to other commodities seems permissible as prices of most commodities appear to be correlated with that of wheat (Scheidel 2010: 435–36). Duncan-Jones 1982: 145–46 estimates that Italian wheat prices normally varied between HS 2 and 4 per modius. Graffiti from Pompeii indicate slightly higher prices of between HS 3 and 7.5 per modius (*CIL* 4.1858 and 4811; see also Diehl 1910: nrs. 391–2 and perhaps Osanna 2018). De Ligt 2012: 197 note 13 posits HS 4 per modius for Roman Italy under Augustus; *cf.* the 'iconic wheat price' in Imperial Italy of Rathbone 2009: 307, but see Mrozek 1975: 10–15.
[*e*] Average Egyptian wheat prices (HS/modius)	triangular [1.3–2–2.7]	Wheat prices in Egypt are attested in various papyri, which are catalogued by Rathbone 2009: 304 and Harper 2016: 814–16.

the value of the census qualification at Pompeii showed that it might have been HS 100,000. Two additional, more speculative calculations roughly confirmed this figure.

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4.5 The Top of the Pompeian Wealth Distribution

At this point, the top of the Pompeian wealth distribution can be reconstructed. This reconstruction might be imagined graphically as the conversion of the residence size distribution (Figure 4.2) into a wealth distribution. Two transformations are required to achieve this. First, the total number of residences on the y-axis is adjusted to include those in the unexcavated parts of town. Second, the units on the x-axis are converted from residence size in m^2 to household wealth in sesterces. I thus keep the shape of the residence size (Section 4.2), while extending it (Section 4.3) and substituting residence size with household wealth (Section 4.4).

This reconstruction can also be expressed in mathematical terms. Based on the residence size distribution, I estimated values for three different variables: the shaping parameter *alpha* (Section 4.2), the total number of households in the power-law tail of the wealth distribution *N* (Section 4.3) and the inflexion point *xmin* expressed in terms of wealth (Section 4.4). A power-law distribution can then be created by inserting these estimates into Equation 3.1 (see Section 3.3). I use probabilistic calculations again. For *alpha* and *N*, I assume a triangular PDF with a range and most-likely value equal to the 95-per-cent HPD interval and expected value of Figures 4.3a and 4.4, respectively. For *xmin* I assume a constant value of HS 100,000. With these inputs, the top of the Pompeian wealth distribution is reconstructed on the assumption that it followed a power law.

The outputs of interest of the reconstructed wealth distribution are the number of households whose wealth exceeded the equestrian and senatorial census qualifications of 400,000 and 1 million sesterces respectively. The results are presented in Figure 4.8. These histograms represent the probability distributions for the estimated number of households holding equestrian and senatorial wealth based on my beliefs on the values of the three input variables.

The probability distribution of the estimated number of households with equestrian wealth has an expected value of 18 with an HPD interval between 11 and 24 (see Figure 4.8a). These values roughly match the results of Geoffrey Kron.[55] He estimates that 1 to 2 per cent of the entire Pompeian population (or 15 to 30 households if we assume a total of 1,500 Pompeian households with Miko Flohr) would have had an equestrian income.[56] Evidently, Pompeii could not match Patavium or Gades, even if the number of 500 equestrians given by Strabo for these towns refers to all members of the

55 Kron 2014: 136–38.
56 Flohr 2017: 56–62.

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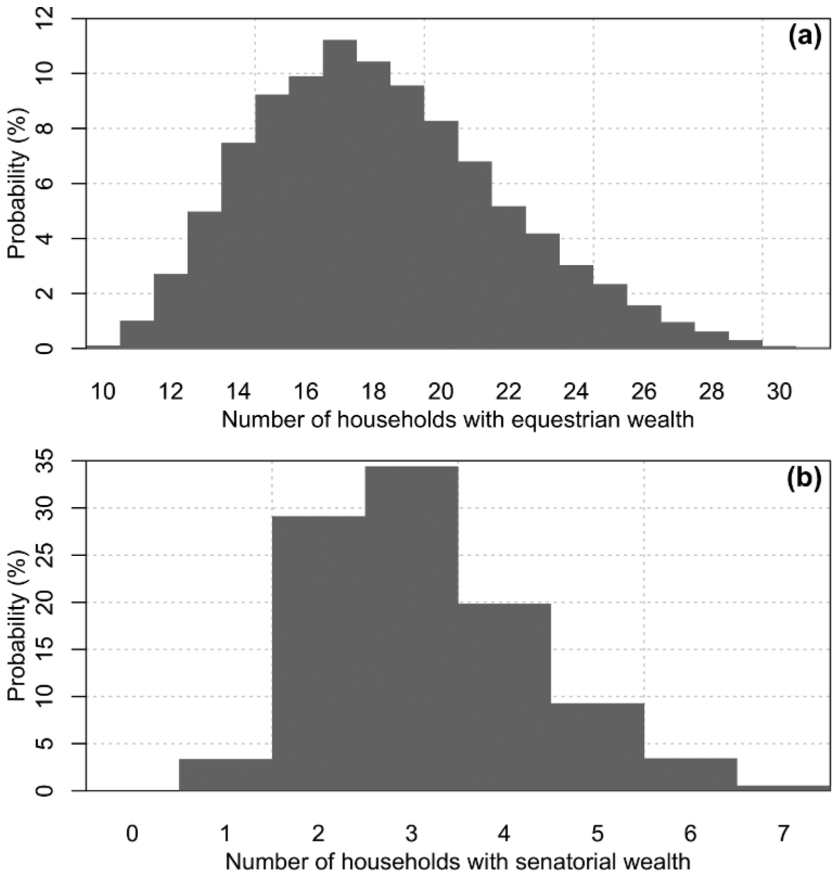

Figure 4.10 Probability density distributions of the number of Pompeian households that satisfied (a) the equestrian and (b) senatorial census qualification of HS 400,000 and HS 1 million respectively.

equestrian households (which would still imply more than 100 equestrian households if the average household consisted of four members).[57]

The expected value of the number of households with senatorial wealth is three, with an HPD interval between 1 and 5 (see Figure 4.8b). Note in particular that the model predicts that there is zero probability that there were no households with senatorial wealth at Pompeii. It seems very unlikely that at any point in time not a single Pompeian household could satisfy the senatorial census qualification.

Three further considerations tend to strengthen this conclusion. First, the discussion of the use of residence size as a proxy for household wealth revealed that the residences probably underestimate the level of inequality. A higher inequality would result in more wealth concentrated at the top of

[57] Strabo 3.5.3 and 5.1.7, *pace* Kron 2014: 137.

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the wealth distribution and thus more households with senatorial wealth. Second, only intramural houses are included in the model. Inclusion of the large extramural villas would increase both the number of households in the power-law tail and the level of inequality. Finally, the values chosen for the input variables were expressly conservative in the sense that they underestimate the inequality. All these biases thus result in an *underestimation* of the number of Pompeian households with senatorial wealth. The actual number must have been higher than those suggested by the model and the results are therefore best treated as a minimum scenario. In sum, it seems safe to claim that there must have been at least several households in Pompeii who satisfied the notional senatorial census qualification.

This conclusion stands in clear contrast with that of Kron, whose model implies that there were none. In his model, the House of the Faun (VI.12.2, with a ground-floor area of 2,832 m^2) would have had the largest annual income at a value of close to HS 55,000, which translates into a notional wealth of approximately HS 900,000 based on the commonly assumed 6-percent rate of return on property. The use of a power-law model thus reveals that more wealth was concentrated at the top of the Pompeian wealth distribution than a straightforward interpretation of the Pompeian houses would suggest.

4.6 Wealth and Officeholding

The reconstructed distribution of elite wealth at Pompeii provides the first tangible evidence of the imperfect overlap between wealth and officeholding in Early Imperial Italy. In this section, I will compare the estimated number of households with equestrian, senatorial and curial wealth with the evidence for the number of Pompeian *equites*, senators and decurions, respectively.

There are relatively many Pompeian equestrians attested for the Imperial period. Ségolène Demougin identifies eleven *equites* for this period, with possibly one additional *eques* under Tiberius.[58] It is noteworthy that Demougin's eleven *equites* were all triumviral and Augustan, which can be explained by the fact that the first emperors admitted relatively many and predominantly Italian men into the equestrian order.[59] The total of twelve known Pompeian *equites* is a high number; of all the other Italian towns only Verona reaches the same number, while the total number of attested equestrians from Rome is less than twice this number, at twenty-two. This is of

[58] Demougin 1988: 501–31. For the Tiberian *eques*, see Beard 2008: 211.
[59] Demougin 1988: 539–52.

course in part due to the exceptionally large amount of epigraphic evidence from Pompeii. A relatively high number of Pompeian equestrians attested for the Imperial period is in any case compatible with the expected value of eighteen households with equestrian wealth at any point in time (as equestrian status was probably linked directly to satisfying the equestrian census qualification).[60]

The estimated number of households with senatorial wealth (between one and five) stands in stark contrast to the lack of any certainly attested senators from Pompeii in the Imperial period. Giuseppe Camodeca lists only one possibility: a *frater Arvalis* in 66 CE.[61] The Pompeian origin of this Q. Postumius Cai[…] is based on the fact that the only other known QQ. Postumii came from Pompeii; Q. Postumius Modestus was duovir in 56/7 and quinquennial candidate in 75 CE, while Q. Postumius Proculus (probably his son) was an aedile candidate in 77 CE.[62] The *frater Arvalis* and these Pompeian magistrates, although sharing both a *praenomen* and *gentilicium* and living contemporaneously, were definitely different persons, which leaves a great deal of uncertainty on the supposed origin of the former.

The lack of certainly attested senators from Pompeii is remarkable for two reasons. First, Campania appears to have been a large supplier of senators. For the period from the first century BCE to the third CE, 130 Campanian senators have been identified.[63] In comparison, the two most southern regions together supplied fewer senators in the same period (116).[64] Second, the large amount of Pompeian epigraphic material, which explained in part the high number of attested Pompeian equestrians, makes the lack of any firmly attested Pompeian senators even more acute.

It is of course possible that we missed the senators from Pompeii due to the vagaries of the transmission of evidence. This is however relatively unlikely. Information on the senators of the first century CE is relatively abundant compared to other centuries. For example, Joseph and Pierre Willems catalogue all known members of the senate in the year 65 CE, identifying 385 senators.[65] Based on a notional size of 600 members, this implies that we know about 64 per cent of the senators in that year. The year 65 CE is however an anomaly due to the abundant literary sources describing the political turmoil accompanying the transition from the Julio-Claudian to the Flavian house and the conspiracy of Piso. Our information on other

60 Mouritsen 2022: 58–63.
61 Camodeca 1982: 126–27; 2014.
62 Castrén 1975: 210 and Franklin 2001: 82–86.
63 Camodeca 1982: 103–8.
64 Camodeca 1982: 104.
65 Willems and Willems 1902.

periods of the first century is scantier. Moreover, the origin of only a part of these senators is known. Mason Hammond asserts that we know the origin of 178 out of a total of 386 senators from Vespasian's reign (69–79 CE).[66] This implies a 46-per-cent chance that we know a senator's origin in this period. Combining these two statistics, the origin of about a third of all senators in the first century CE is known, a reasonably high proportion for ancient history standards. On top of this, the probability of knowing a senator from Pompeii must be much higher than this average due to the abundance of epigraphic evidence from this town. In conclusion, I do not claim there were no Pompeian senators in the Imperial period, as this arguably remains an argument from silence. However, the lack of certainly attested senators from Pompeii in the first century CE should disturb us more than it would for any other period or town.

Extrapolating the estimated average of three Pompeian households with senatorial wealth in 79 CE to the four or five generations of Pompeiians who lived in the Imperial period suggests that there must have been about a dozen households with enough wealth for social advancement into the senate in this period. Even if there were a few Pompeian senators who evaded the historical record, the majority of Pompeian households with senatorial wealth were not represented in the senate. These results thus attest to a discordance between wealth and officeholding among the wealthiest households of Pompeii.

What could have impeded ambitious Pompeiians with senatorial wealth to enter the senate?[67] Besides wealth, there were various other requirements for entry into the imperial orders. The most important were based on gender, age and legal status. Some households might have lacked an adult male or were of freed status or descent (barring them from holding senatorial office).[68] The help of a patron was also indispensable for social advancement into the senatorial elite. There were however many connections between the imperial house and the senatorial elite on the one hand and Pompeii on the other which could have provided such patronage.[69] Ambition (or the lack thereof) might also have played a role.[70] In sum, holding sufficient wealth

[66] Hammond 1957: 76–80.

[67] For a fuller discussion, see Danon 2023: 118–22.

[68] See also Section 10.1.

[69] Members of the imperial family were patron (*CIL* 10.832) and honorary duovir (*CIL* 10.901, 902 and 904 and Castrén 1975: 60–61 and 104–8) at Pompeii. Nero's wife, Poppaea Sabina, furthermore seems to have had close family ties at Pompeii (van Buren 1951). Several senators also owned land at Pompeii (Camodeca 2005, Andermahr 1998: 58–62).

[70] For the discussion on withdrawal from senatorial politics, see Hopkins 1983: 166–69, Talbert 1984: 23–27 and 76–80, Bodel 2015. For Pompeiians in particular avoiding senatorial careers, see Cébeillac-Gervasoni 1992: 100–2 with Biundo 2000: 43.

was not the only hurdle to be taken for entry into the senate. There might have been many different reasons why wealthy Pompeiians did not find their way into the Roman senate.

A similar discordance is implied for the curial level. The coincidence of the inflexion point with the smallest attested magisterial house has one further implication. If the power-law tail of the wealth distribution represents the economic layer of Pompeian society from which magistrates and decurions were recruited, then my model also implies that there were between 187 and 268 households with curial wealth in Pompeii. How do these estimates compare with the number of Pompeian decurions?

Unfortunately, the size of the Pompeian *ordo decurionum* is unknown, which is remarkable considering the amount of evidence there is for its individual members. Many scholars assume the 'canonical' 100 members for an Italian council.[71]

A simple demographic calculation can help to get an idea of the size of the Pompeian council.[72] Entry into the municipal council normally went through holding the aedileship (the junior magistracy at Pompeii). Men typically obtained this office when they were twenty-five years old (the official minimum age to hold this office). After their year of office, they became a decurion for life.[73] The average size of the Pompeian *ordo* can then be estimated at fifty-four, based on the multiplication of the number of annually elected aediles (two) and their life expectancy, which is at an age of twenty-five years about twenty-seven years, according to the Model Life Table Coale and Demeny Model West Level 3.[74] In other words, if only two aediles of twenty-five years entered the Pompeian council each year, the Pompeian *ordo* would have counted only about fifty decurions on average.

If Pompeii indeed had a council of 100 decurions, many (about half) of them must have been *adlecti*. These would be non-ex-aediles who were directly adlected into the council. The thirty-two *pedani* listed in the *album* of Canusium of the Severan period are interpreted as such *adlecti*.[75] There is however hardly any evidence for *pedani* or *adlecti* at Pompeii.[76] Henrik Mouritsen identifies only five Pompeian decurions who are not also securely attested as magistrates, a relatively low number in comparison with

71 For example, Jongman 1988: 320; 2017: 425, Mouritsen 1988: 29, Duncan-Jones 1982: 283–87. See also Section 6.1.

72 Jongman 1988: 321–24. *Cf.* Scheidel 1999.

73 Mouritsen 1988: 28–30.

74 Coale and Demeny 1983. *Cf.* Saller 1994: 43–69.

75 *CIL* 9.338, with Salway 2000: 127–28, Garnsey 1974: 245.

76 Jongman 1988: 319.

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the 255 known (candidate) magistrates.[77] The preponderance of magistrates and magisterial candidates in the Pompeian record can at least partly be explained by the fact that the Pompeian evidence on decurions mainly consists of electoral propaganda which is biased towards (candidate) magistrates. Henrik Mouritsen however plays with the idea that the Pompeian council might have been much smaller than the 'canonical' hundred decurions.[78]

In conclusion, the around 229 Pompeian households with curial wealth must have exceeded the number of decurions by at least a factor of two and possibly even four. There must have been a significant discordance between wealth and political office in Pompeii at the curial level. Not all households with curial wealth were represented in the local council. Moreover, this discordance was widespread; probably only a minority of the households with sufficient wealth could expect one of their household members to become a decurion.

4.7 Conclusions

The reconstruction of the top of the Pompeian wealth distribution strongly suggests that the number of households with sufficient wealth for political office exceeded the number of officeholders considerably. There might have been about two to four times the number of households with the requisite wealth for entry into the local council compared to the actual number of councillors. Furthermore, there were at least several households with senatorial wealth in Pompeii, which stands in stark contrast with the lack of any firmly attested senators from the Vesuvian town in the Imperial period.

In the remainder of this book, a similar argument will be made for Roman Italy as a whole. As Pompeii cannot be taken to be representative for all Italian towns, I will first assess the heterogeneity of the Italian *civitates* in the next chapter. The impact of this heterogeneity on the socio-political institutions of the Italian *civitates* is then reviewed in Chapter 6. Chapter 7 argues that a surplus of households with curial wealth over the number of decurions was a structural feature of the Italian *civitates*. Last, the level of elite wealth inequality is considered in Chapter 8 by analysing four wealth proxy datasets. The insights provided by these chapters will then be brought together in Chapter 9 to reconstruct the top part of the Italian wealth distribution.

77 Mouritsen 1988: 112–13 and 210 note 456.
78 Mouritsen 2015: 90.