

# Malthus Confirmed?

## Being Some Reflections on The Changing

### Distribution of Wealth and Income in Portugal [1309-1789]<sup>1</sup>

Over three decades ago, while in the process of putting together a small book of readings on the Iberian background to Latin American history,<sup>2</sup> I ran across an essay by Jaime Cortesão<sup>3</sup> that I thought merited translation and inclusion. At one point in the essay Cortesão made a typically intuitive but rather murky assertion that I translated, albeit with some doubts, as

“The Kingdom of Portugal then [i.e., the late 14<sup>th</sup> century] counted a mere million or so inhabitants; moors, bogs, and wild forest covered the major part of the country; we were exceedingly poor in industry and needed to import most manufactured products; and the imperfectly evolved class structure formed a more unbalanced [sic] society. We ran the risk, with overseas ventures, of augmenting this disequilibrium, as indeed later happened.”

When I sent my translation of the essay to Cortesão’s widow<sup>4</sup> for her approval and permission to publish, it came back with a large exclamation point next to the word “unbalanced”, strongly suggesting that I had mistranslated her late husband’s thoughts. He had written “balanced” but this did not make sense to me and I thought it was merely a slip of the pen. Confronted by her objection, however, I reexamined the passage, and finally deduced that what Cortesão actually had meant to say was that in the period before the overseas expansion [i.e., the late 14<sup>th</sup> century], Portuguese society, because of its “imperfectly evolved class structure,” had been relatively egalitarian [“balanced” in his words]. But subsequently, with the coming age of “overseas ventures” and the creation of empire, this relative egalitarianism had given way to a growing socio-economic “disequilibrium.”<sup>5</sup> At the time I regarded this as merely one of Cortesão’s free-wheeling assertions, fascinating and intuitive, but ultimately unprovable: an intriguing idea, in short, that could never be tested.

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<sup>1</sup> I wish to thank Professor Doutor A. H. de Oliveira Marques for his kindness in taking the time to read an earlier version of this study.

<sup>2</sup> H. B. Johnson, Jr., From Reconquest to Empire: The Iberian Background to Latin American History (New York, 1970).

<sup>3</sup> Jaime Cortesão, “Os factores democráticos na formação de Portugal,” Obras Completas, I (Lisbon, 1964), pp. 247-265.

<sup>4</sup> Dona Carolina Cortesão.

<sup>5</sup> It is tempting to recall here Machiavelli’s view of the ancient Germans whose Spartan economy and exiguous resources, he believed, had promoted a society of relative egalitarianism.

Recently however, as I began to develop an interest in problems of historical income distribution, I recalled this idea of Cortesão. I think that what he was trying to say, translated into more modern economic terminology, was that income and/or wealth distribution in Portugal was more equal in the late 14<sup>th</sup> century than it was in the 16<sup>th</sup>. By then, he opined, "overseas ventures" and the development of empire had created a new strata of very rich Portuguese, with the consequent alteration of the distribution in the direction of greater inequality or "imbalance," as he put it.

It then occurred to me that the raw data from a number of recent studies might be used to analyze and compare the wealth and income distribution in various Portuguese communities over a range of several centuries; and that this might permit one to put Cortesão's idea to the test--a relatively crude one perhaps, but a test, nonetheless. In short, I asked myself, what would an examination of the income distribution [or wealth distribution in the absence of income distribution] of a number of Portuguese communities from the early 14<sup>th</sup> century to the late 18<sup>th</sup> century reveal? Would it confirm or would it refute Cortesão's idea? Or might it, perhaps, tell us something entirely different? These are the questions that I will pose and attempt to answer in the study that follows.

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Obviously for the centuries involved, there is no possibility of knowing either the income or the income distribution of the totality of Portuguese households at any given date, or even of a random sampling of the whole. Instead the following study will have to make do with a variety of "soundings" taken here and there---i.e., where and when the documentation permits---and use these "soundings" to hazard an idea of the general income distribution at the time. It may well be objected that it is hazardous to rely upon information from geographically dispersed communities, of different sizes, to suggest the general distribution throughout Portugal at any given time. In response to this I would note that in the instances where it has been possible to analyze several communities at the same time (for example Lisbon, Coimbra, Loule, and Vila Franca in the mid-1560's; or.....) the results are strikingly, if not precisely, similar. Indeed, the "soundings" that I will use have, in effect, been chosen for me by the vagaries of the documentation and by what historians [including myself] have found in the archives and decided to study. They are eighteen in number and their dates are (1) 1309; (2) shortly before 1347/8; (3) 1369; (4) 1422; (5) 1466; (6) 1505; (7) 1564; (8) 1565/6; (9) 1566; (10) 1567; (11) 1613; (12) 1669; (13) 1673; (14) 1707; (15&16) both for the year 1699; (17) 1738; and (18) 1789.<sup>6</sup> I shall discuss them in chronological order.

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1. TORRES VEDRAS, ESTREMADURA (1309). The first "sounding" that I shall examine comes from a sizable township, Torres Vedras, located in Portuguese Estremadura north of Lisbon, and gives the titheable agrarian income of the landowners

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<sup>6</sup> It may well be objected that it is hazardous to rely upon information from sometimes widely dispersed communities, of different sizes, to suggest the general distribution throughout Portugal at any given time. In response to this I would note that in the instances where it has been possible to analyze a number of such communities at the same time (for instance, examples 7 through 10, as well as 15 and 16) the results are strikingly, if not precisely, similar. Further, in those instances where it has been possible to follow the same locality for a significant period of time, as in the case of Loulé (1466; 1505; and 1564) as well as the communities in the Azores, the trend fully confirms that which has been found by using dispersed localities.

for the year 1309. Their incomes can be calculated from a survey or surveys<sup>7</sup> that were carried out as the result of an appeal that the four local parish priests of the township made to the bishop of Lisbon. They asked him to order an inquiry to determine what properties [with their respective yields] in the township pertained to which parishes so that their mutual quarrels over the tithes could be resolved. Upon completion of the survey a copy of it was given to each parish. When I was at Yale in 1965 I used a computer to process the data from the copy of the document that had come to rest in the parish church of Santa Maria, and presented my preliminary results in a brief paper at an historical conference held in Oporto in 1968.<sup>8</sup> I subsequently discovered a second copy of the survey, and realized that certain lacunae in the Santa Maria survey could be supplied from this second copy that had belonged to the parish church of São Miguel. At the time, however, I was engaged primarily in research on colonial Brazil and lacked the time necessary to undertake the laborious task of collating the two versions to produce one complete, synthetic version.<sup>9</sup> This I have done only recently, and it is from this synthetic and complete version that I have drawn the data for this paper.

The area included in the medieval township of Torres Vedras is one of gently rolling hills in the north and generally higher, more accidented terrain in the south, characterized by deep narrow valleys and steep hillsides. In 1309 the township was primarily planted in "pao" or "bread" (most likely a mixture of wheat and barley) but it also contained numerous vineyards, as well as a few olive orchards and fruit trees. I have calculated the distribution of agrarian income by households or fogos; these distributions have been further confirmed by calculating the distributions of the grain and wine plots by size using the counts that Professora Doutora Ana Maria Rodrigues produced from my published document.<sup>10</sup> This supplementary material proves, I think, the essential correctness of my income calculations by household. It should be noted that since all the properties in the township were inventoried, with their incomes, the

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<sup>7</sup> There are two copies of the survey in the ANTT. The copy that belonged to the parish church of Santa Maria was originally examined by me in 1964, then transcribed and published in 1970: [Harold B. Johnson, Jr., "Para a história social de Torres Vedras; um documento eclesiástico do ano de 1309," Boletim Cultural da Junta Distrital de Lisboa, III serie, LXXIII-LXXIV (1970)]. Subsequently, Professor Virginia Rau apparently suggested its use to a pupil of hers as the basis for his mestrado [Master's] thesis [J. Manuel do Nascimento Clemente, Torres Vedras e o seu Termo no primeiro quartel do século XIV (1974)] that remains unpublished. He made no attempt to determine the number of households in the township, nor examine their socio-economic stratification. Likewise he neglected to collate my published transcription with the other version of the document, and also failed to include additional material needed to determine the total number of families in the township as well as an accurate idea of the harvest.

<sup>8</sup> "Social Structure and Social Change in Portuguese Estremadura: A Preliminary Overview (1309-1369)."

<sup>9</sup> The São Miguel version has been transcribed as a mestrado [Master's] thesis at the University of Coimbra by a student of Professor Doutor Padre Avelino Jesus da Costa [Maria Julieta Ventura de Oliveira, Subsídios para a História de Torres Vedras (Coimbra, 1970)], likewise unpublished.

<sup>10</sup> Ana Maria Seabra de Almeida Rodrigues, Torres Vedras: a vila e o termo nos finais da Idade média (Braga, 1992), p. 465. She decided not to attempt to determine the number of households or families in the region and preferred instead to work from the number of grain and wine plots. I have used her figures for these to analyze her results in the same fashion that I analyzed my original family income material. It is quite clear, I think, that the distribution by grain plots coincides closely with that by family income and would tend to confirm the accuracy and validity of my family income estimates. The distribution of wine plots is less unequal and is not as good a surrogate for the distribution of family income.

spectrum is virtually complete and the quintiles as well as the Gini Index should be quite exact. The results by quintiles of households as well as by quintiles of wine and grain plots is given as follows: (see also the accompanying Table of Income Distribution, 1a through 1c.)

Top quintile of households.....	64.57%
Second quintile.....	18.95%
Middle quintile.....	9.92%
Fourth quintile.....	4.95%
Bottom quintile.....	1.61%
Gini Index [of Inequality] <sup>11</sup> :	0.615 <sup>12</sup>

Top quintile of wine plots.....	62.79%
Second quintile.....	16.71%
Middle quintile.....	9.71%
Fourth quintile.....	6.28%
Bottom quintile.....	4.51%
Gini Index of Inequality:	0.571

Top quintile of grain plots.....	65.68%
Second quintile.....	15.78%
Middle quintile.....	9.48%
Fourth quintile.....	5.98%
Bottom quintile.....	3.05%
Gini Index of Inequality:	0.606

One might note here that the year 1309, early in the 14<sup>th</sup> century, was likely to have been a time of exceptional population pressure on landed resources when Portugal's pre-Plague population was near its peak, assuming that Portugal experienced the same general demographic forces that operated over most of the rest of Western Europe.

2. PÓVOA D'EL REI, BEIRA ALTA, (shortly before 1348). A second "sounding" that provides a snapshot of the economic stratification of a small agrarian community immediately prior to the plague years of 1348-1349 and the ensuing demographic debacle can be obtained from Póvoa d'El Rei, a small village located not far from present-day Guarda. A typical part of the rolling upland countryside of Beira Alta, the area surrounding the village is marked by the granitic outcroppings that characterize the region. Today, as in the middle ages, it is a region of wheat and rye with some vineyards as well. The material for my analysis of this community comes from a royal inquiry made in the year 1395<sup>13</sup> and first published by Anselmo Braamcamp Freire in 1916. In 1967, in the course of a seminar I gave on medieval Portugal at Yale I

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<sup>11</sup> Also termed the "Gini coefficient." It has been defined as "...a scale running from 0 to 1 on which 0 signifies perfect equality (everybody has the same income) and 1 signifies extreme inequality (one person gets the lot)": The Economist, November 5, 1994, p. 19.

<sup>12</sup> Interestingly enough, we have the distribution of tenancies by size for the manor of Middleton in Essex [England] in the same year [1309]. That distribution produces a Gini Index of .630 [L. R. Poos, A Rural Society after the Black Death (Cambridge, 1991), p. 17].

<sup>13</sup> The document of 1395 gives a picture of the village as it existed some fifty years before.

suggested to Richard C. Hoffmann, one of the student participants, that he might use the document as a possible basis for his seminar paper. He took up my suggestion, and produced an outstanding preliminary study which I later refocused and reinterpreted with the addition of other material. This we subsequently jointly published in Paris in 1971.<sup>14</sup> To my knowledge this was the first analysis of the economic stratification of a specific Portuguese medieval village done from land survey records, and has subsequently served as a model (not always acknowledged) for a number of similar studies by Portuguese historians.

Here are the quintiles, as well as the Gini Indices,<sup>15</sup> by (1) gross household income and also by (2) net household income [after seigniorial levies] for this community.

Top quintile of households.....	50.92%
Second quintile.....	29.51%
Middle quintile.....	16.12%
Fourth quintile.....	3.32%
Bottom quintile.....	0.13%
Gini Index of Inequality: 0.568	

Top quintile.....	58.00%
Second quintile.....	28.82%
Middle quintile.....	10.76%
Fourth quintile.....	2.41%
Bottom quintile.....	0.00%
Gini Index of Inequality: 0.583	

3. ARRUDA DOS VINHOS, ESTREMADURA, (1369). My third example---the first after the catastrophic demographic contraction of the mid-14<sup>th</sup> century---is for the year 1369 and comes from Arruda dos Vinhos, a small village located not far from Torres Vedras in Portuguese Estremadura, north of Lisbon. This community [very likely a small town in the middle ages] was then, as now, nestled in a narrow valley surrounded by the typical flat-topped hills of Estremadura. Here the data takes the form of wealth estimates of the town's households. These estimates were drawn up in response to a decision made by King Fernando [1367-1383] to build a wall around Lisbon to protect the city from a possible Castilian invasion, an endeavor toward which all the inhabitants of Portugal were supposed to contribute on the basis of their wealth. His order, dated December 23, 1369, to the local officials of Arruda dos Vinhos survives:

“...[you shall] determine truly and without error how many people dwell in this town and district: clerics, laity, religious, monasteries, orphans...and all others of whatever status and condition...including all the goods they possess and their value....”

A. H. de Oliveira Marques used the results of this royal inquiry as the basis for a path-breaking article,<sup>16</sup> one of the first, as far as I know, to deal with wealth distribution in

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<sup>14</sup> Richard C. Hoffmann and Harold B. Johnson, “Un village portugais en mutation; Póvoa d’El Rey à la fin du quatorzième siècle,” Annales E. S. C., XXVI (1971), 5, pp.917-940.

<sup>15</sup> Here again, as in Torres Vedras, all the village properties were surveyed so the quintiles as well as the Gini Index should be exact.

medieval Portugal, though he organized his data in a manner different from that employed in this study. Nonetheless, I have relied on his figures for my calculations of the quintiles of wealth and a Gini Index for this community.<sup>17</sup>

For the whole township these are:

Top quintile of wealthholders.....	50.91%
Second quintile.....	28.55%
Middle quintile.....	8.31%
Fourth quintile.....	7.68%
Bottom quintile.....	4.55%
Gini Index of Inequality:	0.428

4. VERRIDE, BEIRA LITORAL, (1422). For my fourth "sounding" I revisit Verride, a village located about half-way down the Mondego river from Coimbra in the direction of the Atlantic ocean. Perched on the top of a low hill over-looking the flood plain of the river, this community has been intensively studied by me in a recent article,<sup>18</sup> and my presentation of it here will therefore be brief. The data upon which my calculations are based are preserved in a land register that belonged to the monastery of Santa Cruz de Coimbra. Santa Cruz controlled approximately one-third of Verride's territory with the rest belonging to Grijó, a monastic house located south of Oporto. Because of mutual land sales among the villagers the payments due to two overlords had become confused and it was decided in 1422 to clarify the situation by conducting a survey of the village plot by plot. This survey was preserved in the Livro Nobre of the monastery and has been used by me to calculate the quintiles of gross household income and the Gini indices.<sup>19</sup>

These are presented in the following Table of Income Distribution:

Top quintile of income.....	50.15%
Second quintile.....	28.98%
Middle quintile.....	13.90%
Fourth quintile.....	4.97%
Bottom quintile.....	2.00%
Gini Index of Inequality:	0.482

In the case of net incomes the quintiles are slightly different:

Top quintile.....	50.82%
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<sup>16</sup> "Estratificação económico-social de uma vila portuguesa da Idade Media," Ensaios de História Medieval (Lisbon, 1980), pp. 121-133 [first published in 1963(?)].

<sup>17</sup> Again, the survey took in all members of the community of whatever status, and the resulting Gini Index should be exact as a result.

<sup>18</sup> "Distribuição de rendimentos numa aldeia medieval portuguesa: Verride em 1422," Ier História, 32 (1997), pp. 181-195. It should be noted that my quintiles here vary slightly from those presented in the study published in 1997. For that study I used software from the U.S. Census Bureau that contained "adjustment factors" for the American data which distorted the results when applied to small communities. I therefore redid my software so that it would give a precise and accurate distribution for a small village such as Verride; and it is this new version that has produced the figures I present here.

<sup>19</sup> Verride's properties were fully surveyed and thus the quintiles as well as the Gini Index ought to be exact.

Second quintile.....	29.19%
Middle quintile.....	13.00%
Fourth quintile.....	5.29%
Bottom quintile.....	1.70%
Gini Index of Inequality: 0.488	

while the Gini Index for the net distribution is 0.488 vs. 0.482 for the gross.

5. Fortunately we also have data for the year 1466, two-thirds of the way through the 15th century. Thanks to some figures published in 1966,<sup>20</sup> we can calculate the wealth distributions in Loulé at that date. These data also have the added interest in that they break down the population into two categories, young and old. Unfortunately the data have been presented in an abbreviated and idiosyncratic fashion---that is to say, except for the "young group," neither the exact amounts for each individual nor the numbers of individuals in each of the broad categories used have been given. Still, with a bit of effort, one can attempt to infer the number of people involved.<sup>21</sup> Using these figures in addition to the wealth categories, one can estimate, within limits, the quintiles and calculate an hypothetical Gini Index as well.

The distribution for the entire population of 63 is as follows:

Top Quintile.....	47.63%
Second Quintile.....	23.60%
Middle Quintile.....	14.17%
Fourth Quintile.....	10.14%
Bottom Quintile.....	4.46%

And the resulting Gini Coefficient is 0.428.

Taking only the 48 termed "old" their distribution is this:

Top Quintile.....	51.55%
Second Quintile.....	23.31%
Middle Quintile.....	12.65%
Fourth Quintile.....	8.92%
Bottom Quintile.....	3.57%
Gini Coefficient.....	0.475

For the "young" the figures are the following:

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<sup>20</sup> Iria Gonçalves, Um Olhar sobre a Cidade Medieval (Cascais, 1996), pp. 177-189.

<sup>21</sup> She gives the young group as 15 in number (though it is really 16, the data for one member of the group being illegible) and the remainder [?] as 48. At least this is the logical inference though she is unclear about whether the 48 include the "young" so that there are 33 "old" and 15 "young" or whether the "old" are 48 in number and the young are 15 in addition, for a grand total of 63. I have made the latter assumption on the basis of the crude percentages that she gives. For example, she has the smallest percentage of the young as 6.7% of the group. Since one knows the total is 15, this gives 1.005 persons. In the case of the old the smallest % is 2.1%. This would be 1.008 persons if the total is 48 but merely .693 if the total is 33. So there would appear to be 48 "old" and 15 "young" in her data.

Top Quintile.....	32.42%
Second Quintile.....	25.80%
Middle Quintile.....	20.10%
Fourth Quintile.....	14.23%
Bottom Quintile.....	7.45%
Gini Coefficient.....	0.260

In attempting to analyze the data that she collected, Gonçalves initially says that the young constitute a "sample quite representative of the {whole} group."<sup>22</sup> This is clearly incorrect. Later on, however, she is able to perceive, even from her relatively unsophisticated analysis, that the "young" were much more equal in wealth at the time that they entered into marriage than were the "old" or, for that matter, the group as a whole.<sup>23</sup>

It should be noted that with a Gini for the whole group of 0.428 this would indicate a continued decline in inequality during the period from 1422 to 1466. In fact, we have here, just before the spectacular expansion of the population in the late 15th century, a Gini close again to the low point of 1369, twenty years after the Plague.

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Five of my remaining thirteen "soundings" come from the region of the Algarve in southern Portugal; and four of them [Loulé in 1564; Castro Marim and Cacela, both in 1699; and the parish of São Clemente in 1738] I have taken from Joaquim Romero Magalhães' very useful survey of that part of Portugal during the 16<sup>th</sup> and 17<sup>th</sup> centuries.<sup>24</sup>

6. LOULÉ, ALGARVE, (1505). My sixth instance of household income distribution, no longer pertaining to the "medieval" period but rather taking us to the threshold of empire, comes from an Algarvian community of Loulé, in 1505.<sup>25</sup> Here are the quintiles and the Gini index.<sup>26</sup>

Top Quintile.....	62.58%
Second Quintile.....	18.47%

<sup>22</sup> Op.cit., p.181.

<sup>23</sup> Op.cit., p.182.

<sup>24</sup> Joaquim Romero Magalhães, Para o estudo do Algarve económico durante o século XVI (Lisbon, 1970), pp. 251-253. In the case of Loulé in 1505 I have preferred to use the data published by João Dias for their greater accuracy: João José Alves Dias, "Estratificação económico-demográfica do concelho de Loulé em 1505," História & Crítica, 13 (June, 1986), pp.59-64. While Magalhães gives the number of fogos in the town as 142, Dias found the number to be 145; and while Magalhães gives the number of fogos in the arrabalde as 283 Dias discovered 289, making 434 in all to Magalhães' 425.

<sup>25</sup> In his aforementioned study of this community Dr. João Alves Dias makes an interesting observation. Loulé, he points out, was one of the more important towns in Portugal at the time, the fifth largest in the Algarve and as such may well serve as a paradigm for much of urban Portugal at the time.

<sup>26</sup> Unlike the four preceding soundings, the information for Loulé in 1505 does not give the incomes for every member of the community, some of the "privileged" having escaped the survey. Thus the Gini Index here needs to be viewed as the minimum with the likely index of inequality somewhat higher than that produced from the available data.

Middle Quintile.....	10.78%
Fourth Quintile.....	5.49%
Bottom Quintile.....	2.68%
Gini Index of Inequality: 0.584	

7. LOULÉ, ALGARVE, (1564). Sounding number seven comes from the same community, but now some 59 years later. Here are the figures:<sup>27</sup>

Top Quintile.....	74.56%
Second Quintile.....	16.46%
Middle Quintile.....	6.81%
Fourth Quintile.....	1.67%
Bottom Quintile.....	0.51%
Gini Index of Inequality: 0.728 <sup>28</sup>	

Loulé's wealth distribution in 1564 furnishes clear evidence of the effect on inequality that came from the extremely rapid population growth that took place in Portugal during the first half of the 16<sup>th</sup> century, something that I shall return to later. Here it might be noted that from a total of 434 fogos in 1505 the population of Loulé rose to 691 fogos in 1564. This is a growth rate of 0.79% per annum for the 59 years involved.

8. LISBON, 1565/66. The same royal request for a serviço that produced the Loulé data of 1564 also provides us with a very detailed look at the wealth distribution in the nation's capital, Lisbon, for the years of 1565/66; as it does, incidentally, for Coimbra at the same time as well. I shall discuss the Lisbon situation first and then Coimbra. A large city by European standards, Lisbon had a population, mid-century, of approximately 100,000 persons, distributed amongst 24 parishes. The average household contained, it would seem, approximately 5.5 persons.<sup>29</sup>

The data for Lisbon have been published in four weighty volumes, material that apparently has so far been little used, or so it would seem.<sup>30</sup> The distribution of wealth in mid-16th century Lisbon by quintiles of the population is as follows:<sup>31</sup>

<sup>27</sup> The same proviso that applies to the 1505 figures also would apply here (See footnote 21).

<sup>28</sup> It should be noted that for Loulé in 1564 I have used the Gini Index for the town plus the surrounding district. If one considers the town alone the index is 0.764, closer, indeed very close, to that for Lisbon at the same time.

<sup>29</sup> See J. V. Serrão, História de Portugal, III (Lisbon, 1978), p. 224. It might be noted that his sums are generally incorrect: he gives 17,825 for the total number of Lisbon's "moradores" although his own figures add to 17,855; and 99,080 for the "almas" when the correct sum for his own figures should be 99,480. He also says there are 24 parishes although he lists only 23. The correct numbers [24 parishes; 18,130 vizinhos or moradores; and 99,992 almas] can be found in João J. Alves Dias, "A População" in Portugal do Renascimento à Crise Dinástica, Nova História de Portugal, vol. V, dir. Joel Serrão e A. H. de Oliveira Marques (Lisbon, 1998), pp. 11-52.

<sup>30</sup> Livro do lançamento e serviço que a cidade de Lisboa fez a el Rei Nosso Senhor no ano de 1565, 4 vols., (Lisbon: Camara Municipal, 1947-1948). Apparently there exists a thesis on 16th century Lisbon by José Magno Santos Pereira Grosso (1968), much referred to, but never published, that I have not had the opportunity to examine. It is possible that he analyzes the 1565 serviço material. See also José Albertino Rodrigues, "Ecologia urbana de Lisboa no século XVI," Ánalise Social, VIII, 29 (1970), pp. 95-115. On the other hand, J. V. Serrão, in volume III of his História de Portugal (Lisbon, 1978) makes no

Top quintile.....	83.66%
Next quintile.....	12.56%
Middle quintile.....	3.16%
Fourth quintile.....	0.62%
Bottom quintile.....	0.00%
Gini Index of Inequality: 0.799	

9. For Coimbra the same serviço produced data giving the following distribution:<sup>32</sup>

Top quintile.....	70.45%
Next quintile.....	18.98%
Middle quintile.....	7.35%
Fourth quintile.....	2.42%
Bottom quintile.....	0.80%
Gini Index of Inequality: 0.690	

According to António de Oliveira, Coimbra about this time would have reached a population ceiling ("um tecto populacional") that would not be surpassed until the mid-19th century.<sup>33</sup>

10. A final [the fourth] mid-16th century distribution (1567) comes from the township of Vila Franca de Campos in the Azores. Analysis of the wealth data from this community<sup>34</sup> on the island of São Miguel produces the following distribution:<sup>35</sup>

Top Quintile.....	82.90%
Next Quintile.....	10.98%
Middle Quintile.....	4.17%
Fourth Quintile.....	1.81%
Bottom Quintile.....	0.13%
Gini Index of Inequality: .790	

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mention of the 1565 document. Instead he publishes data for Lisbon from 1551. See footnote 23 above.

<sup>31</sup> Again the proviso of footnote 21 would apply to these figures.

<sup>32</sup> The proviso of footnote 21 again would apply here.

<sup>33</sup> António de Oliveira, "Estrutura social de Coimbra no século XVI," in A Sociedade e a Cultura no Renascimento: Actas do Simpósio Internacional (Coimbra, 1982), p. 58 [reference from J. J. Alves Dias, op. cit., above.]

<sup>34</sup> The data for this Azorean community comes from a document presently in the British Library {B.L., Royal, 14 XII A}. This document was the subject of a short notice by Artur Teodoro de Matos and Maria de Jesus dos Mártires Lopes published in 1983 ("Subsídio para a história económica e social do concelho de Vila Franca do Campo no ano de 1566: um auto de avaliação dos bens dos seus moradores," Os Açores e o Atlântico (séculos XIV-XVII) (Angra do Heroísmo, 1983), pp. 543-554) where I first learned of it. The article indicated that Professor Matos intended to publish the document in full at a later date. However, since it has so far not appeared, as far as I can determine, and I wished to use the data for this study I wrote to the British Museum and requested a microfilm copy which was sent to me. My analysis has been done from this microfilm copy.

<sup>35</sup> Footnote 21 applies here as well.

What is especially interesting here is the similarity of the Gini index for this Azorean town to that of the capital at the same date, showing that the phenomenon of mid-16<sup>th</sup> century population pressure was by no means limited to the continent.

11. COIMBRA,(1613). Moving from the seventh decade of the 16<sup>th</sup> century to the second of the next, we again have similar data for Coimbra for the year 1613. This, as far as I know, is virtually the only example of income distribution for an Portuguese community on the continent that has come down to us for the 17<sup>th</sup> century prior to the two instances from the century's final year [1699]. This distribution for Coimbra comes from a finta<sup>36</sup> that was levied on the city by royal order to defray the expenses of a coming visit to Portugal by King Philip II [of Portugal (b.1580-d.1621)].<sup>37</sup> A lump sum was to be paid by Coimbra, but it was left to local authorities to apportion it among the citizenry.<sup>38</sup> This was done using an estimate of each household's wealth as the basis. The results are as follows:

Top Quintile of households.....	73.32%
Second Quintile.....	13.90%
Middle Quintile.....	7.50%
Fourth Quintile.....	3.84%
Bottom Quintile.....	1.44%
Gini Index:	0.695

For the rest of the century up until the last year (1699) I am unaware of any other examples of income or wealth distribution in a Portuguese community located on the continent. We do have, however, a couple of mid-17<sup>th</sup> century readings from the Azores: Velas (1669), Topo (1673) and another again for Velas early in the next century (1707). Here are the relevant numbers.<sup>39</sup>

12. Velas (1669):

Top Quintile.....	67.74%
Second Quintile.....	17.59%
Middle Quintile.....	8.07%
Fourth Quintile.....	4.19%
Bottom Quintile.....	2.41%
Gini Index:	0.640

13. Topo (1673):

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<sup>36</sup> See the article "finta" in the Dicionário de História de Portugal [DHP] (Porto, s.d.).

<sup>37</sup> Philip III of Spain.

<sup>38</sup> The finta is published by Fernando Pinto Loureiro in Documentos para a História Económica de Coimbra, I (Coimbra, 1955), pp. 1-59. [The finta was not levied on the poor, the student population, the religious, the military or nobility. As in the case with Loulé and Lisbon as well as Coimbra in 1567 one must therefore take the resulting Gini Index as a minimum that would doubtless be higher were the privileged groups included.] See Armando Carneiro da Silva, Evolução Populacional Coimbrã (Coimbra, 1967), p. 32.

<sup>39</sup> Antonio dos Santos Pereira, A Ilha de S. Jorge (séculos XV-XVII). Contribuição para o seu estudo (Ponta Delgada, 1987), pp. 350-360; 364-370; 416-441.

Top Quintile.....	59.23%
Second Quintile.....	21.86%
Middle Quintile.....	10.59%
Fourth Quintile.....	5.36%
Bottom Quintile.....	2.96%
Gini Index:	0.558

14. Velas (1707):

Top Quintile.....	60.78%
Second Quintile.....	17.75%
Middle Quintile.....	10.38%
Fourth Quintile.....	6.39%
Bottom Quintile.....	4.69%
Gini Index:	0.539

Clearly inequality of wealth was declining in the Azores from the 1560's through the 17<sup>th</sup> century and on into the early years of the 18<sup>th</sup>. This trend that is so clearly apparent in the Azorean data likely mirrored what was happening at the same time in continental Portugal as will be clear if we now turn to the wealth distributions for three Algarvian communities at the end of the century and on into the first half of the 18<sup>th</sup>. For these J. Romero Magalhães again provides us with the necessary data from the tithes:<sup>40</sup>

15. In Castro Marim (1699), a village or small town on the southeastern coast of the Algarve, these are the quintiles and the Gini coefficient:

Top Quintile.....	48.79%
Second Quintile.....	19.55%
Middle Quintile.....	15.27%
Fourth Quintile.....	11.65%
Bottom Quintile.....	4.73%
Gini Index:	0.425

16. For Cancela, another small fishing community in the same region, in the same year (1699):

Top Quintile.....	50.52%
Second Quintile.....	18.16%
Middle Quintile.....	14.65%
Fourth Quintile.....	11.58%
Bottom Quintile.....	5.10%
Gini Index:	0.430

17. And for the parish of S. Clemente, near Loulé, in 1738:

Top Quintile.....	48.41%
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<sup>40</sup> Joaquim Romero Magalhães, *O Algarve Económico, 1600-1773* (Lisbon, 1993), pp. 186-187. Magalhães does not make it clear if all tithe paying aggregates were included in the figures he gives; I have presumed that they were.

Second Quintile.....	22.54%
Middle Quintile.....	14.97%
Fourth Quintile.....	8.98%
Bottom Quintile.....	5.09%
Gini Index: 0.427	

It might be noted that the decline in income inequality shown by these three last soundings may at first glance seem problematic since two of them are fishing communities where inequality of incomes was very probably always less than it was in agrarian communities. Yet the fact that the third of these instances has the second lowest inequality of them all even though it is not a fishing village would tend to confirm the low numbers from the other two; without much doubt there had been a general decline in income inequality compared to the middle of the 16th century, even though these Algarvian examples may slightly overstate the case.

18. For my final example, coming near the end of the 18<sup>th</sup> century (1789), I turn to Lamego, a city located south of the Douro river in the province of Beira Alta. I have extracted the material here from a listing of the tithes [*décima*<sup>41</sup>] collected from the two parishes into which the city was divided at that date.<sup>42</sup> Here all the citizenry was tithed, including the clergy and it provides a particularly appropriate conclusion to my collection of "soundings."

Wealth holding per quintiles of the population in Lamego in 1789 were as follows:

Top quintile.....	64.60%
Second quintile.....	16.05%
Middle quintile.....	8.90%
Fourth quintile.....	6.74%
Bottom quintile.....	3.71%
[Top 10%.....]	48.78%]
Gini Index: 0.584	

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These eighteen distributions then taken together make up my database, so to speak; and the first question that I shall pose is whether or not their data support Cortesão's idea that the development of the overseas empire was the principal causative factor for increasing economic inequality in 16th century Portugal. There can be little doubt that Cortesão's fundamental intuition was correct. Wealth and income were distributed more unequally in the 16th century than in the late medieval period [1350-1500]. But was he correct about the cause of this? Was it the rise of empire, as he thought, that, by enriching the few to the detriment of the many, brought about this increase in inequality [or "imbalance" as he called it] in Portuguese society? Here, I think, there is good reason to question his explanation. For although the rise in income inequality indicated by our samples during roughly the century and a half between 1422 and 1564 appears at first glance to lend support to Cortesão's idea, how are we to explain the subsequent decline in inequality after about 1613 as well as the prior high

<sup>41</sup> On the *décima* see the "Regimento da forma por que se ha de fazer o Lançamento, e Cobrança das Decimas," in Joseph Roberto Monteiro de Campos Coelho e Sousa, *Systema ou Collecção[sic] dos Regimentos Reaes*, 6 vols. (Lisbon, 1775), III, pp. 487-538.

<sup>42</sup> This document is in my private collection.

index of 1309 and the ensuing decline in the later half of the 14<sup>th</sup> century? In these instances either the imperial phenomenon did not exist (1309) or else the observed tendency contradicts Cortesão's thesis [the 17<sup>th</sup> and early 18<sup>th</sup> century indices]. If the creation of empire was the root cause of the 16<sup>th</sup> century rise in inequality, then one must assume that this effect would have persisted as long as the empire was in existence. But the opposite seems to have been the case. Instead of remaining high or increasing, income inequality after 1613 appears to have declined to a marked degree. Empire may have increased the wealth of the wealthiest inhabitants of the capital, Lisbon, and thus for instance pushed its Gini coefficient in the mid-16<sup>th</sup> century above that of Coimbra at the same time, but it cannot explain the subsequent decline of the Index either in the capital or in the provinces.

Thus, if it is far from certain that the creation of empire was behind these observed changes in income distribution over the five centuries in our sample, what other causative factor might be at work here? What must be sought, clearly, is a general operative factor that would not merely explain the rise of inequality during the early 16<sup>th</sup> century but also the diminution of inequality from the mid-14<sup>th</sup> to the end of the 15<sup>th</sup> as well as during the 17<sup>th</sup> century and then its later rise after the middle of the 18<sup>th</sup>.

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The factor that I believe offers a much better explanation, one in fact that can account for all of these observed fluctuations over the 480 years from 1309 to 1789, is to be found not in the political realm, attributing it, as did Cortesão, to the rise of empire, but rather in the socio-demographic, in what the French historian, Le Roy Ladurie, has termed the "eco-demography of a bygone world." That is to say, the primary key to understanding the data here presented is to be found in the secular changes in the pressure exerted by a population upon the resources available to it in an agrarian society, or, put more succinctly, in what Wilhelm Abel has summarized as the "man/land ratio."<sup>43</sup> For, indeed, the observed variations in the Gini ratio across the range of our samples coincide with and tracks very well the fluctuations [as far as we can know them at present<sup>44</sup>] of the Portugal's population and thus of the general pressure of its people on the land's resources.

From a medieval peak of around a million or so persons in the early 14<sup>th</sup> century, achieved after three centuries or more of growth, total numbers in Portugal appear to have stagnated at first and then dropped precipitously as the result of the Black Death of 1348-1350.<sup>45</sup> Best estimates are that Portugal, as a whole, lost somewhere between one-third and one-half of its population due to the Black Death<sup>46</sup>. This demographic

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<sup>43</sup> See his Crises agraires en Europe, XIII<sup>e</sup>-XX<sup>e</sup> (Paris, 1973), passim; also David Herlihy, "The Economy of Traditional Europe," Journal of Economic History, XXXI(1971), pp. 163-164.

<sup>44</sup> An up-to-date synthesis of Portuguese demographic history, long term, is presently wanting and much needed. In the meanwhile one will make do with the relevant chapters in general histories such as Joel Serrão e A. H. de Oliveira Marques, eds., Nova História de Portugal (Lisbon, 1987-); and José Mattoso, ed., História de Portugal (Lisbon, 1991-), etc.

<sup>45</sup> It may be of interest in this context to note here that the number of property holders in Póvoa d'El Rei, the village used for my second sounding, fell from 32 before the mid-14<sup>th</sup> century demographic catastrophe to 9 in 1395, or a drop of almost 72% in 50 years: op cit., p.933. It should be remembered, however, that not all the decrease can be attributed to the plague. Some of the decrease was certainly due to abandonment of the tenures and likely emigration to urban communities.

<sup>46</sup> A really comprehensive study of the Black Death in Portugal remains to be done. But, meanwhile, see Virginia Rau, et.al., Para o Estudo da Peste Negra em Portugal (Braga, 1963).

decline persisted, and in places may even have increased, well into the next century.<sup>47</sup> Then, however, about the middle of the 15<sup>th</sup> century---a bit sooner here, a bit later there--but certainly almost everywhere by 1470, numbers began to rise, slowly at first, and then with greater rapidity. By the time the first general census of the country was taken in 1529-31 the nation's population had more than regained the losses of the previous century and a half and can be estimated quite confidently at about a million and a third or approximately 16 persons per square kilometer. Thus by the third decade of the 16<sup>th</sup> century the previous peak of the early 14<sup>th</sup> century was not only reached but surpassed<sup>48</sup>. The nation's population continued to rise as the 16<sup>th</sup> century wore on, and by the middle of the century it stood at its highest level ever. But soon afterward another decline set in, beginning around the end of the century and extending throughout the 17<sup>th</sup> century.<sup>49</sup> This decline has not been very well measured, but it would seem to have been significant.<sup>50</sup> Having declined during the first part of the 17<sup>th</sup> century, the nation's population did not really begin to recover until about the middle of the 18<sup>th</sup> when a new period of growth began that has, with temporary setbacks and reversals, lasted to the present day.

To give some numbers to these generalizations let us look at the figures given by V. M. Godinho,<sup>51</sup> A. H. de Oliveira Marques and João José Alves Dias,<sup>52</sup> as well as some presented by Joaquim. V. Serrão in his multi-volume history of Portugal.<sup>53</sup>

Godinho's estimates for the total population of Portugal are these:

1415: 1,000,000-1,100,000

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<sup>47</sup> The suggestion of Padre Avelino Jesus da Costa that the population "do território abrangido pelos censuais de Braga e Guimarães" remained almost the same from the mid-11<sup>th</sup> to the mid-13<sup>th</sup> century and that the population of the Minho [and possibly all of Portugal] was stationary between the mid-13<sup>th</sup> century and 1530 seems quite incredible in view of what we know generally about the population of Europe during this period. If this were the case, Portugal would be a bizarre exception to the trends present almost everywhere else, something that I find difficult to believe. See Henrique David, "A População Portuguesa na Idade Média, Uma revisão bibliográfica," População e Sociedade, I (1995), p. 87.

<sup>48</sup> Indeed, the last years of the 15<sup>th</sup> century and the first half of the next were periods of almost explosive population growth in Portugal. For instance, the population of the province of Beira grew by about 1.99% per year between 1406 and 1527; the town of Loulé grew by 2.21% per year from 1505-1565; while the ecclesiastical center of Braga racked up growth per year of 2.03% between 1477 and 1506 and 2.97% in the years from 1506-1514. Lisbon, the capital, grew some 1.81% per annum between 1527 and 1551.

<sup>49</sup> On the population increase of the 16<sup>th</sup> century and the "relative stagnation" of the 17<sup>th</sup> see now the synthesis of Teresa Ferreira Rodrigues, "As estruturas populacionais," in José Mattoso, História de Portugal, vol. III (Lisbon, 1993), p. 212: "Porém, também em Portugal o primeiro quartel do século XVII inicia uma fase de relativa estagnação, que se evidencia independentemente das formas de distribuição regional."

<sup>50</sup> Another "small" plague spread throughout certain regions of Portugal in the years 1599-1601.

<sup>51</sup> See his article "Sociedade Portuguesa," in the DHP (Porto, s.d.).

<sup>52</sup> A. H. de Oliveira Marques & João José Alves Dias, "A População Portuguesa nos Seculos XV e XVI," sep. El Tratado de Tordesillas y su Época; Congreso Internacional de Historia (Tordesillas, 1993), pp. 245-263. Also the essay by J. J. Alves Dias, "A População," op. cit., which because of its greater accuracy is to be preferred to that of Teresa Ferreira Rodrigues, "As estruturas populacionais," in História de Portugal, dir. de José Mattoso, vol. III (Lisbon, 1993), pp. 197-241.

<sup>53</sup> Joaquim Veríssimo Serrão, História de Portugal, vols. 1-12 (Lisbon, 1977-1990), passim.

1527/31: 1,400,000  
1640: 1,900,000  
1700: 2,100,000  
1800: 3,000,000;

Oliveira Marques and Alves Dias offer the following:

ca.1347: 1,500,000 maximum  
1448: <1,000,000  
ca.1530: 1,300,000  
1650: 2,000,000  
1732: 2,000,000  
1758: 2,500,000  
1798: 3,000,000;

while Serrão suggests these numbers:

1417: <1,000,000  
1580: 1,200,000 [continent alone]  
1668: 1,500,000 maximum  
1720: 2,500,000 (?)

However risky it might be, let us attempt to synthesize these estimates for the dates that interest us as follows:

Ca. 1309: 1,500,000  
Ca. 1347: <1,500,000  
Ca. 1369: 1,000,000  
Ca. 1422: <1,000,000  
Ca. 1466: <1,000,000  
Ca. 1505: 1,250,000  
Ca. 1565: 1,500,000  
Ca. 1613: 2,000,000  
Ca. 1700: <2,000,000  
Ca. 1758: 2,500,000  
Ca. 1798: 3,000,000

Thus, in very broad strokes, one might schematically outline the major cycles of Portuguese population history as follows:

- I. The Medieval Cycle
  - a) phase "A" of rising numbers: ca.1000-1348 [with a period of stagnation or slight decline from ca. 1320-1348]
  - b) phase "B" of declining numbers: 1349-1450/70
  
- II. The Early Modern Cycle
  - a) phase "A" of renewal and rise: ca.1450/1470 - ca.1600(?)<sup>54</sup>

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<sup>54</sup> One is tempted to date the beginning of the 17<sup>th</sup> century stagnation/decline from the widespread plague at the end of the 16<sup>th</sup> century.

- b) phase “B” of stagnation or decline: ca.1600-  
ca.1750

### III. The Modern Cycle

- a) phase “A” of renewed rise: ca. 1750-present

What is important to underline here is that these long-term phases are consonant with and appear to track quite closely the fluctuations in the Gini ratio for the various communities at the dates when I have examined them. Thus the first sounding from Torres Vedras in 1309 and that from pre-plague Póvoa d’ElRei may be taken to represent phase Ia [medieval peak] of population growth while the subsequent phase Ib of decline is reflected in the soundings of 1369 from Arruda dos Vinhos and those of 1422 from Verride and 1466 from Loulé. The early modern rise [phase IIa] appears to be reflected in the soundings of 1505 and 1564 (both in Loulé in the Algarve and in Lisbon), as well as those from Coimbra in 1567 and the Azores in 1566; while the following phase of stabilization and then decline [IIb] is revealed by the soundings of 1613, 1699 [twice] and 1738 as well as in the Azorean data from 1669, 1673 and 1707. Finally, the post-1750 revival of population growth is represented by the distribution example based on the Lamego data of 1789.<sup>55</sup> While income inequality seems throughout to be closely correlated with population pressure it would appear that the greatest inequality occurs during periods of extremely rapid population growth. This would explain the very high levels reached by mid-16<sup>th</sup> century. For example the population of Lisbon grew at a rate of 1.81% per year between 1527 and 1551 while Loulé [town only] grew even faster [2.21% per year between 1505 and 1564]; while Coimbra, somewhat of an anomaly, appears to have grown fastest during the second half of the 16<sup>th</sup> century, which would explain the greater inequality there in 1613 than in 1567.<sup>56</sup> Diminishing inequality likewise would appear to result either from actual population decline or from mere population stability, as during most of the 17<sup>th</sup> century. A few specific examples may bring some of these changes into better focus.

1. For instance, the changes that took place in income distribution between the period of peak population in the early thirteenth century and the period after the mid-14th century demographic catastrophe can be clearly seen when one compares Torres Vedras in 1309 with Verride some 113 years later:

<b>Torres Vedras in 1309</b>	<b>1.61</b>	<b>4.95</b>	<b>9.92</b>	<b>18.95</b>	<b>64.57</b>	<b>0.615</b>
<b>Verride in 1422</b>	<b>2.00</b>	<b>4.97</b>	<b>13.90</b>	<b>28.98</b>	<b>50.15</b>	<b>0.482</b>
<b>change</b>	<b>0.39</b>	<b>0.02</b>	<b>3.98</b>	<b>10.03</b>	<b>-14.42</b>	<b>-0.133</b>
<b>percent change</b>	<b>24%</b>	<b>0%</b>	<b>40%</b>	<b>53%</b>	<b>-22%</b>	<b>-22%</b>

Three of the lower quintiles gain from 24% to 53%, with the greatest gains being in the middle and especially the upper middle classes, while the top 20% declines by over 14 percentage points or about 22%.

<sup>55</sup> The fact that the Gini ratios for the 16th century are probably minimums [due to the exclusion of the privileged groups from the list] and that the actual Gini would be higher merely reinforces my argument here: that inequality in Portugal in the 16th century was much greater than at any time since 1350 and much greater than during most of the 17th century.

<sup>56</sup> See Teresa F. Rodrigues, *Op.cit.*, p.212.

2. On the other hand, the changes that occurred in wealth distribution in Portugal between the immediate post-plague period of the 14th century and the early 16th century when population was growing at a rapid pace come into clearer focus if one compares Arruda dos Vinhos in 1369 with Loule in 1505. Here three of the lower quintiles lose ground [the middle group is a surprising exception here since it gains over 2 percent] to the benefit of the top fifth which makes striking gains.

<b>Arruda dos Vinhos in 1369</b>	<b>4.55</b>	<b>7.68</b>	<b>8.31</b>	<b>28.55</b>	<b>50.92</b>	<b>0.426</b>
<b>Loule, town and district in 1505</b>	<b>2.68</b>	<b>5.49</b>	<b>10.78</b>	<b>18.47</b>	<b>62.58</b>	<b>0.584</b>
<b>change</b>	<b>-1.87</b>	<b>-2.19</b>	<b>2.47</b>	<b>-10.08</b>	<b>11.66</b>	<b>0.158</b>
<b>percent change</b>	<b>-41%</b>	<b>-29%</b>	<b>30%</b>	<b>-35%</b>	<b>23%</b>	

3. Additionally, if one goes on to compare Arruda again with Loule but now at a later point, likely near the peak of 16th century population growth, the change is even more remarkable. Here all of the lower fifths lose share, with the greatest losses on a

<b>Arruda dos Vinhos in 1369</b>	<b>4.55</b>	<b>7.68</b>	<b>8.31</b>	<b>28.55</b>	<b>50.92</b>	<b>0.426</b>
<b>Loule, town and district in 1564</b>	<b>0.51</b>	<b>1.67</b>	<b>6.81</b>	<b>16.46</b>	<b>74.56</b>	<b>0.728</b>
<b>change</b>	<b>-4.04</b>	<b>-6.01</b>	<b>-1.50</b>	<b>-12.09</b>	<b>23.64</b>	<b>0.302</b>
<b>percent change</b>	<b>-89%</b>	<b>-78%</b>	<b>-18%</b>	<b>-42%</b>	<b>46%</b>	

percentage basis taking place in the lower and lower middle classes, while the upper class gains by over 23 percentage points.

4. One may also compare the change in distributions for the same town (Loulé) in the years between the beginning of the century (1505) and its 3rd quarter (1565).

<b>Loule, town and district in 1505</b>	<b>2.68</b>	<b>5.49</b>	<b>10.78</b>	<b>18.47</b>	<b>62.58</b>	<b>0.584</b>
<b>Loule, town and district in 1564</b>	<b>0.51</b>	<b>1.67</b>	<b>6.81</b>	<b>16.46</b>	<b>74.56</b>	<b>0.728</b>
<b>change</b>	<b>-2.17</b>	<b>-3.82</b>	<b>-3.97</b>	<b>-2.01</b>	<b>11.98</b>	<b>0.144</b>
<b>percent change</b>	<b>-81%</b>	<b>-70%</b>	<b>-37%</b>	<b>-11%</b>	<b>19%</b>	

Here again all four of the lower quintiles lose to the benefit of the top 20% which rises by almost 12 percentage points. This is a particularly clear demonstration of the effect on wealth inequalities that came with the strong upward thrust of population during the first two-thirds of the 16th century.

5. Finally, to compare the level of inequality in the mid-16th century close to the peak of the demographic boom with the level at the turn of the 17th century when population growth in Portugal had either been stagnate or declining for some time, we have the Azorean community of Vila Franca do Campo in 1566 and Cancela in the Algarve in 1699. Here the reverse situation takes place in which the lower four fifths of the spectrum gain share while the top loses by a significant amount.

<b>Vila Franca do Campo, Azores</b>	<b>0.13</b>	<b>1.81</b>	<b>4.17</b>	<b>10.98</b>	<b>82.90</b>	<b>0.790</b>
<b>Cancela [Algarve] in 1699</b>	<b>5.10</b>	<b>11.58</b>	<b>14.65</b>	<b>18.16</b>	<b>50.52</b>	<b>0.430</b>
<b>change</b>	<b>4.97</b>	<b>9.77</b>	<b>10.48</b>	<b>7.18</b>	<b>-32.38</b>	<b>-0.360</b>
<b>percent change</b>	<b>3823%</b>	<b>540%</b>	<b>251%</b>	<b>65%</b>	<b>-39%</b>	

It would surely be illuminating to further study the Portuguese data in light of similar information from other European countries. Unfortunately at present I have neither the time nor the resources available to me to undertake such an extensive task. I will, however, briefly mention two examples that may be of comparative interest, one from England, the other from France.

Let us take the English example first. Looking at the area of west Berkshire one finds an even more pronounced rise in the Gini index from a very low level in the period after the Black Death to a very high level as early as the first quarter of the 16th century. Here are the figures:<sup>57</sup>

<u>Place</u>	<u>Gini Index</u>	
	Year: <u>1381</u>	<u>1522</u>
Vale of White Horse	0.162	0.666
Bershire Downs	0.296	0.714
Kennet Valley	0.244	0.721
Mixed Parishes	0.191	0.616

Next, the French evidence. This comes from a study done quite some time ago by Le Roy Ladurie, the eminent historian of the rural economy of Languedoc, for the period from the mid-15th century to the mid-18th. There he presents data he took from the regional compoix which detail the size and worth of rural properties. He uses these to indicate the trends and changes in wealth distribution. His choice was to present these trends simply in the form of pluses and minuses, but the data he furnishes offers an excellent opportunity to analyze the wealth changes in accordance with the techniques I employ on the Portuguese data.<sup>58</sup> Translated into quintiles ranging from the lowest to the highest, and then adding the Gini coefficient for the distribution as well as the percentage of wealth going to the top 10%, and finally concluding with the multiple by which the wealth of the top quintiles exceeds that of the lowest, we find the following:

Place	date	lowest quintile	lower middle quintile	middle quintile	upper middle quintile	upper quintile	top 10%	Gini Index	Upper X Lower
Saint-Thibery	1460	4.08	4.42	7.33	24.51	59.65	41.73	0.586	14.62
Montagnac	1520	0.00	5.38	12.47	22.44	59.71	41.01	0.614	n/a
Montagnac	1660	0.00	0.00	13.35	17.60	69.05	57.57	0.675	n/a
Saint-Andre de Sagonis	1665	0.85	3.68	6.22	25.54	63.71	40.96	0.623	74.95
Saint-Andre de Sagonis	1690	1.00	4.39	6.06	23.46	65.09	34.54	0.632	65.09
Saint-Thibery	1690	0.48	4.38	6.28	12.48	76.39	65.23	0.699	159.15
Saint-Andre de Sagonis	1749	3.36	5.61	6.27	24.71	60.04	42.76	0.615	17.87

<sup>57</sup> taken from: Margaret Yates, "Change and continuities in rural society from the middle ages to the sixteenth century: the contribution of west Berkshire" *Economic History Review*, LII:4 (1999), p. 624.

<sup>58</sup> Emmanuel Le Roy Ladurie, *Os Camponeses do Languedoc*, Portuguese trans. by Manuel Ruas (Lisbon, 1997; originally French ed. 23.46), pp. 345-49.

It might be thought that this evidence contradicts the Portuguese, in that in Languedoc inequality [of wealth] appears to rise throughout the 17th century with the four 17th century Gini's higher than those of the 15th, 16th or 18th centuries. But in fact, upon closer inspection, this apparent exception, I think, proves my hypothesis. Unlike Portugal where population was either declining or stagnant throughout most of the 17th century, in Languedoc the population continued to increase peaking, according to Le Roy Ladurie, in the period from 1650-1700, with at least one community reaching its maximum in the 1720s.<sup>59</sup> Thus here again, in Languedoc as in Portugal, it is increasing population that brings about increasing inequality: exactly the situation revealed by the Portuguese data.

These data on fluctuations in the distribution of wealth and income can also be used to re-analyze from a new perspective some long consecrated interpretations of Portuguese social history during the period under study. In this regard and merely as examples, I will refer briefly to two much-accepted explanations for some of the social movements in the 17<sup>th</sup> century.

The first of these is the Sebastianist movement as interpreted by Joel Serrão. In 1969 this distinguished historian published a brief study of much interest entitled "Do Sebastianismo ao Socialismo em Portugal" which included a chapter entitled "O Sebastianismo na estrutura do antigo regime Português." There Serrão argued that Sebastianism was in essence a reflection of the "desespero de viver" that prevailed among the rural poor after 1588 due to the polarization of society between [here he is quoting Braudel] "...a rich nobility vigorously reconstituted in powerful and combative families sustained by enormous landed properties and a mass of poor people constantly more numerous and miserable, lizards or besouros, human insects, unhappily so very abundant." This idea of the "rich getting richer" and the "poor getting poorer" is ideologically fetching and the language provocative, but is it true for Portugal? The data presented here suggest that possibly it is not. Beginning most likely in the last part of the 16<sup>th</sup> century and continuing on through the 17<sup>th</sup> and for some time into the 18<sup>th</sup>, what appears to be happening is not an increase in wealth and income inequality among the Portuguese population but rather a lessening of such. Indeed it seems quite possible that inequality peaked before 1578, not afterward. And thus the idea that Sebastianism was the result of an increasing "polarization" of social classes is, I think, open to question. More research would be needed to settle the matter definitely, but the distribution data I have gathered together here casts some doubt, I think, upon this now classic hypothesis of Professor Serrão.

A second and related idea/hypothesis is that of A. A. Marques Almeida who attributes the numerous popular uprisings in Portugal during the 17<sup>th</sup> century [more precisely 1585-1673] to "...o aumento crescente da pauperização de largas camadas da sociedade portuguesa...."<sup>60</sup> But the evidence presented here again appears to contradict the idea of increasing "pauperization" and Almeida's article itself is intellectually inconsistent in the matter. It makes clear that many of the uprisings began as revolts against taxes upon wealth. Paupers, by definition, do not have any wealth on which to pay taxes. If many, indeed most, of the revolts were in reaction to taxes it might well be that they in fact reflect increasing upward mobility, in short growing middle class wealth rather than any "pauperization." In any case, the matter is far from clear and a study of

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<sup>59</sup> *Ibid.*, p. 349.

<sup>60</sup> A. A. Marques de Almeida, "Levantamentos Populares em Portugal no Século XVII," *História e Sociedade*, 23 [1979], pp. 24-36.

the revolts from a fresh perspective would be welcome. It should go beyond commonplaces about "pauperization" and pay attention to the actual facts re the levels of income and wealth and their distribution among the various strata of the population.

Although, as an historical study, this essay ends in 1789, it may be of some interest to compare these data with those from contemporary Portugal [1991]. In none of the seventeen "historic" cases does the bottom fifth of the population enjoy as much income or wealth as in present-day Portugal. Only at the very end of the 17<sup>th</sup> and early in the 18<sup>th</sup> century does it even come close. The present-day position of next fifth is also not surpassed in any of my examples although Arruda in 1369, after the Plague, and the two Algarvian villages in 1699 come quite close. The present-day share of the middle fifth, however, is actually surpassed by that of this quintile in 1369 and both the situation in Póvoa d'El Rei just before the plague as well as that of Verride in 1422 and the Algarvian villages in 1699 come very close. The share going to today's penultimate fifth is exceeded by Póvoa d'El Rei in 1348 as well as in Arruda in 1369 and Verride in 1422; and the parish of São Clemente in 1738 comes very close. On the other hand, the top fifth in present day Portugal takes a smaller share of total income or wealth than any of the historical examples with the exception of Arruda in 1369. At times, especially in the early years of the 14<sup>th</sup> century as well as during the mid-16<sup>th</sup> century the top fifth's share is strikingly larger than it is today. And while the Marxist vision of complete equality has not and probably never will be achieved, contemporary Portugal most assuredly has a more "equitable" distribution of income than it did at any time in the past of which we presently have knowledge.

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Now in conclusion, let it be clearly understood that what I am offering in this article is merely an hypothesis: i.e., that the distribution of wealth and income in Portugal constitutes simply a Lusitanian example, if you will, of what Emmanuel Le Roy Ladurie has termed "the traditional eco-demography of a bygone world as it functioned...between the 14th and the 18th century."<sup>61</sup> Considering the piecemeal nature of my data as well as its geographical dispersion it would be the height of temerity to claim that these "soundings" prove beyond any doubt that income distribution in Portugal during the 480 years covered by my study necessarily fluctuated in lock step with population pressure: i.e. that when population pressed hardest against economic resources income equality was highest, and that when the contrary was the case, income equality was at its lowest. Further, it is likely that population pressures against resources varied somewhat from area to area during this period of almost five centuries and that the income distributions would vary accordingly.<sup>62</sup> All prudent disclaimers aside, however, these samples from varied sites around Portugal over the 480 years from 1309 to 1789 argue strongly, I think, for the thesis that income equality [or lack of it] not only exhibits a significant correlation with the intensity of population pressure upon resources and but that it was also very likely a result of it.<sup>63</sup>

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<sup>61</sup> Emmanuel Le Roy Ladurie, Le territoire de l'historien, II, (n.p., 1978), pp. 7.

<sup>62</sup> Nonetheless it is striking that the wealth distributions of Loulé and of Lisbon based on the same levy in the mid-1560's are so similar and that both of these are very similar to that of Vila Franca do Campo in the Azores at the same time.

<sup>63</sup> The only other long-term study of changes in wealth and income distribution in a European country of which I am aware is that of Lee Soltow for England ["Long-Run Changes in British Income Inequality," Economic History Review, series 2, vol 21 (1968), pp. 17-29]. His approach, however, attempts to estimate

Nonetheless absolute certainty in this matter cannot yet be claimed on the basis of merely seventeen “soundings”. What one can hope for is that with the passage of time additional examples can be found, examples from more communities in more regions and at many more dates [the 17<sup>th</sup> century, especially the middle years, is inadequately represented in my sample], so that the total number of “soundings” [which is all that we have to go on] can be multiplied. Nonetheless, while admitting all its inherent limitations, my hypothesis still has the merit, I think, of agreeing sufficiently with the demographic evidence that it is now for the skeptics of the Malthusian thesis to formulate their explanations. What alternate hypothesis can they propose for these variations? What explanation do they offer for these striking changes in wealth and income distribution in Portugal over a span of nearly five centuries? Only a study both intensive and extensive by a team of experts [plus some lucky “strikes” in the archives] could prove or disprove my thesis beyond any doubt. But that is a task much beyond the severely limited academic resources presently at my disposal and I therefore shall have to leave its realization to others.

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the distributions for the nation as a whole, instead of employing “soundings” as I have done, and in addition [aside from a glance at data from 1436] he begins only in the late 17th century with the income estimates of Gregory King (1688). His general conclusion is that for the period from 1688 to the onset of industrialization there was little change in the distribution of wealth and income in England.