
ARTICLES

The Plague and the Pre-Malthus Malthusians

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After the great pandemic of 1347-51, epidemics of plague kept flaring up relentlessly in Europe, always killing large numbers of people and affecting all aspects of life, from the economy to the arts, from politics to religion and social organization.

Confronted with these recurrent catastrophies, people had to find an explanation for them. Traditionally, the religious theme prevailed: plague was sent upon the mortals «by the just anger of God for our enormous iniquities». With the seventeenth century, however, a more rational approach clearly began to emerge. A few years ago Professor Stillman Drake drew attention to a passage in Baliani's *Treatise on the Plague*. G. B. Baliani (1582-1666) was a friend and correspondent of Galileo; he published two books on the motion of the heavy bodies, and although he was not a physician, in 1647 he wrote a book on the plague. At the end of the first section of his treatise, dealing with the causes of the plague, Baliani concluded with a passage which — as Professor Drake points out — is «of considerable interest as an anticipation of the fundamental idea now universally associated with the name of Thomas Malthus».¹ For Baliani,

The order of nature requires that more people be born than die naturally. If that were not so, the human race which took its rise from one man alone, would be perpetually occupied by little more than one man, but that could not be, for the world is made for men and to be filled with them.

¹ S. DRAKE, *Seventeenth Century Malthusian*, in «Isis» 58 (1967), pp. 401-402.

However, «it is impossible to go on always filling it (the world) more and more without many persons dying of hunger» because of the relative scarcity of arable land. Consequently, in Baliani's views

Pestilence and war, which fill the world with horror, cannot be escaped without our ultimately running into famine, which is perhaps still worse than the others... thus where neither pestilence nor war supervene, it is impossible in the end to escape famine.²

Ideas of this kind were in the air. As early as 1580, Bartolomeo Paschetti, a physician who preferred the study of Petrarch to the practice of medicine, compared the views «of the theologians» who saw in the plague «a punishment sent by God» to the views of «the Naturalists who maintain that the plague is a device like floods and fire that Nature uses to rid the world of a superfluity of people».³ In 1661, G.B. Riccioli, the learned Jesuit who was given by his Order the difficult task of refuting the Copernican cosmological theories, wrote that,

unless there is an expansion of the amount of land from which people can derive their food, the population of a city is kept at approximately the same size by war, plague and famine; thus for instance for many years Bologna had a population of about 60 to 70 thousand and Florence of about 70 to 80 thousand.⁴

As I said above, ideas of this kind were in the air, but I do not know of any who dwelt on them as did a humble friar, Father Antero Maria di San Bonaventura.⁵ Father Antero had first-hand knowledge of what plague was. He lived through one of the worst epidemics that ever ravaged a town. He was the governor of one of the pest houses of Genoa during the epidemic of 1657 which killed

² The passages are derived from G. B. BALIANI, *Trattato della Pestilenza*, Savona 1647, pp. 80-82 (translated by DRAKE, *loc. cit.*).

³ B. PASCHETTI, *Lettera scritta al Sig. P. Loredano*, Genova 1580, p. 19.

⁴ G. B. RICCIOLI, *Geographiae et Hydrographiae Reformatae Libri Duodecim*, Bologna 1661, p. 681.

⁵ His real name was Filippo Micone. On this remarkable man see MANNO, *Bibliographia*, VI, 28830.

about 55,000 people out of a population of about 73,000.⁶ Father Antero himself caught the plague in the pest house and was one of the few who managed to survive it.

For a man who had lived through so many ordeals, so many horrors and had witnessed so much misery and suffering, it was quite natural to ask himself the reasons for so vast a tragedy. His answer was admirably clear:

... and then, what would become of the world, if God did not ever so often touch it with the plague? How would it feed so many people? God would have to create new Worlds destined alone to the provision of this one...

Genoa had grown so much that it no longer seemed a great city but an ant-hill. You could not walk there without jostling one against the other, nor was it possible to pray in Church because of the multitude of the poor who would goad and prod you, not wanting to let you be heard by God if you had not first listened to and satisfied them. And the noble rich people had multiplied so much that it was impossible for them to keep themselves in magnificence and splendour because eventually even Princes, nay, Kings themselves cannot be reputed great if there are many of them sharing in the same dominion...

Whence we must confess that the plague is an effect of Divine providence for the good ordering of the Universe. Wisely in truth Tertullian spoke when he called the plague *Tonsura orbis terrarum* since just as when a man has a beard of exceeding length or too thick hair, it is right to shave the former and cut the latter, thus it is the task of God's providence to shave the world's beard when it has much multiplied, which he is wont to do with the razor of the pestilence. And though God should wish every day to make the miracle he once made in the Desert, feeding five thousand people with the multiplication of five loaves and two fishes, yet there would not be enough room to hold them all and it would call for His broadening the face of the earth or at least allowing us the gift of being lithe and slender.

Just imagine the great City of Milan with the people who died there of the plague of San Carlo and those who died of the plague in our own day, not to speak of the plagues in older times, and conjure up at the same time the increase they would have made up

⁶ D. PRESOTTO, *Genova, 1656-1657*, in « Atti della Società Ligure di Storia Patria », N. S., vol. V (1965), pp. 335-336.

now, and you will see it as the most monstrous of cities in exactly the same way a man would be if he let his hair grow to the ground.

Or it would be necessary for 90 out of every 100 women to be barren (but how would Heaven be peopled?) or else the life of man ought to be like that of certain animals mentioned by Aristotle which have no more than one day of life, or else, if He did not want to decimate the cities with the plague, He would have to decimate them with war or with famine or at least, by making us insensible in our natures, He should make us at the same time companions to aerial Spirits to that we would be able no less to fly in the air than to walk upon the ground...

It belongs to Divine Providence to send the plague every so often not only to chastise sins but also for the good ordering of the Universe.⁷

So the «invisible hand» was still the hand of God, but now for an increasing number of people, God used the plague not (or not only) to punish mankind «for our enormous iniquities» but to keep a balance between population and scarce resources.

Physicians cannot have been strangers to such new ideas, but it is not surprising that they hardly discussed them in their written works. After all if God was busying himself keeping a workable balance between population and scarce resources, it was embarrassing for the physicians to admit that they tried, although unsuccessfully, to undo what He was so successfully doing. There was, however, one aspect of the whole question which interested the physicians, and it was the problem of differential mortality. Parisi, with his genius for incisive expressions, called this «*un grande intrico*» — «a big, intricate puzzle».⁸ All, more or less, agreed that during an epidemic of plague, the poor were relatively more affected than the wealthy. As a modern epidemiologist put it, «the plague has been always considered largely a disease of the poor and at one time it acquired the name of the beggars' disease, at another the poor's plague and at another *miseriae morbus*».⁹

⁷ ANTERO MARIA DI SAN BONAVENTURA, *Li Lazareti della Città e Riviere di Genova del 1657*, Genova 1658, pp. 268-271.

⁸ P. PARISI, *Avvertimento sopra la peste*, Palermo 1593, p. 57.

⁹ W. J. SIMPSON, *A Treatise on Plague*, Cambridge 1905, p. 191.

What puzzled the physicians, however, was the cause of differential mortality.

For Ingrassia there was no doubt. The plague « is more familiar to the poor » and if the poor were « more inclined to catch the infection » it was because of « the putrescible humidity and the vile humours due to a bad way of living ».¹⁰ Parisi was more cautious and he believed that « the big intricate puzzle was not resolvable until the matter had been further examined ». He did not share Ingrassia's opinion of the low resistance of the poor; in fact, he thought that the nobility had a way of living which was conducive to lower resistance. Yet, he had to admit that all available evidence pointed to higher mortality among the poor. This was the « puzzle » and he suggested the following explanation:

... when the disease is in the air, the nobility is injured more than the populace since it is more delicate and tender and less strong, and besides it is more sanguine and humid because of placidity, peacefulness and splendour of life. On the contrary, the populace being stronger, drier and toughened by adversity and hard living, has more resistance than the nobility.

It is true, however, that because of the misery and distress in which the poor always live, the catching disease, that is contagion, which passes very easily from one person to another, damages the populace more than the nobility for a large part of the latter, because of their riches, are better placed to avoid the disease.¹¹

In other words, the poor were more resistant than the wealthy, but the latter, having more commodious homes and generally also a home in the countryside could more easily avoid the infection. This was also the view of Father Antero. As he puts it:

Why in a City more of the poor than the rich die of plague? This proposition is not as certain as everybody believes. In Consolation [the pest house], doubtless more rich than poor have died [of plague] because of all those that can be counted rich as having their regular board and clothing, such as in particular Priests, Monks

¹⁰ G. F. INGRASSIA, *Informatione del Pestifero et Contagioso Morbo*, Palermo 1576, Part 1, pp. 2 and 82.

¹¹ P. PARISI, *Avvertimento*, cit., p. 57.

and Nuns and other civilized persons, no more than a tenth part survived, while in contrast, of soldiers, peasants and other people used to suffering about a quarter recovered.

In the City, I do not believe any reason can be found for the health of the rich other than their flight, since few among those of this class who fell sick are now here to tell their story.

It is true that not only in absolute sense but also in relation to their numbers, more poor die than rich. Of two thousand and more weavers in Genoa no more than 59 are still alive; of 400 spinners, 40 are left; and of a great multitude of beggars who would ask for alms at the door, I do not know whether 30 have survived and thus it is for all the others living in poverty.

To say that this happens because they are more exposed to dangers as they have no houses outside the city to retire to, is well said; to say that the poor are more prone because of their poor conditions to catch the plague, does not seem unreasonable to me; to add that all the armies of servants that thoughtlessly gather round the plague-sufferers are poor people and that therefore they are more likely to die of plague than the others, is undoubtedly true. But I believe that I would infallibly hit the mark if I spoke thus: more poor become infected for the above reasons, so much so that of the two thousand and four hundred, perhaps no one remained healthy; but more of the poor recover because of their nature, accustomed to discomfort and hardship, resists the contagion better than the nature of noble and delicate persons. This is the reason, in my opinion, why more soldiers recovered than did any other condition of person, though the former mostly fell sick early when few medicines were available for them. You might well show here that I have contradicted myself, reminding me of what I said of the convicts used as gravediggers, of whom very few recovered; to which I reply that it is one thing to poison a man with a pound of poison and another thing with an ounce. If the gravediggers fell ill, it was a miracle if they recovered, since they had not sipped the plague-bearing poison but had gulped it down in great draughts.

Thus we must conclude that the privilege of the rich consists in their being able to avoid the plague; the privilege of the poor consists in the fact that they can survive the plague when they catch it. If you do not believe me, count all the rich and the nobles in Genoa who caught the plague; if you find that more than 5 per cent of them recovered, I will admit that I am mistaken.¹²

¹² ANTERO, *Lazzaretti*, cit., pp. 293-295.

There was enough evidence around to prove the point.¹³ As to housing conditions, it was common knowledge that the poor lived in small, crowded and unhealthy quarters and that this was a major source of troubles. Writing about the epidemic of 1630 in Milan, Ambrogio Magenta reported that

The poor have not enough to eat and their living space is inadequate. There are houses which are called *stalli* (stables) in which a large family lives crowded in a very small space. This is a source of uncleanness and a cause of contagion.¹⁴

In Florence, Rondinelli noticed that those who died of plague were almost all poor people and he pointed out that

When a count was made of the people, it was found that 72 persons lived within an ancient ugly tower, and in Via dell'Acqua 94 persons lived in one house and 100 in another house in Via di S. Zanobi and if by misfortune one became infected with the plague, it would have been almost impossible not to infect all the rest.¹⁵

According to Dr. Fiocchetto, who was in charge of the Public Health Board of Turin when in January 1630, Franceschino Lupo, shoemaker, fell sick, the Board decided to quarantine him and to disinfect not only the room in which he lived, but also all the rooms of the building. The apprehension of the Board originated from the fact that sixty-five persons «all craftsmen» lived crowded «in that house».¹⁶ When physicians insisted that the poor be quarantined in the pest-houses while they were ready to allow the wealthy to be quarantined in their homes, they always pointed to the dangerously bad housing conditions of the lower orders.¹⁷

All this was generally agreed upon and, as we saw above, Father Antero accepted the general view. But he took one step further. For him the differential mortality between rich and poor during an

¹³ A. BRIGHETTI, *Bologna e la Peste del 1630*, Bologna 1968, p. 266.

¹⁴ C. M. CIPOLLA and D. ZANETTI, *Peste et Mortalité différentielle*, in «Annales de Demographie Historique», 1972, pp. 160-161.

¹⁵ F. RONDINELLI, *Relazione del contagio stato in Firenze l'anno 1630 e 1633*, Firenze 1634, p. 59.

¹⁶ G. F. FIOCHETTO, *Trattato della peste o sia contagio di Torino dell'anno 1630* (2nd ed.), Torino 1720, pp. 30 ff.

¹⁷ CIPOLLA and ZANETTI, *Peste et Mortalité différentielle*, p. 163.

epidemic was essentially an ingredient of the plan by which the Divine Providence was able to keep population and resources nicely balanced. This is the passage which entitles Father Antero to a prominent place among the pre-Malthus Malthusians:

I consider the greater mortality among the poor to be the effect of Divine Providence for the good ordering of the Universe, since the poor are wont to breed beyond measure. All of them marry and all are usually fecund, whereas among the rich, for political ends, only the firstborn son and hardly more than one daughter marry, though in Genoa this is not so scrupulously followed as in other cities of Europe.¹⁸

Thus, differential mortality was God's response to differential fertility. As men became more rationalistic, their Gods underwent by necessity a similar change: in God's interference with human affairs men saw less and less the wrath of an irate judge and more and more the rationality of a « wise » accountant.¹⁹

¹⁸ ANTERO, *Lazzaretti*, cit., p. 295.

¹⁹ The view expressed by Father Antero in 1658 that « it belongs to Divine Providence to send the plague every so often not only to chastise sins but also for the good ordering of the Universe » was echoed in 1713 by William Durham, Canon of Windsor, who stated that « those extraordinary expenses of mankind may be not only a just punishment of the sins of men, but also a wise means to keep the balance of mankind even ». (See J. BONAR, *Theories of Population from Raleigh to A. Young*, London, 1931, p. 141).

During the plague of 1630, a Milanese priest, Ambrogio Magenta, noticed that more women than men died. He did not indulge in the view that God was punishing the successors of Eve. Instead he reasoned that « the number of women had to be reduced because according to the last census they were 140,000 [in Milan] while the men were only 90,000 ». (Archivio di Stato Milano, *Sanità, Parte Antica*, b. 278). The figures offered by the good priest are highly dubious but his efforts to rationalize about the causes of the plague are interesting.