

VOLUME II

CHAPTER I

"POVERTY AND HEALTH" IN EGYPT

STUDIES DURING THE RULE OF MOHAMMED ALY

1805 - 1848

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THE HOLOCAUST DURING THE DIGGING OFMAHMOUDIAH CANAL

I shall begin my studies of the conditions in Egypt during the 19th Century by discussing the history of the excavation of Mahmoudiah Canal in 1819-20. I have chosen this incident to begin with as it illustrates the social and political conditions in Egypt and gives a representative specimen of the life that the Egyptians had at this time. Besides, it tells again the old story of how poverty and bad living conditions, lead to the sacrifice and loss of life.

The Mahmoudiah Canal extends from the harbour of "Alexandria" to "Atfh", near the town of "Fouah", on the Nile. The canal is forty-eight miles in length, and was, when completed ninety feet in breadth, and from fifteen to eighteen feet in depth. It was excavated to establish a safe communication between the port of Alexandria and the Nile, so that the cargo could pass safely and quickly to the port from the inside of the country.

(1)

The Egyptian contemporary historian El Jabarty, in his account of the events of the month of August 1819, tells the story of the excavation of this canal in the following way:

"And the Pasha journeyed to Alexandria on account of the Ashraffyyah (Mahmoudiah) Canal: and he ordered the governors of all the rural provinces to assemble peasants for this work: and this was carried out. The peasants were secured one to the other by ropes and were taken down by boats. They were prevented from sowing their maize, which was their staple food. That made them suffer terribly on their return home, in addition to what they had suffered during the work when many of them died of cold and fatigue. Those that fell down had earth thrown upon them even

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(1) Sheikh Abdel Rahman el Jabarty (1754-1822) was the author of an important history of Egypt, titled "Adjāib al-āthār fī-tarādjim wal-akhbār". (The wonders of the past in biography and history) This work mostly took the form of a monthly chronicle, in which the various events which he considered important had been simply related. His book was partly also a necrology. His work actually covers the 18th Century and part of the 19th, but the years in which he was contemporary diarist are from 1776 to just prior to his violent death in 1822, a period in which his standard of historical treatment is one of detached impartiality. That he was an eye-witness of much of what he wrote renders his work invaluable especially as his writing shows that he was completely independent in his judgment. However, there is little attempt to integrate his vignettes into a historical narrative. In his book, he gives vivid portrayals of the suffering of the people and the tyranny of the rulers in the terms of day to day incidents. He was murdered in June 1822 and the responsibility for this murder has always been charged to Mohammed Aly who was secretly told about El Jabarty's work and his attitude in it. This work was naturally never published during the reign of Mohammed Aly and its printing was long prohibited in Egypt. It only reached publication in 1879-1880. An earlier edition was seized and burnt.

while they might yet be alive. When the survivors returned to their homesteads, the tax was required of them, and it was increased ..... in addition to the usual tax, each acre was obliged to furnish a camel-load of straw, a "Kelah" of wheat and a "Kelah" of "ful" and the grains taken were priced low and overmeasured. Scarcely had they done this than they were required to return to their labour on the canal, and the scooping out of the ceaselessly infiltrating water which was very salt. And while in the first period, the weather had been bitterly cold, it was now extremely hot and there was a scarcity of potable water which had to be conveyed by them on camel-backs from a great distance, and what was worse the water supply of Alexandria was delayed". (1)

In the events of January 1820, El Jabarty tells that the digging of the canal was completed and concludes "the peasants returned to their homesteads after most of them had perished". (2)

(3)

Dr. W.H. Yates, who had visited Egypt during the reign

(1) El-Jabarty, A.R., *Adjāib al-āthār fi-tarādjim wal-akhbār*, Cairo (Written up till 1822, published 1880), Vol. IV, p.304.

(2) El-Jabarty, A.R., *Op Cit*, Vol. IV, p.304.

(3) Yates, William Holt, Graduate of the Universities of Cambridge and Edinburgh. Graduated M.D., Edinburgh, 1825. He thus most probably had been one of the students of Alison. His paper "On the Causes of Epidemic Fever in the Metropolis, More Especially As Regards the Conditions of the Labouring Classes" London, 1838, shows the trend of the Scottish School in connecting poverty and disease. (see pp.21 & 25 of this paper) His book about Egypt also shows this line of thought. [The London Medical Directory, 1846.]

of Mohammed Aly gives an account of the excavation of Mahmoudiah Canal and comments in length on it. He says:

"If the Pascha had reason to glory at its completion, thousands had reason to lament that the work was ever undertaken. ... It was done at the instigation of Mr. Samuel Briggs, a merchant of Alexandria .... but when Mr. Briggs recommended a scheme so obviously useful, he never for a moment contemplated that its adoption would be attended with such disastrous consequence, nor could he suppose that Mohammed Ali would set about it in such an inconsistent and barbarous manner. But this, which is spoken of as one of the Pascha's "grand doings" serves to illustrate the character of the man. .... that in order to gratify his wishes, he compels the people to work without pay. His Herod-like conduct, on this occasion, corresponded with his other desperate acts. .... He knows that he is hated as well as feared, and imagined that there is but one course for him to pursue:- since 'Crowns got by blood must be by blood maintained! When, therefore he has any project in view, it is not a trifle that will thwart him in its execution. Justice and mercy are unknown to him: of course, he cares nothing about his people's love. 'That the labourer is worthy of his hire', is no concern of his; so that the Egyptians have indeed 'a hard master'". (1)

He proceeds further to say "Now if these individuals had been properly paid, and properly fed, and allowed sufficient time to complete the work, so far from there being any injustice in the

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(1) Yates, W.H. The Modern History and Condition of Egypt, London 1843, Vol. I, p.112.

act, the poor would have reason to rejoice;- but no sooner had the Pascha made up his mind to open the canal, than he resolved that it should be done at once. .... however, the Pascha being left to himself, he spoke the word, and the decree went forth throughout the land. The canal was completed at the time appointed;- but all the waters that have since flowed through it are insufficient to wash away the stain which this ferocious deed has left upon the Pascha's character. As, in the time of Pharaoh, the Israelites were compelled like slaves to furnish of themselves the straw to make the bricks, and were goaded in their work, broken-hearted and feeble, - so in the time of Mohammed Ali, were the wretched ill-fated Arabs compelled to labour, dejected and faint, under the iron rod of their oppressor, whose minions stood by and saw his will enforced. Leaving their families at home to starve, they were driven down hither without regard to circumstances, and actually obliged to scratch up the loosened soil with their hands, and convey it away in baskets. They were not allowed sufficient repose to repair their wasted strength: the pay alluded to, was fifteen parahs (about three halfpence) and a piece of black bread consisting of bean flour and mouldy wheat, per diem - which was barely sufficient to support life at any other time, much less when condemned to labour under circumstances like these; and 30,000 of them died! ....."

"Still with the knowledge of such facts, their labours were continued without intermission, although many were known to be in a state of exhaustion: and at last, as no suitable provision, either of food or anything else, was made for the sick and feeble



- hundreds died and were buried every day. Nevertheless, when the murderous work was completed, the canal, we are told, was opened with great pomp and rejoicings".<sup>(1)</sup>

The details of the tragic manner in which the Mahmoudiah canal was dug was described by many other writers. One of these was "Le Duc D'Harcourt" who told the story in his book "L'Egypte et les Egyptiens". He wrote:

"Mehemet Ali, souverain énergique jusqu'à la brutalité, et comme les turcs, inaccessible à la pitié commandant en maître absolu à des populations sans résistance, devait fatalement abuser de sa force, et l'abus fût, en effect, monstrieux. Mille traits rapportés par les voyageurs de cette époque le prouvent surabondamment mais ce fût surtout l'emploi généralisé de la corvée ou requisition qui provoque de véritable horreurs. Tous les grands travaux qui signalerent son règne furent faits à l'aide de ce moyen, au prix de quelles souffrances. Le canal Mahmoudiah, reliant Alexandrie au Nil, fût creusé en dix huit mois, trois cent treize mille fellahs (313,000), hommes, femmes, enfants, vieillards furent amenés, souvent liés les uns aux autres, de toutes les provinces d'Egypte, et jetés sur l'emplacement des travaux. Là, sans aucun salaire, on les contraignit à gratter la terre de leurs mains; le canal fut entièrement creusé de la sorte, sans outils quelconques, les femmes et les enfants transportaient la terre et la vase au moyen de paniers ou "couffes" jusque sur les bords du canal.

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(1) Yates, W.H., The Modern History and Condition of Egypt, London 1843, Vol. I, p.112.

Les mauvais traitements, les maladies et toutes les misères furent naturellement les plus affreux ravages parmi cette multitude de malheureux, mais la sévérité pour les maintenir au travail fût impitoyable, et trente mille cadavres furent enfouis sous les berges que parcourent aujourd'hui indifférentes, les petits (1) fils des victimes".

The same story was told by Felix Mengin in his book "Histoire De L'Egypte sous le Gouvernement de Mohammed Ali". He wrote: "Dés le pincipe, on eût pu éviter ces difficultés si l'ingénieur turc chargé de l'exécution n'eût fait commencer l'entreprise sans avoir au préalable suivi les règles de l'art. On ne s'occupa d'aucun travail préparatoire; une partie de fellahs de la Basse Egypte fut dirigée sur ce point sans que l'on eut réuni les instruments nécessaires à une telle opération, et formé des magasins de vivres pour assurer leur subsistance. Un grand nombre de ces malheureux périt autant par le manque d'eau, et de nourriture, que par les mauvais traitements, et les grandes fatigues auxquelles ils n'étaient point habitués. Les soldats chargés de les surveiller ne leur donnaient point de relâche; ils les faisaient travailler depuis l'aube du jour jusqu'à la nuit close. Ces fellahs étaient obligés de creuser la terre avec leurs mains, et de rester dans l'eau, qui filtrait de tous côtés. Il en périt environ douze mille dans l'espace de dix (2) mois les berges recouvrent leurs ossemens".

(1) Harcourt, Francois-Charles-Marie, duc d', L'Egypte et Les Egyptiens, par le duc d'Harcourt, Paris, 1893, p.10.

(2) Mengin, F., Histoire de l'Egypte sous le Gouvernement de Mohammed Aly, Paris, 1823, Vol.II, p.333.

I shall quote also other sources in order to be able to compare a number of statements made about the history of the excavation of this canal to ascertain their truth. One of these is J.A. St. John who wrote in his book about Egypt: . . . "Having appointed Ismail Pasha director of the works, with two Beys, and four Kiasheffs, under his orders, the Viceroy returned to Cairo. The sheikhs of the provinces of Gharbieh, Sharkieh, Mensourah, Kelyoubieh, Ghizeh, Menouf and Bahyreh, were commanded to furnish each a given number of fellahs, amounting in all to three hundred and thirteen thousand, including women and children. This promiscuous multitude, collected in haste, were marched towards the ground, where they encamped, under the command of the sheikhs, along the intended line of canal. The government, however, intent on carrying its designs into execution, but indifferent respecting the injury and misery inflicted thereby upon the people, had neglected to provide implements or store of provisions for the workmen: nevertheless, they were compelled to labour incessantly, from the break of day until night, soldiers being stationed along the line of works, who allowed of no pause or relaxation. The men, destitute of the necessary tools, scratched up with their hands the soft mud, which was removed by women and children in baskets, and placed in heaps on the right and left. Having, in many places to excavate considerably below the level of the sea, and no pumps being provided to keep the ground dry, they were compelled to work knee-deep in water; and thus, from the severity of the labour, to which they were unaccustomed, united with ill-treatment, and want of food and

pure water, twenty-three thousand persons perished in ten months, and were buried in the embankments, like dead dogs". (1)

The Earl of Carnarvon in the British Parliament referred to Mahmoudiah Canal excavation while talking about forced labour in the project of the Suez Canal in 1861. Hansard's Parliamentary Debates quoted him saying, "All these works in the East must be accomplished, not by voluntary labour, not by the system of labour which was in practice in this country and in Europe, but by a system of forced labour. They had already ample evidence of the system and results of forced labour in the east; and the construction of the Mahmoudiah Canal by Mehamet Ali where 10,000 workmen perished was a yet recent illustration of the certain sacrifice of life in such a work". (2)

The Encyclopaedia Britannica referred to the subject saying "The sacrifice of life, however, was enormous (fully 20,000 workmen perished) and the labour of the unhappy fellahin was forced". (3)

If we subject these reports to critical study, we find that they have differed in stating the number of the workmen who perished in this project. According to Yates and Harcourt they were 30,000, while the Encyclopaedia Britannica gave their number as 20,000 and the Earl of Carnarvon stated that they were

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(1) St. John, James Augustus, Egypt and Mohammed Ali, 1834, Vol. II, pp.348-349.

(2) Hansard's Parliamentary Debates, 1861, Vol. CLXII, p.1550.

(3) Encyclopaedia Britannica, 14th Edition, 1929, Vol. 8, p.91.

10,000. St. John, J.A. reported that 23,000 persons died while Mengin reported that the deaths were 12,000 in a period of ten months. As regards the original number of workers, Harcourt gave their number as 313,000 and Yates quoted the words of the Quarterly Review which stated that "The Arabs were marched down in thousands and tens of thousands, under their respective chiefs: the number employed at one time, actually exceeded 250,000 men"<sup>(1)</sup>.

Obviously it is quite natural that the different reports will differ in giving the number of deaths as there were no official returns or statistics at that time in Egypt and I had found no official estimation of the loss of life in this project. But, however, all the sources agreed that there occurred a great loss of life in the carrying out of the project.

I do believe that that was true according to my experience as regards the problem of transferred labour in Egypt, and it was with transferred labour that the project of Mahmoudiah Canal was carried out. Although my experience was in the 1940's, yet the conditions in the Nineteenth Century could not have been better, if not worse. It is well known by modern Egyptian epidemiologists how transferred labour had been one of the main causes of most of the epidemics that occurred in Egypt in recent years. I had participated in the combat of some of these epidemics during and after the last great war, and I had

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(1) Quarterly Review Vol. XXX, p.502.  
 Cited by Yates, W.H., Op. Cit., Vol. I, p.117.

then some opportunities for studying the conditions of the transferred labourers in some towns in Egypt which led to these epidemics. These labourers used to come from the rural areas all over Egypt to work in these towns, either for different civilian contractors carrying out different projects for the troops, or less commonly work for the troops directly. Originally they were of the class of agricultural labourers in their villages.

I shall try to describe their living conditions in the towns where they were working. Indeed they had a very low standard of living. They used to live in the poorest quarters of the towns and, as there was never enough accommodation there, they used to accumulate in large numbers in the rooms available, and insert themselves in the already overcrowded houses. It was not an uncommon observation during the plague or the typhus epidemic to find ten men or more sharing one room on the ground floor, or over the roof of a house, and perhaps occupy it only at night to leave it to another ten during the day. I shall tell an illustrative incident of this state of affairs. At one time, a sudden epidemic of relapsing fever broke out in one of the villages in Upper Egypt in the area where I was M.O.H. In tracing the source of infection, I found out that it originated from diseased labourers who were immigrants in Cairo, and who caught the disease in Cairo and returned to their original village when they felt ill. (This is the usual habit of these people. Because of their sense of insecurity, they would sacrifice anything to be nursed in their homes and among their relatives.) About sixty of these came from Cairo in successive

groups in about ten days and, when I asked them about their addresses in Cairo, they all gave one address; and that was a house owned by a policeman who was originally one of the inhabitants of the village but who had immigrated to Cairo a long time ago, settled there, and bought a house in one of the poor districts of Cairo. Again because of being insecure, these villagers keep to their tribal patterns of behaviour, and try to gather and coalesce together in the same place in the foreign town. Thus every farmer from the village I am referring to, who used to go to Cairo, whether for work or for any other purpose, used to live in the house of this policeman. This house continued to supply us with fresh cases of relapsing fever every day until the health authorities in Cairo, upon my request, investigated the matter: I saw this house during my work in Cairo and it consisted only of six rooms, two of which were occupied by the owner and his big family, and the other four were hired to all who might come from this special village.

As regards nutrition, the villagers on their immigration used to take with them a large amount of maize bread, and used to get new supplies of this bread from their villages whenever their supplies finished. Besides bread, they used to eat very poor and insufficient diet .... mainly "Tamiah" which are cakes of crushed beans and "Foul Medamies" which are cooked beans. These labourers in their villages were never used to buying food. The farmers in Egypt usually eat only what they produce - mainly bread, cheese and mucilaginous vegetables which they grow. So, when they used to live in the town, they never attempted to

buy what they would consider very expensive articles of food, and they used to be content with the very cheap articles which are of little nutritive value, and with their bread. So they were obviously malnourished. As to their clothes, they were of the poorest kind and I need not say that they were mostly very dirty. These villagers were mostly employed in very hard manual work such as the making of roads or carriage of heavy cargoes in ports etc.

For all these reasons, epidemics used always to ravage among these people, and in the districts in which they lived. Further, these epidemics used to be transferred to their original villages, as they always used to return home when they got sick. That was the usual pattern of most of the epidemics that had attacked Egypt in recent years. It is the same story again - the story of how poverty leads to disease. In this case, all the elements of poverty: overcrowding, malnutrition, overwork, etc., were at work. So they had led naturally to epidemics and loss of life.

The poverty of these labourers was, in the majority of cases, due to the insufficient wages given to them by contractors. However, there were some among the labourers, especially those directly attached to the troops, who used to receive reasonably good wages. In spite of that the standard of life of these moderately well-paid labourers was just as low as the others. To understand the explanation of that, one has to study the previous pattern of life of these labourers before emigrating to the towns. They were originally of the class of agricultural labourers who were usually hired by landlords only for short periods during the



year when their labour was needed, but remained mostly unemployed for the rest of the year. They have never been used to receiving anything that could be called sufficient wages. In return for their work they used to receive only very scanty pay, mostly in kind. So they were used in the villages to a very low standard of living. When they went to the towns, the wages they used to receive, insufficient as they were sometimes, were a new thing in the life of these labourers. It was their only chance in life when they could get any money at all. So they tried to take this opportunity to save as much as possible of this money in order to be able to buy, at last, a little piece of land. So, those who were reasonably paid among these labourers did not try to utilise their wages to raise their standard of living but were mainly concentrated on saving all they could save in order to return to their villages with small fortunes, which they could never collect there. I happened, besides working among these labourers in the towns, to work also in 1945-48 among them in a rural district in Upper Egypt, which was one of the main sources of these transferred labourers. I was so mixed there with the local populations that I had ample opportunity for the study of their social life and for an insight in their psychology and ways of thinking. I had watched their anxieties to emigrate to these towns where their friends were said to be receiving regular wages for the first time; and I had seen them going and watched them on their return, and I had heard them and heard the other villagers speaking about the sums of money some of them had collected there, and their future projects of buying some kirats

of land in their home villages in order to be included at last among the owners of land there. The main object of the emigrants was not to live a better life there in the towns, but just to save money. They did not look forward to the towns to get better food and better clothes, but only to supply themselves with the necessary money to secure a better prospect. That is why, even those who could have escaped it temporarily, still lived a life of poverty and still suffered from its effects on their health.

Someone may argue that those labourers who were receiving good wages, should not be considered as being poor. However, on deeper analysis, he will conceive that they were actually in a state of poverty, although it was in this case an intentional poverty. A person who had always been accustomed to the lowest standards of living, cannot be expected to change his mode of life because he becomes temporarily well paid for a short period of time. Besides, this temporary job cannot give him any security against the future, as he knows quite well that this job is not permanent at all, and that he will sooner or later lose it, and return back to his village - to unemployment and misery. So instead of spending his wages, and raising his standard of living, this feeling of insecurity will drive him to keep as much as he can of the wages he is receiving. Every human being is looking forward to security, and as his migratory labour is only temporary, and cannot offer him a settled secure prospect, he tries to utilise it at least to get that secure future in his home village. He finds it foolish to live a high standard of life for a while

and then return back to a life-time poverty and *hardship*. Therefore he instead, tries to take advantage of this temporary rise in income to secure a comfortable future life in the only place he is bound to spend his future days.

This pattern of behaviour is not peculiar to the Egyptian labourer, but it characterises all similar migratory labourers from poverty stricken countries. For example, the Irish migratory labourers to England and Scotland, during the 19th Century, presented the same picture. This is described in that volume of the Poor Inquiry (Ireland), 1835, which was devoted to the Irish emigrants in England and Scotland. It says, "In general it may be said that the Irish in England and Scotland do not live in an equally good style with the natives, who obtain equal wages with them ....."

"In all the towns of England and Scotland where the Irish have settled, they inhabit the cheapest dwellings which can be procured; and thus they are collected in the lowest, dampest, dirtiest, most unhealthy and ruinous parts of the town ....."

"'The Irish', says Dr. Duncan of Liverpool, 'seem to be as contented amidst dirt and filth, and close confined air, as in clean airy situations. What other people would consider comforts, they appear to have no desire for: they merely seem to care for that which will support animal existence'....."

"With respect to food, the Irish for the most part use in Britain the same diet to which they had been accustomed in their own country".

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(1) Poor Inquiry (Ireland), Appendix G, Report on the State of the Irish Poor in Great Britain, B.P.P.1836 [40] XXXIV, pp.x-xii.

It is the same picture. The low standard of living seems to perpetuate itself when the circumstances of labour do not provide enough assurance for a secure constant employment. One may call this peculiar type of poverty, "The Insecurity Poverty". The fear from future privation, made the Egyptian fellah, and the Irish peasant continue to be in a state of poverty in spite of any reasonable wages they might get at a time. In other words, their long acquired habits of privation and their feeling of insecurity against the future, keep them within the prison of poverty even if they get good employment for some time. This could explain why the transferred labourers in the towns of Egypt were all living a life of privation although some of them were paid enough. The good wages some of them were receiving during the war, had not raised their standards of living, and it had only increased the work of the post offices in which they used to save their money, while poverty continued to sustain its grip on their lives.

Thus it may be said that the system of transferred labour in a country like Egypt could only lead to a state of poverty, whether enforced or intentional. This poverty had resulted in many epidemics among the workers in the Egyptian towns during and after the war; and again as the story always ends these epidemics were never confined to them. They had spread to other districts of the towns and other parts of the country and sometimes involved the whole country. ... The same old history of disease - it always repeats itself. It is the same story of the epidemics which used to spread in

England and Scotland by the poor Irish immigrants. The history of Liverpool, where Irish immigration was very common, is full of a long list of epidemics which had followed the same pattern of the epidemics, which had lately occurred in Egypt as a result of transferred labour. - The same conditions of poverty and the same resulting disease.

To return to the project of Mahmoudiah Canal. It also with transferred labour that it was carried out, and a very large number of these transferred labourers were involved in the project. According to different reports, the workers were marched down from all over Egypt in thousands and tens of thousands under their respective chiefs and the number employed at one time was between 250,000 and 330,000 men. This labour was not only transferred but also forced labour. So if transferred well paid labour could result in the 20th Century in Egypt in so many widespread epidemics, such epidemics naturally could have occurred during the excavation of Mahmoudiah Canal when poverty was much more extreme, and when labour was very little paid, or not paid at all. Bearing in mind that the methods of control of epidemics were not known at that time, and that there was naturally no medical care of the labourers, one can imagine how these epidemics will spread and ravage among their victims. In addition to this, if we accept as true or even as having only some elements of truth - the statements quoted before about the ways in which the forced labourers were treated, then we could easily account for the great loss of life that all the sources have agreed on its occurrence during the canal excavation. For then, all the elements of poverty and destitution that lead to disease and death would be working in full power and resulting in their inevitable end. ... If we believe as true, or even as having some elements of truth .. that these large multitudes of labourers were collected by force and marched tied to each other and accumulated on the works ..

that the necessary steps to meet the needs of such a great number were not taken at the place of work ... that the Government "neglected to provide implements or store enough provisions" "pour assurer leur subsistence" ... that the workers were working "sans aucune salaire" or for very scanty wages mainly given in kind ... that they were working "sans outils quelconques" ... that they were only allowed "a piece of black bread consisting of bean flour and mouldy wheat per diem" ... that their labour was continued incessantly from the break of day until night, as the soldiers stationed along the line of works allowed no pause or relaxation ... that even those who were sick or exhausted were not allowed sufficient repose to repair their strength ... that they were treated with pitiless and merciless brutality in order to maintain their work with no regard to their health or exhaustion ... and that no suitable provisions either of food or anything else was made for the sick and diseased. If we believe all that to be true or nearly true, what better conditions could be created for breeding disease and death. That is why "les maladies et toutes les misères furent naturellement les plus affreux ravages parmi cette multitude de malheureux".<sup>(1)</sup> It is no wonder that "trente mille cadavres furent enfouis sous les berges que parcourent aujourd'hui indifférentes, les petits fils des victimes".<sup>(2)</sup>

The conditions under which these labourers were working were the typical conditions of poverty that would inevitably lead

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(1) & (2) Harcourt, Francois - Charles - Marie, duc d',  
Op. Cit. p.10.

to disease and epidemics and death. It is a unique significant experiment in which all the elements of poverty were allowed free hand to act on a mass of workers and they naturally resulted in widespread disease and loss of life.

And the characteristic unique feature of this tragedy is that the poverty and destitution that led to such disease and loss of life was not the ordinary type of poverty, but was an extraordinary "State-made poverty". Instead of preventing and curing poverty, which is the duty of the State, the State actually created poverty and misery among a section of the population. It was a new type of poverty. It was not the old ordinary type that the Governments used to claim falsely that it was an evitable natural phenomenon ... but it was a new type of poverty made by the hands of an oppressive despotic kind of Government.

It must be noticed that not only did the State enforce privation on the large multitude of workers who were involved in the project, but also by taking these working hands from their home villages, the State enforced privation and destitution on their families and children at their homes. They were forced to leave their fields and leave their families at home without any support. One can imagine the widespread destitution and poverty that must have resulted in the villages of Egypt. However, El-Jabarty reports that although these workers were prevented from the cultivation of maize which was their main food, yet on their return home from the works they were forced



to pay the taxes which were this year augmented than usual.

Forced labour in the Cotton Industry

Not only the Mahmoudiah Canal, but all the projects and the public works carried out during the reign of Mohammed Aly were carried out by forced labour. Most of this forced labour was either unpaid labour, or very little paid. The history of cotton manufacture, which Mohammed Aly introduced in Egypt gives us another example of the pernicious effects of this system on the welfare and health of the people.

The operatives of this industry were recruited from among the peasants and were put to work by force. It is reported that they had an extreme dislike for the business and used to avail themselves of the first opportunity to escape. (2) Therefore the mills were supplied by prisons, and the managers were continuously accompanied by executioners for flogging the unwilling operatives. (3) It is stated the wages paid for these operatives were extremely low. "The Pasha" says J.A. St. John, (4) "obtains the labour of his subjects for almost nothing". "The wages received by the unhappy fellah were barely sufficient to provide his daily subsistence". (5)

Thus it seems that poverty had always been a constant accompaniment of the system of forced labour; and that the State

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(1) El-Jabarty, A.R., Op. Cit.  
(2) (3) (4) (5), St. John, J.A., Op. Cit. Vol. II, pp. 412 - 415.

through that system was enforcing privation on different multitudes.

What was the result of this privation on the health of the cotton operatives? There are insufficient details to answer this question adequately. However, we can gain a clue to the answer from some European books. J.A. St. John says that the fellahs "though they generally arrive at the factories in good health, the insalubrious nature of the employment, imprisonment, their scanty wages, the insufficiency of their food, ... in a short time render them diseased and despicable". (1)

F. Pruner also mentions that typhus was very common in the Egyptian Factories "because the workmen were shut up in hermitically closed rooms to prevent their running away". (2)

It is natural, when one is discussing this policy of forced ill-paid labour in Egypt, to remember the economic theories in Britain which regulated labour during the same period of the Nineteenth Century. These were the doctrines of "Laissez-faire" and "Free contract" and the "Iron law of wages". These doctrines were the opposite extreme to the policy of forced labour. They insisted on the absolute freedom of the labour market and were opposed to any Governmental interference with labour. To them wages and profit should be left to be determined only by forces of competition. Such doctrines are now considered unfair and are supposed to have resulted in much poverty and disease, because they insisted on leaving the working class unprotected against the grinding forces of competition in the labour market. But

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(1) St. John, J.A., Op. Cit., Vol. II, p.412.

(2) Sandwith, F.M., The Medical Diseases of Egypt, Pt. I, London, 1905, p.16.

if these British economic theories of the 19th Century would be considered unfair because they were against the interference of the Government to protect the labourers from their employers and from the results of competition - if these were considered unfair, what words could describe Mohammed Aly's system of forced ill-paid labour?

POVERTY AND DISEASEPORTRAYALS BY EUROPEAN WRITERSThe Policy of Impoverishment

In Britain, there are great numbers of documents and writings from the last Century that could reflect the social and health conditions of the people at that time. On the other hand, there are very little corresponding Egyptian publications. In Egypt at that time, there was no opportunity for the development of social or political thought comparable with that which had existed in Britain in the same era. However, some of the Europeans who had visited or worked in Egypt had written about the state of the country then from the European point of view. Their publications are the only corresponding substitutes in Egypt for the many detailed reports and publications on the condition of the people in Britain during the same epoch. These writings give very lamentable pictures of the condition of the population in Egypt at that time; the engrossing topic of most of them was the extreme poverty of the people. It seems that Egypt then was the country of poverty and that the masses were suffering from unexemplified privations and miseries. It appears that Mohammed Aly was concerned only with increasing the revenue to fulfil his ambitions, and paid little attention to whether it was possible to extort the huge sums he needed from the fellahs without reducing them to abject poverty. (1)

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(1) St. John, James Augustus, Egypt and Mohammed Aly, 1834, Vol. II, p.451.

His many wars and the establishment of an equipped army and fleet needed large sums of money. And in order to get these he pressed hard on the peasants and overburdened them beyond their capabilities. His conception of a good Government was totally different from that which existed in Britain at the same era. Besides, the people were powerless and there was no influential public opinion that could induce him to pay more attention to their welfare. This should be borne in mind in order that the western man could conceive the degree and the picture of poverty in Egypt at that time. It was not a poverty of a certain class but it involved almost the whole country and it was extreme. The State, far from trying to alleviate this poverty, was actually carrying out a policy that could only be called the policy of impoverishment. Most of the European writers attributed the deplorable condition of the people to the economic system of Mohammed Aly. Even his friends were extremely critical of this policy and were concerned about its injurious effects on the people. (1)

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## I. The Economic policy of Mohammed Aly.

I am going to discuss in this appendix the main features of the economic policy of Mohammed Aly in order to provide the necessary background for the coming studies.

### (1) Land Monopoly

During the reign of Mohammed Aly, as well as for a long time before, the fellahs of Egypt were not entitled to the ownership of the agricultural land which they were cultivating. Mohammed Aly was the only proprietor of most of the land of Egypt and the fellahin were all the "labourers of the Pasha". The

land was distributed among them to be cultivated according to the wishes of the Government. Each was allowed to keep a certain area for which he was required to pay the fixed taxes. The local governmental officials used to dictate to them what to grow, and to possess themselves with the crops when they are reaped at the end of the year. (1) Part of these crops were taken as taxes and the rest were appropriated by the Government at nominal prices fixed by itself. The fellah never owned his strip of land, but he was allowed to keep it as long as he was capable of paying its taxes. These lands were not inheritable, nor could they be sold or pawned. At any time the government was free to take the land back from any farmer. "The agrarian system was a matter of duties rather than rights". (2) From ancient times the Egyptian fellahs were regarded by the Governments, which successively dominated them, as instruments to fulfil one function in life - the tillage of the soil, and the supply of revenue. Mohammed Aly inherited this conception unchanged from the past; and he clung to it most firmly. (3)

This system of land monopoly could never have offered the Egyptian Fellah enough security as regards his means of living and his future. It could not have given him enough incentive to strive hard for his wellbeing. And that, to my mind, explains the impression among the different European writers that he had been lazy and apathetic. Most of the Europeans who had visited Egypt in the last Century had monotonously repeated that the Egyptian fellah was slothful and lacking ambition. For example, Florence Nightingale wrote about the fellahin "they have not the least motive for gain, and accordingly they do as little as they can, and if they have not beans for tomorrow, they say God will provide". (4) That should not be astonishing, as the fellahs had been extremely insecure, and had not the natural incentives for labour - neither ownership, nor good wages. Were not the same accusations made about the Irish peasants in the 19th Century, who were in very much similar conditions? (5) This reluctance to work was naturally an element which added to their poverty.

The oppressive character of this system of land monopoly is evident from the fact that the fellahs used to run away and desert their fields. "From 1829" says Dodwell, "begins a series of complaints of peasants abandoning their villages, and the severest orders were issued against both the emigrant peasants and the officials in whose jurisdiction they should be discovered". (6) They however continued to desert the villages even in the face of the punishment of death.

(1) (2) (3), Dodwell, H.H., The Founder of Modern Egypt: A Study of Mohammed Ali, Cambridge 1931, pp. 218, 215.

(4) Nightingale, F., Letters from Egypt, London, 1854, p. 40.

(5) Report of Geo. Nicolls, to His Majesty's Principal Secretary of State for the Home Department, on Poor Laws, Ireland. Pt. 1, B.P.P. 1837 [69] Ll, pp. 5 & 6.

(6) Dodwell, H.H. Op. Cit. p. 216

This agrarian system may look on paper as some kind of nationalisation of land. But one must judge the system not on the basis of such speculation, but should consider it only as it actually existed, and one cannot estimate its value without taking into account the instruments by which it was carried out. These instruments, the government officials during Mohammed Ali, were extremely corrupt and unjust. When Mohammed Aly ordered a cadastral survey of the land in order to assess the required tax on each farmer, "the rich occupiers bribed the surveyors to show their lands as uncultivated and not irrigated, while the reductions thus made in the demand were recovered by over-assessing the lands tilled by poorer cultivators".<sup>(1)</sup> This factor must have added much to the perniciousness of the system and its weight on the poor fellahs.

While speaking about the land policy of Mohammed Aly, one must refer to the system of "Chiflikes" which he introduced. This was the beginning of a process of amalgamation of farms similar to the "Enclosures of Land" in Britain. But although this process began during the reign of Mohammed Aly, yet it did not attain great proportions except in the latter half of the Century. The "Chiflikes" were large estates of soil which were farmed as one piece by the officials of Mohammed Aly to his benefit. The fellahin were not given definite areas to cultivate but only work as troops of labourers, and as usual it was forced ill-paid labour. These Chiflikes were either owned by Mohammed Aly himself or granted to his family members. The villages whose inhabitants used to fail to fulfil their obligations and pay their taxes under the usual system, were transformed into "Chiflikes" and farmed at the expense and to the direct benefit of either Mohammed Aly or his relatives. The number of these Chiflikes gradually increased during the reign of Mohammed Aly.<sup>(2)</sup>

The European writers gave lamentable portrayls for the labourers in these estates. The fellahs inhabiting them were required by forced labour to farm them. The agents of Mohammed Aly were given the right of life and death in these chiflikes. The writers concur in stating that the labourers were forced to work incessantly in the fields under the surveillance of hard-fisted Nazirs, who allowed them no repose, and under the threat of the whip. They also coincide in stating that the allowances given to the labourers were insufficient for their maintenance and the support of their families.<sup>(3)</sup> J.B. Lautour, in trying to account for the high mortality of the farming animals in these estates, attributed it to the stealing of their rations by the hungry peasants. He states that the labourers were not given enough food; and as they had to eat and feed their wives and children, they were forced to steal the rations of the farming animals.<sup>(4)</sup>

(1) Dodwell, H.H., Op. Cit. p.211.

(2) & (3) Hamont, Pierre, Nicolas, "L'Egypte sous Méhémet Ali, Paris, 1843, Vol. I, p.82; p.81.

(4) Lautour, J.B., Revue de L'Orient, 1844, Vol. IV, p.39.

(II) Monopolies of Trade

Mohammed Aly created for himself a monopoly of the main agricultural and industrial products of the country to the further impoverishment of the population. Palmerston, referring to these monopolies says, "It must be evident to every person who is at all conversant with the principles of nations that [the pasha's] system tends to keep Egypt and Syria in a state of abject poverty". (1)

In agriculture, his monopolies were a continuation of his land system. He was the only owner of agricultural land and thus he used to possess himself of all its produce and became accordingly the only merchant in the country. The fellah was only supposed to cultivate the land and reap the crops but he was not to keep these crops as they were the Government's property. The fellah was required, as soon as he used to reap the crops, to take them to the Governmental stores which possessed themselves of these crops at prices fixed by the pasha, which were reported to be much lower than the market prices. The machinery of this system was under the surveillance of an army of local governmental agents who enforced it in an unmerciful severity. The seizing of all the crops by the Government used naturally to create and maintain an artificial scarcity which raised much the prices of these necessities of life. Nothing could suit better the objects of Mohammed Aly as this would raise his profits from his trade. This rise of prices was also more aggravated by the exportation by Mohammed Aly of large quantities of these crops. Thus the people had to buy their food needs at much higher prices than those at which they get from the Government for them. (2)

It was reported that wheat purchased by the Government in Upper Egypt was resold in Cairo at a price 4.8 times greater. Beans, one of the principal articles of food among the poor, were also disposed of to the people at the same enormous rate of profit. (3)

Mohammed Aly used to dictate to the fellah in certain areas what he should grow each year according to his commercial plans, and the levels of prices in foreign markets. It is reported that in certain years, when the prices of cotton were high, he enforced the agriculture of large areas of cotton at the expense of grains which resulted in the occurrence of scarcity and famine in the country. (4) In some years the corn

(1) Memorandum, Sept. 13, 1838 (F.O. 96 - 19)

Cited by Dodwell, H.H. Op. Cit., p.221.

(2) British Consul-General Col. Campbell, 1839.

Encyclopaedia Britannica, 14th Edition, 1939, Vol. VIII, p.91.

(3) St. John, J.A., Op. Cit. Vol. II, p.462.

(4) Hamont, P.N., Op. Cit. Vol. I, p.47.



which had already been cultivated was torn out of the ground and replaced by cotton.<sup>(1)</sup> Again, even in times of scarcities of grain he used to levy high taxes on their importation, in order to keep the price high.<sup>(2)</sup> Like any other merchant, to avoid loss and increase profits, his policy was dictated by the fluctuations of commerce and not by the needs of his people.<sup>(3)</sup>

Such a state of affairs would make life much harder on the poor and increase the weight of poverty from which they were suffering. One of Nature's blessings on the Egyptian fellah is that the lands' crops and the animal food products are plentiful, and thus very cheap, as a result of the fertile soil. This natural gift had always and still does lessen the effects of poverty on the poor fellahs. I have always noticed during my work in the villages in Egypt that even the poorest classes could avail themselves of bread and milk products, on account of the abundance and the extreme cheapness of these in the villages. But even this nature's gift was taken away by Mohammed Aly from the hands of the poor by seizing their crops and raising their market prices. He denied them the abundance they were used to by creating an artificial scarcity.

Yates gives a very moving picture of the poverty which was forbidden the usual gifts of Nature that it was used to. He says: "What seems to be peculiarly indigenous to Egypt; the country not only produces an abundant crop, ... but also the wheat which is alluded to in the Scriptures, as having 'seven ears upon one stalk'. .... In times of abundance, this plant does actually bring forth, in the present day, seven fold: .... I have seen it, for I happened to be in Egypt during one most prolific season: and yet that very year, the people endured the most incredible miseries. The avarice of the Pascha seemed to increase with the harvest. He seized the grain wherever he could find a pretext for so doing; he gathered it into barns, and permitted none of his suffering famished vassals to enjoy the blessings which the munificence of Providence had bestowed upon them. .... It is really impossible to convey anything like an adequate idea of the wretchedness which exists at times. I have no hesitation in asserting that I saw people starving in the public streets. Travellers may write, but in a country like England, their statements will hardly be credited, especially as these unfortunate creatures were actually in a land of plenty, surrounded by every luxury, the crops rotting before their eyes, and yet they dared not help themselves, to satisfy the common cravings of hunger".<sup>(4)</sup>

(1) Hamont, P.N. Op. Cit. Vol. I, p. 47.

(2) Yates, W.H., Op. Cit. Vol. I, p. 201.

(3) Hamont, P.N. Op. Cit. Vol. I, pp. 29-30.

(4) Yates, W.H., Op. Cit. Vol. I, p. 200.

In evidence Yates quotes the Literary Gazette which says, "In 1829, there was a great dearth in Egypt, particularly at Rosetta. The people died of hunger, while a horrible and unheard of fact - mountains of grain, destined to the speculations of Mohammed Ali, sprouted in the open air, before the eyes of the inhabitants, who had not the permission to purchase any of it. It was not until the grain was spoiled that it was sold to them, with the prohibition to procure any other. Alexandria and Cairo were equally subjected to this tyrannical measure. The government first sold half wheat and half barley, mixed together; the wheat was afterwards stopped, and mouldy beans were substituted. This continued for about three or four months, and corn was contraband throughout Egypt. Some wheat was even imported from Syria by private speculation, a thing unknown in Egypt since the famine of Ismaen Bey: but a heavy duty put a stop to the promised relief".(1)

### (III) Fiscal System

During the reign of Mohammed Aly the taxes had been raised greatly and new taxes had been imposed.(2) The burden became very heavy on the poor. Moreover his Fiscal system, opposite to sound economic principles was very unjust in its technique. Thus the sums demanded from tax payers were arbitrarily fixed, uncertain in amounts, and were characterised by glaring inequalities. A very characteristic unjust feature of this system was that when the taxes were not paid in due time by certain individuals, it was no more the individual that was held responsible but the whole locality. And when the taxes fixed on a locality did not arrive in due time, the agents of the Pasha used to use extreme cruelty and resort to corporal punishment in order to extort the fixed money from the area. And if in spite of that pressure and devastation, the agents could not get the required money, the localities used to be transformed into "chiflikes".(3) It was even reported that if one village was found unable to pay the tax, because of depopulation, the burden was put on the surrounding villages who had to pay the arrears of tax instead, or suffer the consequences of non-payment.

This fiscal policy gradually led to the ruin of the economic condition of the country. The finances in the latter part of Mohammed Aly's reign fell into complete and incomprehensible chaos and the resources of the country were

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(1) Yates, W.H., Op. Cit. Vol. I, p.201.

(2) Encyclopaedia Britannica, 14th Edition, 1929, Vol.VIII, p.91.

(3) Laitour, J.B. Op. Cit. p.39;  
& Hamont, P.N. Op. Cit. Vol. I, p.66.  
& St. John, J.A., Op. Cit. Vol. II, p.451.

impoverished. The farmers, in order to escape payment of arrears, used to desert their villages and run away to the towns, and Mohammed Aly found it necessary to punish with death any towns-dwellers who harboured fugitive farmers. "Several executions took place on this ground". (1)

In 1844, partly as a result of a murrain in the cattle, and partly from the increasing depopulation and flight of the peasantry, - even in the face of death punishment, a panic seemed to have seized the Government officials, who found themselves unable to collect the arrears of tax. This induced the Council of Cairo to make a report to Mohammed Aly describing frankly the real state of affairs. The report exposed the chaos to which the conditions had come. It showed that although some of the villages were greatly depopulated, yet they were still required to supply the same amount of tax they used to supply. It also proved the unbearable burdens which were put on the neighbouring villages when one of them failed to fulfil its obligations. Moreover, the report went into minute details showing that the public works carried out by Government with forced unpaid labour was the root of the evil and the cause of the depopulation. (2)

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(1) & (2) Paton, Andrew Archibald, A History of the Egyptian Revolution from the Period of the Mamelukes to the Death of Mohammed Aly, London, 1863, Vol. II, pp. 232-233.

The Connection Between Poverty and Disease

What was the effect of the widespread national privation during the rule of Mohammed Aly on the public health? The European writings about Egypt at that time give the impression that the health of the country was very deteriorated. The writer especially those of them who belonged to the medical profession, besides giving pictures of the poverty of the masses, gave also remarkable portrayals of the prevalence of disease in the country. And, what is more interesting, a considerable number of them associated between the privations of the people and their ill-health and more or less conceived the relationship between both. This is rather striking, especially as some of these writings were early in the Century, and may suggest that the conditions in Egypt were particularly impressive with the connection between poverty and disease. The medical men probably could not help being impressed with this connection which stared them in the face. I am therefore going to study some of their writings in order to ascertain how clearly they conceived this connection and the influence of the state of affairs in Egypt in inspiring them.

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One of these medical writers was P.N. Hamont. In his book about Egypt he discussed the diseases of the Egyptians, and he seemed quite convinced with the effect of their privations on their health. For example speaking about Pulmonary Tuberculosis

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(1) P.N. Hamont, a veterinary doctor "de l'école d'Alfort", was one of two doctors who came to Egypt upon the request of Mohammed Aly to the French government in order to found a school for veterinary doctors in Egypt. He arrived in Alexandria in 1828 and remained 14 years in Egypt as a government official.

in Egypt, he wrote:

"Affection Tuberculeuse Des Poumons. Pendant longtemps, on a cru que dans les pays chauds, la phthisie tuberculeuse du poumon était extrêmement rare et les médecins en général, .... attribuaient cette rareté à la température élevée des contrées méridionales. Il n'en est pas ainsi cependant; les maladies tuberculeuses sont communes en Egypte, sur les hommes et sur les animaux, elles se développent sous l'influence de causes qui n'atteignent point ordinairement les hommes des classes riches et les animaux de races distinguées ou ceux qui sont placés dans les circonstances les plus avantageuses. Pour l'espèce humaine, on rencontre généralement la phthisie, chez les habitants pauvres, mal nourris, et vivant d'un travail forcé dans des maisons basses et humides. .... Ainsi soit chez l'homme, soit chez les espèces animales domestiques, les causes de la phthisie pulmonaire paraissent identiques, ce sont: une nourriture insuffisante, de mauvaise nature, des habitations insalubres, un travail forcé etc., etc." (1)

Speaking about "intermittent fevers", he said:

"Fièvres intermittentes:- Elles règnent fréquemment dans les cantons les plus bas du Delta, là où l'on cultive le riz. Les fièvres intermittentes se montrent surtout après les grandes inondations, elles sont parfois très tenaces, et sévissent sur un grand nombre d'habitants. .... Dans les arrondissements de Damiette et de Rosette, après un débordement

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(1) Hamont, Pierre, Nicolas, l'Egypte Sous Méhémet Ali, Paris, 1843, Vol. I, p.492.

extraordinaire du Nil, les fièvres intermittents attaquent une très grande partie de la population des campagnes. Les fellahs restent couchés pendant trois ou quatre mois. Leur convalescence est extrêmement longue, et heureux encore lorsqu'ils ne meurent pas des suites du "soukoune" (fever) qui prend facilement, dans des organisations appauvries, un caractère de malignité qu'il ne contracte pas ailleurs. En 1841, les fièvres intermittentes régnaient épidémiquement dans le district de Damiette. Les chefs des villages étaient dans la désolation. L'autorité prescrivait, voulait, exigeait des travaux, et plus d'un tiers des paysans luttait contre des accès de fièvre qui paraissaient à des intervalles rapprochés. Le travail des champs fut suspendu. Beaucoup d'hommes moururent de misère, de maladies, laissant des enfants, des femmes dans un dénuement complet.

Et le Gouvernement pour lequel le fellah sème, récolte ou se bat ne fit rien pour prévenir, chasser ou atténuer le mal qui décimait la population".<sup>(1)</sup>

This is very interesting. The writer had discovered the fact that pulmonary tuberculosis was a common disease in Egypt. He, moreover, connected between the incidence of tuberculosis and poverty. He realised that tuberculosis developed under the influence of causes which accompany poverty, or in his own words "causes which do not reach ordinarily the people of rich classes". He was aware that tuberculosis was common among the poor malnourished classes and held malnutrition,

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(1) Hamont, P.N. Op. Cit. Vol. I, p.515.

forced labour and unhealthy homes responsible for the disease.

As regards "Fièvres Intermittents", I think that his description of the disease, its distribution in Egypt, and its relation to the rice cultivation and the inundation, ... prove that the disease he meant was malaria. Malaria is endemic in the areas of the rice fields in Egypt about the districts of Damiette and Rosette in lower Egypt. It is interesting to notice that he discovered that the victims of the disease in Egypt remained "couchés" in bed for months, and that their convalescence was very prolonged which is now known to occur when malaria attacks malnourished populations. He has the credit of discovering the important observation that this disease assumes a malignant character in impoverished organisations which it does not assume ordinarily. In his own words the disease "prend facilement, dans des organisations appauvries, un caractère de malignité qu'il ne contracte pas ailleurs".

He described an epidemic in 1841 in the district of "Damiette" and the features he described, always characterise the epidemics of malaria in the poverty stricken rural populations in Egypt. He reported that the work in the fields had to stop and that many lives had been lost. It is also interesting that he accounted for these deaths by both poverty and disease (mentioning poverty first before disease). In his own words:

"Beaucoup d'hommes moururent de misère, de maladies, laissant des enfants, des femmes dans un dénuement complet".

That is a true picture of malarial epidemics in Egypt. The recent epidemic which occurred in Upper Egypt in 1943-46

was a very characteristic example of these. It was one of the most evident illustrations of the effects of poverty on disease in modern history. The epidemic assumed a most fearful malignant character and the loss of life was inconceivable. The reason for that was the extreme poverty of the inhabitants of these areas which were attacked by the disease. Poverty made the population an easy victim for malaria which was slaughtering their lives in thousands. But although the cause of death was diagnosed in each case as malaria yet the real cause of death was poverty. The malnourished population of these areas could not offer any resistance to the disease and they succumbed quickly and easily when they were attacked. So how true was Hamont when he stated that people in 1844 died due to both poverty and disease. How right he was.

Hamont described another disease in Egypt which he called "Cachexie Aqueuse" and about which he wrote a paper in conjunction with another colleague and addressed it to the Royal Academy of Medicine (Paris) in 1833. He described it in his book in the following way:

"Cachexie Aqueuse. Parmi les nombreuses affections qui sévissent sur les Egyptiens, il en est une, essentielle, très redoutable, meurtrière, la Cachexie aqueuse. Cette maladie, commune en Egypte, chez les hommes des classes inférieures, a été décrite par M. le professeur Ficher et moi, dans un mémoire que nous avons eu l'honneur d'adresser à l'Académie royale de médecine en l'année 1833.



En Egypte, la cachexie aqueuse se montre sur l'homme et sur les animaux. Chez le premier, elle est caractérisée au dehors, par un gonflement oedemateux des mains, de la figure, par une décoloration de la peau et des membranes muqueuses. Les malades se fatiguent vite, mangent peu, digèrent mal, languissent plus ou moins long-temps, et finissent par succomber.

La cachexie aqueuse est lente dans sa marche, mais elle conduit, presque toujours ses victimes au tombeau. Elle est causée par des aliments aqueux, des habitations basses, humides, un travail fatigant, continu dans l'eau et dans la boue. Quelquefois, les malades offrent un développement considérable du ventre, ce développement est dû à la présence d'une liquide dans l'abdomen.

Dans l'armée, la cachexie aqueuse règne comme dans les compagnes Egyptiennes. En 1833, beaucoup de soldats se rendaient à l'hôpital d'Abouzabel avec les symptômes que j'ai indiqués. A la mort, on rencontrait tous les lésions qui appartiennent à la cachexie aqueuse, décoloration du sang, pâleur des viscères, liquide séreux dans les cavités splanchniques.

Ce fait de l'existence de la cachexie sur l'homme et les animaux en Egypte, démontre que des causes semblables peuvent, parfois, donner lieu à des maladies semblables sur des êtres dont l'organisation est différente".<sup>(1)</sup>

From the description given by Hamont about this "Cachexie Aqueuse", I shall try to guess what disease it is

(1) Hamont, P.N.

Op. Cit.

Vol. I, p.499.

according to the new terminology of diseases. The disease which is common in Egypt among the lower classes, which is fatal, and which presents the signs and symptoms and the post-mortem picture described by the author is most probably a combination of Bilharzial Cirrhosis of the liver, and either Ankylostoma Anaemia or Nutritional Anaemia or both together. The three diseases could easily co-exist in the same person in Egypt. They form a syndrome which one meets sometimes nowadays among the poor classes. It is significant that the author had stated that this extreme picture of the disease was essential and common in Egypt among the inferior classes at these times. This indicates that malnutrition, Ankylostoma and Bilharzial infection were then common and essential diseases in Egypt. The role of poverty in the causation of such a syndrome is quite evident. As regards Bilharzial and Ankylostoma infection, these exist and affect a large percentage of the population as a result of the pattern of life of the fellah. The cycle of these parasites continues only because the fellah urinates and defaecates in the canal water and on the ground, - drinks the Nile water directly from canals, - walks with bare feet, - sits on the ground with no clothes intervening, and swims in infected water. It is not easy to tell how much of this pattern is due to poverty and how much is due to cultural factors. Poverty definitely plays a role but cultural habits also are important. It is true that the fellah could not do otherwise but urinate and defaecate in water or on the ground as he could not afford a W.C. But it is also true that on supplying him with a W.C., he may not completely change his habit immediately. Also it is true that the fellah now has no other alternative but

to walk bare-footed as he cannot afford to buy shoes, but when he was supplied with free shoes during some experiments, he was not seen to wear them continuously but only on occasions. But we must remember that these cultural habits are the result of long periods of poverty. They were acquired because they were features of the social pattern of life for centuries and this social pattern was a pattern of extreme poverty. As a proof of that, the families in the Egyptian villages which have been prosperous for some time do use W.C's and shoes although they do field work just the same and are surrounded by others who behave differently. If we can raise the material well-being of the Egyptian fellahs, I am quite certain that many of these unhygienic cultural habits will disappear in time although this will not occur immediately. So poverty plays a definite role in the infection with Bilharzia and Ankylostoma in Egypt.

Furthermore, malnutrition plays a definite role in the development of Bilharzial and Ankylostoma diseases and their complications. There is some work going on now which had indicated that the organism develops some immunity against parasites and naturally this immunity depends much on good nutrition.<sup>(1)</sup> Besides malnutrition plays a definite role in the development of the pathological picture of liver cirrhosis in Bilharziasis. In Ankylostoma, the picture of Ankylostoma anaemia is usually aggravated by the accompanying malnutrition. Thus it is clear that poverty in more than one way plays a

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(1) Compare the work of (a) Otto, G.F. & Landsberg, Am. J. Hyg. 1940, Vol. XXXI, p.37, & (b) Foster, A.O. & Court, Am. J. Hyg. 1935, Vol. XXI, p.302.

definite role in the problem of Bilharziasis and Ankylostomiasis in Egypt; and that the frequency of the syndrome which Hamont had described in his book is definitely the result of centuries of privations of the Egyptian fellah.

Hamont had also described many other diseases in Egypt, and in almost each case he accused malnutrition and the bad condition of the Egyptian fellah of being partly responsible for its origination. Thus in Dysentery "chez les fellahs, une nourriture de mauvaise nature, le séjour dans l'humidité, un travail forcée, des vêtements insuffisants, constituent probablement, les causes principales d'un mal que redoutent avec tant de raison, les Orientaux et tous les habitants de l'Égypte". (1)

Also in eye affections "Il n'est pas douteux qu'il se développe sur les yeux des Egyptiens, des affections très graves qui n'ont point, pour cause, une inflammation. Ces affections résultent d'une organisation détériorée par une alimentation vicieuse ou insuffisante. Ainsi de certains ulcères, de l'atrophie du globe de l'œil, etc." (2)

Also in plague "la peste est une maladie par empoisonnement. Les émanations du sol, la nourriture, les conditions de logement etc. font le poison qui tue". (3)

It is very significant that Hamont in the discussion of many diseases had mentioned forced labour among the causes of these diseases. Among these were ... tuberculosis, dysentery and cachexie aqueuse. There is no definite proof in his work

(1) Hamont, P.N. Op. Cit. Vol. I, p.501.

(2) Ibid p.500

(3) Ibid p.520

that he clearly recognised that this system of labour led to disease because of forcing a state of poverty on the labourers, and it is possible that he thought that "just being forced to work" is a sufficient causative agent by itself. However, in any case his observations in this respect are of great value as they show how much he was impressed by the co-existence of forced labour and disease. His work shows also that he was so impressed by the malnutrition of the fellahin that he held it responsible for almost every disease, even those which are not really dependent on it. Thus he held it responsible for even leprosy and elephantiasis of the scrotum. Thus he said that in leprosy "les causes de ce mal dérivent de circonstances externes ou internes, comme une mauvaise nourriture, une habitation insalubre".<sup>(1)</sup>

And in Elephantiasis of the scrotum "la cause principale de cette affection doit être attribuée à l'usage trop exclusif d'une nourriture végétale".<sup>(2)</sup>

About the role of malnutrition in the diseases of the fellah Hamont says: "On lit dans quelques publications modernes: 'Les voyageurs qui s'apitoient sur le sort des Arabes ont grandement tort. Les Arabes vivent de peu, leurs besoins sont minimes, et dans ce climat hereux où la température est élevée, une chemise suffit à l'Arabe'. Et des voyageurs ont ajouté foi à de pareilles assertions, ils les ont répétées, il les ont soutenues. C'est mal connaître le pays, c'est répandre des erreurs extrêmement funestes, favoriser le despotisme impitoyable qui pèse sur les Egyptiens. Si

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(1) Hamont, P.N. Op. Cit. Vol. I, p.504.

(2) Ibid p.514.

les fellahs peuvent se passer de vêtements, pourquoi donc les Turcs, anciens dans le pays, habitant sous le même ciel, un milieu égal, se couvrent-ils de draps, de vêtements bien fourrés, ou de manteaux épais? ..."

"On assure également que le fellah se nourrit de peu, et se trouve bien de l'usage presque exclusif des végétaux. S'il en est ainsi, pourquoi donc est-il celui que les maladies attaquent de préférence? L'Osmanli (Turc) prend une nourriture succulente, animalisée, et les affections meurtrières qui (1) attaquent les fellahs, épargnent l'Osmanli!"

Hamont is stating that the poor fellah succumbs more to disease than the rich Turks. And he takes that to prove that his vegetable diet must be insufficient for him. This suggests how convinced he was of the relation between malnutrition and susceptibility to disease. He must be taking that for granted in order to argue that the greater succumbency of the fellah to disease is an evidence of the insufficiency of his food.

This conviction might possibly be the effect of the conditions in Egypt at that time. It might be that he could not help discovering this fact when every fellah in Egypt was illustrating it. How could he ignore or forget the importance of malnutrition on disease when in front of his eyes there was exposed a most illustrative convincing living film of poverty and its diseases? And what kind of poverty ... not the inevitable poverty of a naturally poor country, but poverty and

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(1) Hamont, P.N. Op. Cit. Vol. I, p.230.

malnutrition in a country with a plentiful food produce. That is why he says of Egypt "En Egypte, la nature est belle, mais l'oeuvre de l'homme repousse, elle fait horreur. L'homme seul a préparé les éléments de destruction qui l'entourent; il est devenu son propre ennemi".<sup>(1)</sup>

P.N. Hamont wrote another paper about Egypt, "Destruction de la Peste. Lazaret et Quarantines", Paris, 1844. This paper was referred to and summarized in the Lancet while discussing quarantine regulations.<sup>(2)</sup> The paper exhibits the same trend as his book. The Lancet summarizes Hamont stating that the fellah was "wanting food, clothing and everything". He then asks, "what can we expect of an organisation formed under such influences as those which we have described?" .... "Is it surprising that the diseases to which the fellah is exposed should also be exceptional?"<sup>(3)</sup> He then states that "the number of those who are suffering from disease in Lower Egypt is immense. Eighty out of every hundred fellahs, at least, are labouring under chronic incurable ophthalmia, and a large proportion are, besides, attacked with scrofula, porrigo, scabies, elephantiasis, diarrhoea, dysentery, marasmus, cachexia, and lastly with plague".<sup>(4)</sup>

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(1) Hamont, P.N. Op. Cit. Vol. I, p.518.

(2) The Lancet gives the name of the author as M. Hamont. I have ascertained that the work the Lancet was referring to was that of Pierre Nicolas Hamont. Probably the letter (M) which was given as the initial stands for the word "Monsieur". Lancet, 1845, Vol. I, pp.124 & 159.

(3) & (4) Lancet, 1845, Vol. I. p.160.

What interests me more is the comment of the Lancet on this paper. It tried to draw the attention to the similarity between the conditions occasioning the spread of plague in Egypt and typhus in Britain. It says, "We cannot read the details furnished by M. Hamont without being struck with the great similitude of the circumstances under which the plague arises in Egypt and malignant fevers in our large towns. It is in the badly drained, badly ventilated suburbs of London, Edinburgh, Dublin, Liverpool &c. among a population of badly fed, half starved individuals, that malignant typhus makes its ravages". (1)

Again the Lancet comments on the health conditions in Egypt saying, "It is because the modern Egyptian has failed to avail himself of his intellect in order to neutralise the influence of his own impurities, that he may be said to live in the jaws of death, that the population of his native country has fallen from ten millions, to which it amounted in former times, when hygiene was known and practised, to less than a million and a half". (2)

The Lancet is attributing this great depopulation in Egypt then to a deterioration in the hygienic circumstances than in former times, when "hygiene was known and practised". I do not think that there was any change in the sanitary conditions of the villages. The only new change that had occurred in Egypt was .... an increase of poverty. The Egyptians then were living in the "jaws of death" because of their privation.



Another medical man who wrote about the public health in Egypt was a British doctor, William Holt Yates. (1) His book gives further evidence to the effects of the poverty of the population on their health at these times. He, for example, wrote "Here as at every other halting place, I had plenty of patients, and beheld misery, filth and disease, in their most aggravated forms, owing chiefly to neglect and want. I have long ceased to speak of these things, having already had occasion to say so much; the whole country bears the same aspect". (2)

He also wrote: "But having been called upon, during a long residence, to attend the sick, I had extensive opportunities of knowing that the want of food was, in very many instances, the chief, and often the sole cause of their sufferings, and that its judicious administration would have done more good than any

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(1) Dr. W.H. Yates, had probably been a student of Alison and he exhibits the trend of the Scottish School in connecting poverty and disease. Thus for example, he says in his paper, "On the Causes of Epidemic Fever in the Metropolis, More Especially As Regards the Condition of the Labouring Classes", London, 1838, "All sources of debility, whether intemperance, want of proper food and clothing, .... invariably render the body prone to disease". (p.21)

He also, under the heading "Destitution and Disease" quotes a writer saying "Still less is our sensibility affected, when the sufferings endured do not exhibit themselves in the visible form, as immediate consequences of a privation of the necessaries of life. If we heard that a whole family had been found dead in their beds from starvation, we should be struck with horror; but the sufferings is not less, or less real, (it is even greater because more prolonged) if they are so debilitated by a continued privation of needful food and clothing, or gradually to fall victims under the attacks of fever, consumption, or dropsy". (p.25)

(2) Yates, W.H.

Op. Cit.

Vol. II, p.436.

medicine which I could give them: having, moreover, no interest of a private or political nature to induce me to be silent, I feel myself in a situation to speak without reserve, and I am confident I shall be borne out in my assertions by every traveller who was then in the country; that is if he chooses to express his real sentiments. The poor were to be seen lying about among the debris, at the skirts of villages, in the scorching sun, not only in a state of nudity, but pale, sickly, and emaciated, faint, and broken-hearted, tormented by the flies, and in such a feeble state, that they could with difficulty defend themselves from the rats and dogs, and even when food or money has been offered them, they have scarcely had strength to take it. These things are not changed".

"In Egypt hundreds may die, and no sort of cognizance be taken of the fact. .... A man may sink down and expire within the walls, among the rubbish or the tombs, for lack of subsistence. .... It is to be lamented that even one human being should have fallen in the midst of a land of plenty, and surrounded by pomp and luxury, unheeded, and alas unpitied, except by those who are as destitute and wretched as himself; and who, having no resource in their affliction, patiently endure all, put their unfeigned trust in Allah ..."<sup>(1)</sup>

"but there is no doubt that matters went very hard with the unfortunate fellah, and that the rigorous measures adopted by Mohammed Ali, fully justify the assertions that have been made

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(1) Yates, W.H. Op. Cit. Vol. I, p.205.

concerning them, they furnish also very strong grounds for the belief that persons did die of starvation. I was in Egypt at that time and the scenes I then witnessed, left this conviction upon my mind".<sup>(1)</sup>

In another place he wrote "I was detained about two hours by the inhabitants, who brought their sick from the surrounding neighbourhood, to the boat, and I believe my companions were fairly tired out: for it was much the same at every place we came to: not that there was any epidemic, but on account of the total absence of all medical aid. It is a melancholy thing to see so much misery, and to reflect that the chief cause is with the Government - smallpox and famine being the two great scourges".<sup>(2)</sup>

However, as would be expected at that time, Yates was not always clear about the causation of poverty diseases; and in discussing the diseases he met with in Egypt, he accused climatological or other factors for being responsible for them. A very illuminating observation which he made is the following. He says "A very frequent source of fever in the East is the sudden destruction of a flight of locusts ... they devour everything that comes in their way, not only corn, but grass and herbs, and the leaves of trees, converting whole Provinces into a barren wilderness ... they are often carried away by the wind or killed by the rain - their bodies soon putrefy, and occasion pestilential diseases".<sup>(3)</sup>

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| (1) Yates, W.H. | Op. Cit. | Vol. I, p.204.  |
| (2) Ibid .,     |          | Vol. II, p.488. |
| (3) Ibid .,     |          | Vol. II, p.527. |

Yates in this paragraph is stating the important observation that flights of locusts were followed by pestilence. He thinks that flights of locusts cause pestilential diseases as a result of their putrefaction. If any epidemic disease would follow the attacks of these locusts on the fields of Egypt, this could be explained only by the extremely severe privation that would result from their visits. When they used to attack the country they used to devour the plantations and leave the people without food. In the history of Egypt there had been many famines resulting from the sudden flights of these huge swarms of locusts from the desert. They used to spread privation and misery and accordingly spread ravages of disease wherever they went.

Yates also accused the south east sandy hot winds that prevail in Egypt about the month of March of causing disease, epidemics and ophthalmia. They are called the "Khamasin".

He wrote:

"These winds last fifty days, as the term implies and would blow directly in our teeth; moreover, the period of their duration is said to constitute the sickly season, for they regularly bring with them various kinds of endemic and not unfrequently epidemic diseases. ...."

"All this is doubly felt by the newly imported European, who has not had time to get accustomed to the climate, or become sufficiently familiarised with dirt and squalid looks, to divest himself of gloomy thoughts, - the result of an over-excited imagination; and as long as this execrable weather continues, he is haunted day and night, by these sad scourges

of the human race - plague, cholera, ophthalmia, and famine,  
 the gaunt and meagre symbols of which he continually beholds at  
 his elbow, and in the visages of all around him". (1)

What made Yates accuse the Khammasin for these diseases is that they happen to prevail during a time of the year when the curve of epidemics in Egypt is high. This is clearly shown in the curves of epidemics in Egypt in modern times. Most of these epidemics are epidemics of fevers which mainly attack the poverty stricken population.

Again, the reader of Yates's book will find in every chapter a large number of pages, describing the scenes of poverty and disease, and drawing pictures of the multitudes of poverty-stricken diseased creatures. In every town he visited, he used to describe such scenes, which gives the reader an impression of the large extent and the extreme frequency of poverty and disease. For example he wrote about Rosetta:

"Here, as at Alexandria, the feelings are harrowed up by the numbers of unsightly deformed, and disgusting objects which present themselves in the garb of human beings. The picture is truly a melancholy one; for it consists of squalid wretchedness, filth and disease of the most loathsome kind; and there are beggars without end; groups of neglected children swarming with flies and vermin, are to be seen, rolling in the dust and debris of deserted buildings, in the obscurer parts of the town; and here and there, the aged and the sick are observed squatting on heaps of dirt and rubbish and supporting their head

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(1) Yates, W.H.,

Op. Cit.,

Vol. I, p.297.

upon their knees, or resting their emaciated forms against the tottering wall of their hovel, gazing, with hollow eyes and haggard mien in vacant apathy on all around them".<sup>(1)</sup>

Wherever Yates went, he used to meet such scenes. There are hundreds of similar pictures in his book. This book pictures Egypt at that time as a country of poverty-stricken diseased population. It gives a strong impression of the extreme prevalence of disease and epidemics all over the country. "Plague" a term which he discovered that people gave to all kinds of epidemics, was everywhere and it was so prevalent that it used to cause an unbelievable loss of lives. In almost every district in Egypt Yates met these ravages of "plague", and described them in his book. Thus the book is full of moving melancholic pictures of disease. The co-occurrence of these pictures of disease beside the pictures of privation and misery is strongly suggestive to the reader of Yates book. Wherever there was poverty, there was also extensive loathsome disease. And they were both everywhere in Egypt.

Another writer who discussed poverty and disease in Egypt and referred to their relation was J.B. Lautour.<sup>(2)</sup> That was in an article titled "L'Etat Hygiénique De l'Egypte" in the "Revue de l'Orient" which was the bulletin of the "Société Orientale". In his article he gave a vivid picture of the social life of the Egyptian peasants and their poverty and the state of Public Health

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(1) Yates, W.H., Op. Cit., Vol. I, p.175.

(2) lautour had been "Medecin de la faculté de Paris, veterinaire brevete de l'ecole d'Alfort, ex-professeur de pathologic veterinaire à l'ecole d'Abouzabal en Egypte" and was then in 1844 "medecin sanitaire à Damas".

in the villages. In more than one instance it was clear that he recognised the responsibility of the privation of the Egyptian peasants in the causation of diseases in Egypt. He gives the following picture of the ill-health of the Egyptian peasants: "Condition du peuple Egyptien: Au premier abord, l'Arabe d'Égypte paraît vigoureux; mais si l'on porte un examen plus approfondi, on reconnaît en lui une grande prédominance du système lymphatique".

As regards the children, he says, "Les enfants, en général, ont la tête volumineuse, le ventre ballonné, les extrémités grêles, avec des tumeurs scrofuleuses au cou, ou des symptômes des rachitis." (1) S'ils tombent malades leurs convalescences sont interminables".

Describing the young girls after passing the period of puberty, he says: "Dès l'âge de dix-huit à dix-neuf ans, elles sont presque toutes flétries, vieilles, et la disposition malade de langueur éclate de nouveau dans les maladies qui les attaquent pendant le cours de leur vie ....."

Then describing the mothers, he says: "Les femmes sont très fécondes, conçoivent même quelques jours après l'accouchement le foetus qu'elles portent dans leur sein absorbant toute la nutrition disponible, le nourrisson se trouve dans une condition tres-défavorable au développement du système osseux".

Then he makes the following important observation about the health of the recruits in the army.

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(1) Lautour, J.B. "L'Etat Hygiénique De l'Égypte" Revue de L'Orient, 1844, Vol. IV, p.35.

"On recrute pour l'armée des jeunes gens de douze à quinze ans; bientôt après leur incorporation ils tombent malades, ou maigrissent considérablement, par suite des fatigues inhérentes à l'état militaire. Pour compléter les cadres de l'armée le gouvernement a souvent enrôlé des hommes de trente à cinquante ans, et même davantage: en sorte que les individus du dernier âge sont appelés à partager le sort des enfants de douze ans..... C'est sur de pareilles constitutions que sévissent spécialement <sup>(1)</sup> les maladies épidémiques, notamment la peste".

This is the portrayal Lautour gives of the health of the Egyptian peasants. He is clearly asserting that the peasants were in a poor state of health, and he is giving the impression that ill-health was not restricted to a certain class but was universal among the rural population.

Further, Lautour tries to account for this state of health. He attributes it to the malnutrition of the peasants. He describes the food of the fellah and concludes that it was very poor and insufficient for health. And he accuses this malnourishment for the common diseases of Egypt; rickets, diarrhoea, dysentery, "cachexie aqueuse", "disposition scrofuleuse", plague and with the long tedious convalescence of the sick.

In his own words, "J'ai souvent observé chez les fellahs de la basse Égypte des affections secondaires de cette nutrition primitive incomplète; avant d'avoir atteint un âge avancé leurs extrémités articulaires se tuméfient, s'ulcèrent ou s'indurent..."

(1) Lautour, J.B.,

Op. Cit.

p.37.



"L'Egyptien manque d'aliments nécessaires à son entretien; il est forcé de se nourrir de substances nuisibles à la santé - et réduit à manger du mauvais pain de maïs, du fromage salé, très sec, des poissons salés, mal déséchés, à demi putréfiés, répandant au loin des odeurs repoussantes..."

"En résumé, la nourriture des fellahs ne se compose que de mauvaise viande, et beaucoup plus souvent de fruits verts aqueux, d'herbes mucilagineuses. D'où il résulte que la qualité du chyle correspond à cette alimentation: ce qui donne suffisamment l'explication de la vieillesse prématurée, de l'asthénie des viscères, de la diarrhée, de la dyssenterie et de la cachexie aqueuse, toutes maladies très-fréquentes en Egypte" (1).

Lautour even relates the frequency of eye diseases in Egypt with malnutrition. He says referring to malnutrition,

"On peut encore rapporter à cette influence le plupart des maladies des yeux qui s'observent sur les Egyptiens."

Le professeur Megendie à déjà prouvé, par d'ingénieuses expériences que, la nourriture végétale continuée trop longtemps chez des animaux dont l'organisation réclame un régime plus animalisé, ceux-ci finissent par devenir aveugles: or, les expériences du savant physiologiste de Paris se trouvent confirmées par le fait énoncé précédemment...."

"Cependant, il me semble que le mauvais régime prédispose ces pauvres gens aux taches de la cornée lucide, à

son opacité complète, au développement de la cataracte, tandis que les ophthalmies proprement dites naissent plus directement des causes dont l'air atmosphérique est le véhicule". (1)

Although, the above statements, in the light of modern knowledge, lack exactness and precision, yet they are very interesting as they prove that he had suspected that malnutrition of the Egyptians during the reign of Mohammed Aly had been responsible for much of the ill-health he observed among them.

Side by side with these pictures of ill-health of the Egyptians, Lantour also gave detailed portrayals of their poverty and their social life. These portrayals are very illustrative and exact and prove that he must have lived long and mixed intimately with Egyptian social life in the villages. He wrote, "Ne croyez pas tout ce que l'on écrit sur l'Égypte! on vante la civilisation de cette contrée, parce que Son Altesse se promène en bateau à vapeur de Rosette jusqu'à Thèbes; mais on ne vous dit pas que les quatre-vingt dix-neuf centièmes des fellahs marchent nu-pieds; on se donne bien de garde de vous faire connaître que la récolte de céréales se fait en les arrachant, et que les mains sont le seul instrument dont on se sert pour nettoyer les canaux".

"Depuis le mois de juillet 1837 jusqu' en mars 1841, j'ai constamment habité le Delta et parcouru les autres provinces de la basse Égypte, dont j'ai successivement visité presque tous les villages. J'ai souvent pénétré dans la hutte du pauvre

fellah, j'ai partagé son pain de doura et ses oignons crus; j'ai couché sur sa natte déchirée, ou les poux, les punaises et surtout les puces m'épargnaient si peu que le lendemain ma chemise était tout ensanglantée, et mon corps couvert de piqûres. J'ai vu les enfants des paysans courir après moi pour me demander l'aumône, ayant les yeux chassieux, ulcérés, remplis de mouches.

"Vouloir donner des renseignements sur l'état social de l'Égypte, c'est prendre une tâche d'autant plus pénible et désagréable, qu'il faut s'attendre à rencontrer partout des incrédules....."<sup>(1)</sup>

Another writer, whose books I have read to observe his opinions about the health of Egyptians, and to see if he had connected the public health with their material well-being... was Antoine Barthelemy Clot known as "Clot Bey".<sup>(2)</sup> He had written a number of medical books about Egypt and Egyptians. I was specially interested in his books as he was the chief medical figure in Egypt at that time.

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(1) Lautour, J.B. Op. Cit. p.30.

(2) Clot Bey was a french physician who in 1825 arrived in Cairo as physician and surgeon in chief to the French Army. When Mohammed Aly became viceroy, Clot Bey became chief surgeon to him. At Abuzabel, near Cairo, Clot Bey founded a hospital and schools for all the branches of medical instruction; and instituted the study of anatomy by means of dissection. "To him the honour is due of inaugurating a new era, not only in hospital reform, but in Egyptian Education" (Acland, T.D. St. Thomas's Hospital Gazette, 1908, Vol. XVIII, No. 8, p.173). In 1836 he was appointed head of the medical administration of the country. Besides hospitals and schools of medicine, pharmacy and midwifery, he introduced in Egypt sanitary and quarantine departments and vaccination against smallpox.

He had a book about Plague titled "De la Peste observée en Egypte". In this book he grouped all the different opinions expressed by different authorities about the origin of plague. It is to be noted from the description of symptoms and signs that other fevers used to be mixed with plague and diagnosed as such. Some of the theories expressed in this book correlate poverty with plague. For example, Clot Bey wrote "Cependant on a remarqué, et c'est du reste un fait qu'on observe dans toutes les épidémies, que les malheureux qui vivent entassés dans des quartiers sales et mal aérés, de même que ceux qui souffrent de toute espèce de privations, ont fourni de nombreuses victimes au fléau".<sup>(1)</sup>

Among the opinions of doctors who had observed the epidemic in Egypt in 1834-1835, he gave the following opinion of M. Emangard who had divided the causes of plague into general and predisposing. "On est forcé" he said, "d'admettre que l'atmosphère en Égypte est le véhicule d'une cause générale ou première dont l'action s'exerce de préférence sur les individus prédisposés ... Cette explication donne la raison pour laquelle la classe malheureuse, mal nourrie, mal vêtue, passant sa vie dans des lieux infects, entassée par famille sur des haillons fétides, devient surtout la proie des épidémies; comment les intempérans, quels que soient les excès auxquels ils se livrent ne sont pas épargnés".<sup>(2)</sup>

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(1) Clot, A.B. De la Peste Observée en Egypte, Recherches et Considérations sur cette Maladie, par A.B. Clot Bey, Paris, 1840, p8

(2) Clot Bey, A.B. Op. Cit. p.210.

Among the medical opinions before the French Expedition to Egypt, Clot Bey quoted the significant report of Deidier who was reporting on the plague of "Marseille" of 1719. He wrote: "Deidier rapporte que, durant l'été de 1719, les chaleurs et la sécheresse furent excessives, qu'il n'y eut presque pas de récolte de blé, peu de lin, peu d'huile; ..... enfin, que pendant les quatre mois qui précédèrent la peste, le peuple se nourrit d'un mélange de blé du Levant avec un tiers d'orge, d'avoine et de seigle".<sup>(1)</sup>

Besides, Clot Bey constructed a table in his book to summarise the different theories put forward to explain the origin of plague by different sources at different times. Among these theories he put "famine" and "destitution" as causes for the occurrence of plague.<sup>(2)</sup>

However, it does not seem to me that Clot Bey was really convinced of the big role played by poverty in the occurrence of fever epidemics. I had searched all through his many books about Egypt, but I did not find anything more about the relation between poverty and disease than the few lines I quoted before and the table I referred to. It appears that the writer wanting his table to be exhaustive, included famine and destitution among the possible causes of plague. He did not seem really impressed by their role; and if he had devoted some lines to them, that was probably only because he was trying not to miss any theory

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(1)(2) Clot Bey, A.B., Op. Cit., pp.198; 213.

N.B. I gathered from Clot Bey's book that some different fevers were included under "plague".

that had been mentioned by any authority before. There is no evidence that he really conceived the manifold ways in which poverty helped the spread of epidemics.

I was concerned to know his exact attitude in this subject as he was the chief advisor of Mohammed Aly on health administration, and he was enjoying the confidence and the trust of the Pasha. If Clot Bey had really recognised the relation of poverty to health, that would have been of some significance. Again, Clot Bey was entrusted with the health administration of the army. Mohammed Aly was very enthusiastic about forming a strong army; and it was because of the needs of the forces that Mohammed Aly constructed the medical school and hospitals. Thus if Clot Bey could have recognised the intimate relation between poverty and health, he could have advised Mohammed Aly that to form a strong army, one should first ensure the health of the people by raising their living standard. He could have told him that in order to recruit strong forces, he should not impoverish the population. According to Lautour, who was serving in Egypt at that time, the army could not get enough recruits among the young people because they were not healthy, and their weak constitution could not bear the hard military life, and for this reason the Government in order to complete the army ranks had to resort to recruiting men between 30 and 50 years. <sup>(1)</sup> What a pity Clot Bey did not realize the cause and the solution for that problem.

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(1) Lautour, J.B.

Op. Cit.

p.37.

Another interesting medical work which refers to the relationship of disease to the poverty of the Egyptians is that of Dr. F. Pruner. He describes an epidemic of typhus among the troops in Cairo in 1836-7, when no less than 3,000 cases were admitted to Kaso el-Army hospital, Cairo, out of a total of 7,000 sick. Pruner states that the patients filled up not only the wards but also the corridors, and that they communicated the disease to many of the physicians and to  $\frac{2}{3}$  of the attendants in the hospital. It is interesting to notice that Pruner attributed this epidemic to the following causes, "the soldiers were unhappy, unwilling conscripts, who had been made to march long distances under circumstances of great cruelty; they were terribly overcrowded in barracks, and fed on diet to which they were unaccustomed".<sup>(1)</sup> He also mentions that typhus was "very common" at his time in Egyptian factories, "because the workmen were shut up in hermetically closed rooms to prevent their running away".<sup>(2)</sup>

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(1) Pruner, F., *Topographie Médicale du Caire*, Munich, 1847. Cited in Sandwith, F.M., *The Medical Diseases of Egypt*, Pt. 1, London, 1905, p.15.

(2) *Ibid*, p.16.

Decrease of Population During the Reign of Mohammed Aly

There were no statistics in Egypt which could tell us much about the condition of health and the effects of impoverishment on it during the reign of Mohammed Aly. There was no reliable system of births and deaths registration, and there was no accurate census of the population. However, there are some estimates of the population of Egypt that may be of significance.

During the French Expedition in Egypt, E. Jomard<sup>(1)</sup> in his report about the scientific studies made then, estimates the population as 2,488,950; but A. Bionet,<sup>(2)</sup> in 1886, quoted the estimate of the French Expedition as being 2,460,200. This later figure has been used ever since by the Egyptian Statistical Department.

In 1823, Felix Mengin<sup>(3)</sup> made an estimate of the population according to the numbers of houses in the provinces and in big towns, and he ascertained these numbers from the lists of taxes levied on houses. He calculated the number of population by assuming that in Cairo eight people lived in one house and in the Provinces four. He decided on this assumption by making some preliminary surveys. His estimate was 2,514,400.

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(1) Jomard, E., Description de l'Egypte, 2<sup>ème</sup> Edition, Vol. IX. Cited by Cleland, W., "The Population Problem in Egypt", Lancaster, Penn, 1936, p.7.

(2) Bionet, A., Bulletin of the Egyptian Institute, 1886, 2nd series, No. 7. Cited by Cleland, W. Op. Cit, p.7.

(3) Mengin, F. Histoire de l'Egypte sous le Gouvernement de Mohammed Aly., Paris, 1823, Vol. II, p.317.



(1)

E.W. Lane, writing about 1835, referring probably to this estimate (although he did not mention Mengin) asserted that the computation approximated very nearly to the truth at its time. However, he believed that the population at the time when he was writing (1835) was much reduced. He believed it to be less than two millions.

Naturally, much weight should not be put on these estimates; however they can give a rough idea. The fact that after about 25 years from the French Expedition the population was only very little more (25,450); and after about another 10 years the population was reduced by more than 514,400 gives a rough idea about the condition of health in the country during these years. Especially so as it had been recorded by all writers that the Egyptians then were as fond of offsprings as they are now, and that Egypt had always had a high birth rate. (The birth rate per 1000 was 42.7 in 1945 and it was 49.8 in the towns of lower Egypt in 1886-1890.)

(2)

These estimates confirm the observations of the different writers who wrote about Egypt at these times and had agreed that the population had been greatly thinned during the time of Mohammed Aly. A large number of sources concurred that at the end of his reign, the population of many villages was so thinned that the land could not be cultivated. One of these

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(1) Lane, E.W., An Account of the Manners and Customs of the Modern Egyptians; 1st Edition, London, 1836, p.25.

(2) Kamal, A.M., A Statistical Review of Births and Deaths of Children in the 19 Principal Towns of Egypt, Cairo, 1932.

(3) Lancet, 1845, Vol. I, p.161.

sources was Yates who stated that the Pascha had so completely thinned the population, that in 1833, it was only by the greatest exertion, that a sufficient number of hands could be raised to bring down the cotton, and to gather in the grain, two of the staple commodities of the country. (1)

Again A.A. Paton describes this depopulation and how it led to an incomprehensible chaos in the finance of the country and how Government became unable to collect taxes. He states that this state of affairs aroused panic among the Government officials and that the Council of Cairo found it necessary to make a frank report to Mohammed Aly describing the deplorable state the country had come to. (2)

Again J.A. St. John gives evidence to this depopulation by relating a questionnaire of a Sheikh (head) of one of the villages in Egypt. The answers of the Sheikh reveal that the population of this village had been reduced to less than one half, and this was attributed to ravages of disease. (3)

The quoted estimates, and the statements of different writers tend to indicate that the population in Egypt in the space of 40 years, not only did not increase but also was reduced. I think this is significant and tends to corroborate the portrayal I have given in the foregoing pages of the extreme poverty and the low standard of health of the country in this era.

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- (1) Yates, W.H.            Op. Cit.            Vol. I, p.119.  
 (2) Paton, A.A.            Op. Cit.            Vol. II, p.233.  
 (3) St. John, J.A.,        Op. Cit.            Vol. II, p.465.

COMPARATIVE STUDY WITH BRITAIN

"Le Vice-Roi étant seul maître des propriétés foncières, il est de son intérêt d'améliorer le sort des fellahs. On voit facilement au physique de ces hommes qu'ils sont dans un état de malaise continuel. Leurs chaumières ne sont point aérées, elles sont himides et malsaines. Il serait facile de bâtir dans les villages des habitations mieux appropriées qui réuniraient le double avantage de l'aisance et de la salubrité, ... les fellahs sont mal vêtus, pendant l'hiver ils devraient être habillés plus <sup>(1)</sup> chaudement".

How wise and true. These are the words of Felix Mengin (the friend of Mohammed Aly). He is repeating again the fact that it is in the interest of the ruler to care for the health of the people, or in other words the very old maxim "without health there is no wealth". Besides he is indicating that to raise the health of the people, the vice-roi should care for their well-being and avail them with clothes and good homes. He also realised the necessity for good nutrition as he added "l'homme voué aux travaux de la campagne a besoin de bons alimens" <sup>(2)</sup>

Thus the writer besides assessing the dependence of wealth on health, has also recognised the relation between material well-being and the health of the people. How much Mohammed Aly needed this lesson. He does not seem to have been interested in the

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(1) Mengin, F. Op. Cit. Vol. II, p.318.

(2) However, the writer considers, incorrectly, that the diets of the Egyptian peasants which he described as consisting of maize bread, beans, lentils, onions, cucumber, water melon, "ne sont point malfaisans". p.318.

health of the fellahin, nor is there anything to indicate that he realised how much ill-health results from poverty. There is nothing either to show that he even cared.

However, in another country, far away from Egypt, the years during which Mohammed Aly reigned, were the beginning of a new era, in which the extreme value of health was spreading quickly in the national mind, and the connection between poverty and health was gradually recognised by the society. This country was Great Britain. It is true that this connection was not fully recognised at first; but at least it was then laid down the basis on which later in the century was built the gradual understanding of the role of poverty in the causation of disease.

It is interesting to compare the conditions in Britain then which favoured or hindered the gradual recognition of the importance of privation as an influence on health and the conditions in Egypt, where such recognition did not occur during the whole of the 19th Century, and does not seem to have occurred up till now. What were the factors that had allowed and helped the evolution of public health in Britain, and what were those that had not allowed such evolution in Egypt? What were the elements which had favoured the birth and progress of social and health movements in Britain and which were lacking in the life of Egypt?

#### (I) Political Life

I regard that the great difference in the political life of both countries can account satisfactorily for their different social and public health histories. In Egypt,

there was no Parliament and no public opinion. The country at that time was part of the Ottoman Empire, and although theoretically Mohammed Ali was a representative of the Sultan of Turkey, yet he was almost an independent dictator of Egypt. The people had no word in the administration of the country. Besides, the concept of a Government in that part of the world to which Egypt belonged was totally different from that which had existed in Britain at that time. The object of the ruler was not so much care for the welfare of the people as to have a stronghold of the country.

Moreover, the Government officials, or Mohammed Aly's agents were almost all Turkish in origin. Thus the ruling dominant class in Egypt was constituted almost entirely of Turks. This class used to regard the Egyptian peasants as an inferior species of human beings. Up till recently the word "fellah" had been an insulting word in Egypt. The Egyptian peasant was thought of as a dirty, lazy, slothful creature, who should be dominated and oppressed in order to be managed. This was the general trend of thought of the ruling class. The extremely low life of the Egyptian peasant make them identify him with dirt and repugnancy and imagine that these were inseparable elements of his nature. And this mode of thinking was clearly reflected in the way they administered the country.

They could not conceive that this despicable lower grade of human beings, the fellah, could ever be changed. Moreover, they had an idea, of which we can see some traces up till now, that the fellah should be kept in a low state, otherwise it would be difficult to suppress and control him. One could not expect from such a ruling class any care of the wellbeing or the health of the fellah.

On the other hand in Britain there was a Parliament and a free political life. The political power was not in one hand but was shared by more than one class. And although the lower classes were not at first well represented, yet their cause was often espoused by some of the favoured class; and the Parliamentary life gave these a chance to defend and fight for this cause. And it is significant to notice that as the franchise was extended and as Parliament became representative of more and more classes, there was more and more progress in public health and social legislation and more and more care was devoted to the poorer section of the population. (1)

Again the machinery of the Parliamentary system helped a lot to arouse the interest of the public in the different health and social problems. In the first half of the last Century Parliament had appointed a large number of Committees and Royal Commissions to inquire into the problems of the poor. These used to listen to large numbers of witnesses from different classes.

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(1) Frazer, W.M., A History of English Public Health, 1834-1939, London, 1950, p.12.

This naturally tended to stimulate study and to arouse interest in the different health and social questions of the time. Moreover, it helped to reflect the different public trends and to make use of the experience of different authorities in different fields. It was in this way that the opinions of Alison and his disciples on the injurious effects of poverty on health were known and published in the Reports on the Sanitary Condition of the Labouring Population of Great Britain.

Again the free political life helped the development of social thought outside Parliament, and allowed writers and philosophers to study the problems of society and to advocate new ideas and new solutions. And these in turn used to influence the general trends of thought, politics and the course of legislation. It was this atmosphere of political freedom that allowed Alison, Kingsley, Ruskin etc., to think along new lines and to teach new concepts. And it was this freedom of thought that gave an impetus for the very numerous writings and publications in the last Century about poverty and the conditions of the poor. Besides, this political freedom allowed the evolution of different movements espousing the cause of the unfavoured classes, such as the Sanitary Movement in England, the Anti-poverty Movement in Scotland, and the Anti-Corn Laws League, all of which had succeeded eventually in changing the course of legislation. If Alison, Simon and Chadwick had been Egyptians, they could never have had, under the reign of Mohammed Aly, either the opportunity which they were given under the parliamentary system to fight for public good, or the stimulus for thinking and research which

existed in the democratic political life. An advisor of a dictator is in a different position from the reformer in a parliamentary system. He had to adapt his ideas and even his mental attitude and line of thinking to the policy of the dictator. I doubt if any of Mohammed Aly's advisors could have found enough impetus in the political pattern around them to think in the problems of poverty or could be encouraged and listened to if they did.

## (II) The Industrial Revolution in Britain

Another factor which had led eventually to the birth and evolution of the Public Health movement in Britain, and later on to the recognition of the necessity to combat poverty in order to ensure health - was the Industrial Revolution. This revolution in the economic pattern of the country resulted in bringing suddenly into existence large urban communities. The growth of accommodation in towns could not keep pace with the increase in their populations and this resulted in the overcrowding of huge masses under extremely insanitary conditions. Moreover, the industries at first were subject to great upheavals and recurrent depressions which used to throw into unemployment large multitudes of workers. This tended to create bitter poverty and destitution in these newly urbanised populations. And even in ordinary times, the immigrants into the towns were much more than the demand for labour which resulted in a redundancy in the labour market and kept the wages low. These conditions were extremely favourable to the spread of disease and that is why the industrial towns were subjected to severe epidemics of fevers.



I have tried to give some evidences of this state of affairs in respect to Scotland in the first volume. (1) And according to W.M. Frazer the same thing occurred in the industrial areas of England. (2)

The epidemic fevers in the towns were not confined to the poor working class population, but spread to the whole society and threatened all the classes. This naturally aroused the concern of the more influential class. The diseases bred by poverty, which used to be so dispersed in the rural areas, and which were far away from the eyes of the ruling classes became, as a result of the industrial revolution concentrated in the towns, and for the first time menaced the lives of the rich as well as the poor. Naturally the influential classes could no more neglect such a danger which was threatening their own lives. This stimulated investigation into the condition of the poor and initiated inquiry into the causes of these diseases. And it was in the course of the investigation of the conditions of the poor that their misery and their privations were disclosed and attracted the attention of society.

It is significant in this respect to quote Gilbert Slater's description of how the public health campaign began in England. He says, "This campaign began in 1837. It was a year of bad harvest, rising prices and depression of trade. The first burst of railway building, initiated by the success of the

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(1) See p. 145-207.

(2) Frazer, W.M.

Op. Cit.

p.3.

Liverpool and Manchester Railway opened in 1830, had ended in a panic, employment shrank, and intensified poverty brought on an epidemic of typhus in London, not confined to the poorest quarters. Alarm spread in the West End and three distinguished medical men were asked to report on the causes"<sup>(1)</sup>.

So according to Slater the sequence of events was Unemployment in London .. Extreme poverty .. Resulting typhus .. Spread of the disease to the West End. This caused alarm among the better classes which stimulated research into the conditions of the poor. Slater might have dramatised it too much, but it is true that the interest in removing poverty became greater when the better classes recognised that it led to disease which was not confined to the poor, but used to spread to them and threaten the whole community. I may refer in this respect also to the evidence I have given in the first volume which tended to show how the severe epidemics of fever in the Scottish towns were among the factors that had aroused the interest in poverty and had initiated the movement for raising the standard of the poor.<sup>(2)</sup> All this was the result of the Industrial Revolution which accentuated poverty at first, and at the same time concentrated its evils in urban areas among the residences of the better classes.

Besides, the Industrial Revolution had changed the pattern of political power in the country. Frazer says,

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(1) Slater, G., Poverty and the State, London, 1930, p.106.

(2) See page 186.

"Progress in invention and in the organisation of Industry led to the factory system with all the evils as well as the advantages which such a system entails. .... The factory system, developing and extending year by year, had a profound influence on industry and on the health of the worker; it brought into being vast urban communities which lived under conditions of squalor and degradation; and on the political side it produced combinations of workmen, the employers' answer in the Combination Acts, trade unions recognised by law, strikes and the modern labour party".<sup>(1)</sup>

One of the political results of the industrial revolution was that it transferred some political influence from the landowners into the hands of the industrialists. Moreover, the industrial workers, being grouped together in the factory, became a political power, and, therefore, more attention was given to their needs than when they were working in agriculture. This had a definite effect on the course of events in the 19th Century, and it is significant that "the passing into law of the Reform Bill of 1832 was preceded by an agitation in the industrial districts of England which in many places threatened the civil order, and there is little doubt that Parliament, including the Duke of Wellington, was overawed by the public clamour".<sup>(2)</sup>

The industrial workers' movements and agitations during the 19th Century, which were sometimes menacing had kept what Carlyle called "the condition of the people question" vividly before the mind of the public. The society had to listen to the needs of

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(1) & (2) Frazer, W.M.

Op. Cit.

p.9; p.12.

the working classes, and had to try to better their conditions to ensure peace. This in turn had stimulated much research and investigation of the conditions of the poor, which eventually led to the discovery of the intimate relation between poverty and health.

Besides, the Industrial Revolution had also resulted in a revolution in the culture and thought. There appeared new classes in society and new problems in the life of the people and this led to the evolution of new kinds of literature. Philosophers and writers were devoted to the exploration of the new fields which opened before them. Light became focused on this new feature of society, the huge industrial working classes, and the men of literature became involved in portraying the hardships and sufferings they endured and thus the thought of the period began to be coloured by a socialistic tinge. This aroused the sympathy of society and helped to change the general trends of thought and gave a greater importance to the question of the "Condition of the people". I may mention as examples of this new literature "Mary Barton" by Mrs. Gaskell, "Alton Locke" by Kingsley and the writings of Carlyle and later of William Morris.

In Egypt, on the other hand, no industrial revolution occurred. Egypt is mainly an agricultural country and the majority of the population are agricultural workers. These had no political power and had been so dispersed all over the country that there had never been any kind of union of social or political importance between them. They used to suffer in silence and apathy, and they were so accustomed to tyranny and

oppression of the state for centuries that they just accepted it as a natural phenomenon. They were so used to and familiar with every species of despotism that they never thought to complain. Florence Nightingale was so astonished and annoyed with their contentment; she said "I assure you one never goes ashore without being sick with this state of things. It would be a thousand times better if the people were dissatisfied and turbulent. It is their content which is shocking. A contented mind is a perpetual curse".<sup>(1)</sup>

She could not understand or bear this contentment, because she was familiar with the industrial pattern of life. The life of the agricultural workers is different. It does not facilitate union and grouping, which is the only way that workers could discuss their conditions and rights and conceive the injustice of their life. It is only when the workers mass, that they can develop a common object, for which, as a group, they can fight, and thus compel the rulers to listen to them. The individualism of the agricultural worker does not allow him this opportunity.

Besides, the agricultural labourers in Egypt, being dispersed in the country, the evils of their poverty and diseases were not concentrated in one place as is the case in industrial countries, so these evils were not apparent and alarming to the better classes as is the case in industrial towns. Also being far away from the residence of the rulers, their poverty and diseases had not threatened the lives and the wellbeing of the better classes. The fire was far away from the homes of the rulers

(1) Nightingale, F., Letters from Egypt, London, .1854, p.39.

That is why very little interest was devoted to the fellah's poverty and disease. In evidence of this, I may mention that in contrast with the utter neglect of the welfare and the health in the rural areas, Mohammed Aly paid a great amount of attention to the prevention of plague in Cairo and Alexandria, where the ruling classes and the Europeans used to live. He made many applications to the foreign Governments to send him medical men to study this problem and a great amount of work was done in this respect. (1)

### (III) The Economic Policies

In Britain, a factor which had offered a considerable resistance to those who were defending the case of poverty and made the society turn a more or less deaf ear to the argument of the relation between poverty and health, was the teaching of the orthodox economists such as Malthus and Ricardo and their theories of "Laissez faire", "Free contract", "The Economic Man" and "Iron Law of Wages". These doctrines so much affected the public mind that they became almost sacred principles that no one could question. It is perhaps because they were found so essential for the flourish of Industry, and the industrial interests, that they shaped the general mind in their own pattern, and became an important characteristic feature of the Nineteenth Century thought. They became almost such an unquestioned common sense that even they were admitted by the great public health workers, like Simon, who could see and show the disastrous evils of poverty on health.

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(1) Clot, A.B.

Op. Cit.

He would think of all possible solutions for his poverty and public health problems short of questioning these sacred laws of political economy. He would explore any unknown land in the field of poverty and public health but would not step in the sacred land of "Laissez faire" and "Free contract". The public opinion was ready to listen to arguments of poverty and health, but not if these did not agree with the unquestioned theories of political economy. The general trend of thought could not easily question the principle that wages should be fixed only by the free play of competition, and that the State should refrain from interfering with industry, and should let the forces of competition alone determine the degree of material wellbeing of different classes of the community.

And there is no doubt that such beliefs and principles had been strong impassable cultural and political obstacles in front of the purpose of those who were working in the fields of poverty and public health. Alison had devoted all his life and his energy to try to shake and invalidate these sacred principles which were standing in front of the cause for which he was fighting, but they were stronger than his sound reasoning and arguments. "There is little doubt", Frazer says, "that the teachings of the orthodox economists influenced the various governments in whose hands the destinies of this country rested during the greater part of the nineteenth century, . . . . . When it is mentioned that the economists influenced the Government and therefore the course of legislation, it is not meant to imply that this influence - judging from the standpoint of a century later - was necessarily

beneficial to the community as a whole. Their theories about competition and the freedom of contract - even contracts between such unequal parties as employers and largely unorganised workpeople - led them to view with suspicion the immature beginnings of social legislation, and in the campaigns for the extension of the various Factory Acts passed during the first half of the century they were usually to be found in the camp of the opposition. But the leaders of economic thinking like Malthus, John Stuart Mill and Ricardo typified in their doctrines something of the ruthless, competitive spirit of an age in which this country, the first to be fully industrialised, laid the foundations of its wealth and prosperity".<sup>(1)</sup>

In Egypt, again, the economic system of Mohammed Aly was the root of the evil, and had led to the impoverishment of the people and the deterioration of health. But, there is no real resemblance between the economic systems of the two countries, and it is very unfair to compare the effects of the theories of the British orthodox economists, however unfavourable, with the tragic results of the economic policy of Mohammed Aly. In fact Mohammed Aly's policy was the other extreme of the teachings of the British economists; and the British writers such as Paton were of the opinion that Mohammed Aly was completely ignorant of the A.B.C. of political economy and that his policy was leading to results quite opposite to those he intended.<sup>(2)</sup>

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(1) Frazer, W.M.

Op. Cit. p.55.

(2) Paton, A.A.

Op. Cit. Vol. II, p.226.



#### (IV) General Trends of Thought on Poverty

One of the main obstacles in Britain that had hindered the growth of understanding of the connection between poverty and disease was the attitude of the culture towards poverty. The general trend of thought early in the Century was that the poor were responsible for their destitution and that a liberal relief of the lower classes would kill the spirit of independence among them and that the main assistance that the upper classes could give to the poor should be moral and religious education. This general trend of thought might have evolved partly as a result of the teachings of the political economists of the time. But I do not think that these were the only factors that could explain its evolution; and that is why I am discussing this point under a separate heading. It may even be said that the political economists were merely reflecting the attitude of the whole culture; although naturally their doctrines tended to support and maintain this way of thinking about poverty. The development of this general trend of thought might have been the effect of the Industrial Revolution, the competitive spirit it had inoculated into society, and its need for the new ethics of independence, endurance and toughness.

Again it may be the effect of another psychological factor. The poor labouring classes then were usually more indulged in habits, which were considered as shocking vices by the industrious religious society at that time. This tended to make the upper ranks identify poverty with vice. The human beings are always

inclined to ascribe the bad consequences to what they consider most evil. That is why the Victorian strict society was attributing poverty to the vice and the immorality of the poor. And it is significant that the men of religion were mostly on the side of Dr. Chalmers who was the sponsor of that view and not on the side of Alison. I regard this as one of the factors that had contributed to the general public opinion on poverty at that time. Another factor probably was the increase in the burden of pauperism as a result of the maladministration of Poor Laws and the payment of rates in aid of wages.

This general trend of thought on poverty was behind the reluctance of most people to accept the idea that the only way for better health was to prevent destitution. It was behind the prejudice of Chadwick and the Sanitary School to Alison's ideas. Moreover it was behind the attitude of the legislator and the State towards the poor, and behind the spirit with which the Poor Laws were administered.

In Egypt, the society was totally different. The small dominant class used to regard the poverty of the fellah as a natural condition which he deserved. He was never thought to be worthy of anything more than he was getting. In fact it was repeatedly reported that the fellahs used to conceal any fortune they might get and to assume the most miserable appearance for fear of confiscation. They were sure that if their rulers would suspect that they were keeping anything,

it would be extorted from them in the most cruel ways. (1)

"The man who is decently dressed in his tent" says F. Nightingale while speaking about Egypt, "will come into the city like a beggar. If he is suspected of having property, he is bastinadoed.... The Arab would be the most thriving man in the world under any Government but this". (2)

#### (V) Education and Progress of Science

Another reason why the effect of poverty on the public health in Britain took a long time to be recognised and studied, and took a longer time to be believed in by the public opinion ... is the lack of sufficient scientific knowledge about the real causes of disease, and exact information about how diseases are originated and propagated. The science of preventive medicine in the beginning of the 19th Century was still in its infancy, and was completely in the dark as regards the causes of disease. (3) So was also the science of nutrition. The lack of exact knowledge on these subjects gave rise to all sorts of speculative theories about the origin of disease. This allowed everybody to choose the theory that would suit his political and social thought and he was sure to find in the contemporary medical literature a large amount of evidence in its support. Society and the State at that time were naturally more predisposed to

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(1) Nightingale, F. Op. Cit. p.15,  
and Harcourt, Francois-Charles-Marie, duc d', Op. Cit, p.9.

(2) Nightingale, F. Op. Cit. p.15.

(3) Frazer, W.M. Op. Cit. p.3.

like the theory of "effluvia" advocated by the Sanitary School rather than the idea advanced by Alison. The idea to supply drains could be accepted, but it was not conceivable to prevent poverty. And as science then had not said a definite word on the subject, this allowed them to choose the easier way. And it was only when science discovered the manifold ways in which poverty affects health, that Alison's ideas became universally accepted and adopted.

The effect of the lack of scientific knowledge on the attitude towards poverty and health is even more prominent in the case of Egypt. In Egypt at that time, the greatest majority of the population were illiterate and there was no knowledge at all of science and scientific ideas. And the ruling class was no further advanced in this respect than the people. The public opinion then used to believe strongly in the supernatural origin of disease. And this could apply not only to the fellahs but also to the Government and the rulers. This belief in the supernatural origin of disease was intimately connected and mixed up with the religious beliefs and was considered as an act of faith. The men of religion used to consider it irreligious to think otherwise and to accept the European ideas in this respect. These beliefs even exist up till now in a considerable section of the population and this in itself shows how little science had affected the general thought in Egypt during the last Century and how little scientific development occurred.

This belief in the supernatural origin of disease had hindered and still hinders the development of public health in

Egypt. As long as the people and the rulers had a deep faith that disease was determined by supernatural forces, as a punishment or as a test, they could not be expected to devote much attention to preventive medicine or to detect the influence of poverty on health. The position in Egypt then was similar to the position in Europe during the middle ages. The general belief in the supernatural origin of disease in mediaeval times, and the attitude of the mediaeval churches towards science was a great obstacle to the development of preventive medicine and public health. (1) The "Ulema" or the religious heads in Egypt adopted the same attitude of the mediaeval churches and carried out the same role. Acland gives us an example of their hindrance to the development of science in Egypt. While speaking about the difficulties which Clot Bey encountered in introducing medical science in Egypt, he says "Amongst other things we are told that so great was the prejudice against dissection that he had to commence on dogs, and not even on Moslem's dogs, but on the dogs of Jews and Christians. Little by little he was permitted to use the bodies of Christians and black slaves, though the Ulema had declared that the dissection of the human body was against the tenets of Islam". (2)

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(1) Frazer, W.H. Op. Cit. p.4.

(2) Acland, T.D., St. Thomas's Hospital Gazette, 1908, Vol. XVIII, p.174.

(VI) Growth of Humanitarianism in Britain

In Britain, another reason which had helped the research into the conditions of the poor and led to the exploration of the different connections between poverty and public health, was the growth of the humanitarian movements in the 19th Century. It is true that these movements did not always attack the root of the evil. It is also true that the humanitarian feelings were more shocked with the "indecent" of the conditions of the poor rather than with their poverty, and that they thought that the main way of saving the poor was to instruct them in moral ideals and principles. This all may be true, but, however, these humanitarian movements had helped, even unintentionally to solve some of the problems of poverty in the field of public health. An example of that is the problem of housing of the poor. This problem attracted the attention and aroused humanitarian feelings not only because of the effect of overcrowding and unfit houses on the health of the people, but mainly because of the indecent and immorality which were some of the results of overcrowding. However, this interest in the housing of the poor had eventually stimulated study of the effect of this problem on health and had resulted in legislation to improve the condition of the lodgings of the poor classes. Besides, the humanitarian movements made the public opinion welcome and listen more to all kinds of investigation and researches in the conditions of the poor. In other words they prepared the soil unintentionally for the growth of interest in the health problems of poverty.

In Egypt, on the other hand, the only cries of humanitarian and sympathetic feelings with the poor fellahs were those of the European writers. There was no evidence of any voluntary efforts or work in the social field. There was a sort of voluntary charity called "El-Zakat". This is one of the laws of the Islamic Religion. The moslems are required by their religion to give to the poor a certain proportion of their incomes yearly at a certain date. Those who obeyed the rules of their religion used to give this "El Zakat" regularly to the poor. However, this form of charity only existed in the few towns where the better classes used to live. Moreover it could never have been enough to meet completely the needs of the poor, even if this religious duty had been strictly carried out by all the Moslems. Besides, the religion gives the individual the choice to distribute his charity in the way he likes.

Besides, "El Zakat", there was a kind of charity called "Wakf" (legacy unalienable by law). This was occasionally directed to the relief of certain classes of the poor. But that was not always the case; and many charitable Wakfs were mainly meant for the benefit of mosques and religious institutions. Besides the revenues of the Wakfs had always been subject to corruption and inexactness. So, I do not think that the Wakfs had been of much value in solving the problem of poverty.

But apart from these individual charities there was no form of organised voluntary system of relief of the poor. I need not say that there was no law in Egypt corresponding to the

Elizabethian Poor Law which had existed in Britain since 1601 and which had been, in spite of its shortcomings, an expression of humanitarianism in the British society. (1)

(VII) Mohammed Aly's Wars

During the administration of Mohammed Aly, Egypt was driven into a hard political strife for the purpose of fulfilling Mohammed Aly's ambitions. He devoted most of the resources of the country and most of his attention to the formation of an army and a fleet, which were involved in a large number of long wars. These demanded a great amount of expenditure, which he could provide only by pressing harder and harder on the fellah. Thus these long wars were one of the main factors that had led to the deterioration of the condition of the people at his time. Egypt was no exception in this respect, as impoverishment seemed to be an accompaniment of long wars at these times. They seemed everywhere to have resulted in an anti-reform spirit and in a lag in social progress.

The British history of the 19th Century gives us an example of the effect of wars in impoverishing the poor classes. This example is the Napoleonic wars (1793 - 1815). Trevelyan in his "English Social History" described how these wars had led to violent disturbances of economic life, .... to great fluctuations of unemployment "which increased the suffering of the English working class", ... to a raise in the price of bread

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(1) Simon, Sir John, English Sanitary Institutions, 2nd Edition, 1897, pp.460 & 448.



from which the poor "suffered terribly", ... to the setting up of the cheap and nasty model of urban industrial life, and to increasing the gap between the poverty of the poor, "who suffered by the war", and between the wealth of the landed gentry who "at no period had been wealthier". The wars had created "a mood of (anti-Jacobin) reaction against all proposals of reform and all sympathy with the claims and sufferings of the poor" and had obscured the humanitarian spirit of the Eighteenth Century. There was a danger of starvation in many rural areas. Poverty, which (1) "had been an individual misfortune" became "a group grievance".

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(1) Trevelyan, G.M., English Social History, London, 1945, p.463 & 466.

CHAPTER II

THE LAND OF POVERTY AND DISEASE UNDER THE

NEW MASTERS

ABBAS, SAÏD AND ISMAIL 1848 - 1879

THE 1878 FAMINE

In 1878, there was a famine in Upper Egypt. I have chosen the history of this famine to discuss because it reflects the picture of the political and social life of Egypt at that time. It was a symptom of the social and political maladies of Egypt, and in its occurrence contributed almost all the malignant systems that existed in the country then. Besides, it tells again the story of how poverty leads to disease, and illustrates the intimate relation between both.

The direct predisposing cause for the famine was a low Nile in 1877 and a very high Nile in 1878. The Nile, which has always been the source of all life and prosperity in Egypt, had also been the cause of many disastrous famines that had occurred in our history.

Egypt has been mainly an agricultural country whose people live mostly on the products of cultivation. As there is very little rain in Egypt, agriculture is totally dependent on irrigation by the Nile waters. The level of the Nile water changes and is high in summer, where there is a seasonal Nile flood (inundation), and low in winter. Besides, it varies from year to year according to the amount of rain falling in East Central Africa and in Abbyssinia. The water of the Nile, then, had not been regulated enough by the different engineering devices that exist now, and so when the Nile was too low, it used to leave a large proportion of the arable land unirrigated, and when the Nile flood in summer was very high, it used to destroy by flooding

the cultivated crops. In either case it used to lead to shortage of the products of agriculture.

In 1877, the Nile was very low, and thus large areas of the soil of Egypt were not irrigated and thus could not be cultivated. This was followed in the next year (1878) with an extremely high Nile which flooded and destroyed a great extent of the "Doura" (Maize) crop, which is the staple food of the fellah. This was the direct cause of the famine that occurred in the year 1878.

But the real deep cause of the famine was the very low standard of the fellahs and the constant state of poverty in which they had always been living. This accentuated the effects of these Nile fluctuations and made them more apparent and conspicuous. The fellah had always been living on the verge of starvation. So when the Nile floodings occurred, this was the last straw needed to break the camel's back.

This was also the opinion of Sir Alexander Baird who was asked by the Egyptian Government to investigate this famine. He wrote in his report "The peasants in those districts which have suffered most severely from famine are almost all without capital, steeped in poverty, and trusting to the Nile for their means of living, and paying their taxes from year to year. When, therefore, (as happened in 1877) the Nile is so low as to leave unirrigated a large proportion of the arable land, and is followed by such an extremely high Nile as that of 1878 which destroyed by flooding a considerable extent of the Durra crop (maize), the state of the poorest class becomes very deplorable,

and having no capital laid up as a reserve to fall back upon, they are forced to beg, steal or starve".

"Even under ordinary circumstances, the Egyptian peasant leads a life which has little that is attractive to European eyes; his food consists of coarse durra bread, with beans, lentils and onions, and various weeds; he wears scanty clothing of cotton or rough home spun woollen cloth and sleeps in a mud hut or in the open air..... The worst feature in his life is his chronic state of indebtedness, either of the Government for arrears of taxation or to the merchant who supplies him on credit with seed corn and corn for his household, to be repaid with exorbitant interest when his crops are ripe. The merchants for the most part are Europeans, and are always ready to make advances to the needy peasant provided the interest is high enough; the fellah called upon to pay his taxes, at a moment when his crops are still unripe is compelled to borrow and is not in a position to wrangle about the interest. ...."

"There is no poor law or any system of relieving the poor, and they depend entirely on the charity of those able to help them. The Egyptian peasant is very charitable, and will share his meal of bread and roots with any one poorer than himself, but when he has hardly sufficient for himself he cannot do much to assist the paupers, consequently the latter have suffered severely during the past year".

"Such being the condition of the population, it cannot be a matter of surprise that the disastrously low Nile of 1877 should have caused distress and famine".<sup>(1)</sup>

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(1) Baird, A. Report of the Famine of Girgeh, Kenneh, and Esneh, Cairo, 1879, pp.1-3.

But the Nile flooding was not the only hardship that the Egyptian fellah had met during that year, for the Khedive Ismail added a great amount to his poverty. The State, as if not contented enough with the amount of privation the fellah endured due to the high Nile, added to it an extra amount of State-imposed privation. This is no exaggeration but a fact according to the historians who lived in Egypt at that time and wrote the history of this period. What happened was that the Khedive had to pay on the 1st of May, 1878, a coupon for the sum of two million pounds which were the yearly interest on the Unified Debt. It appears that the Khedive was hoping until the last moment, that the payment of the coupon could be deferred, because only one month before the coupon was due only about half a million pounds had been given to the Commissioners of the Debt. <sup>(1)</sup> But the French and British Governments insisted that the coupon should be paid in the fixed time. <sup>(2)</sup> So the Khedive had to resort to the method he, and other rulers had always resorted to, and that was to extract from the poor fellah whatever could be extracted from him by every kind of force and oppression. So the fellah, whose land he could not cultivate because of the low Nile of 1877 and whose crops had been drowned by the flood of 1878 had to pay, in addition to his usual taxes, a year's tax in advance, so that the Khedive could pay the coupon in due time. The Khedive knowing that the fellahs were enduring a real hardship, and that many of them had nothing to be extracted from them, sent with his hard fisted tax collectors,

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(1) & (2) Baring, Evelyn. Earl of Cromer, Modern Egypt, London, 1908, Vol. I, p.35.

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a staff of money lenders. If the whip could not reveal that the fellah had anything to give, then these money lenders would supply him with the necessary money to pay the in-advance tax in return for the next season's crops which were still green on the ground. The fellah, confronted with the threat of bastinadoing with the "Korbagh" had no alternative but to give up any crops he was keeping to feed with, or to sell the next season's crops submitting to all the conditions of the money lenders. So, to the privations resulting from the Nile flood, were added much harder privations forced on the poor fellah by his Government. And the sad aspect of this tragedy was that the fellah was suffering not for any necessary object of his country, but only to pay the interests on the debts resulting from the extravagance of the Khedive.

I shall leave Lord Cromer, who was in Egypt at that time and was one of the Commissioners of the Debt, to tell this moving story in his own words, so as to throw light on the different political forces which played roles in this famine and contributed in the pressure on the fellah, and to show the relation between the international politics and the social life of Egypt then. He wrote:

"The nadir both of financial chaos and popular misery was reached in the summer and autumn of 1878.... The Commissioners of the Debt were of the opinion that it would have been better not to pay this coupon. We should have preferred to allow the financial collapse, which was manifestly inevitable to come at once as a

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(1) Baring, Evelyn, Earl of Cromer, Op. Cit.

preliminary to the establishment of a better order of things. We were aware that the money could not be paid without taking the taxes in advance, a course to which we were opposed as being oppressive to the peasantry, and also contrary to the true interests of the bondholders. Not only, therefore, did we abstain from putting any pressure on the Khedive to pay, but we even discussed the desirability of protesting against payment".

"Unfortunately, the French Government did not share this view. French public opinion held that the Khedive could pay his debts if he chose to do so, that the distress alleged to exist in Egypt was fictitious, and that the arguments based on the impoverishment of the country were fabricated in order to throw dust in the eyes of the public and excite humanitarian sympathy where no sympathy was deserved. .... The cause of the bondholders was warmly espoused by the French diplomatic representative at Cairo, Baron de Michels, who turned a deaf ear to all arguments based either on the necessities of the Khedive or the misery of Egyptian people. The result was that, on April 16th, 1878, the French Government, through their Ambassador in London, informed Lord Salisbury .... that there was 'every reason to believe that the Khedive could pay the coupon, which falls due in May, if he chose to do so'. M. Waddington expressed a hope that the British Government would join the French Government in pressing for payment. Lord Vivien was accordingly instructed to act in concert with Baron des Michels on this subject".....

"Steps were taken to collect the money necessary to



pay the coupon. Two of the most iron-fisted Pashas who could be found were sent into the provinces. They were accompanied by a staff of money-lenders who were prepared to buy in advance the crops of the cultivators. Thus, the low Nile having diminished the quantity of the crop, the peasantry of Egypt were deprived of such benefits as some of them, at all events, might have derived from the high prices consequent in the scarcity. .... The money was, however, obtained! The last instalment was paid to the Commissioners of the Debt a few hours before the Coupon fell due. The great diversity of currency, and the fact that many of the coins were strung together to be used as ornaments, bore testimony to the pressure which had been used in the collection of the taxes.

The only result of paying this coupon, was that the crisis was delayed for a short time, The sufferings of the people of Egypt were increased, whilst the position of the foreign creditors, so far from being improved, was rendered rather worse than it was before".<sup>(1)</sup>

Sir Alexander Baird in his report about the famine described in some detail the losses of the fellahins from being forced to sell in advance their still growing crops to pay taxes in advance. He wrote "The fellah called upon to pay his taxes at a moment when his crops are still unripe is compelled to borrow and is not in a position to wrangle about the interest".  
"For instance, last year when great pressure was put upon the

(1) Baring, Evelyn, Earl of Cromer, Op. Cit.

Egyptian Government to pay the coupon due in May, the peasants were forced to sell their corn still growing and, in some cases perfectly authenticated, corn was sold to the merchants for Pt.50 per ardeb which was delivered in one month's time, when it was worth Pt.120 per ardeb. These are no exceptional cases; the same thing was going on all over the whole of Upper Egypt." "Another plan of the merchants to secure themselves against loss is to advance money on corn to be delivered at Pt.16 to 20 per ardeb less than the price of the day; thus if corn is selling at Pt.86 per ardeb the fellah received but Pt.70 or 66 according to his bargain".

"It requires no great intelligence to see that this system is most ruinous to the peasant and to the country; the only individual who profits by it is the merchant, who, if European, pays no sort of taxes to the Government; and even if a native, unless a landholder as well, escapes with an almost infinitesimal tax compared to the burden which is laid on the back of the cultivator. At one place where the market price of Durrah was Pt.80 per ardeb, I found the peasants purchasing what they required for their households at the price of Pt.170 per ardeb on credit".<sup>(1)</sup>

To complete the picture of the famine it is to be noted that in 1877 also, the same system was followed.... the system of extorting taxes in advance and before the fellahin had ample opportunity to gather and sell their crops. This

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(1) Baird, A., Op. Cit. , p.2.

is evident in Lord Vivian's report. Lord Vivian was then the Commissioner of the Debt in Egypt. He wrote on January 6, 1877: "The Government employé's are many months in arrears of pay. ... While on the one hand the employé's were unpaid, on the other hand, the taxes were being collected with merciless severity. I hear reports that the peasantry are cruelly treated to extract the taxes from them, the fact probably being, partly that the taxes are being collected in advance, and partly that, as the date of the coupon falls so soon after the harvest, insufficient time is given to the peasantry to realise fair prices for their grain and that they are unwilling to make the ruinous sacrifice of forced sales"<sup>(1)</sup>. The Khedive, in conversation with Lord Vivian, "admitted that, in order to pay the coupon, the taxes were being collected for nine months,<sup>(2)</sup> and in some places for a year in advance".

This means that the fellah, in these two years 1877 and 1878 in which Nature had withheld its gifts and was not generous as usual, had been forced to sell whatever crops he could get at unfair prices in advance, to pay taxes in advance. Thus added to the privations resulting from the Nile were another kind of unnecessary privation forced on him by the State that was supposed to look after him.

As regards the degree of distress Baird's report gives some pictures which show the degree of suffering. It says that

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(1) & (2) Baring, Evelyn, Earl of Cromer, Op. Cit., p.33.

the poor were sometimes in such a state of hunger that they were forced to satisfy their cravings with the refuse and garbage of the streets, <sup>(1)</sup> and in another place it says "The greatest suffering was in the large towns and not in the villages, for the villagers being driven by the failure of their crops to leave their homes and seek work elsewhere, their families naturally drifted into the towns to look for help. It is almost incredible the distances travelled by women and children, begging from village to village". <sup>(2)</sup> It also speaks about the "undoubted destitution and starvation that I ascertained to exist amongst the fellahs of Upper Egypt". <sup>(3)</sup> But Baird could not state "how many died from starvation" because "in no instance does the death register show a death caused by starvation". <sup>(4)</sup>

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(1) (2) (3) & (4) Baird, A., Op Cit., pp.4; 3; 1; 4.

What was the result of this famine on public health? In the report written by Alexander Baird, he published a table showing the total numbers of deaths during the year 1877 compared with the total number of deaths in the year 1878 in the provinces of Girgeh, Kenneh and Esneh "so far as they can be asserted from the Death Registers". It is to be noted that he stated that "worst period of famine had been September, October, November and December, 1878".<sup>(1)</sup>

The following is the table published in his report.

TABLE XX:

Deaths in the Provinces of Girgeh, Kenneh and Esneh (1877 & 1878) (2)

Province	Population	1877		1878		Excess in 1878	
		No. of Deaths	No. per 1,000.	No. of Deaths	No. per 1,000	No. of Deaths	No. per 1,000
Girgeh	336,000	4,377	13	8,060	24	3,683	11
Kenneh	286,143	3,973	14	7,530	26	3,557	12
Esneh	<u>206,999</u>	3,162	15	6,014	29	2,852	14
	829,142						

Baird concludes from this table that "it appears that in the three provinces upwards of 10,000 more deaths were registered in 1878 than in 1877, and I am afraid that this excess can only be attributed to the famine and its consequences".<sup>(3)</sup>

The population of the three provinces was 829,142 and the death rate in the three provinces in 1877 was 13.9 per thousand and in

(1) (2) & (3) Baird, A.

Op. Cit.

pp.3 & 7 & Appendix,p.I

1878 it was 26.1 per thousand. That means that the death rate was almost doubled in the year 1878, and that about 10,000 more people died in 1878 out of a population of 829,142, according to the quoted statistics.

But, these figures should be received with caution because death registration in Egyptian villages had not been and is still imperfect. And I have reason to think that the increase in death rate in 1878 must have been greater than what the table reveals. My reasons for that are firstly the fact that the registration of deaths of the poor had always been more imperfect than that of the rich, who had to register for inheritance purposes; and it was naturally the poor that mainly suffered in 1878 from the famine, secondly the death registration of the poor must have been particularly more imperfect during the famine as a result of their emigration <sup>(1)</sup> from place to place.

The inexactness of statistics was recognised by Baird who cautioned the readers from accepting the figures with confidence. He stated that no one seemed to take the least interest in accuracy and that some of the deaths were not registered. <sup>(2)</sup> Baird was describing a discussion that could have occurred between him and the registering officials, when they used to hand him statistics which looked inaccurate from the first glance. He wrote "Or perhaps it is found that for every 20 men only one woman is registered, and as the number of deaths

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(1) & (2) Baird, A., Op. Cit, p.3 & 6.

is generally about equal, further explanation is asked for and the reply 'Oh'. a mistake' necessitates a fresh investigation".<sup>(1)</sup> That was not, most probably, a mistake in calculating figures. It was more likely due to the fact that registration of deaths of women had always been very much avoided in rural Egypt.

However, although the increase in deaths is, to my mind, an underestimate, yet it is considerable and very significant (death rate almost doubled). "I am afraid", Baird says, "this excess can only be attributed to the famine and its consequences".<sup>(2)</sup>

But what were the causes of death? Baird was not a medical man but still he answered this question in his report saying: "I am satisfied that the excessive mortality during the period of scarcity was caused by dysentery and other diseases brought on by insufficient and unwholesome food".<sup>(3)</sup>

It is clear that he recognised the relation between privation and health, and realised that insufficient food would lead to disease. However, he could not at that time see fully the ways in which poverty could cause all sorts of illhealth. Thus, searching for another understandable way to explain how privation led to disease he found one which was more logical to the minds then. That explanation was that disease could be accounted for by the consumption of refuse and garbage by the poor. Thus he added "The poor were in some instances reduced to such extremities of hunger that they were driven to satisfy their

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(1) (2) & (3) Baird, A., Op. Cit., pp.7 & 4.

cravings with the refuse and garbage of the streets".  
He thought that this would furnish him with another reasonable explanation for disease and death.

There are no other documents to show in more detail the causes of excessive deaths during this famine. However, the information we have is enough to show that extreme poverty during this famine had led to disease and loss of life, and that the story again repeated itself as it did everywhere else when the people suffer, for one reason or another, from privation.



THE CONDITION OF THE PEOPLE UNDER THE KHEDIVES

"Have you ever represented to yourself in imagination the estate of the rustic who tills the ground? Before he has put the sickle to his crop the locusts have blasted part thereof; then come the rats and birds..... The tax collector arrives; his agents are armed with clubs, he has negroes with him who carry whips of palm branches. They all cry, 'Give us your grain' and he has no way of avoiding their extortionate demands. Next, the wretch is caught, bound, and sent off to work, without wage, at the canals; his wife is taken and chained, his children are stripped and plundered".<sup>(1)</sup>

This letter which was describing the condition of the Egyptian peasant was written three thousand years ago by "Ameneman", the chief librarian of "Ramses the Great" to the poet of the period "Pentatour". It was translated from a papyrus, which is now preserved in the British museum and which contains part of the correspondence between "Ameneman" and "Pentatour".

How unchanging the condition of the Egyptian peasant seems to be all over the centuries. These same words which had described his state three thousand years ago, could faithfully picture his condition under the reign of Mohammed Aly. And the picture is not at all different from the portrayals which we find in European books about his condition under the Khedives. All

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(1) Cited by De Leon, Edwin, The Khedive's Egypt - The Old House of Bondage under New Masters, London, 1877, p.229.

the sources whether books, reports of European Consuls, British Parliamentary Papers or reports of international bodies concur in describing his great misery and privations. (1)

I shall proceed now to describe some features of the social condition of the people at that time.

### Engrossment of Land

The pattern of land tenure has changed much in the latter half of the Nineteenth Century. This change began in the later years of Mohammed Aly when he began a process of amalgamation of agricultural lands into large estates. These were of two kinds. The first were called "chiflikes" and these were administered directly by himself to his benefit or granted tax-free to the members of his family and his favourites. Besides these, Mohammed Aly also ceded to his favourites and officials large areas of uncultivated lands to which he introduced new irrigation systems. These latter estates were ceded on the condition that they should be cultivated. This policy of granting large areas of lands was possibly due to his apprehension of the application of the treaty of 1833 between Britain and the Turkish empire, which required the abolition of monopolies. He, in order to turn round this treaty, adopted this policy so as to continue to control the whole produce of Egypt to his convenience.

During Abbas, and Saïd, the process of granting large areas of land continued. Besides, whenever the fellahin were

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(1) (a) Correspondence Respecting the Affairs of Egypt.  
B.P.P. 1880 [2549] LXXIX.

(b) De Leon, E. Op. Cit. pp.210-219.

(c) St. John, Bayle, Village Life in Egypt...., London, 1852,  
Vol. I, p.190.

in arrears of taxes, they were expropriated from the lands they were keeping, and the land was then ceded in return of tribute or rent to agents and speculators who were given the right to the forced labour of the fellahin in their areas. (1) "On these occasions", says B. St. John, "it is rarely said that So and So has taken such a number of acres, but so many villages. The people go with the soil. The man who farms an estate has a right to the labour of those who dwell on it, and giving of wages is often merely optional". (2)

(3)  
 Florence Nightingale in 1850, describing this policy says, "Mr. Murray told us at Cairo that Abbas has just issued an edict that, if all the arrears of taxes are not paid up within two months, every man, who had hired land, is to be dispossessed. The result they expect to be that the greater part will be ousted, and the land revert to the Pasha, who will put it into the hands of agents, who having no interest in it but to grind the people, will let shadoofs ... barns, and everything go to ruin ... Alas, alas poor Egypt". (4)

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(1) & (2) St. John, B. Op. Cit., Vol. I, p.190.

(3) Florence Nightingale visited Egypt in the winter of 1849-1850 and published her book "Letters from Egypt" in 1854 for private circulation only. Although this book was written early in her life yet it bears her characteristic stamp, and shows the early lines of her personality which was to appear fully later on. In fact her visit to Egypt had some influence on the shape of her future life because "on the journey she met two Sisters of St. Vincent de Paul, who gave her introductions to their order in Alexandria, where she visited their schools and hospitals. From the Sisters she learned the importance of formal discipline in hospital nursing". (See Encyclopaedia Britannica, 14th Edition, Vol. 16, p.446.)

(4) Nightingale, F., Op. Cit. p.40.

This new pattern of land tenure was an important phenomenon of the time. During the reigns of Saïd and Ismail, private ownership of land was established in successive steps by law. But it was not the ordinary small fellah who mainly benefited from this right of ownership. This is because the process of amalgamation of farms had already proceeded then to a considerable extent. It is reported that Ismail alone had "secured for himself in his own name and those of his sons and daughters, fully one-fifth of the best and most valuable of the lands of Egypt under actual cultivation". (1) One of the factors that had helped greatly this process of engrossment was, I believe, the rise in the price of cotton during the American War (1863-1865). As a result of this new policy in land tenure, there began to develop in Egypt a new pattern of social life. There began to appear in the extravagant life of Egypt under Ismail that new class of rich landlords which has become since then a feature of the Egyptian life. It may be said that the reigns of Saïd and Ismail were the starting points of the modern pattern of social life which exists now in Egypt, where a group of Princes and Pashas own most of the land, while the greatest majority of the population owns nothing, and only work as labourers in the estates of the rich.

This consolidation of agricultural lands into large estates led to the increase in the privations of the ordinary fellah. He, in the first place, lost the strip of land, which

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(1) De Leon, E.,

Op. Cit.

p.236.

although he had not owned before, at least he was allowed to keep. In Egypt, the whole life of the fellah depends on this strip of land. If he has survived the pressure of poverty all these centuries, this is because of the natural privileges of independent farming. Although he has often to give up to his landlords and tax collectors most of the crops of his strip of land, yet there has always been something remaining for him from its plentiful produce. Though he has not been often allowed to keep the corn and the cotton he cultivates, yet he has always been able to sow some maize at the end of the year after gathering the cotton in order to avail himself with bread all the year. Besides, on this strip of land he can always rear a cow or a sheep and some geese or chickens and these mean much to him. Although his landlords usually avail themselves of the butter he extracts from the milk of his cattle, of his chickens and their eggs, yet at least there remains for him the valuable skimmed milk cheese, which his masters find too crude to care for; and this cheese forms the most important food of the fellah and fortunately supplies him with some indispensable nutritive materials. Without his strip of land he could not get this plentiful supply of first class protein which he is used to having. Besides, the secondary by-products of farming, which his masters usually find too worthless to deprive him of, can supply many of the necessities of his life. Among these by-products of farming are the stalks of maize with which he roofs his hut, - the stalks of cotton which he uses for fuel, - the stubble of corn with which he feeds his cattle and chicken, -

the dung of cattle which he uses as fuel and as a fertiliser, - the green leaves of the maize with which he feeds his donkey, - the vegetables which he grows on the borders of his strip of land to mark it, - and so on. All these supply him with many necessities without costing him anything. Thus it is evident that many of the needs of the fellah were only available to him as a result of the system of independent cultivation of small strips of land by the small farmers. When the fellah lost this strip of land, and became a labourer on big estates, he lost all these privileges and he was for the first time compelled to buy all his necessities which he could not afford. This naturally led to scarcity of these necessities and of their raised prices. This could only tend to increase the burdens of poverty he was sustaining.

That was one way in which the fellah suffered from the consolidation of land into big estates. Another way was that he became the slave of the new owners or speculators who hired these estates. The fellahin went with the land. Naturally, these agents were only interested in their material benefits, and being allowed the use of force to collect the sufficient labourers to farm their estates, they had no reason to offer except the most scanty wages for these labourers and only during the seasons of farming. As long as they could use force, they did not need to offer higher wages as an incentive for labour; thus the wages were reported to be very scanty indeed.

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(1) Correspondence Respecting the Affairs of Egypt.  
B.P.P. 1880 [2549] LXXIX.

When one is discussing this social change in land tenure in Egypt, one will naturally remember a corresponding, although not quite similar, event in the English Social History. This event was the "Enclosure System" in the Eighteenth Century. The two events differ greatly in their features, but they both had resulted in much poverty and hardship among the poor classes. Trevelyan in his "English Social History" wrote about the effects of this "Agricultural Revolution" on the labouring poor. He said,

"The social price paid for economic gain was a decline in the number of independent cultivators and a rise in the number of landless labourers.... While the landlord's rent, the parson's tithe, and the profits of farmer and middleman all rose apace, the field-labourer, deprived of his little rights in land and his family's by-employments in industry, received no proper compensation in high wages, and in the Southern Counties too often sank into a position of dependence and pauperism..."

"..... Without sympathy from the classes that were framing the Enclosure Acts, the peasant was unable to state his own case with effect..... The enclosure of commons, though very desirable from the point of view of national production, meant depriving the poor man of his cow and geese and often of many other small rights of fuel cutting and so forth, by which he had eked out an independent livelihood".<sup>(1)</sup>

However, I think the change in land tenure in Egypt should not be thought of in the light of the circumstances and

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(1) Trevelyan, G.M., Op. Cit. pp.379,380.

effects of the English system. The two societies were totally different. And I doubt whether the engrossment of land in Egypt had led to any increase in the national produce corresponding to what had occurred in England. It did not seem to have led in Egypt at that time to any change in the methods of farming or to the introduction of new improvements in the land.

W.P. Alison, and G.P. Scrope in the 40's and 50's of the last Century when prescribing a solution for the poverty in the Irish society, which was very much like the Egyptian one in its circumstances, were strongly in favour of the system of "croft husbandry" or "petite culture" and opposed to the system of amalgamation of farms in such a community. (1) I tend to agree with them in this respect and regard their arguments as applicable to Egypt as they were to Ireland.

### The Dwellings of the fellahs

Most of the European writers who described the condition of Egypt at that time were shocked by the condition of the Egyptian villages and the homes of the fellah. They devoted much space to portray the unbelievable wretchedness of the rural dwellings. One of these is Florence Nightingale who seemed in her book extremely concerned about this question. She says for example:

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(1) Alison, W.P., Observations on the Reclamation of Waste Lands and their Cultivation by Croft Husbandry Considered with a View to the Productive Employment of Destitute Labourers, Paupers and Criminals, Edinburgh, 1850.



"One rides out to see the sunset, but between you and the sun you see, crouching in a ditch, humps of low huts, not even pretending to keep out the weather, the bulrushes which grow in the swamps round them droop over them, and try to do for them what the industry of man will not. The best have, instead of a round hole in the clay for a window, a pot without a bottom let into the hole; there is hardly any attempt at thatch, and out of these come crawling creatures, half clothed, even in this country, where it is a shame for a woman to show her face ..."<sup>(1)</sup>

Another portrayal she gave in her book was:

"Then we walked round the village. But no European can have the least idea of the misery of an African village; if he has not seen it, no description brings it home. I saw a door about three feet high, of a mud hut, and peeping in, saw in the darkness nothing but a white horned sheep, and a white hen, but something else was moving, and presently crawled out four human beings, three women and a child....The only reason why they had not their camel with them was because he could not get in; ... all the houses in the village were exactly like this..... There appeared to me to be only one den inside, but I did not go in because I had promised not. Some little things were setting out to fetch water from the Nile, each with his amphora on the head, each with a rag which scarcely descended over the body, but shrouded the head"<sup>(2)</sup>.

In another page she wrote: "This morning I went ashore at a village more miserable than anything we have seen. The people here did not live in huts but in half a hut, just a mere semicircular screen of mud put up with a penthouse of sugar cane stalks at the top, and underneath it squatted, half naked, the whole family in the mud, with a sheep, a dog, and a hen, their two or three pots round them, their shelf a scoop in the mud wall".<sup>(1)</sup>

A further picture was: "The view of the whole temple of Luxor from the poop, as you sail away, is beautiful, - the plan of it being less disturbed by the mud huts. What the disturbance of these is morally, and physically, no one can describe.... To see those columns lifting their heads to the sky even now, when half buried, and carrying one's eyes naturally on high, and to see human beings voluntarily losing their prerogative as men of the "os sublime" choosing darkness rather than light, building their doorways four feet high or less, choosing to crawl upon the ground like reptiles, to live in a place where they could not stand upright, when the temple roof above their heads was all they needed! .... Pigsties and cow houses were palaces to these. If they had been deserted, you would have thought it was the dwelling place of some wild animal. I never before saw any of my fellow creatures degraded (thieves, bad men, women and children), but I longed to have intercourse with them, to stay with them, and make plans for them; but here, one gathered one's clothes about one, and felt as if one had

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(1) Nightingale, F.,

Op. Cit.

p.76.

trodden in a nest of reptiles. It sounds horrible to say so, but one cannot conceive how even Moses could set about his work of regeneration here".<sup>(1)</sup>

These descriptions given by F. Nightingale are examples of a large number of European writings which convey to the reader very similar pictures of the Egyptian village.<sup>(2)</sup>

What factors had contributed to make the Egyptian village one of the worst agricultural slums of the world? I have no doubt that the "poverty" of the fellah had been the main factor. It may be objected that it had not been the only root of the evil and that cultural factors must have been partly responsible. But is it possible to disentangle these two elements especially when poverty is so extreme as it had been in Egypt? I am aware that some public health workers tend to consider the problem of housing as a separate problem, independent of poverty. That can only apply to countries like Britain where the standard of living has risen to such an extent that it has ceased to be the great influence in the housing problems. But as one gets to lower and lower social classes of human life, the role of poverty in the problem greatly increases. The question in such communities assumes a completely different aspect. Moreover, one is more apt to regard the problem of the dwellings

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- (1) Nightingale, F., Op. Cit., pp.103 & 104.  
 (2) St. John, B., Op. Cit. Vol. I, p.183;  
 & De Leon, E., Op. Cit. p.242.

of the fellahs mainly as a problem of poverty when it is realised that every fellah owns his own home. There are no dwellings for hire or rent in the villages, and the fellah has to build a home for himself. And these homes are inherited from fathers to sons and divided and subdivided between them. And one can imagine what kind of home the fellah can provide for himself with his very limited means. He naturally builds it with mud, and roofs it with the dry stalks of maize and cotton, the only materials he can get for nothing. Windows would be a luxury that he could never afford, and the floor would be the bare uncovered ground. And if the home is extremely dirty and filthy, this is mainly because the fellah keeps within it his cow and gamouse. This habit again is mainly a necessity of his poverty. He is very careful to collect the excretions of these animals as he has no other substitute to use both as fuel and as fertilizer for land.

Some writers were astonished and could not understand the smallness and overcrowding of the fellah's home. The explanation of this overcrowding is that there is still a great amount of insecurity as regards life and property in rural Egypt. That is why each large family lives within a certain enclosed area and its members dare not build a home outside the skirts of this area, otherwise their lives and property would be endangered by their enemies. (1) The district occupied by each family as years pass

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(1) N.B. This insecurity is another explanation for the habit of the fellah of keeping the farming animals within his home.

by, becomes subdivided and subdivided by inheritance and becomes occupied by larger and larger numbers of people. That is why the huts become overcrowded, and the narrow lanes between them get more narrowed as they are continuously encroached upon by any widening of the overcongested buildings. Moreover, the overcrowding is inevitable in upper Egypt, where the whole land is flooded during the inundation and the villages are built only on limited areas of land which had been raised considerably above the level of the fields. It is very difficult and expensive to raise the level of adjoining land to add it to the villages, and that is why in villages in upper Egypt the price of land available for building is very high, a factor which tends to make them more and more congested.

The dirtiness of the fellah's home might be ascribed to cultural habits. But these cultural habits again are the result of centuries of poverty. They have evolved and developed and become fixed patterns of behaviour because the successive generations one after the other had been suffering from extreme privations. And is it often that one meets clean poverty in the world especially if it is such an extreme poverty as that of the Egyptian fellah? The same accusations of uncleanness had been made against the Irish peasant and Alison adequately answered then saying,

"The Chief Secretary of Ireland, in describing to Parliament the great epidemic fever of Ireland in 1819, expressed a hope 'that the lower Irish would be better prepared in future, to guard against such a calamity; that they would

be more cleanly in their persons and domestic habits . . . . and change their bedding and clothes'. This really recalls the remark of the French Princess, who expressed her astonishment that any of her father's subjects should not have lived on bread and cheese, rather than have died of famine. A medical observer - observes with perfect justice 'It may be asked, how can these wretched beings, scarcely able to procure a meal's meat, be expected to be more cleanly in their domestic habits; or how can they, who have scarcely a rag to cover them, and who are obliged, for want of bed clothes, to sleep under the raiment they wear by day, change their bedding and clothes?' Before we can be justified in using such language towards the poor of Ireland, we must remove the causes of their poverty, and then allow half a century to eradicate the bad habits of ages".<sup>(1)</sup>

There is another factor which I had always suspected played an important role in keeping the Egyptian village in such a bad state. The sometimes inexplicable dirtiness and poor condition of the huts of the fellahin, especially those who are prosperous, seems to me a result of their old deep rooted habit of intentionally trying to look poor and wretched - this habit which must have persisted from the times when it was dangerous for any one to look well-off or rich, otherwise the government

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(1) Alison, W.P., Observations on the Management of the Poor in Scotland, and its Effects on the Health of the Great Towns. 1st Edition, London & Edinburgh 1840, p.30.

agents would over-tax him. At these times the farmer was educated by bitter experience to try to look very poor, and to try to make his house speak of his extreme privation, in order to avoid the suffering of flogging, which otherwise he would endure if the government agents would suspect that he had any hidden money, in order to extort it from him. Such habits which the people are taught over long periods become deep rooted and attain a solid existence. They become an approved pattern of behaviour which is sanctioned and even encouraged by the community. It becomes quite ordinary and natural to look dirty. These habits are acquired by successive generations through the influence of the experience of one generation on the next, and accordingly, the social patterns are handed over unchanged from the fathers to the sons. They become so deep rooted and so general that they look as if they are inherited, or as if they are characteristic racial qualities. Moreover when successive generations get used to such dirty conditions, it becomes difficult for new generations to imagine anything better.

There are many writers who had discovered that the farmers used, in the past, to be disguised in the forms of poverty and to make their homes speak of their privation. One of these was Le Duc D'Harcourt. He quoted a picture drawn by a French traveller for the Egyptian village, and then he concluded that the miserable appearance is not only due to real poverty but also due to their desire to conceal or hide any little fortune they might possess. The following is the picture quoted and the conclusion the writer made:

"Le village se composent de huttes en terre, ayant de trois à quatre pieds de hauteur, sur une largeur de cinq à six pieds, et percées à leur base d'une ouverture qui leur donne l'apparence de niches à chiens; c'était la effectivement que vivaient entassés plusieurs milliers de malheureux, couverts de haillons, couchant sur le sol, entourées d'immondices, dévorés par la vermine, disputant leur nourriture a des bandes de chiens errants, et portant avec tous les caractères de l'abjection, l'empreinte de la plus repoussante misère".

"Peinture affligeante et fidèle, qui peut s'appliquer en général à toutes les familles des fellahs et à presque tous les villages de l'Egypte."

"L'aspect misérable des demeurs des Egyptiens, encore aujourd'hui, ne tient pas seulement à la misère trop réelle où ils vivent, mais au désir de dissimuler le peu de fortune qu'ils peuvent posséder; ceux d'entre eux qui ont acquis, une certaine aisance ont appris par tradition à la cacher soigneusement, et à détourner des convoitises toujours dangereuses en prenant les apparences de la pauvreté et du dénuement. Nombre d'exemples leur ont fait voir, même protégée ni contre des mesures generales, ni contre des mesures particulieres, ayant aussi bien les unes que les autres la confiscation pour resultat". (1)

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(1) Harcourt, Francois-Charles-Marie, Duc d', Op. Cit. p.9.



Pellagra in Egypt

I have reason to think that pellagra, one of the diseases of poverty had been prevalent in Egypt at this era. Unfortunately the Egyptian doctors of the time were not aware of the disease and their writings give no information on the subject. But this is no wonder when we remember "the depth of ignorance the Egyptian doctor of that day had descended"<sup>(1)</sup> to. As an evidence of this ignorance, Dr. F.M. Sandwith says that when he took over the Sanitary Department in Egypt in 1884, he was assured on all sides that typhus was never seen in Egypt, and the doctors were totally unaware of the reports of Pruner and Griesinger, who had worked in Egypt, on its outbreaks in the country in 1836-37 and in 1851. "This was the more inexcusable", says Dr. Sandwith, "because I have since found out that until this time typhus was present almost every year in the students' dormitories of the Medical School".<sup>(2)</sup>

Another evidence of the low standard of the doctors then is the fact that Griesinger in 1851 had proved that the common anaemia in Egypt was due to anchylostomum duodenale. However, although his work was carried out in Cairo hospital, yet Sandwith had found that the Egyptian doctors were totally ignorant of that fact. "The remembrance of Griesinger researches", says Dr. Sandwith "had entirely died out, and a new generation of

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(1) Sandwith, F.M., Medical Diseases of Egypt, London, 1905, Pt. I, p.16.

(2) Sandwith, F.M., Ibid p.16.

native doctors had arisen who had never heard of Griesinger or Pruner, and the discovery had to be made a second time".<sup>(1)</sup>

So was the case with pellagra. When Dr. Sandwith went to Egypt he had no idea about the existence of the disease there. He found no one in Egypt to give him information on the subject.<sup>(2)</sup> So he had to make the discovery himself. He noticed that his patients "showed a symmetrical eruption which sunburn, chapping and dirt could not explain".<sup>(3)</sup> So he suspected the existence of pellagra and his suspicion was confirmed by some Italian doctors who had visited his wards. Thus he began to ascertain the frequency of the disease and its prevalence in the country and he discovered that it was a very common disease in Egypt. He examined the inhabitants of three villages near Zagazig to estimate the degree of prevalence of pellagra. He found out that "practically in these villages half the male population on that day was pellagrous. Many of the men were suffering from advanced anaemia".<sup>(4)</sup> In another survey, he found that out of 315 men living in 11 different villages in the province of Gharbia, 36 per cent (114 persons) showed signs of pellagra. Dr. Sandwith makes the significant observation that in one of these villages, where the inhabitants were more prosperous as they were getting regular pay throughout the year from the Domains Administration, the percentage of pellagrous men was only 15%.

(1) (2) & (3) Sandwith, F.M. "Pellagra in Egypt", Journ. Trop. Med. 1898-1899, Vol. I, p.63.

(4) Sandwith, F.M., The Medical Diseases of Egypt, London, 1905, Pt. I, p.284.

While among the men of one of the poorest villages the percentage was as high as 62.<sup>(1)</sup>

Dr. Sandwith states that when the peasants had discovered that interest was then taken in this disease, they used to tell each other to go to Cairo for treatment and that they used to come scores of miles on foot to hospital begging their way.<sup>(2)</sup>

Dr. Sandwith, clearly recognised the relation of pellagra to the poverty of the peasants. He says, "The essential causes of pellagra ... are bad maize, poverty, and exposure to the sun".<sup>(3)</sup> He also says, "The Egyptian Government should now imitate that of Italy, which besides teaching cleanliness and hygiene among the affected peasants, has for some years soup kitchens and retreats for the poor".<sup>(4)</sup>

That Pellagra was not a new disease but had always occurred in Egypt as a result of the extreme poverty of the people is apparent from the fact that it was described by Pruner before 1847. Under the heading of "Leprosis" Pruner says, "Pellagra is sporadic in Egypt and such as we have studied it in Milan".<sup>(5)</sup>

(1) Sandwith, F.M., The Medical Diseases of Egypt, London, 1905, Pt. I, p.235.

(2) (3) & (4) Sandwith, F.M., "Pellagra in Egypt", Journ. Trop. Med. 1898-1899, Vol. I, p.63; p.65; p.70.

(5) Pruner, F., Topographie Médicale du Caire Munich, 1847, p.67. Cited by Sandwith, F.M., "Pellagra in Egypt", Journ. Trop. Med. 1898-1899, Vol. I, p.63.

Report on the Health of Workers in the Suez Canal Project

I have come across an interesting report by Dr. Aubert Roche on the health of the workers in 1864-1865 in the project of the Suez Canal.<sup>(1)</sup> The report shows a great understanding of the relation between privations and health. In describing the health conditions in different places and at different times, he was connecting it closely with the state of nutrition.

Thus in discussing the sanitary and medical condition of Port Said he said, "La santé generale n'a subi aucune atteinte, elle s'est au contraire améliorée. Ce fait est des plus remarquables, et je crois qu'il faut l'attribuer en partie à la liberté du commerce et des transactions qui a fait que l'alimentation, à part la viande, a été plus facile que partout ailleurs en Egypte".<sup>(2)</sup>

In "Kantara" on the other hand, the health was low and the report explains this saying, "Surtout en viande; il n'en est rien. Pendant quelques temps, l'alimentation a été très difficile; ... Ce qui s'est pass dans cette localité merite consideration non-seulement au point de vue économique, mais encore au point de vue de la santé generale. Diverses affections de l'estomac se sont manifestées, qui ne pouvaient avoir leur source que dans la rareté des vivres ou leur prix excessif".<sup>(3)</sup>

As regards Ismailia, Dr. Aubert Roche states that whenever sufficient lodgment and provisions were supplied and made ready before the arrival of the workers, the general health was good.

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(1) Aubert-Roche, Louis Rémy, Rapport sur l'Etat Sanitaire et Medical Des Travailleurs et Des Etablissements du Canal Maritime de l'Isthme de Suez du 1<sup>er</sup> Juin 1864 au 1<sup>er</sup> Juin 1865, Paris, 1865.

(THIS REPORT WAS SENT PICTURED ON A FILM BY THE COURTESY OF THE SURGEON-GENERAL'S OFFICE, U.S. ARMY LIBRARY, WASHINGTON.)

However, he adds,

"Mais si un personnel nouveau se presente subitement sur les chantiers, avant que l'ont ait eu la temps de faire les constructions necessaires pour le loger, si ce personnel a des habitudes de malpropreté, est mal vetu, se nourrit mal, si la plus grande partie est adonnée a l'ivrognerie et n'a pas de quoi se coucher, alors la question de santé change". (1)

In discussing the causes of diseases in the area the report enumerates all possible origins of ill-health; and then states that these causes led to disease only whenever there was rarity of food provisions. In its own words it says,

"Comme influence sur la santé generale, à par les cas speciaux d'Ismailia et du Serapeum, les causes que nous venons d'enumerer n'ont eu aucune action excepte cependant la rareté et la cherté des vivres dont la consequence a été de frequentes indispositions du cote des voies digestives". (2)

It seems that the workers who were imported from Greece to work on the canal exhibited a lower standard of health than other classes of workers. Dr. Aubert Roche explains that in the following way,

"Les Grecs se nourrissent mal, ceux qui arrivent sont fatigués, on voit que les privations ont affaibli ces belles constitutions: aussi a Port Said les maladies sont-elles plus frequentes chez les Grecs et surtout chez les nouveaux débarqués. Cette position toute particuliere de Port Said, lieu d'arrivage, explique le chiffre des maladies et des indispositions". (3)

(1) (2) (3) Aubert-Roche, Louis Rémy, Rapport sur l'Etat Sanitaire et Medical Des Travailleurs et Des Etablissements du Canal Maritime de l'Isthme de Suez du 1<sup>er</sup> Juin 1864 au 1<sup>er</sup> Juin 1865, Paris, 1865. pp.26, 38, 13.

Poverty and Infant mortality in Egypt

There is a report about child mortality in this period written by Dr. E. Rossi Bey in 1875. He says in this report

"Donc comparée aux principaux pays de l'Europe, l'Egypte présente une inferiorité de naissances et un excédant de décès, soit pour 100 habitants 3.57 naissances contre 2.64 décès. -- l'excès de mortalité en Egypte se trouve dans l'excès de mortalité des enfants, les résultats des statistiques des six dernières années le prouvent d'une manière indubitable. En effet sur 138,870 décès annuels il y a 80,000 décès d'enfants en bas-âge. Cette proportion est énorme; elle est de plus de 50% du chiffre général des décès, en aucun pays de l'Europe elle n'atteint ce chiffre; meme beaucoup d'eux n'offrent que la proportion de 25% et quelques uns de 13%".<sup>(1)</sup>

I must say that I doubt the accuracy of these figures given by Rossi Bey for child mortality and I am rather inclined to regard them as underestimates. This is because my experience in the villages in Egypt has impressed me with the fact that registration of deaths is not perfect and especially the deaths of early life. Because of the very high mortality in this age, and because of the large number of children in each family, the deaths of early life are received with apathy and carelessness; and the

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(1) Rossi, E., De la Mortalité Des Enfants en Egypte, Geneve, 1875, p.4.

fellahs rarely bother to register them. When we used to make inquiries in the villages to discover unregistered deaths, we used to find that the majority of these were infants or older children (1 - 5 years). During the period referred to by Rossi Bey the state of registration must have been the same or even worse as registration was not then compulsory by law. The first legal attempt to compulsory notification and registration in Egypt was the Births and Deaths law of 1891.

Besides, it must also be remembered that registration of births in the villages is also imperfect. According to my experience in the 20th Century, most farmers are used to registering the births of their offspring only when the children survive the dangerous age. Before that they do not take that trouble because of the great possibility that the child may die while still very young. It follows that most unregistered births are usually infants who had not survived the early years of life.

This would mean that the "inferiorité des naissances" Dr. Rossi observed, would be mainly due to the non-registration of the birth of infants that had died in early age. It would also follow that the difference between the official and the actual births would represent dead infants and should be added to the figures of mortality, which would raise the rate of mortality in early life still more.

Dr. A.M. Kamal had calculated the rates of mortality in early life and birth rates in Cairo, Alexandria, and the chief towns of Upper and Lower Egypt, in the quinquennium 1886-1890 (a somewhat later period than the one referred to by Rossi Bey). Trying to give a picture of mortality in early life as near as possible to reality, he omitted the statistics of villages where registration is most defective and he took the figures of the towns of upper and lower Egypt to represent rural Egypt. His figures were the following,

Birth Rates and Infant and Child Mortality Rates in  
the Towns of Egypt (1886 - 1890) (1)

	Birth Rate per 1000 Population	Infant Mortality Rates per 1000 Births	Child Mortality Rates (1-5) years per 1000 Sur- vivors at Age 1
Cairo	47.2	297	337
Alexandria	48.1	302	299
Towns of Lower Egypt	49.8	278	313
Towns of Upper Egypt	48.1	269	284

These figures show a high infant mortality rate and a high child mortality rate.

What were the factors to which Rossi Bey attributed this "excès de mortalité des enfants en bas age"<sup>(2)</sup> In his article, he regarded, in agreement with a quoted opinion of "l'Académie de Médecine de Paris" that "poverty" was one of the grave causes of mortality of children by depriving them of the necessary nutriments. In his own words he says, "l'Académie de Médecine de Paris a parfaitement reconnu comme une de causes les plus graves de mortalité des enfants, la misère, et trop fréquemment la débauche qui engendrent la faiblesse nature des enfants et qui les privent de la nourriture et des soins convenables".<sup>(3)</sup>

(1) Kamal, A.M., A Statistical Review of Births and Deaths of Children in the 19 Principal Towns of Egypt", Cairo, 1932, pp.6,17,36

(2) "Mortalité en bas age" seems to include both infant mortality and mortality of older children. The writer dealt with these two together as one entity.

(3) Rossi, E., Op. Cit. p.4.



Besides, he considered that the social customs and ways of rearing children in Egypt were highly responsible for the high mortality among them. He, in confirmation, described the picture of the Egyptian infant from the time of birth. The following is the picture he described "Le court tableau que nous allons tracer des premiers pas de l'enfance, en Egypte n'est pas exagéré car tout le monde l'a continuellement sous les yeux. A peine le nouveau-né sort à la lumière du jour, qu'il est enveloppé de haillons sales, restes d'anciennes blouses teintes à l'indigo, qui ont servi pendant de longues années à couvrir le père ou la mère et qui n'ont jamais été lavées. Souvent nu il est recueilli, et nu il reste tout le temps de son enfance; son corps est à peine nettoyé à sec quelque morceau de linge sale de la liqueur visqueuse de l'annios, et plus tard des excréments et des urines; bien souvent son corps n'est touché par l'eau pendant la première année de sa vie, parce que la superstition populaire attribue au lavage pendant ce temps, le développement de la syphilis. ... Quant aux linges sales qui l'enveloppent, si on se décide à les laver, ce sera fait au fleuve, et sans l'ombre de savon ou de cendre. De lit ou de loerceau on n'en parle pas; une natte, quelquefois une peau de monton, la terre nue le plus souvent. ...."

"A peine pourra-t-il mouvoir ses membres qu'il sera laissé par terre se retourner dans la poussière et dans le fumier des animaux, et, dans cet état, c'est à peine si on pensera à le nettoyer un peu. Tout ce qu'il trouvera à sa portée il le mettra dans sa bouche et en fera, sans choix sa

nourriture. Souvent dans cette gymnastique, s'il trouve par terre quelque scorpion, il n'aura aucune crainte d'avancer la main pour s'en saisir et s'en faire un jouet".<sup>(1)</sup>

Thus it is evident that Dr. Rossi claims that the high mortality of children is partly explained by poverty and partly by the social customs, ignorance, superstitions and the inefficiency of mothers in child rearing. But he did not show clearly the ways in which poverty affects the child mortality. As both poverty and child mortality were and still are two important problems in Egypt, I would like to discuss more deeply their relation in the light of Britain's experience in this respect.

As regards the infant mortality, the rate in Britain remained high all through the Nineteenth Century and only dropped quickly and enormously in the 20th Century. Frazer says in explanation of this phenomenon, "Until the end of the nineteenth century, the infantile mortality rate had remained obstinately at or near 150, but after 1900 a highly welcome decline took place. In the period 1901-05 this figure had dropped to 138, in 1911-15 to 110 and in the quinquennium 1916-20 to 90....Some of the reduction in infantile deaths must be ascribed to better housing and a high standard of living, but much of the credit for this saving in infant life was due to the Child Welfare Service which had, by 1910, attained a reasonably high standard of efficiency".<sup>(2)</sup> Thus Frazer believes

(1) Rossi, E., Op. Cit. p.5.

(2) Frazer, W.M., Op. Cit. p.355.

that some of the reduction of infantile deaths in the 20th Century was due to the rise in the standard of living, or in other words that the high infant mortality of the 19th Century must be ascribed in part to the lower standard of living of the people.

### Poverty

A writer who was most enthusiastic to relate poverty and infant health was Richard M. Titmuss in his book "Birth, Poverty and Wealth". His book is a study of the relation between poverty and infant mortality. He is under the impression that privation plays a very important role in child mortality. He explains the 19th Century high infant mortality in the following way: "Reducing this diversity to identity", he says, "we can distinguish two main factors operating in the past to produce a high death rate. One can be summed in the word poverty; the other is insanitary urbanisation".<sup>(1)</sup>

He further on says "Improved sanitation having amputated the nineteenth century peak in infant mortality, there now became apparent the contours of a new peak largely formed on the dynamics of poverty".<sup>(2)</sup> Titmuss directed the attention to the great differences in infant mortality rates between the different social classes classified by the Registrar General. Furthermore he made a statistical study to determine whether the gradient

(1) Titmuss, R.M., Birth, Poverty and Wealth, London, 1943, p.13.

(2) Ibid p.17.

of inequality between social classes in infant mortality has increased or decreased from 1911 to 1931. He compared the data of infant mortality rates in different social classes given by the Registrar General for the periods (1911), (1921-3) and (1930-2). But he recognised that the grouping made by the Registrar General of different occupations into different social classes in these periods was not similar and therefore the data were not comparable. Thus in order to surmount the defects of classification of earlier periods, he made various statistical studies in which he grouped in each social class, only clearly defined occupations and then he compared the infant mortality rates in his groups.

His findings are that "for all five classes the death-rates have fallen considerably, but the decline has been steeper for Class I and II than for Classes III, IV and V"<sup>(1)</sup>. He thus concludes that the gradient of inequality between different social classes in infant mortality "has not lessened over the twenty years but has, in fact tended to increase"<sup>(2)</sup>. In other words he proves that there has been no diminution in social class inequalities in infant mortality but on the other hand these inequalities have increased. He comments on these findings saying:

"Now we have statistical proof that not only has the social differential persisted for at least twenty years but that it had widened greatly. The rigidity of the class structure holds, it seems, in the field of health, just as it does in the realm of money"<sup>(3)</sup>. "The lesson, the inescapable lesson, of this study,

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(1) (2) & (3) Titmuss, R.M., Op. Cit. pp.26, 26, 99.

is that the infants of the poor are relatively worse off today than they were before the 1914 war. They are in other words dying in relatively greater numbers".<sup>(1)</sup>

Titmuss associates intimately between poverty and infant mortality and says, "It is fitting, therefore, that we should end with a reference to the important and again unexpected findings of other research workers, who in a different realm but covering the same period, revealed that (although the enormous inequality in the distribution of private property was known) there had been no significant change in that distribution since 1911.<sup>(2)</sup> Is it too much to suggest that if such a change had taken place, if the gradient of economic inequality had become gentler with the years, a statistical study of infant mortality would have yielded results very different from those recorded in this book?"<sup>(3)</sup> Furthermore, he refers to the work of Kermack, McKendrick and McKinlay,<sup>(4)</sup> who, by a statistical treatment of generation mortality in England, Scotland and Sweden, show that the death rate of the adolescent and adult depend on the constitution acquired during the first 15 years or so of life. He comments

(1) Titmuss, R.M., Op. Cit. p.99.

(2) The author cites the following references Daniels, G.W., and Campion, H., The Distribution of National Capital, 1936, and Campion, H., Public and Private Property in Great Britain, 1939.

(3) Titmuss, R.M., Op. Cit. p.100.

(4) Kermack, W.O., McKendrick, A.G., and McKinlay, P.L., "Death rates in Great Britain and Sweden" Lancet, 1934, Vol. I, Cited by Titmuss, R.M., Op. Cit. p.95. p.698.

on these findings by saying "In other words, each generation carries with it through adult life and even into extreme old age the relative mortality of childhood. ... If Kermack and his colleagues are right then the power of economics is not only determining gross inequality today but for decades to come. We might indeed say that from the moment of conception the minutiae and majesty of money come into play. As this wheel of economics gathers momentum the longer the susceptible infant life is subject to its revolutions, it is not surprising that the impact of the machine in a multiplicity of forms on sensitive infancy should result in an ever-widening range of health inequality".<sup>(1)</sup>

I think that Titmuss had overemphasised the role of the "economic status" per se in infant mortality, especially as he was discussing 20th Century Britain. The social classes do not differ only in income, but also differ in family size, social customs which influence infant's health, maternal efficiency, and the degree of benefiting from social services. Each of these factors although may not be related or only partly related to the income, yet it influences to a large extent the infant mortality rates.

Together with the economic differences between social classes, there are many discrepancies in the every day life of babies, and in social customs of rearing children to account for some of the differences in infant mortality rates between social

(1) Titmuss, R.M.,

Op. Cit.

pp.94, 95 & 96.

groups. For example, poorer mothers do not appreciate, and do not usually provide to the same extent high standards of cleanliness in the nutrition and rearing of their infants. Again in lower social classes, the custom is that infants are often kissed and fondled by relatives, brothers, sisters and visitors, which favours droplet infection. Besides, the knowledge of mothercraft is not developed or advanced to the same extent in different social classes. Mothers of poor classes are much less educated in matters related to health. Furthermore, families of poorer classes are larger and more rapidly bred, and this in itself, apart from the economic pressure it involves, limits the amount of care given by the mother to each infant.

### Biological Factors

In Egypt, one of the big factors that had affected infant mortality in the 19th Century was the size of the family, the rate of breeding, and the age of mothers. In Egypt, women used to marry very young, and Egyptians were enthusiastic to get very large number of quickly successive offsprings. A worker who had studied the effect of these phenomena on infant mortality was Clarice Margarete Burns. She was more inclined to explain variations in infant mortality by biological factors than by social factors. She has made a study in the county of Durham upon the child mortality and its relation to the size of family and rapidity of breeding.

Among her findings is that death rates are related to the size of the families and that the families with the lowest death rates per thousand live births are the one child families. After the third child there is a very rapid rise in death rates, she says: "Among the first three children in the family, death rates after the first month tend to offset the high death rate among first children in the earlier period (before one month), rates between one month and five years being respectively 50, 62 and 70, while for seventh and later children the high initial death rate is followed by the high later rate of 90 (to compare with 50 for first children)."<sup>(1)</sup>

Another of her findings is that "even more important than the size of family in determining infant death-rates is rate of breeding. Children in families which are rapidly bred have the maximum death rates at each birth-rank".<sup>(2)</sup>

She also finds that the age of the mother affects the death rates and that "At all stages of family and in all classes, births to older women are more frequently associated with still-births and neo-natal deaths".<sup>(3)</sup> Besides, "women who are young to bear children or to have borne a number of children produce small and weakly babies".<sup>(4)</sup>

In explanation of these findings, Burns tends to stress the role of biological factors in infant mortality. She thinks that the explanation of the variations by parity and rate of breeding is biological rather than social. She believes

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(1) (2) (3) & (4) Burns, C.M., Infant and Maternal Mortality, Newcastle-upon-Tyne, 1942, p.1; p.138; p.137; p.2.



that "in first children, birth is a relatively dangerous period, and the unfit are weeded out (thus high still birth and neo-natal death rates). Those who survive have (thus) a relatively low subsequent death rate. The late children of large families have however a high death rate at all stages, i.e., they are unfit, and they present very special problems".<sup>(1)</sup> She thinks that the mortalities in later birth rank children is high because they are of poor biological make-up.

Besides she thinks that the high death rate among the children of very young mothers is a biological rather than a sociological phenomenon. "It seems possible", she says "that the drain on the salts of the maternal skeleton which has been found to occur in pregnancy and lactation in animals, (Sherman and MacLeod, 1925) and in women, even under excellent dietary conditions (Macy et al 1930) may prove excessive in the case of young mothers in whom skeletal growth is still occurring, thus diminishing the chances of health in mother and offspring. The relatively low still-birth rate in the group suggests however that this skeletal immaturity may be favourable rather than otherwise to parturition----Though the postponement of the reproductive cycle in the human would seem to be on the whole advantageous to the offspring, it raises its own particular problems".<sup>(2)</sup> She thinks that the low still-birth rate in very young mothers and the high total death rate up to five years of children of young mothers illustrates this idea.

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(1) & (2) Burns, C.M., Op. Cit. p.1; p.37.

She also reasons "it was found that even in classes with low infant death rates, the rise in the post-natal death rates among second and third children still occurred, although it seemed improbable that such children received less essential care than first children of their own class. It would seem that the more probable explanation of the phenomenon is the greater weeding out of the weaklings by first births".<sup>(1)</sup>

I would like to discuss more the ideas of Burns, because of their special significance in the problem of infant mortality in Egypt in the 19th Century. In Egypt, the big size of family and the quick rate of breeding had always been characteristic features. Besides, poverty had been a particular feature of the social pattern of the Egyptian life. That is why it is of importance to discuss the ideas of Burns about the relative influence of social and biological factors on infant mortality. I think that Burns had over-emphasised the role of biological factors and minimized the effects of social factors on infant mortality. Her findings do not justify her in reaching some of her conclusions, and her arguments are sometimes clearly biased. For example I shall discuss one of her important arguments on which she lays much weight in her conclusions. She says, "Is the relationship between infant death rate and size of family biological or social? .... The strongest evidence in favour of the view that biological factors

are of prime importance lies in the readily demonstrable influence of the rate of breeding. Here there is little reason to suppose that in the families slowly bred the average income per head is higher than in those more rapidly borne<sup>(1)</sup>. Again on the same point she says in another place: "Now while it is true that in some large families which are more carefully spread out, some of the older children may be earning before the younger ones are born, nevertheless the fact that the more slowly bred families rear more of their children must involve a greater domestic expenditure, which will in general offset any increase in income due to the employment of adolescent members of the family. It is difficult therefore to see how the families which are slowly bred can be significantly better off socially than the quickly bred ones,<sup>(2)</sup> when it is remembered that in this investigation 97% of the large families are found among manual workers. The conclusion seems inevitable that the difference is primarily due to biological causes, and that the rate of breeding is one of the most important factors in determining the child's chance of survival, and in large families is the dominant factor."<sup>(3)</sup> Again in another place she repeats the same thing saying "Too rapid breeding greatly increases death

(1) Burns, C.M., Op. Cit. p.60.

(2) Alan Carruth Stevenson, in his book Recent Advances in Social Medicine, 1950, says about this sentence "Burns, however, in advancing her argument, perhaps goes too far when she says: "It is difficult to see, therefore, how the families which are slowly bred can be significantly better off socially than the quickly bred ones", p.79.

(3) Burns, C.M., Op. Cit. p.45.

rates. In this investigation it was found that sixth children born to mothers of twenty five to thirty had a death rate up to five years of 235 per 1000; those to mothers five years older, and therefore on the whole bred more slowly had a comparable death rate of 176 per 1000. Of the previous children in these families, in the former group 264 per 1000 had failed to be born alive or had died before the birth of the sixth child; in the latter group the figure was 179. Since both these groups belonged to the same social class and the older mothers had more children alive needing money and care, it is clear that the advantage attaching to the better spacing of children is due to biological causes and not to social factors<sup>(1)</sup>.

It seems to me that these arguments do not justify her conclusions. Can this reasoning, which I quoted, be regarded as convincing of her assumption that the "advantage attaching to the better spacing of children is due to biological causes and not to social factors?" I must say that I am not convinced and that I do believe that economic and social factors are of great influence in this respect. At least Burns has not proved that this is not the case and has given very little conclusive evidence that the difference in infant mortality between slowly bred and quickly bred families "is primarily due to biological causes". Does she not think that part of the explanation may be that "neither clinics,

(1) Burns, C.M.,

Op. Cit.

p.2.

hospitals, convalescent homes, village institutes nor any other health or educational facility can be of much use to a woman with two or three tiny children always on her hands, nor will she generally be in a physical condition to cope with more than a minimum of her domestic or social duties?"<sup>(1)</sup> Strangely enough, these are Burns's words. She was explaining why the figures of infant mortality of large rapidly bred families in Durham in 1910-30 show no improvement over the Registrar General figures for the whole country in 1890-1911. If she thinks this a reasonable explanation of the non-improvement of quickly bred families during 20 years, why does she not take it to explain - at least partly - the differences between quickly and slowly bred families. I regard this explanation as an important factor which determines greatly the difference in infant mortality in both types of families. The available care of the mother and her opportunities of benefiting from the social institutions, both health and educational, is a factor of prime importance in infant mortality. Much of the credit of lowering the infant mortality in the 20th Century Britain is due to the welfare centres; and thus the degree to which the mothers can benefit from these is extremely important in deciding the infant mortality in any group. Besides, the share of care and interest devoted to each child in quickly breeding families is much less; and it has always been shown that it is this care which is the factor of prime importance in infant mortality.

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(1) Burns, C.M.,

Op. Cit.

p.54.

Furthermore, in quickly bred families there is a greater economic pressure at each stage of the family. "A woman with two or three tiny children always on her hands" will be less able to supply all her and their nutritive and health needs. In addition, in more slowly bred families, some of the older children may be earning money before the most young are born. Besides, for the quickly growing family the housing problem is more acute, and a bigger house is either got by devoting a larger share of the income at the expense of nutrition and clothing for example, or got by moving into a house of a worse quality. The quality of the house, its standard of sanitation and the degree of overcrowding affect the spread of infection among infants. In addition, bad houses do not offer mothers the necessary facilities which help them in their domestic duties and there are many handicaps in them for efficient child rearing. Furthermore, in quickly bred families, there are at any time more children going to schools and bringing back infection, and it is natural in such large families because the mother is too busy, that the infant will be carried and caressed by his older brothers and sisters. Another human factor of some importance is that the parents of quickly growing families do not appreciate to the same degree as slowly bred families their offspring and as a result they devote less care and interest in their health. A mother with only one infant is more careful not to lose him and is usually more concerned about his health than a mother with two or three tiny children on her hands. Sometimes a too quickly coming infant is

unwelcomed, or at least less welcomed, by a busy mother and overburdened father.

All these factors I have mentioned are important social factors which determine the differences between quickly and slowly bred families. I want to conclude that Burns' findings and arguments do not justify her in minimizing the importance of the social factors in the above-mentioned phenomena of infant mortality and in overemphasising the role of biological factors.

But to do justice to the author, she recognised the value of social factors in other aspects of infant mortality in which there was no place to suppose that biological factors are influential. Thus she says, "These differences in death-rates according to birth-rank are found in each of the social groups into which the population studied is divided, although great difference is found in each birth-rank between the different social groups, i.e., death rates are determined by both biological and social factors".<sup>(1)</sup>

#### Analysis of the Ways Poverty Affects Child Mortality

One of the ways in which the economic conditions affect the infant mortality is the relation of the health of the mother to the health of the infants. Karn and Pearson say, "Mother's health before conception is twice as important for

(1) Burns, C.M.,

Op. Cit.

p.137.

the babies' health as crowding, clothing, cleanliness, feeding and economic conditions".<sup>(1)</sup> And, naturally the mother's health before conception depends to a large extent on her economic status and the state of her nutrition. J.H. Ebbs, F.F. Tisdall and W.A. Scott,<sup>(2)</sup> of the Departments of Paediatrics and Obstetrics, University of Toronto, conducted an experimental survey which demonstrated among other findings, the relation between the diet of the mother before conception and infant health. In the survey the pre-natal diets of four hundred women not yet at the end of their six months of pregnancy were studied. Then three groups of 100 were watched. One group found to be on a low diet was left as a control. The second group, originally on a poor diet also, received during the last months of pregnancy supplements of milk, egg, vitamin C, wheat germ oil, iron and vitamin D. The third group, originally living on a higher income and reasonably good diet was improved by nutritional education alone. What interests me now from the results of the survey is the part related to the health of infants. An interesting table is given of the diseases of the infants in the first six months of life. The incidence of frequent colds, pneumonia, rickets, tetany and dystrophy was less among the babies in the good and supplemented diet groups than in the poor diet groups. Frequent colds for example occurred in 21 per cent of the poor diet group and in 4.7 per cent of the other two groups, and rickets in 5.5 per cent of

(1) Burns, C.M., Op. Cit. p.6.

(2) Ebbs, J.H., Tisdall, F.F., and Scott, W.A., Journal of Nutrition, 1941, Vol. XXII, p.514.  
 Cited in Titmuss, R.M., Op. Cit. p.86.



the poor diet group, in none of the supplemented diet group and in 1 per cent of the advised group. Besides, the incidence of miscarriages, stillbirths and premature births in the poor diet group was much higher.

The People's League of Health appointed a special committee in 1935 to study the relation of the nutrition of expectant and nursing mothers to maternal and infant mortality and morbidity. The investigation was carried out in 1938 - 1939 with the co-operation of ten London hospitals on 5,000 women. An estimate of the average diet consumed by these was obtained from questionnaires filled in by 1,000 expectant mothers attending four of the hospitals. Analysis of these questionnaires showed no marked deficiency in first class proteins but a shortage of calcium was noted in 70 per cent, of iron in 98 per cent, and of vitamins in approximately 50 per cent. In each hospital, alternating cases were given daily vitamin and mineral supplements. Among the results of the experiment, the one which interests me now is that in the group receiving improved diet there was a lower incidence of prematurity which was regarded as statistically significant. The Lancet says of this result "The relatively greater proportion of deliveries at term among the treated women is of particular importance in view of the Registrar General's finding that 50 per cent of infantile deaths under one month are due to prematurity".<sup>(1)</sup>

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(1) Interim Report of the People's League of Health, Lancet, 1942, Vol. II, p.10.

It is thus obvious that the nutrition of the mother during pregnancy affects the infant health, and naturally this nutrition depends on the economic status of the mother.

That the nutrition of the infants affects infant mortality is described by Stanley Graham from the Hospital for Sick Children in Glasgow. He says, "The marasmic, anaemic or rachitic infant, with his terminal respiratory or alimentary infection, presents a picture which paediatrists are constantly seeing in the outpatient department, and in the wards of all children's hospitals. Indeed, much of their time is spent in attempting, often unsuccessfully, to save the lives of these babies. Marasmus is not a clinical entity but is synonymous with inanition, due in the majority of cases to the fact that an infant is offered less than he requires of iron-containing foods in the diet. Rickets albeit in a mild form, affects almost half the same infant population. Its cause is well enough known. In the presence of one or more of these conditions infection occurs and the death is attributed to the infection. No mention is made, even by the pathologist, of the part played by the nutritional defects. But there is abundant evidence to show that marasmus, nutritional anaemia, and rickets greatly predispose to the infection - and they are preventable. If they are prevented it seems only logical to assume that infection would be much less likely to occur, or if it did occur much less likely to prove fatal".

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(1) Graham, S., Lancet 1940, Vol. I, p.1107.

This malnourishment of the infants may be secondary to malnutrition of the mothers or result from the incapability of poor mothers to supply their infants with the supplementary nutrients they need.

Another way in which the health of the mother affects the infant mortality is its relation to maternal efficiency. In a survey carried out in Scotland by Paton and Findlay <sup>(1)</sup> of the different factors influencing child health they found out that the main factor was "maternal efficiency" and that this maternal efficiency depended greatly on the health of the mother. The factor of inefficiency was found to be correlated with the poor health of the mother. They thought that maternal health affected the child only in so far as it influenced maternal efficiency. In other words they meant that the effect of the maternal health on child health is a social, and not a biological one.

Poverty also, affects infant mortality in another way. It lessens the degree to which mothers can benefit from the available educational and welfare services to increase their maternal efficiency. The value of these services in lowering infant mortality rates has been widely appreciated and generally agreed upon. Poverty prevents mothers from fully benefiting

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(1) Paton, D.N. & Findlay, L., with others, Child Life Investigations, Poverty, Nutrition, and Growth, Medical Research Council, 1926, Spec. Rep. No. 101.

from these services in two ways. The first is that the poor mother is carrying her domestic duties without any help and is thus too busy and cannot afford the time or the strength to attend the welfare centres. The other way in which poverty affects the degree of benefiting from these services is psychological. Privation decreases the morale of a community and lessens their interests in the betterment of their conditions. Edward A. Rundquist and Raymond F. Sletto carried out a psychological social study with the aim of investigating the effect of unemployment on personality and family relationships. They developed scales designed to measure morale, feelings of inferiority, family adjustment, economic conservatism, attitudes toward law, attitudes toward education, and a seventh scale they called general adjustment scale. The scales were administered to approximately 3,000 individuals and were found to be applicable and reasonably reliable in a wide range of groups. They then compared employed and unemployed groups by these scales. Among their conclusions is "Poorer morale, too, is characteristic of the unemployed as a group. Discouragement and a sense of hopelessness is greatest among men in the semi-skilled and unskilled groups, among older men, and among the men with the least education".<sup>(1)</sup>

This poor morale and the sense of hopelessness, which social workers among the poor classes are familiar with, diminish the enthusiasm of these classes to attend social centres and to

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(1) Rundquist, E.A., Sletto, R.F., Personality in the depression, A Study in the Measurement of Attitudes, Minneapolis, 1936, p.367.

benefit fully from them. Poverty lessens the interest and decreases the enthusiasm for anything other than the elementary needs. The poor are so disappointed and depressed by life, that many of them could not care less for whatever happens to them or to their children. Deprivation creates in the long run, helplessness and despair which may amount almost to apathy. This attitude of "could not care less" is commonly encountered among the very poor classes. All the interests of the poor are so concentrated on the strive for daily subsistence, that they usually find it superfluous to attend educational and child welfare centres. Their pattern of thinking will be that: if they cannot afford to buy enough milk for their children, why take the trouble to listen to a social worker speaking about prevention of milk borne infections. Besides, deprivation and frustration creates aggressive feelings and attitudes towards the society which make the poor less co-operative with health and social institutions. The poor become so impressed that nobody cares for them that they cannot believe or trust that anybody will take the trouble of helping them.

Furthermore, poverty creates feelings of inferiority and inclinations for withdrawal from society. Every social worker can tell of many cases where poor mothers do not attend welfare centres and child clinics because they are ashamed of their children's external and internal clothes or of their own clothes.

Thus in such ways privation (per se) prevents the classes which are most in need of the social services from

benefiting from them and in this way influence greatly the infant mortality rates.

All the time, I was more or less concentrating on discussing the relation of poverty to infant mortality and I have tried to prove that it plays a definite role although it is not the only factor that counts in this respect. If, however, one discusses its relation to the mortality of children (1 - 5) years, the role of poverty becomes more obvious and much more important. The child, as he gets older, begins to share more with the poor adults, the same type of life they sustain, and his health becomes exposed to the same kinds of dangers inherent in the state of privation. He begins to feed on the same insufficient food, in place of his mothers milk, and thus begins to suffer with his parents the effects of malnutrition. This also applies to all the other conditions of poverty like housing, clothing etc. In other words, the pattern of life of the child approximates more and more the adult pattern of life and thus becomes susceptible, in the same way as the adult, to the adverse effects of poverty on health.

### The Question in Egypt

Had poverty in Egypt played only the same role it plays in Britain on infant and child mortality? When one tries to apply to Egypt the British views on the degree to which poverty influences child mortality, one will find that they are only valid in respect to middle and higher strata of the society but not exact when applied to the lowest strata. And this will

lead one to discover an interesting phenomenon. This phenomenon is that the role of poverty on infant health increases greatly as one gets to the lowest social strata of human beings. If it is true that the economic status plays only a limited role in the social classes of the 20th Century Britain, this is not true in the much lower social classes. The differences in the economic status of different British classes are not big enough to reflect sharply in infant mortality, but when one gets to a much lower strata, the differences become so great that they become (per se) a great factor in infant mortality.

One does not encounter in Britain pregnant women with such grave and conspicuous nutritional diseases as exists in the lower social classes of Egypt. However, these nutritional diseases which are the fruits of poverty in my country, are alone responsible for a respectable percentage of mortality of unfit weak infants. If Paton and Finlay in Britain has found "no clear indication that the nutrition of the child is directly associated with the income of the family", that was because the level of the surveyed incomes was above the level which endangers, enormously, child health; that would not be the case in Egypt where poverty is so extreme that parents could not afford to give their children even the most necessary nutriment. Paton and Finlay's findings were due to the fact that even the lowest income in the families surveyed, would give the natural parental instincts the opportunity to supply their children with their necessities. If they have found that the variations of height and weight in children were not

definitely related to the economic condition of the family, this was because they were dealing with a reasonable range of income ... a range in which the differences between incomes could be offset by the natural parental instincts which make the parents put the needs of their children prior to theirs. But that will not be the case, when we get to lower strata of human beings where the incomes are so negligible that it is impossible to supply one's children with most of their needs. In such strata the economic status plays a more drastic role on the health of children. Again, taking the factor of housing Burn's findings that (where the same size of family was considered) it was impossible to relate (rooms per person) or (rooms per family) with the children's death rates, ... are only valid in respect to the area examined. If she had included in her survey, the type of houses and the degree of overcrowding encountered in the lower social classes of Egypt, she would find definite correlations between housing and child's health. Her findings cannot be extended to apply to the lowest types of shelter encountered in some of the slum areas in Egypt. She was even conscious of that and said "Densely packed slum areas are of course not found in a country area, and no conclusion about the influence of housing in such an area can be applied to slum problems".<sup>(1)</sup> In Egypt, Poverty compels the lowest social strata to live packed in dark unventilated homes which are responsible for spread of infection and the sacrifice of



large numbers of infant lives.

Again, the extreme poverty in the lowest strata of human beings is associated by a low type of life characterised by insanitation, dirt, ignorance, superstitions, and harmful social habits, which have all a deleterious effect on child life. I do believe that poverty is partly responsible for such a pattern of life. Centuries of poverty must affect the cultural structure of any society and mould it in the lowest forms. Although, some of the features of such a life are due to cultural habits, and not directly due to economic forces, yet these cultural habits themselves are partly determined by long periods of poverty.

Poverty also tends to fix and perpetuate this low type of life in such societies through its effects on the psychology of the poor. The people in the lowest strata of human societies exhibit a characteristic psychological pattern: of apathy, sloth and indolence. They are mostly contented with their state and have little interest in progress or betterment of their life. Mrs. Bernard Bosanquet<sup>(1)</sup> had tried to explain psychologically the evolution of such a pattern in her book "The Standard of Life" in the chapter about the Psychology of Human Progress. She thought that poverty leads to such apathetic contentment and loss of interest through the long concentration of the poor on their elementary needs.

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(1) Bosanquet, Mrs. Bernard [Helen], The Standard of Life, London, 1899.

The importance of this factor in infant mortality is more appreciated when we recognise the great value of health education and child welfare centres in diminishing the infant mortality. It is very difficult to make the lowest strata of human societies which are living in extreme poverty benefit from such education and persuade them to be interested in welfare services. They cannot be interested in any attempt to change their cultural habits of rearing their children. Poverty reduces them to a state of apathy in which they care little for anything. Such people cannot benefit to any degree from educational social centres until their economic standard of living is markedly raised.

So, when dealing with very poor low strata of society, one cannot say that economic conditions do play only a limited role in infant mortality as they do in the 20th Century Britain. In such societies, you can do only very little indeed to influence favourably the child health, if you do not begin with raising the standard of life. This is the basic thing on which you can build further reforms. Child welfare centres are actually of very little use in these lowest strata of human life. You have to prepare the ground by raising the economic standards before sowing the seeds of health education in order to get any fruits at all. That is why I regard poverty a major factor in the high infant mortality in the 19th Century Egypt.

It is time now to return back to the work of E. Rossi on child mortality in Egypt in 1875, which led to this discussion.

of the various factors that affect infant and child health. I think, in the light of these discussions, that he was not far from the truth, as we see it nowadays. He obviously conceived the roles of both poverty and cultural habits in causing the very high child mortality in the 19th Century Egypt.

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