Of Cholera and Post-Modern World

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An examination of the political and economic forces underlying the recent epidemic of cholera in Latin America reveals striking resemblances to the situation in which the pandemics of cholera occurred in the 19th century. It draws attention to the fact that not only does politics inform the occurrence of disease, but the shape and content of health policy and intervention as well.

The Cholera's Coming
The cholera's coming - oh dear, oh dear,
The cholera's coming - oh dear!
To prevent hunger's call
A kind pest from Bengal
Has come to feed all
With the cholera, dear.

The people are starving - oh dear, oh dear,
The people are starving - oh dear!
If they don't quickly hop
To the parish soup shop
They'll go off with a pop
From the cholera, dear

The cholera's a humbug - oh dear, oh dear,
The cholera's a humbug - oh dear!
If you can but get fed
Have a blanket and bed
You may lay down your head
without any fear.

—A popular song of the 1830s in England.

THIS article, by way of a preliminary enquiry, is divided into three parts. The first briefly describes the conjuncture within which arose the cholera pandemic currently sweeping Latin America. The second harks back to the 19th century to examine cholera pandemics emanating from India and threatening existing order in Europe. I end with observations and speculation on the impact of what has been described as the post-modern world order on the health of the poor in third world countries.

I

Cholera, a disease known from antiquity (the word is derived from the Greek, 'kolera', meaning diarrhoea) now shows its minatory face over the US, at the apotheosis of her power and glory. Cholera, that king of disease has always been a disease that stalked the poor and haunted the rich. Now, where did this awesome threat emanate from? Peru, the land of the glorious Inca civilisation.

To historians of disease Peru is of singular interest. What baffled historians was how this mighty civilisation succumbed so rapidly, so easily, so very meekly to the small band of Spanish conquistadores lead by Pizarro. Was it the superior technology of gun powder? McNeill offers the explanation that it was in fact disease, in this case small pox, which sealed the fate of the Amerindian civilisations. Unexposed to small pox, the Indians were ravaged by the disease; the Spaniards, in contrast, supremely immune, seemed supernaturally protected. While small pox savaged the Incas, the conquistadores marched unharmed, unopposed, to raid the capital, its temples and treasures. Thus was Peru 'integrated' into the world market. The events in Peru recalled the similar amazing conquest of the Aztec empire of Mexico and her millions by the Spaniard Hernando Cortez with an army numbering less than 600. Infectious disease then has had a profound, if not decisive, effect on the tide of history.

At the heart of the Spanish Empire, Peru was plundered by colonial rule. Her 'tryst with destiny', when it arrived, was but a sad one. Peru is today one of the poorest nations of South America with a population of 20 million and an external debt of 25 million dollars. A poor country with a primarily peasant economy Peru could 'naturally' only rely on export of primary products to build her economy. The economy, equally naturally, was guided by the US since the Peruvian ruling class was preoccupied with a lavish life style and holidays in Florida. Other events were natural consequences. A country whose ruling class lives beyond its means gets into debt. The iron laws of international economics are unbending: they will not permit the prices of the primary commodities, that Peru exports, to rise. The irresponsible ruling class cannot tighten its belt; indeed they cannot even control their own peasant rebels. Security assistance from the US is necessary and is forthcoming to quell those rebels. The niceties of parliamentary democracy may have to be given short shrift for some time.

This, too, is 'natural' for does the economy not have to be put on rails? Productivity must increase, exports must go up; there should be a cutting down on 'wasteful' social expenditures, particularly those directed towards vulnerable populations; inefficient public enterprises must be made efficient, that is to say, almost axiomatically, privatised. Thus runs the wisdom of the package on structural adjustment enunciated by the IMF-World Bank towards which Peru, 'naturally', turns for loans. As the country was being further 'integrated into the world market', in August 1990 was implemented the IMF-World Bank sponsored programme described as 'Fujishock' or "the most severe form of 'economic engineering' ever applied".

And Peru did adjust structurally, if painfully. The pain was not, of course, equally apportioned—the IMF-World Bank prescriptions did not envision that for it would involve unthinkable changes in patterns of investment and consumption. The pain was 'naturally' distributed to the poor in their over-crowded shanty towns, slums or barrios.

Structural adjustment has meant devastation to the lives of the poor and indeed even the salariat. Consequent to wage freeze and an unprecedented price rise has occurred a drastic squeeze on the purchasing power of the people. Unemployment and casualisation of wage labour has reached dismaying heights. It is estimated that the real purchasing power declined by 85 per cent even as the cost of bread increased by an incredible 1150 per cent. State support to health and education has been phased out leading to a collapse of health and educational institutions. Essential humanpower, of trained doctors and nurses, took flight to greener pastures contributing to a further drain of capital from Peru. Public hospitals, despite inadequate staff and widespread lack of drugs and equipment, have attempted to 'recover costs' through fee for services. The impoverished population cannot therefore avail of medical care leading to a decline in hospital attendance and admissions even as morbidity levels increased; the rich, of course, never dependent on public institutions have their private havens. Public health activities such as water supply, nutrition and sanitation, seldom an area of high priority, have come to a grinding halt.

It is in this context of poverty, squalor, hunger and misery that the disease of underdevelopment flares up. It is not fortuitous, therefore, that cholera should break out in the barrios. Cholera was first reported in several coastal cities of Peru almost simultaneously in January 1991. It spread rapidly across the country, crossing the Andes, to affect other cities in less than a month. Within six months the disease had marched to neighbouring countries. Since January 1991 cholera has taken a fearful toll of 2,681 lives in Peru alone; the reported number of cases is 2,81,513. By the beginning of this year close to four lakh cases and more than 3,000 deaths have been reported from 15 countries. The accompanying table

shows the number of cases and deaths in Latin America since cholera made its debut.

There have been 28 cases, with no mortality, so far in the US but alarm bells have begun to ring. A recent issue of *The Journal of the American Medical Association* (JAMA) carried an article entitled 'Cholera Threatens US Population from Elsewhere in This Hemisphere' while a weekly watch is being kept on the depredations of the disease.

The causes for the current pandemic, the consequences and the reactions evoked in the US bring to mind the uncanny if not sinister resemblance to the 19th century in England when cholera erupted from her backyard, India. To this we shall now turn our attention.

II

India was 'integrated' into the world of capitalism by the British East India Company with the Battle of Plassey. The colonial loot of the jewel in Britain's crown was both instantaneous and staggering. It has been estimated that the treasure taken from India alone between Plassey and Waterloo was an astounding 500 million pounds to a 1,000 million. Thus, while India provided the capital for Britain's industrialisation began the process of her own underdevelopment.

The consolidation of the British empire in India was not as easy as the Spanish conquest of South America. Several wars were waged and populations displaced. During one of these movements of troops broke out a fearful disease, regarded then as entirely new but later recognised as cholera. Snow notes: "In June 1814 the cholera appeared with great severity in the 1st battalion 9th regiment NI, on its march from Jaulnah." Little however, is heard of this outbreak. What was of great import, and with grim consequences, was the epidemic breaking out in August 1817 in Jessore. The Marquis of Hastings made the following entries in his diary.

"*13 November, 1817*: The dreadful epidemic, which has been causing such ravages in Calcutta and the southern provinces, has broken out in camp... I march tomorrow, so as to make the Pohooj river, though I must provide carriage for 1,000 sick.

15 November, 1817: We crossed the Pohooj this morning. The march was terrible, for the number of poor creatures falling under the sudden attack of this dreadful infliction and from the quantities of bodies of those who died in the wagons, and were necessarily put out to make room for such as might be saved by the conveyance. It is ascertained that 500 have died since yesterday."

While the toll on the British army was no doubt fearful, that on the population of the country was devastating although of course no reliable estimates are available. One estimate placed cholera mortality in the four years between 1817 and 1821 in British India at 18 million deaths. Over the next few years the disease fanned out across neighbouring countries advancing along three discrete routes. To the west through Persia and up the river Tigris to Baghdad, spreading thence via camel caravans to Syria and southern Russia. To the east the disease marched through Burma, Malaya, Java and the Philippines where a number of Europeans were massacred with the not-all-too-mistaken belief that they had spread the disease. For as the empire opened up to trade new parts of the globe, there were forged new epidemiological links in disease transmission. To the north the disease conquered the vast land mass of China.

Was the disease in fact new? Or was it merely unfamiliar to British doctors? Had a new, and more virulent, strain of the disease come into existence? The ease with which the El Tor cholera vibrio originating in the Celebes in 1964 replaced the classical cholera vibrio in Asia in a few years admits the plausibility of this speculation. It is more likely, however, that colonial intervention had altered the ecology of the disease. McNeill, for instance, suggests that "old and established pattern of cholera endemicity intersected new British-imposed patterns of trade and military movements. The result was that cholera overleaped its familiar bounds and burst into new and unfamiliar territories where human resistance and customary reactions to its presence were totally lacking."

The next wave of this worldwide epidemic or pandemic reached Moscow in 1830 and soon spread over Russia, eastern and central Europe. Hungary was particularly badly affected; in less than three months over a quarter of a million were affected and nearly 1,00,000 died. The disease established itself soon at the Baltic sea ports, to the horror of the British; for, a major part of Britain's trade passed through these ports. Reports meanwhile poured into London of a terrible outbreak in the Middle East taking, it was claimed, 30,000 lives in Cairo and Alexandria in one day. The British government watched with macabre fascination and terror. The king's speech at the opening of parliament on June 21, 1831 observed:

"It is with deep concern that I have to announce to you the continued progress of a formidable disease... in the eastern parts of Europe... I have directed that precautions should be taken against the introduction of so dangerous a malady into this country." As Snow notes "cholera began to spread to an extent not before known... [its] approach towards our own country, after it entered Europe, was watched with more intense anxiety than its progress in other directions."

Everywhere the disease was observed it have terrible social, political and demographic consequences. The disease occurred despite whatever measures governments or the people—in some cases driven in religious, penitential frenzy—took. In Russia troops were deployed around affected villages with orders to shoot starving peasants struggling to escape. But the disease spread to neighbouring communities. Prussia, equally true to her heritage, stationed her army at the borders; to no avail. The dolef influence of Malthus' *An Essay on the Principle of Population*, published in the historic year of the French Revolution, was now being felt on the continent with fearful consequences. Convinced that the disease was a conspiracy of the ruling class and physicians to bring down the population of the poor—for it was strange, if not sinister that both members of the ruling class and physicians seemed relatively unaffected—peasants attacked several manors in Hungary, butchering the nobility. The army was, of course, called in but in several cases the men had deserted and shot their officers. In St Petersburg occurred the first 'cholera riot', to become familiar later in England. The riot came to an end when the Czar appeared, falling on his knees on the street to offer a public prayer that his country be

TABLE: LATIN AMERICAN EPIDEMIC

Country	Month of 1st Report	Cases	Deaths	Death-to-Case Ratio (Per Cent)
Bolivia	August	109	6	7
Brazil	May	2611	3	1
Chile	April	411	2	5
Colombia	March	9774	132	1.3
Ecuador	February	39154	600	1.5
El Salvador	August	709 +	25	3.5
Guatemala	July	2247	36	1.6
Honduras	October	5 +	0	0
Mexico	June	2028 +	25	1.2
Nicaragua	November	1 +	0	0
Panama	September	696 +	20	2.9
Peru	January	281513	2681	0.9
United States	April	16 +	0	0.0
Total		336554	3538	1.05

* By country in the Americas, as of November 19, 1991 (data are from the Pan American Health Organisation).

\+ Laboratory-confirmed cases only.

Source: *JAMA*, vol 267, no 10, March 11, 1992.

spared the disease. The disease revived forgotten horrors of the Black Death in public memory. The psychological impact of the approach of cholera has been noted to be unique. Says Vigarello, "It seemed capable of penetrating any quarantine, of by-passing any man-made obstacle. It chose its victims erratically, mainly but not exclusively, from the lower classes. It was, in short, both uniquely dreadful in itself and unparalleled in recent European experience. Reaction was correspondingly frantic and far-reaching." Indeed it would be no exaggeration to say that cholera was one of the twin spectres that haunted Europe in early 19th century; the other was, of course Revolution.

As England anxiously watched the ravages of the disease on the continent, fearful of its arrival, the unresolved conflict between miasmatic and contagionist schools of disease causation came to a head. The former, going back to Hippocratic days, held that disease was caused by miasma (meaning stain); miasma emanated from spoilt air or atmosphere. Putrefaction, decay and dirt were therefore, at the heart of the miasmatic theory of disease causation. These processes were of course, central to the florid lives of the tropics, wherein emanated cholera, with their excesses of heat, humidity and indeed of passions as opposed to the cool, the dry and the temperate. Diseases thus had geographic, meteorological and ecological causes.

The contagionist aetiology of disease or the germ theory of disease, all too often attributed to Robert Koch in the late 19th century, goes back in fact to as early as 1546 and Giralamo Fracastoro. Fractastorius maintained that disease was caused by discrete animalcules transmitted through human interaction. The contagionist theory provided the basis for the elaborate medieval Mediterranean quarantine regulations, enacted to guard against plague. The contagionist theory, however, fell victim to Napoleonic ambitions. His adventure to Santa Domingo had been laid low by yellow fever; when yellow fever broke out in Barcelona in 1822 French physicians were asked to make a 'definitive' study of disease causation. They concluded that there was no possibility of contact among the victims of yellow fever—not having known of the role of the insect vector, mosquito. The contagionist theory of disease aetiology was thence given a premature demise. Medical reformers were henceforth at the forefront of efforts to dismantle the quarantine regime. They were vociferously supported by British free traders. Regulations on free trade, it was argued, was a superstitious relic of contagionist fears not based on scientific empirical facts.

The government in Britain was now in the throes of a crisis over the agitation for the Reform Bill. But when cholera broke out in Hamburg in 1831—a port with which England had vast maritime contact, a board of health was set up. The primary responsibility of the board was to ensure that cholera was kept out of the island. The board's recommendation that quarantine measures be strengthened was vigorously opposed by the city and business interests and, indeed, the Admiralty, which claimed they would not be able to adequately help implement these measures. The compromise evolved placed the responsibility squarely on non-existent or ineffective local governments.

When cholera at last made its long feared appearance from Hamburg in the port town of Sunderland, the first reaction was to deny its existence. Commercial interests in the town, aided by doctors, were vehement that the port was disease-free. The same situation prevailed later when London was struck; *The London Medical and Surgical Journal*, supported by a solid body of doctors maintained that it was a false alarm. *The Lancet* editorially beseeched "the members of the medical profession not to be misled by the commercial cry that malignant cholera is not in the metropolis".

Cholera swept through England, Scotland and Ireland reserving its horrors especially for those towns and cities that had grown rapidly during the Industrial Revolution. For here huddled in over-crowded slums, sans water, sanitation, air and sunlight were the impoverished workers; the only certainty in their lives was the insecurity of employment. They were cholera's natural victims.

As the disease spread, so did panic. Towns were deserted by those who could afford to flee, carrying the disease into the hinterlands. What cholera did, above all, was to expose the unbelievable poverty hidden behind the facade of metropolitan prosperity. Cholera unveiled the rotten underbelly of capitalism; of the poverty, squalor and misery of the people on which it was built.

To the Bread Riots, the Luddite riots and the Chartist riots in early 19th century England were added the cholera riots. Given the very high mortality in hospitals—experience had, not incorrectly, convinced the poor that chances of survival in hospitals were distinctly less than if they suffered in their homes, and the general distrust of upper class doctors and the fears of the sacrilege of post-mortem riots occurred at several towns. Mobs raided hospitals, smashing everything in sight and delivered patients to their homes. Seldom before had the medical profession been exposed to be so impotent even as they bickered over what caused cholera, how it spread and how to cure it.

When cholera receded it had left 60,000 dead. It also left behind in the minds of a section of the middle class, the sanitary idea. Most crucial to this concept was the understanding that the poor did not choose to live in squalor. The sanitary idea embraced the need for hygienic housing, clean piped water in adequate quantities, efficient sewers and paved roads.

The reformed parliament in 1933 passed the Registration Act for the compulsory registration of births and deaths; it also passed the notorious Poor Laws. The author of the Poor Laws, manning the Registrar General's office was the remarkable utilitarian Edwin Chadwick whose work saved more lives than all the doctors in the 19th century. Assisting him was William Farr who raised medical statistics to a science. Behind them both in their endeavours were the enlightened public, amongst them Carlyle and Dickens. Chadwick's conversion from a poor law reformer to a public health campaigner was due mainly to his consideration for financial economy. For in his view, it was wasteful that every year thousands of widows and their children were thrown on to the poor rates by the death of the breadwinner of the family.

Chadwick's investigations and zeal lead to the presentation to parliament of *The Report on the Sanitary Condition of the Labouring Population of Great Britain* in 1942. The *Report* was loaded with hard hitting statistics and made pragmatic economic sense. Striking for instance was the data on life expectancy: in Derby it was 49 years for the gentry, 38 for a tradesman but only 20 for a member of the working class. In Leeds the figures were 44, 27 and 19 respectively. The *Report* stressed the enormous waste of potential labour and hence of money, caused by preventable disease, pointing out that it would be far cheaper to put the cities in order. In this the report echoed the practitioners of the new science of political economy, who like the Physiocrats before them, saw the wealth of the nation, in terms of efficient labour. The sanitary maps in the *Report* showed how cholera cases clustered together in the poorest and worst drained areas. Chadwick's labours led to the setting up of a Royal Commission on The Health of Towns. The Royal Commission's two reports, based on a detailed study of 50 large towns with the highest death rates was damning. All these reports however came to naught, parliament was loath to pass the Public Health Bill recommended.

But the bill had a powerful ally—cholera, readying itself for another onslaught in 1948. It was finally the threat of cholera, accompanying the age of revolutions of 1848, which led to the passage of the Public Health Bill and the establishment of a new Board of Health. Public health was finally acknowledged as the responsibility of the state.

Six pandemics of cholera reached England in the 19th century, five of them emanating from Ihdia. But the importance of cholera, as indeed of all infectious diseases, declined as England completed her sanitary revolution and improvements occurred in nutrition and the general standard of living. It is significant that this decline occurred prior to the discovery of the cause of the disease. The sway of the miasmatic theory of disease was, however, so strong that when Snow published his remarkable findings, a classic in epidemiologial research, *On the Mode of Communication of Cholera* in 1849, it was largely ignored. The tide of sanitary reform, however, could not be ignored; it swept through the continent also. The urban land-

scape of Paris was transformed; the Second Empire rebuilt the city with wide boulevards as much to let in air to ward off noxious miasmata as to control revolutionary mobs. And Germany, having completed her sanitary reform, was rewarded with seeing cholera now respect boundaries, this time sanitary.

Cholera, then, became a disease of the Other: a tropical disease. But with each new pandemic from India, the British government came in for international censure. A series of international sanitary conferences took place in 1866, 1874, 1875 and 1885 devoted specifically to cholera and the question of quarantine. The first conference at Constantinople in 1886 had embarrassed the British government by pronouncing India the natural home of cholera. Threats of a trade boycott were in the air; the French spoke of the possibility of riots breaking out in Marseilles if the British did not control communicable diseases in the Indian ports. The cholera pandemic of 1861 had, further, decimated the British army killing one in every 10. It was not only expensive but physically not possible to keep shipping in fresh recruits. Military men in India, particularly after the 1857 uprising, were acutely aware of the proportion of Europeans and Indians in the British army and the constant and large number of the former invalid in hospitals. All these factors together propelled the government to initiate public health measures in India directed towards protection of the army.

What evolved was a policy of *cordon sanitaire*. The British army and important civilians were to be segregated in sanitary, self-contained areas, secluded from the natives. Fears of miasma emanating from the latter even lead to the construction of walls between Indian and European troop locations to keep miasma out. A broad-based sanitary reform on the lines of the west encompassing the entire population was never on the colonial agenda—as indeed it is not in the nationalist agenda of the day; the government was unwilling to make the necessary financial expenditures. Sanitary reforms for the general population comprised *ad hoc* arrangements at pilgrimages. Arnold observes trenchantly "Cholera in India was more than a dreaded disease. It was associated with much that European medical officers and administrators found outlandish and repugnant in Hindu pilgrimage and ritual—so much so that the attack on cholera concealed a barely disguised assault on Hinduism itself." No such assault on cholera was in fact in the offing; for, sanitary reforms for the general population was also blocked on the specious grounds that they would offend the religious sensibilities of the people. Cholera thus was the leading cause of death in India in the 19th century frequently accompanying the terrible famines which swept various parts of the country.

The reasons for the decline of cholera, as indeed the decline of death rates in India commencing in the 1920s, is a matter of controversy. One fact however, is generally accepted and that is that public health policy and intervention had little to do with the decline.

III

The history of cholera throws light on some salient issues. First, the occurrence of disease is not necessarily 'natural' but contingent on a large number of interlinked socio-economic factors. In other words, a web of factors resting on a socio-economic milieu not only sets the ground for occurrence of a disease but also contours the limits of health intervention. Second, it focuses attention on the limits to medical technology. Technical solutions offered to problems social in nature, while having great short-term appeal, offer no long-term cure to community health problems. Third, morbidity and mortality are seen to be not merely biological phenomena shared by the human population. Diseases are not the great levellers they are frequently thought to be; the disease and death load in a population are distributed as unevenly as are resources. Lastly it shows us above all that politics informs not only the occurrence of disease but the shape and content of health policy and intervention. That is to say that given a set of health problems in a community, it is politics which decides which of these problems are important; and these are not necessarily epidemiological imperatives. Politics also determines which of a possible range of interventions is selected.

Now, how does all this have any remote bearing on India in the late 20th century? Is it relevant now at the dawn of a brave new world? To consider these questions we shall briefly survey the evolution of health services in India.

At the glimmerings of the dawn of independence in India was established the Bhore Committee to draw up the blue-print for the health system of India. In view of the quantum and nature of the health problems in the country the Bhore Committee drew up a plan that laid emphasis on preventive services focusing on rural areas linking health to overall development. These recommendations were considered eminently feasible within available resources; they were accepted as the minimum irreducible if a dent was to be made on the health profile of the country. The recommendations were accepted by the government of India; they were not however to sully the conscience of our planners. During the first two plan periods health obtained 3.3 and 3 per cent of the total plan outlays, much below the irreducible minimum of 10 per cent recommended by the Bhore Committee. Further within this budget, 55 to 60 per cent was allocated to curative health services and to medical education. Public health obtained a mere third of the budget. Of the funds available for public health, the major share was garnered by the vertical programmes like malaria, small pox and soon even family planning, for, by the early 1960s, it was decided that the number of poor ought to be controlled 'on a war footing'. In other words while hospitals and medical colleges came up, primary health centres did not.

In the third plan the Mudaliar Committee's recommendations came to force. This committee had noted that the primary health care system that had evolved bore no resemblance to that visualised by the Bhore Committee. Very curiously, however, the consolidation of existing services to be on par with the west rather than building up the PHC network was recommended. The family planning programme now took wing. The extension education approach not having been successful, the IUCD was relied upon; that having proven a failure a target-oriented, time-bound programme was launched. During the Third and Fourth Plans health budgets continued to decline even as expenditure on family planning increased sharply. Health obtained 2.63 and 2.12 per cent; family planning was allocated 0.29 and 1.76 per cent respectively. Over this period the colossal malaria eradication programmes suffered a series of set backs. Among other reasons, technical and logistical, one of the major reasons for the failure of the programme was that a health structure, one capable of carrying out surveillance, had not been developed adequately. During the Fifth Plan health and family planning received 1.92 and 1.24 per cent respectively. Even as recognition is said to have dawned that "development is the best contraceptive" this plan period witnessed the use of brutal methods to obtain family planning targets. And in view of the continuing set backs to the malaria eradication programme, a new strategy for the control of malaria was drawn up; eradication became a long-term objective. Efforts were belatedly made now to integrate the vertical programme; a task not yet adequately achieved.

During the Sixth Plan health and family planning received 1.86 and 1.03 per cent of the budget respectively. In a departure from previous plans the Sixth provided for an increase in the allocation for rural health. This was, however, at the expense of preventive programmes: reduction of medical expenditure was only 4 per cent whereas that for the control of communicable diseases was 11 per cent. The family planning programme now came to be directed at poor women whose reproductive profligacy was considered the cause of the country's poverty. This period also witnessed official policy to encourage the corporate sector to enter the health market.

The Seventh Plan made some efforts towards strengthening health infrastructure. Health and family planning were allocated 1.88 and 1.80 per cent of the budget respectively. Yet towards the end of this period, given the lack of correlation between programme performance and birth rates, it was grudgingly acknowledged that the massive family planning programme had not been successful. With financial incentives from the state there occurred a mushrooming of super speciality institutions for high technology curative care during this period.

What is striking however, is that in our country now, not only is the morbidity and mortality load still high but there has been no change in their overall character; infectious diseases continue to be the major causes of morbidity and mortality; malnutrition continues to be widely prevalent. Data from the National Nutrition Monitoring Bureau reveals that while the prevalence of severe malnutrition has somewhat declined that of moderate malnutrition has in fact increased, while the prevalence of mild malnutrition remains unchanged.

What we have achieved has been to evolve plural and divorced worlds of health systems. One endowed with advanced and expensive technology, concerned with cancer, diseases of ageing and so forth and another at the periphery which fails to confront preventable morbidity and mortality. The former attends to the needs of a small minority whose living standards includes access to public health services. The latter fails to recognise that the prevailing morbidity and mortality are rooted in poverty and are therefore, not amenable to technical solutions.

India is now poised at a new conjuncture. The World Bank-IMF policies of structural adjustment is pregnant with dire consequences for the health of the majority. They will further wrench apart the distance between these dual health systems. The cut in health budgets would mean that health institutions, on the verge of collapse, may simply go under. At the recent World Health Assembly in Geneva the minister for health and family welfare declared that we do not have sufficient resources for primary health care. Reports, meanwhile, have come in of cholera deaths in Tripura and in Bihar; while Delhi, the most endowed of Indian cities, has started reporting cases of cholera. The threat of cholera flaring up again therefore, persists.

These are not merely Cassandra's fears. Data not just from Peru but a number of other countries that have implemented the World Bank-IMF dictated policies of structural adjustment reveal the grim consequences of these policies. UNICEF's *The State of the World's Children 1992* notes that given the problems of external debt, of declining terms of trade and of protectionism in the markets of the first world the 1980s were disastrous economically for the majority of the countries of the developing world. It states "UNICEF has watched the deterioration of that economic environment being translated, in many countries, into rising malnutrition, preventable disease and falling school enrolments". The report further goes on to warn that "the developing world will find it difficult to find a place in the new world order".

To illustrate, a 10-country study on the effects of recession and structural adjustment on health, published by UNICEF, showed a deterioration in the nutritional status of children in eight of these countries. Infant and child mortality rates which had been declining for two decades since the 1960s showed either a reversal of the trend or a slowing down of the rate of decline. Data from Zambia show that between 1980 and 1984 hospital deaths due to malnutrition increased from 2.4 to 5.7 per cent in the 0-11 months age group and from 38 to 62 per cent in the age group 1-4 years. Between 1980 and 1985 infant mortality rates went up from 146 to 168 in Ethiopia, from 97 to 108 in Uganda, from 103 to 110 in Tanzania and from 87 to 91 in Kenya. Similarly childhood mortality rates went up from 32 to 38 in Ethiopia from 18 to 21 in Uganda, 19 to 22 in Tanzania and 15 to 16 in Kenya over the same period.

The devastation to people's health and living conditions in the developing world has lead to calls by UNICEF for "adjustment with a human face". As India prepares to tread the same path some sobering reflection is called for. Are we prepared to condemn the country, in perpetuity, to be a 'factory of disease'?

Notes

[I am grateful to Padma Prakash for not only mooting the idea of this paper but also supplying me with data from *JAMA*. I am alone responsible for errors and infelicities.]

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